School District of Manawa

Board of Education Meeting Agenda

May 17, 2021

<mark>REVISED AGENDA</mark>

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1. Call to Order – President Johnson – **7:00 p.m.** – Hybrid Meeting Format (In-person Meeting for Board of Education at MES Board Room, 800 Beech Street & Virtual Components)
2. Pledge of Allegiance
3. Roll Call
4. Verify Publication of Meeting
5. Presentations:
    a. Review of NEOLA Policy and Guidelines Service (Diligent) - Steve LaVallee
6. Announcements:
    a. Contributions to the District
    b. Other Contributions
7. Consent Agenda
    a. Approve Minutes of April 26, 2021 Board Meeting and a Special May 3, 2021 Board Meeting
    b. Treasurer's Report: Approve Expenditures & Receipts
    c. Donations:
        i. Five boxes of books from Waupaca County Association for Home and Community Education
        ii. Two anonymous donations to the Manawa FFA $250 each
        iii. Manawa Area Chamber of Commerce $151.85 donation to Urgent Needs Fund
        iv. Union Thresherman's Club $250 donation to LWHS Class of 2021
        v. Seal-A-Smile donation of a toothbrush bag to every student in the district
    d. Consider Renewal of the WIAA Membership for SY2122
    e. Consider Acceptance of Food Service Worker Resignation
    f. <mark>Approve Francisco Amparan as the 1.0 FTE Secondary Spanish Teacher as Presented</mark>
8. Any Item Removed from Consent Agenda
    a.
    b.
9. Public Comments (Register to Speak Prior to Start of Meeting / Guidelines Listed Below Agenda)

10. Correspondence:
    a. Kobussen Buses LTD. Thank you to the SDM for Bus Driver Appreciation Week
    b. Project Backpack - Thank you to the SDM for continued support
11. Board Recognition: No Recognitions this month.
12. District Administrator's Report:
    a. Student Council Representatives - Colin Moser and Amber Fietzer
    b. Legislative Update
    c. Monthly Enrollment Update
    d. Curriculum Director Update
    e. Invitation for Board 1-on-1s Vision for SDM Future
    f. Update on Revising Key Performance Indicators
    g. COVID-19 Update
    h. 2021 Census
13. School Operations Reports:
    a. ES Principal/Special Education Director: Highlights - Included in Board Packet
    b. MS / HS Principal: Highlights - Included in Board Packet
        i. 2021 Head Volleyball Coach Recommendation
14. Business Related Reports:
    a. Highlights - Included in Board Packet
    b. Kobussen Transportation Report
15. Director's Reports:
    a. Technology Director Highlights - Included in Board Packet
16. Board Comments:
    a.
    b.
17. Committee Reports:
    a. Curriculum Committee (Hollman)
        i. Consider Endorsement of Secondary Math Curriculum as Presented
            1. Seventh Grade Math
            2. Eighth Grade Math
            3. AP Calculus AB
            4. Precalculus & Trigonometry
        ii. Consider Endorsement of Recommendation to Change from the Adopted Lucy Calkins's Phonics Units of Study for Grades 4K-2 to Really Great Reading as Presented
        iii. Consider Endorsing Pre-ACT (SY2021-22) and Mosaic Adaptive Academic Learning (SY2022 and beyond) to Replace the ACT Periodic as the Grades 9 & 10 Universal Screener as Presented
        iv. Receive Presentation on 2021 ACT Results
        v. Future Academic Goals Planning
        vi. Curriculum Committee Planning Guide

b. Finance Committee (Pethke)
    i. Consider endorsement of Printer and Support Services recommendation
    ii. Review of WERMC, WI Educators Risk Management Cooperative, insurance policies - Kathy Johnson, Independent Risk Management Consultant
    iii. Monthly Financial Summary - March
    iv. Executive Summary
    v. Fund Balance Policy Review
    vi. Finance Committee Planning Guide
c. Buildings & Grounds (R. Johnson)
    i. Review MS/HS Paving Project - Matt McGregor from Hoffman
    ii. Buildings & Grounds Budget Summary
    iii. Consider Remaining Funding in Operational Referendum for Green Space
        1. Dormant seeding
        2. Outdoor Classroom - picnic tables and/or benches
    iv. Review Exterior Bleacher Installation Project
        1. Possible final use on Memorial Day weekend for graduation ceremony on May 29.
        2. Removal of old bleachers by volunteers on May 30 or 31.
        3. Concrete pad preparation and pouring beginning on June 1 and allowing for 2-3 days for fast cure time.
        4. Southern Bleacher installation begins on June 7.
    v. Review Gym Refinishing Project
    vi. Solar Customer Hosted Renewable Solutions Project Update
    vii. Pfefferle Project Update
    viii. Culligan MS/HS Water Softener Repairs
    ix. Consider Endorsement of MS/HS Gym Fans and Cages Replacement
    x. Buildings & Grounds Committee Planning Guide
d. Policy & Human Resources Committee (J. Johnson)
    i. Consider Endorsement of Summer School 2021 Staffing as Presented
    ii. Review CDC Outdoor Face Covering Updates Related to Districtwide Reopening Plan Tabled from 05-03-2021 BOE Meeting
    iii. Consider Endorsement of Summer School Mitigation Plan as Presented
    iv. Consider Endorsement of HS Band Field Trips for Parades/Events as Presented
    v. Consider Endorsement of a School-Sponsored Student Vaccination Clinic for Approved Age Groups
    vi. Consider Endorsement of Revised Policy 0165.1 - Notice of Regular Meetings as Presented

  vii. Consider Endorsement of Waupaca County Shared Social Worker Position for the 2021-22 School Year as Presented Tabled from 04-26-21 BOE Meeting

  viii. Review Policy 9130 - Public Request, Suggestions, or Complaints

  ix. Review WI 118.03 / PO2510 - Adoption of Textbooks

  x. Review WI 118.125 / PO8330 - Student Records

  xi. Discuss a Board of Education News Article for the Wolf Pack Express

  xii. Discuss Board Goals/Key Performance Indicators

  xiii. Policy & Human Resources Committee Planning Guide

 e. Ad hoc Recognition Committee

  i. Select "Friend of Education" from Nominees

  ii. Verify Heart of Gold Nominations

   1. Check scrubbing accuracy.

   2. Verify eligibility of nominees.

  iii. Finalize Plans for Annual Heart of Gold Program

  iv. Create Work Order for Room Set-Up

  v. Confirm Compilation of Accomplishments for the Program - Stephanie's Google Form

  vi. Review Draft Program - Stephanie will duplicate the program for the event.

18. Unfinished Business: No Unfinished Business this Month.

19. New Business:

 a. Consider Approval of Secondary Math Curriculum as Presented

  i. Seventh Grade Math

  ii. Eighth Grade Math

  iii. AP Calculus AB

  iv. Precalculus & Trigonometry

 b. Consider Approval of Recommendation to Change from the Adopted Lucy Calkins's Phonics Units of Study for Grades 4K-2 to Really Great Reading as Presented

 c. Consider Approval of Pre-ACT (SY2021-22) and Mosaic Adaptive Academic Learning (SY2022 and beyond) to Replace the ACT Periodic as the Grades 9 & 10 Universal Screener as Presented

 d. Consider Approval of EO Johnson Printer and Support Services as Presented

 e. Consider Approval of MS/HS Gym Fans and Cages Replacement by Master Electrical Services LLC as Presented

 f. Consider Approval of Summer School 2021 Staffing as Presented

 g. Consider Approval of CDC Outdoor Face Covering Updates Related to Districtwide Reopening Plan as Presented

 h. Consider Approval of Summer School Mitigation Plan as Presented

 i. Consider Approval of HS Band Field Trips for Parades/Events as Presented

      j.   Consider Approval of Waupaca County Shared Social Worker Position for the 2021-22 School Year as Presented

      k.   First Reading of Policy 0165.1 - Notice of Regular Meetings as Presented

      l.   First Reading of Policy 9130 - Public Request, Suggestions, or Complaints

      m. Consider Approval of Naming the Waupaca County Post as the Official District Newspaper

      n.   Confirm Board of Education "Treat" for and Attendance at Staff Recognition Event

      o.   Discuss Interest in Starting a Board of Education News Article for the Wolf Pack Express
- i.   Schedule
- ii.   Topics
- iii. Other

20. Next Meeting Dates:

      a.   May 19, 2021 SDM Staff Recognition, Heart of Gold, and Friend of Education Presentation - 2:30 p.m. HS/MS Commons

      b.   May 27, 2021 Buildings & Grounds Committee Meeting - 5:00 p.m.

      c.   May 29, 2021 LWHS Commencement - 11:00 a.m. LWHS Football Field (Rain date May 30, 2021)

      d.   June 1, 2021 Curriculum Committee Meeting - 6:00 p.m.

      e.   June 2, 2021 Policy & Human Resources Committee Meeting - 6:00 p.m.

      f.   June 7, 2021 Board of Education Retreat - 5:30 p.m.

      g.   June 8, 2021 Finance Committee Meeting - 6:00 p.m.

      h.   June 21, 2021 Regular Board of Education Meeting - 7:00 p.m.

21. Adjourn

PLEASE NOTE: Any person with a qualifying disability under the Americans with Disabilities Act that requires the meeting or material to be in accessible format, please contact the District Administrator to request reasonable accommodation. The meeting room is wheelchair accessible.

Upon request to the District Administrator, submitted twenty-four (24) hours in advance, the District shall make reasonable accommodation including the provision of informational material in an alternative format for a disabled person to be able to attend this meeting.

0167.3 - **PUBLIC PARTICIPATION AT BOARD MEETINGS**

The Board of Education recognizes the value of public comment on educational issues and the importance of allowing members of the public to express themselves on District matters.

Agenda Item

 Any person or group wishing to place an item on the agenda shall register their intent with the District Administrator no later than ten (10) days prior to the meeting and include:

A. name and address of the participant;
B. group affiliation, if and when appropriate;
C. topic to be addressed.

Such requests shall be subject to the approval of the District Administrator and the Board President.

Public-Participation Section of the Meeting

To permit fair and orderly public expression, the Board shall provide a period for public participation at every regular meeting of the Board and publish rules to govern such participation in Board meetings.

The presiding officer of each Board meeting at which public participation is permitted shall administer the rules of the Board for its conduct.

The presiding officer shall be guided by the following rules:

A. Public participation shall be permitted as indicated on the order of business, at the discretion of the presiding officer, and for individuals who live or work within the District and parents/guardians of students enrolled in the District.

B. Attendees must register their intention to participate in the public portion of the meeting upon their arrival at the meeting.

C. Participants must be recognized by the presiding officer and will be requested to preface their comments by an announcement of their name; address; and group affiliation, if and when appropriate.

D. Each statement made by a participant shall be limited to three (3) minutes duration.

E. No participant may speak more than once on the same topic unless all others who wish to speak on that topic have been heard.

F. Participants shall direct all comments to the Board and not to staff or other participants.

G. All statements shall be directed to the presiding officer; no person may address or question Board members individually.

H. The presiding officer may:

1. interrupt, warn, or terminate a participant's statement when the statement is too lengthy, personally directed, abusive, obscene, or irrelevant;

2. request any individual to leave the meeting when that person does not observe reasonable decorum;

3. request the assistance of law enforcement officers in the removal of a disorderly person when that person's conduct interferes with the orderly progress of the meeting;

4. call for a recess or an adjournment to another time when the lack of public decorum so interferes with the orderly conduct of the meeting as to warrant such action.

5. waive these rules with the approval of the Board when necessary for the protection of privacy or the administration of the Board's business.

I. The portion of the meeting during which the participation of the public is invited shall be limited to fifteen (15) minutes, unless extended by a vote of the Board.

J. Recording, filming, or photographing the Board's open meetings is permitted. Recording, filming, or photographing the Board's closed session is only permitted pursuant to Bylaw 0167.2 – Closed Session. The person operating the equipment should contact the District Administrator prior to the Board meeting to review possible placement of the equipment, and must agree to abide by the following conditions:

1. No obstructions are created between the Board and the audience.

2. No interviews are conducted in the meeting room while the Board is in session.

3. No commentary, adjustment of equipment, or positioning of operators is made that would distract either the Board or members of the audience or otherwise disrupt the meeting while the Board is in session.

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Legal   19.90, Wis. Stats.

Call to Order – President Johnson – 7:00 p.m. – In-person Meeting for Board of Education at MES Board Room, 800 Beech Street & Virtual Meeting
Pledge of Allegiance
Roll Call - Russ Hollman, Pete Griffin, Kerri Jepson, Sondra Reierson, Russ Johnson, Joanne Johnson, and Bobbi Jo Pethke present
Verify Publication of Meeting - Dr. Oppor verified.

Election Results: Election Results were included in the packet: Canvass determined the most votes were received by: Zone 1/City of Manawa: Kerri Jepson 671 votes; Zone 4/Ogdensburg / St. Lawrence: Sondra Reierson 387 votes; and Zone 2/Little Wolf: Pete Griffin 408 votes.

Election of Officers:
President: Pethke nominates Joanne Johnson; second by Hollman. Reierson nominates Pete Griffin: Second by Jepson. Any other nominations (asked three times) No other nominations. Ballot vote: Joanne Johnson 4 votes and Pete Griffin 3 votes. Carried - J. Johnson is President.

Vice President: Hollman nominates Russ Johnson, second by Jepson. Reierson nominates Pete Griffin, no second. Any other nominations (asked three times) No other nominations. Ballot vote: Russ Johnson 4 votes and Pete Griffin 3 votes. Carried - R. Johnson is Vice President.

Treasurer: Pethke nominated Bobbi Jo Pethke; second by J. Johnson. Any other nominations (asked three times) No other nominations. All those in favor by voice vote: 7 ayes, 0 nays. Carried - Bobbi Jo Pethke is Treasurer.

Clerk: Griffin nominates Reierson for Clerk; second by R. Johnson. Pethke nominates Hollman, Second by J. Johnson. Any other nominations (asked three times) No other nominations. Ballot vote: Sondra Reierson 3 votes and Russ Hollman 4 votes Carried - Russ Hollman is Clerk.

Annual Board Committee Appointments:
Buildings & Grounds Committee: R Johnson, Chair, Griffin, Hollman
Curriculum Committee: Hollman, Chair, Jepson, J. Johnson
Policy & Human Resources Committee: J Johnson, Chair, Reierson, Pethke
Finance Committee: Pethke, Chair, R. Johnson, J. Johnson
Ad-Hoc Recognition Committee: J. Johnson, Pethke
Ad-Hoc Human Growth & Development Committee: not active until 3 yrs

Staff Exit- Pethke
CESA 6 Board of Control Convention Delegate: Pethke
WASB Legislative Contact: J. Johnson
WASB Convention Delegate: defer closer to convention time

Presentations: A Look Back & Forward
Announcements: Contributions to the District -Sturm Foods, Inc. and Kerri Jepson - Drink Mix Packets for 2021 Prom; 1st State Bank and Mary Griffin - Cases of Water for 2021 Prom; Jeff and Sarah Bortle $100 donation to LWHS Drama Club, Thank you to the Ad hoc Human Growth & Development Committee members for volunteering their time and expertise, and Thank you to the Ad hoc MS/HS Gym Refinishing Committee for volunteering their time and expertise.
Other Contributions: None

Approved by Consent: Minutes of March 15, 2021 Regular Board of Education Meeting, Minutes of March 30, 2021 Special Board of Education Meeting, Treasurer's Report: Approve Expenditures $327,087.90 & Receipts $182,608.95; Donations: Sturm Foods, Inc. and Kerri Jepson - Drink Mix Packets for 2021 Prom, 1st State Bank and Mary Griffin - Cases of Water for 2021 Prom, Jeff and Sarah Bortle $100 donation to LWHS Drama Club, Thank you to the Ad hoc Human Growth & Development Committee members for volunteering their time and expertise, Thank you to the Ad hoc MS/HS Gym Refinishing Committee for volunteering their time and expertise, Accept Retirement of Carol Wortz, Secondary Special Education Teacher and Accept Resignation of Bryant Cobarrubias, Instructional Technology Director.

Any Item Removed from Consent Agenda: Reierson requested the Minutes of March 30, 2021 Special Board of Education Meeting be removed from the consent agenda for discussion.
Motion by Hollman / R. Johnson to Approve the Minutes of March 30, 2021 Special Board of Education Meeting. Motion carried.

Public Comments: None
Correspondence: There was no correspondence this month.
Board Recognition: Student Recognition - Ted Emmert for his submission to the WSMA Student Composition Contest.

District Administrator's Report:
Student Council Representative - Abi Riske and Emma Riske reported on Promcoming and Teacher Appreciation. Legislative Update - The state Assembly Committee on Education will hold an informational hearing on Tuesday, April 27 at 1:00 p.m. in Room 412 East of the State Capitol. The committee will receive invited testimony only from the Department of

Public Instruction and Legislative Fiscal Bureau on the topic of *"School Funding as Related to the Counting of Students"*. There is a Legislative Breakfast at Cesa 6 on Friday, April 30. Monthly Enrollment Update - Student enrollment is at 668. Curriculum Director - Update on summer Professional Development for teachers and support staff.

COVID-19 Update - Weekly Waupaca County DHS meetings continue. Manawa currently has zero active cases and zero quarantines. Seal a Smile Program will return next school year.

School Operations Reports: ES Principal / Special Education Director: Highlights - Included in Board Packet; MS / HS Principal: Highlights - Included in Board Packet; Revised Track and Field Coaching Appointment.

Business Related Reports: Highlights - Included in Board Packet; and Kobussen Transportation Report. Reierson and Hollman questioned whether the 18% fund balance continues to be a recommendation as this policy is dated. The fund balance percentage can be revisited by the Finance Committee.

Director's Reports: Technology Director Highlights - Included in Board Packet.

Board Comments: Reierson is concerned with having a conflict of interest having Dr. Goedderz as the district medical advisor and an active member on the Waupaca County DHS Committee. She would like to see someone who is independent of the county DHS giving another perspective. In addition, she noted Policy 9130 is a conflict of interest and would like to make sure § 118.03 is being followed.

Committee Reports: Minutes of a Curriculum Committee, Finance Committee, four Buildings & Grounds meetings, Policy & Human Resources Committee, Human Growth and Development Committee, and a Ad Hoc Recognition Committee were included in the board packet.

Unfinished Business: No Unfinished Business this month.

New Business:
Motion by R. Johnson / Pethke to Approve of Secondary Social Studies Material Adoption as Presented. Motion carried.

Motion by Jepson / Hollman to Approve of Two (2) Day of Instructional Design Work Per Secondary Social Studies Teacher at the $25 Rate as Presented. Motion carried.

Motion by Reierson / Pethke to Approve of Animal Science/Veterinary Medicine Textbook Adoption as Presented. Motion carried.

Motion by Hollman / Pethke to Approve of the Human Growth & Development Abstinence Plus Other Forms of Birth Control Program Type Per the Recommendation of the Ad Hoc Human Growth and Development Committee. Motion carried.

Motion by Pethke / Hollman to Approve of Human Growth & Development Scope and Sequence as Presented. Motion carried.

Motion by Reierson / Jepson to Approve of ACT Aspire 2021 Proposal as Presented. Motion carried.

Motion by R. Johnson / Pethke to Approve of Fifth Grade Transition Proposal as Presented. Motion carried.

Motion by Griffin / Jepson to Approve of Staff Salary and Wage Increases as Presented. Pethke and R. Johnson recused themselves. Motion carried.

Motion by Hollman / Griffin to Approve to Include Date of Payment for School Board Member Salaries in Annual Meeting Resolutions. Motion carried.

Motion by R. Johnson / Griffin to Approve of Awarding the MS/HS Gym Floor Refinishing to Hardwood Specialists and Craftsman to Install Design Version 4 as Presented. Motion carried.

Motion by Pethke / Reierson to Approve of the Revised 2021-22 School Year Calendar as Presented. Motion carried.

Motion by Reierson / Hollman to TABLE the Waupaca County Shared Social Worker Position for the 2021-22 School Year for further discussion. Motion carried.

Motion by Jepson / Griffin to Approve of Spring Events as Presented - Eighth Grade Recognition Proposal, Spring Choir Concert Proposal, Spring Instrumental Concert Proposal, Senior Walk/Breakfast Proposal, LWHS Graduation Ceremony Proposal, HS Student Job Shadow Proposal, and Spring Sports Recommendations Update.
Reierson had issue with capacity limits and other mandates which are outlined in many of these proposals. Mr. Wolfram would have to reach out to outside agencies to get clarification for Reierson. Griffin noted it may be time to change the protocols. Griffin rescinded his second. Motion failed.

Motion by Jepson / Reierson to Approve the Student Job Shadow Proposal, Spring Sports, and Senior Walk/Breakfast Proposal as Presented. Motion carried.

Motion by Griffin / R. Johnson to TABLE the Eighth Grade Recognition Proposal, Spring Choir Concert Proposal, Spring Instrumental Concert Proposal, LWHS Graduation Ceremony Proposal for further discussion. Motion carried.

Motion by Reierson / Pethke to Approve of Districtwide Pilot of the Paraprofessional Evaluation Rubric as Presented. Motion carried.

Motion by Jepson / Hollman to Approve of Teachers for Level Advancement on the Salary Advancement Model as Presented. R. Johnson recused himself. Motion carried.

Discuss Board of Education "Treat" for Staff Recognition Event

Reminder for Board of Education Members to Confirm Attendance at Graduation Ceremony to the LWHS Office by May 7

Motion by Pethke / Hollman to Approve Future Meetings to be Hybrid - Regular Board of Education Meetings, Special Board of Education Meetings, and Board Committee Meetings. Motion carried.

Next Meeting Dates:
May 3, 2021 Special Board of Education Meeting - 7:00 p.m.
May 4, 2021 Ad Hoc Recognition Committee Meeting - 5:00 p.m.
May 4, 2021 Buildings & Grounds Committee Mtg - 6:00 p.m.
May 5, 2021 Curriculum Committee Meeting - 6:00 p.m.
May 11, 2021 Finance Committee Meeting - 5:00 p.m.
May 12, 2021 Policy & Human Resources Comm Mtg - 6:00 p.m.
May 17, 2021 Regular Board of Education Meeting - 7:00 p.m.
May 19, 2021 SDM Staff Recognition, Heart of Gold, and Friend of Education Presentation - 2:30 p.m. HS/MS Commons
May 29, 2021 LWHS Commencement - 11:00 a.m. LWHS Football Field

Motion by Hollman / Jepson to adjourn at 9:04 p.m. Motion carried.

Stephanie Flynn, Recorder

<u>Minutes of a May 3, 2021 School District of Manawa Special</u>
<u>Board of Education Meeting</u>

Call to Order – President Johnson – 7:01 p.m.
Hybrid Meeting Format
Pledge of Allegiance
Roll Call - Jepson, Reierson, Griffin, R. Johnson, J. Johnson, and Pethke present. Hollman absent.
<u>Verify Publication of Meeting</u> - Dr. Oppor verified

<u>Unfinished Business:</u>
Review CDC Outdoor Face Covering Updates Related to Districtwide Reopening Plan. <u>Motion by</u> Reierson / Griffin to TABLE the CDC Outdoor Face Coverings Updates Related to Districtwide Reopening Plan. 6 ayes, 0 nays, Hollman absent. Motion carried.

Consider Approval of Eighth Grade Recognition Proposal in Gym as Presented. <u>Motion by</u> Reierson / Jepson to Approve of Eighth Grade Recognition Proposal Option 2 as Presented. 6 ayes, 0 nays, Hollman absent. Motion carried.

Consider Approval of Spring Choir Concert Proposal as Presented. <u>Motion by</u> Jepson / R. Johnson to Approve of Spring Choir Concert Proposal as Presented. 6 ayes, 0 nays, Hollman absent. Motion carried.

Consider Approval of Spring Instrumental Concert Proposal as Presented. <u>Motion by</u> Pethke / Jepson to Approve of Spring Instrumental Concert Proposal as Presented. 6 ayes, 0 nays, Hollman absent. Motion carried.

Consider Approval of LWHS Graduation Ceremony Proposal as Presented. <u>Motion by</u> Griffin / Reierson to Approve of LWHS Graduation Ceremony Proposal Option 2 with the Amendment that Face Coverings are Voluntary. 6 ayes, 0 nays, Hollman absent. Motion carried.

<u>New Business:</u> (None)
<u>Next Meeting Dates:</u> (All meeting are in the hybrid format - in-person BOE & virtual components)
May 4, 2021 Ad Hoc Committee Meeting - 5:00 p.m.
May 4, 2021 Buildings & Grounds Committee Meeting - 6:00 p.m.
May 5, 2021 Curriculum Committee Meeting - 6:00 p.m.
May 11, 2021 Finance Committee Meeting - 5:00 p.m.
May 12, 2021 Policy and Human Resources Committee Mtg - 6:00 p.m.
May 17, 2021 Regular Board of Education Meeting - 7:00 p.m.
May 19, 2021 SDM Staff Recognition, Heart of Gold, and Friend of Education Presentation - 2:30 p.m. HS/MS Commons
May 29, 2021 LWHS Commencement - 11:00 a.m. LWHS Football Field

June 7, 2021 Board of Education Retreat - 5:30 p.m. - Board Room

<u>Motion by</u> Griffin / Jepson to Approve to Adjourn at 7:25 p.m. 6 ayes, 0 nays, Hollman absent. Motion carried.

Stephanie Flynn, Recorder

CHECK NUMBER VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
82054 GRESHAM BOOSTER CLUB	JPAP04	04/23/2021	TRACK RELAY INVITATIONAL ON 4/27/2021	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	125.00
				Totals for 82054		125.00
82057 KAJEET	JPAP04	04/23/2021	Kajeet Renewal - Services only	GENERAL FUND/ON-LINE COMMUNICATIONS/INSTR UCTION RELATED TECHNOLOGY	8002100068	14,840.10
82057 KAJEET	JPAP04	04/23/2021	Kajeet Telecom Fees	GENERAL FUND/ON-LINE COMMUNICATIONS/INSTR UCTION RELATED TECHNOLOGY	8002100072	1,446.91
				Totals for 82057		16,287.01
82061 PACELLI ATHLETICS	JPAP04	04/23/2021	GOLF MEET AT STEVENS POINT COUNTRY CLUB ON 5/3/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/COED GOLF	0	100.00
				Totals for 82061		100.00
82064 SCHOOL DISTRICT OF I	JPAP04	04/23/2021	MS TRACK INVITATIONAL ON 5/1/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	150.00
82064 SCHOOL DISTRICT OF I	JPAP04	04/23/2021	GOLF INVITATIONAL ON 4/26/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/COED GOLF	0	150.00
				Totals for 82064		300.00
82065 SCHOOL DISTRICT WEYA	JPAP04	04/23/2021	MS TRACK MEET ON 4/26/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	40.00
				Totals for 82065		40.00
82070 THORNBERRY CREEK AT	JPAP04	04/23/2021	GOLF INVITATIONAL ON 5/4/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/COED GOLF	0	250.00
				Totals for 82070		250.00
82071 WI PUBLIC SERVICE CO	P9	04/30/2021	Payroll accrual	GENERAL FUND/GARNISHMENT DEDUCTION	0	217.50
				Totals for 82071		217.50
82076 INTEGRATED SYSTEMS C	JPAP04	04/30/2021	IS CORP BILLING FOR 2020-21	GENERAL FUND/TECH/SOFTWARE SERVIC/ADMINISTRATIV E TECHNOLOGY SERV	8002100007	360.00
				Totals for 82076		360.00
82078 SCHOOL DISTRICT OF S	JPAP04	04/30/2021	MIDDLE SCHOOL TRACK MEET ON 5/6/21 @ SHIOCTON HIGH SCHOOL	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	100.00
				Totals for 82078		100.00
82079 SCHOOL DISTRICT OF W	JPAP04	04/30/2021	VARSITY TRACK MEET ON 5/6/21 @ WAUPACA HIGH SCHOOL	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	250.00
				Totals for 82079		250.00
82080 SCHOOL DISTRICT OF A	JPAP04	04/30/2021	VARSITY TRACK TRIANGULAR ON 5/7/21 @ AMHERST HIGH SCHOOL	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	50.00
82080 SCHOOL DISTRICT OF A	JPAP04	04/30/2021	MIDDLE SCHOOL TRACK TRIANGULAR ON 5/7/21@ AMHERST	GENERAL FUND/DUES & FEES MEMBRSHIP/FT	0	50.00

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
				HIGH SCHOOL	FEES/CO-ED TRACK		
					Totals for 82080		100.00
82081	SCHOOL SPECIALTY LLC	JPAP04	04/30/2021	CARRIE KOEHN CENTRAL SUPPLY	GENERAL FUND/CENTRAL SUPPLY ROOM/UNDIFFERENTIATED CURRICULUM	4002100237	26.86
82081	SCHOOL SPECIALTY LLC	JPAP04	04/30/2021	CARRIE KOEHN CENTRAL SUPPLY	GENERAL FUND/CENTRAL SUPPLY ROOM/UNDIFFERENTIATED CURRICULUM	4002100237	23.82
82081	SCHOOL SPECIALTY LLC	JPAP04	04/30/2021	CARRIE KOEHN CENTRAL SUPPLY	GENERAL FUND/CENTRAL SUPPLY ROOM/UNDIFFERENTIATED CURRICULUM	4002100246	18.45
82081	SCHOOL SPECIALTY LLC	JPAP04	04/30/2021	CARRIE KOEHN CENTRAL SUPPLY	GENERAL FUND/CENTRAL SUPPLY ROOM/UNDIFFERENTIATED CURRICULUM	4002100246	13.91
					Totals for 82081		83.04
82082	SKYWARD, INC	JPAP04	04/30/2021	ELECTRONIC SIGNATURE PRINT DRIVER	GENERAL FUND/PERSONAL SERVICES/GENERAL ADMINISTRATION	0	200.00
					Totals for 82082		200.00
82085	TIERNEY	JPAP04	04/30/2021	CHROMEBOOKS	GENERAL FUND/NON-CAPITAL TECH HARDWARE/INSTRUCTION RELATED TECHNOLOGY	0	9,874.97
					Totals for 82085		9,874.97
82087	WITTENBERG-BIRNAMWOO	JPAP04	04/30/2021	VARSITY TRACK MEET ON 5/3/21 @ WITTENBERG-BIRNAMWOOD HIGH SCHOOL	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	100.00
					Totals for 82087		100.00
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	CARRIE KOEHN WRISTBANDS AND TAPE FOR GRADUATION	GENERAL FUND/CENTRAL SUPPLY ROOM/UNDIFFERENTIATED CURRICULUM	4002100262	28.14
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	CLASSROOM MATERIALS	SPECIAL EDUCATION FUND/NON-CAPITAL EQUIPMENT/MULTI-CATEGORICAL	272100061	59.87
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	Co-ed Track	GENERAL FUND/NON-CAPITAL EQUIPMENT/CO-ED TRACK	4002100231	154.69
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	RITA GIPP FLASH DRIVES FOR SENIOR VIDEO	GENERAL FUND/GENERAL SUPPLIES/BUSINESS OCCUPATIONS	4002100253	190.39
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	Gorilla Cart for Track	GENERAL FUND/NON-CAPITAL EQUIPMENT/CO-ED TRACK	4002100249	86.99
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	CLASSROOM MATERIALS	SPECIAL EDUCATION FUND/GENERAL	272100061	88.06

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
					SUPPLIES/MULTI-CATEGORICAL		
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	CLASSROOM MATERIALS	SPECIAL EDUCATION FUND/INSTRUCTIONAL MEDIA/MULTI-CATEGORICAL	272100061	95.61
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	CLASSROOM MATERIALS	SPECIAL EDUCATION FUND/NON-CAPITAL EQUIPMENT/MULTI-CATEGORICAL	272100061	114.48
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	SANDY CORDES CLASSROOM SUPPLIES	GENERAL FUND/NON-CAPITAL EQUIPMENT/AGRICULTURE	4002100258	60.00
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	Medical supplies for sports	GENERAL FUND/MEDICAL SUPPLIES/GENERAL ATHLETICS	4002100250	256.24
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	Co-ed Track	GENERAL FUND/NON-CAPITAL EQUIPMENT/CO-ED TRACK	4002100231	230.80
82088	AMAZON CAPITAL SERVI	JPAP05	05/06/2021	white Rustoleum Paint for Field prep	GENERAL FUND/GENERAL SUPPLIES/GENERAL ATHLETICS	4002100255	187.12
					Totals for 82088		1,552.39
82089	APPLE COMPUTER INC.	JPAP05	05/06/2021	Two iPads for the special education department. This purchase was requested by Ms. Brauer.	SPECIAL EDUCATION FUND/NON-CAPITAL TECH HARDWARE/MULTI-CATEGORICAL	272100059	598.00
					Totals for 82089		598.00
82090	CASH	JPAP05	05/06/2021	REIMBURSE MES PETTY CASH	GENERAL FUND/GENERAL SUPPLIES/OFFICE OF THE PRINCIPAL	0	118.84
82090	CASH	JPAP05	05/06/2021	REIMBURSE MES PETTY CASH	Special Revenue Trust Fund/GENERAL SUPPLIES/GUIDANCE	0	41.00
					Totals for 82090		159.84
82091	GOLD CROSS AMBULANCE	JPAP05	05/06/2021	CPR training for trainers	GENERAL FUND/PERSONAL SERVICES/INSTRUCTIONAL STAFF TRAINING	8002100071	180.00
82091	GOLD CROSS AMBULANCE	JPAP05	05/06/2021	CPR training for trainers	GENERAL FUND/OTHER NON-CAPITOL OBJECTS/INSTRUCTIONAL STAFF TRAINING	8002100071	310.00
82091	GOLD CROSS AMBULANCE	JPAP05	05/06/2021	CPR training for trainers	GENERAL FUND/TEXTBOOKS & WORKBOOKS/HEALTH EDUCATION	8002100071	20.00
					Totals for 82091		510.00
82092	GRIFFIN, SAMANTHA	JPAP05	05/06/2021	REIMBURSE TRACK ATHLETIC FEE FOR CHEYENNE GRIFFIN	COMMUNITY SERVICE FUND/COMMUNITY	0	15.00

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
					SERVICE FEES/DISTRICT WIDE		
					Totals for 82092		15.00
82093	HARGARTEN, PETER	JPAP05	05/06/2021	CARRIE GRUMAN STAGE COMBAT (THEATRE)	GENERAL FUND/PERSONAL SERVICES/VOCAL MUSIC	4002100260	250.00
					Totals for 82093		250.00
82094	INSTRUMENTALIST AWAR	JPAP05	05/06/2021	AUSTIN ROHAN INSTRUMENTAL AWARDS	GENERAL FUND/NON-CAPITAL EQUIPMENT/INSTRUMENTAL MUSIC	4002100215	130.50
					Totals for 82094		130.50
82096	NORTH EASTERN WISCON	JPAP05	05/06/2021	Occupational Therapist - monthly bill	SPECIAL EDUCATION FUND/PERSONAL SERVICES/OCCUPATIONAL THERAPY	272100045	1,012.07
82096	NORTH EASTERN WISCON	JPAP05	05/06/2021	Occupational Therapist - monthly bill	SPECIAL EDUCATION FUND/PERSONAL SERVICES/OCCUPATIONAL THERAPY	272100045	84.43
					Totals for 82096		1,096.50
82097	SCHOOL SPECIALTY LLC	JPAP05	05/06/2021	ART SUPPLIES	GENERAL FUND/GENERAL SUPPLIES/ART SHOW	1012100115	96.48
					Totals for 82097		96.48
82098	TWEET-GAROT MECHANIC	JPAP05	05/06/2021	FILTER PURCHASE	GENERAL FUND/GENERAL SUPPLIES/OPERATION	0	4,395.87
					Totals for 82098		4,395.87
82100	VALLEY SCREENPRINT I	JPAP05	05/06/2021	AUSTIN ROHAN ALTERNATE UNIFORM POLOS	GENERAL FUND/APPAREL (Instructional only)/INSTRUMENTAL MUSIC	4002100233	445.20
					Totals for 82100		445.20
82101	WISCONSIN SCHOOL MUS	JPAP05	05/06/2021	CARRIE GRUMAN SOLO & ENSEMBLE - CHOIR PORTION	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/VOCAL MUSIC	4002100261	39.80
					Totals for 82101		39.80
82102	WITTENBERG-BIRNAMWOO	JPAP05	05/06/2021	VARSITY TRACK MEET ON 5/10/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	100.00
82102	WITTENBERG-BIRNAMWOO	JPAP05	05/06/2021	MS TRACK MEET ON 5/13/21	GENERAL FUND/DUES & FEES MEMBRSHIP/FT FEES/CO-ED TRACK	0	75.00
					Totals for 82102		175.00
82103	ENGELHARDT DAIRY OF	JPAP05	05/10/2021	MES MILK	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	184.73
82103	ENGELHARDT DAIRY OF	JPAP05	05/10/2021	MES MILK	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	322.45
82103	ENGELHARDT DAIRY OF	JPAP05	05/10/2021	LWJSHS DAIRY PRODUCTS	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	148.98

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
82103	ENGELHARDT DAIRY OF	JPAP05	05/10/2021	LWJSHS DAIRY PRODUCTS	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	179.20
					Totals for 82103		835.36
82104	PAN-O-GOLD BAKING	JPAP05	05/10/2021	BREAD PRODUCTS	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	69.87
					Totals for 82104		69.87
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/CENTRAL SUPPLY ROOM/FOOD SERVICES	0	-40.00
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/CENTRAL SUPPLY ROOM/FOOD SERVICES	0	158.19
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	1,314.88
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/GENERAL SUPPLIES/OPERATION	0	624.60
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/FOOD/FOOD SERVICES	0	1,193.02
82106	REINHART FOOD SERVIC	JPAP05	05/10/2021	FOOD AND NON-FOOD SUPPLIES	FOOD SERVICE FUND/GENERAL SUPPLIES/OPERATION	0	275.79
					Totals for 82106		3,526.48
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	GENERAL FUND/WI RETIREMENT FUND	0	9,277.46
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/WI RETIREMENT FUND	0	1,722.14
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	FOOD SERVICE FUND/WI RETIREMENT FUND	0	414.12
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	GENERAL FUND/WI RETIREMENT FUND	0	9,277.46
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/WI RETIREMENT FUND	0	1,722.14
202000234	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	FOOD SERVICE FUND/WI RETIREMENT FUND	0	414.12
					Totals for 202000234		22,827.44
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	GENERAL FUND/WI RETIREMENT FUND	0	9,152.90
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/WI RETIREMENT FUND	0	1,373.97
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	FOOD SERVICE FUND/WI RETIREMENT FUND	0	273.66
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	GENERAL FUND/WI RETIREMENT FUND	0	9,152.90
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/WI RETIREMENT	0	1,373.97

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
					FUND		
202000244	WISCONSIN RETIREMENT	MARCH	04/30/2021	Payroll accrual	FOOD SERVICE FUND/WI RETIREMENT FUND	0	273.66
					Totals for 202000244		21,601.06
202000257	EMPLOYEE BENEFITS CO	JPWI04	04/30/2021	HRA & BESTFLEX PLAN ADMIN FEES	GENERAL FUND/DISTRICT FEES / BANKING FEE/FISCAL	0	126.50
					Totals for 202000257		126.50
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FICA (SOCIAL SECURITY)	0	7,831.91
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FICA (SOCIAL SECURITY)	0	1,300.20
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/FICA (SOCIAL SECURITY)	0	319.77
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FICA (SOCIAL SECURITY)	0	1,831.66
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FICA (SOCIAL SECURITY)	0	304.08
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/FICA (SOCIAL SECURITY)	0	74.78
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FEDERAL INCOME TAX	0	442.00
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FEDERAL INCOME TAX	0	41.24
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FEDERAL INCOME TAX	0	5.50
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FEDERAL INCOME TAX	0	11.00
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FEDERAL INCOME TAX	0	9,544.51
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FEDERAL INCOME TAX	0	1,048.83
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/FEDERAL INCOME TAX	0	144.05
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FICA (SOCIAL SECURITY)	0	1,831.66
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FICA (SOCIAL SECURITY)	0	304.08
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/FICA (SOCIAL SECURITY)	0	74.78
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	GENERAL FUND/FICA	0	7,831.91

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
					(SOCIAL SECURITY)		
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/FICA (SOCIAL SECURITY)	0	1,300.20
202000264	INTERNAL REVENUE SER	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/FICA (SOCIAL SECURITY)	0	319.77
					Totals for 202000264		34,561.93
202000265	MASSMUTUAL FINANCIAL	P9	04/30/2021	Payroll accrual	GENERAL FUND/HARTFORD INS - TSA/ROTH	0	50.00
					Totals for 202000265		50.00
202000266	WEA TAX SHELTERED AN	P9	04/30/2021	Payroll accrual	GENERAL FUND/WEA TRUST - TSA/ROTH	0	100.00
202000266	WEA TAX SHELTERED AN	P9	04/30/2021	Payroll accrual	GENERAL FUND/WEA TRUST - TSA/ROTH	0	500.00
					Totals for 202000266		600.00
202000267	WISCONSIN DEPT OF RE	P9	04/30/2021	Payroll accrual	GENERAL FUND/STATE INCOME TAX	0	80.00
202000267	WISCONSIN DEPT OF RE	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/STATE INCOME TAX	0	5.00
202000267	WISCONSIN DEPT OF RE	P9	04/30/2021	Payroll accrual	GENERAL FUND/STATE INCOME TAX	0	6,040.01
202000267	WISCONSIN DEPT OF RE	P9	04/30/2021	Payroll accrual	SPECIAL EDUCATION FUND/STATE INCOME TAX	0	726.84
202000267	WISCONSIN DEPT OF RE	P9	04/30/2021	Payroll accrual	FOOD SERVICE FUND/STATE INCOME TAX	0	124.98
					Totals for 202000267		6,976.83
202000269	WEA MEMBER BENEFIT T	P9	04/30/2021	Payroll accrual	GENERAL FUND/WEA TRUST ADVANTAGE	0	40.00
					Totals for 202000269		40.00
202000270	DELTA DENTAL OF WISC	JPWI04	04/28/2021	DENTAL CLAIMS & ADMINISTRATION	GENERAL FUND/SELF FUND-EMPLOYER SHARE PREMI	0	3,262.61
					Totals for 202000270		3,262.61
202100190	DRATH, RONALD	JPAP04	04/30/2021	VARSITY BASEBALL OFFICIAL ON 4/27/21 VS BOWLER	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	80.00
					Totals for 202100190		80.00
202100191	UJAZDOWSKI, LUANNE	JPAP04	04/30/2021	PBIS ITEMS	GENERAL FUND/GENERAL SUPPLIES/OFFICE OF THE PRINCIPAL	1012100135	95.00
					Totals for 202100191		95.00
202100192	DALLMAN, WILLIAM	JPAP05	05/04/2021	VARSITY SOFTBALL OFFICIAL ON 4/27/21 VS BOWLER	GENERAL FUND/PERSONAL SERVICES/GIRLS SOFTBALL	0	70.00
					Totals for 202100192		70.00
202100193	ROLOFF, ROBERT	JPAP05	05/04/2021	VARSITY SOFTBALL OFFICIAL ON 4/27/21 VS BOWLER	GENERAL FUND/PERSONAL SERVICES/GIRLS	0	70.00

CHECK NUMBER	VENDOR	BATCH NUMBER	CHECK DATE	INVOICE DESCRIPTION	ACCOUNT DESCRIPTION	PO NUMBER	AMOUNT
					SOFTBALL		
					Totals for 202100193		70.00
202100194	BEYER, ALAN	JPAP05	05/05/2021	MS TRACK OFFICIAL ON 5/4/21 AT MANAWA	COMMUNITY SERVICE FUND/PERSONAL SERVICES/OTHER COMMUNITY SERVICES	0	100.00
					Totals for 202100194		100.00
202100195	HERZOG, ROBERT	JPAP05	05/06/2021	VARSITY BASEBALL OFFICIAL ON 4/27/21 VS BOWLER	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	80.00
					Totals for 202100195		80.00
202100196	RODENCAL, DOUGLAS	JPAP05	05/06/2021	MS TRACK OFFICIAL ON 5/4/21	COMMUNITY SERVICE FUND/PERSONAL SERVICES/OTHER COMMUNITY SERVICES	0	100.00
					Totals for 202100196		100.00
202100197	DRATH, ANTHONY	JPAP05	05/10/2021	JV BASEBALL OFFICIAL ON 5/9/21 VS AMHERST	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	70.00
					Totals for 202100197		70.00
202100198	DRATH, RONALD	JPAP05	05/10/2021	VARSITY BASEBALL OFFICIAL ON5/6/21 VS GRESHAM	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	80.00
202100198	DRATH, RONALD	JPAP05	05/10/2021	JV BASEBALL OFFICIAL ON 5/7/21 VS AMHERST	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	70.00
					Totals for 202100198		150.00
202100199	ROSICKY, MARK	JPAP05	05/10/2021	VARSITY BASEBALL OFFICIAL ON 5/6/21 VS GRESHAM	GENERAL FUND/PERSONAL SERVICES/BOYS BASEBALL	0	80.00
					Totals for 202100199		80.00
					Totals for checks		133,225.18

F U N D   S U M M A R Y

FUND	DESCRIPTION	BALANCE SHEET	REVENUE	EXPENSE	TOTAL
10	GENERAL FUND	76,469.99	0.00	36,347.58	112,817.57
21	Special Revenue Trust Fund	0.00	0.00	41.00	41.00
27	SPECIAL EDUCATION FUND	11,233.69	0.00	2,052.52	13,286.21
50	FOOD SERVICE FUND	2,433.69	0.00	4,431.71	6,865.40
80	COMMUNITY SERVICE FUND	0.00	15.00	200.00	215.00
*** Fund Summary Totals ***		90,137.37	15.00	43,072.81	133,225.18

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*********************** End of report ***********************
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Name	Reference	Trans Date	Description	Post Date	Amount
		04/01/2021	MES FOOD SEVICE FOR WEEK OF 3/29-4/1	04/01/2021	100.00
			Totals for 15148		100.00
		04/01/2021	DHS FORWARD HEALTH	04/01/2021	4,748.98
			Totals for 15149		4,748.98
		04/01/2021	J FRAZIER COBRA PAYMENT	04/01/2021	844.04
			Totals for 15150		844.04
		04/01/2021	J FRAZIER COBRA PAYMENT	04/01/2021	130.96
			Totals for 15151		130.96
		04/01/2021	MES YEARBOOK DEPOSIT	04/01/2021	297.25
			Totals for 15152		297.25
		04/01/2021	MS ATHLETICS	04/01/2021	15.00
			Totals for 15154		15.00
		04/01/2021	HS ATHLETICS	04/01/2021	165.00
			Totals for 15155		165.00
		04/01/2021	ART RESALE	04/01/2021	42.50
			Totals for 15156		42.50
		04/01/2021	DISTRICT STUDENT FEE	04/01/2021	85.00
			Totals for 15157		85.00
		04/01/2021	LYCEUM FEE	04/01/2021	2.00
			Totals for 15158		2.00
		04/01/2021	NEWSPAPER FEE	04/01/2021	1.00
			Totals for 15159		1.00
		04/01/2021	STUDENT FINES	04/01/2021	5.00
			Totals for 15160		5.00
		04/01/2021	PARKING FEE	04/01/2021	15.00
			Totals for 15161		15.00
		04/01/2021	STUDENT PASS	04/01/2021	5.00
			Totals for 15162		5.00
		04/01/2021	HS YEARBOOK	04/01/2021	273.00
			Totals for 15163		273.00
		04/01/2021	CHROMEBOOK CHARGE	04/01/2021	50.00
			Totals for 15164		50.00
		04/01/2021	CAPP ENGLISH CLASS FEE	04/01/2021	600.00
			Totals for 15165		600.00
		04/01/2021	CLASS OF 2021	04/01/2021	15.00
			Totals for 15166		15.00
		04/01/2021	CLASS OF 2021	04/01/2021	5.00
			Totals for 15167		5.00
		04/01/2021	HS FOOD SERVICE	04/01/2021	731.95
			Totals for 15168		731.95
		04/01/2021	HS FOOD SERVICE	04/01/2021	1,110.00
			Totals for 15169		1,110.00
		04/01/2021	DC TRIP	04/01/2021	1,369.00
			Totals for 15170		1,369.00
		04/01/2021	MS ATHLETIC FEE	04/01/2021	75.00
			Totals for 15171		75.00
		04/01/2021	DISTRICT FEE	04/01/2021	30.00
			Totals for 15172		30.00
		04/01/2021	STUDENT PASS	04/01/2021	5.00
			Totals for 15173		5.00
		04/01/2021	MS YEARBOOK	04/01/2021	84.00
			Totals for 15174		84.00
		04/01/2021	CLASS FEE	04/01/2021	10.00

Name	Reference	Trans Date	Description	Post Date	Amount
			Totals for 15175		10.00
		04/01/2021	CLASS FEE	04/01/2021	7.50
			Totals for 15176		7.50
		04/01/2021	DC TRIP	04/01/2021	3,845.00
			Totals for 15177		3,845.00
		04/01/2021	MS TRACK FEES	04/01/2021	60.00
			Totals for 15178		60.00
		04/01/2021	INTEREST ACCT WORK PERMITS	04/01/2021	10.00
			Totals for 15179		10.00
		04/09/2021	MES FOOD SEVICE FOR WEEK OF 4/2-4/9	04/09/2021	341.50
			Totals for 15147		341.50
		04/09/2021	MES YEARBOOK DEPOSIT	04/09/2021	114.50
			Totals for 15153		114.50
		04/09/2021	FOOD SERVICE DEPOSIT FOR 3/31-4/9	04/09/2021	184.00
			Totals for 15180		184.00
		04/15/2021	LOTTERY CREDIT FROM WAUPACA COUNTY	04/15/2021	117,137.16
			Totals for 15185		117,137.16
		04/16/2021	MES YEARBOOK	04/16/2021	13.50
			Totals for 15181		13.50
		04/16/2021	FOOD SERVICE DEPOSIT MES	04/16/2021	56.00
			Totals for 15186		56.00
		04/16/2021	TO PAY FOR CATERING FROM STUDENT ACTIVIT	04/16/2021	494.95
			Totals for 15187		494.95
		04/16/2021	S KELLER DENTAL	04/16/2021	50.89
			Totals for 15188		50.89
		04/16/2021	S KELLER VISION	04/16/2021	4.65
			Totals for 15189		4.65
		04/16/2021	A MILLARD-FERG TO REIMBURSE DISTRICT FOR	04/16/2021	45.00
			Totals for 15190		45.00
		04/16/2021	PAYMENT FOR APUSH TEST - O'BRIEN	04/16/2021	94.00
			Totals for 15191		94.00
		04/16/2021	PEPSI REBATE CHECK FOR TEACHER ACCOUNT	04/16/2021	63.64
			Totals for 15192		63.64
		04/16/2021	CLASS OF 2021	04/16/2021	351.00
			Totals for 15193		351.00
		04/16/2021	ST PAUL ATHLETIC FEES	04/16/2021	210.00
			Totals for 15194		210.00
		04/16/2021	FOOD SERVICE DEPOSIT FOR WEEK OF 4/12-16	04/16/2021	742.75
			Totals for 15195		742.75
		04/19/2021	ESSER I PAYMENT THRU DEC 31, 2020	04/19/2021	29,447.14
			Totals for 15182		29,447.14
		04/19/2021	GEER PAYMENT THRU DEC 31, 2020	04/19/2021	36,868.56
			Totals for 15183		36,868.56
		04/19/2021	GEER PAYMENT THRU DEC 31, 2020	04/19/2021	9,646.59
			Totals for 15184		9,646.59
			Total for Cash Receipts		210,603.01

F U N D   S U M M A R Y

FUND	DESCRIPTION	BALANCE SHEET	REVENUE	EXPENSE	TOTAL
10	GENERAL FUND	1,030.54	184,973.00	45.00	186,048.54
27	SPECIAL EDUCATION FUND	0.00	4,748.98	0.00	4,748.98
50	FOOD SERVICE FUND	3,266.20	10,141.54	0.00	13,407.74
60	HS - ACTIVITY ACCOUNT	5,612.50	0.00	0.00	5,612.50
62	ES - ACTIVITY ACCOUNT	425.25	0.00	0.00	425.25
80	COMMUNITY SERVICE FUND	0.00	360.00	0.00	360.00
*** Fund Summary Totals ***		10,334.49	200,223.52	45.00	210,603.01

*********************** End of report ***********************

CREDIT CARD STATEMENT - April

Date	Vendor	Amount	Fund	E	Location	Object	Function	Project	Description
						WUFAR Code			
Dan Wolfgram									
3/22/2021	MENARDS E-COMMERCE	$604.72	10	E	400	440	136000	000	DAN KOEHLER - SUPPLIES
3/23/2001	WISCONSIN FOOTBALL	350.00	10	E	400	310	162201	000	JENNY BESSETTE - FOOTBALL COACHES CLINIC
		$55.00	10	E	400	940	162201	000	JENNY BESSETTE - FOOTBALL COACHES CLINIC
3/24/2021	WFSCA	$40.00	10	E	400	940	162103	000	AUSTIN ROHAN - HEAD COACH MEMBERSHIP
3/25/2021	TEAMSNAP	$13.99	10	E	400	940	162103	000	AUSTIN ROHAN - SOFTBALL SUBSCRIPTION
3/26/2021	JOANN STORES	$89.55	10	E	400	411	121000	000	NANCY ZABLER - SUPPLIES
4/2/2021	HARBOR FREIGHT	$60.81	10	E	400	440	121000	000	NANCY ZABLER - SUPPLIES
4/2/2021	WAYFAIR	$279.99	21	E	800	561	131000	669	SANDY CORDES - SUPPLIES
4/4/2021	HARBOR FREIGHT	$91.68	10	E	400	440	121000	000	NANCY ZABLER - SUPPLIES
4/12/2021	UW OSHKOSH	$40.00	10	E	400	310	241000	000	DAN WOLFGRAM - CAREER FAIR
	TOTAL	**$1,275.74**							
Bryant Cobarrubias									
03/28/2021	Windhostcom	$35.85	10	E	800	360	295000	000	Software service - Rtl hosting
04/05/2021	Facebook	$25.00	10	E	800	360	295000	000	Software service - Rtl hosting
04/06/2021	CDWG	$260.54	10	E	400	440	295000	000	2x Computer monitors
04/08/2021	CDWG	$2,175.02	10	E	400	581	295000	000	Samsung QN85Q60TAF Q60T Series - 85" Class (84.5" viewable) LED-backlit LCD
04/12/2021	Freshworks	$720.00	10	E	800	360	295000	000	Helpdesk software
04/15/2021	CDWG	$756.55	10	E	400	581	295000	000	Dell OptiPlex 3080 - micro - Core i5 10500T 2.3 GHz - 8 GB - SSD 256 GB
	TOTAL	**$3,972.96**							
Danni Brauer									
3/27/21	ReMarkable	$629.82	10	E	101	581	241000	0	Digital Notepad
	TOTAL	**$629.82**							
Department Card									
4/2/21	Indeed	**$132.59**	10	E	800	310	264200	0	Renewal for recruitment of employees
	TOTAL	**$132.59**							
Melanine Oppor									
4/6/21	Mountain View	$149.99	10	E	800	360	232100	0	Boomerang
	TOTAL	**$149.99**							

Fwd: Letter of resignation

Carmen O'Brien <cobrien@manawaschools.org>   Wed, May 5, 2021 at 4:33 PM
To: Melanie Oppor <moppor@manawaschools.org>

---------- Forwarded message ---------
From: **Brenda Suehs** <bsuehs@manawaschools.org>
Date: Wed, May 5, 2021 at 4:16 PM
Subject: Fwd: Letter of resignation
To: Carmen O'Brien <cobrien@manawaschools.org>

---------- Forwarded message ---------
From: **Jennie Beyer** <jbeyer@manawaschools.org>
Date: Tue, May 4, 2021, 2:03 PM
Subject: Letter of resignation
To: Brenda Suehs <bsuehs@manawaschools.org>

To whom it may concern, this is Jennie Beyer and I regret to inform you that I will not be able to work next year for the 2021/2022 year. I would be able to work on Mondays, Tuesdays and Thursdays if needed. If you can't find someone to work next year for this position I'm willing to work those days and those days only. I really don't want to resign but I absolutely can't work on Wednesday or Fridays anymore. So if possible I would be able to work those 3 days.
         Sincerely Jennie Beyer

--
Carmen O'Brien
Business Manager
School District of Manawa
Manawa, WI
cobrien@manawaschools.org
(920) 596-2525

We can't control the wind, but we can adjust the sails.

Students choosing to excel; realizing their strengths.

To: Dr. Melanie Oppor, Manawa Board of Education

Fr: Dan Wolfgram

Date: 5/14/2021

Re: Secondary Spanish Teacher Teacher Recommendation – Francisco Amparan

---

This memo is to recommend Mr. Francisco Amparan for the 1.0 FTE Spanish teaching position for the 2021-22 school year.

Mr. Amparan is currently employed at Trinity Episcopal School of Austin Texas. Previous places of employment include Phillips Exeter Academy in New Hampshire and the Grand Prairie School District in Texas. He has taught Spanish at the elementary and secondary level instructing beginning through advanced classes as well as working with native speakers. He brings 27 years of teaching experience to Manawa.

Mr. Amparan received his Bachelor of Applied Arts and Sciences in Education at Dallas Baptist University and has studied at the Universidad Internacional de Valencia, in Spain. Additionally, Mr. Amaparan has 18 credits towards a Master's Degree in Second Language Acquisition, a Reading Teacher Certification, and Bilingual-Bicultural Certification.

As a native speaker of Spanish, Mr. Amparan brings real-world experience to the classroom. His supervisor at Trinity Episcopal Shanna Weirs states, "He is warm and kind, and has high expectations for his students. Mr. Amparan regularly attends all school events to support his students outside of the classroom. He uses these experiences to create connections and integrate them into the classroom."

Mr. Amparan received the full endorsement of both the staff and administrative team interviews. Three candidates were interviewed in the first round, while two were moved forward to the administrative team interview.

School District of Manawa

Thank You!
To Our Sponsors
For Making
The 2021 School
Bus Driver
Appreciation
Week A Success!

KOBUSSEN BUSES LTD.

PROJECT BACKPACK
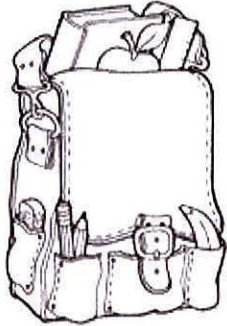
Dear Friends of Project Backpack,

Thank you for the support you have shown Project Backpack.!

2020/2021 school year marked the 11th year for Project Backpack. Each year brings its own opportunities and challenges. This year Project Backpack added a new school to support. Project Backpack now provides food to 11 schools in five school districts!!

2020/2021 school year threw us another curveball, but we didn't let the schools closing or food shortages get use down. We took the challenge head on and never missed a beat! We prayed for answers and we got them.

We are proud to say through your generosity and the help of over 100 volunteers Project Backpack was able to provide an average of 218 bags of food per week to students in need for the 2020/2021 school year! More specifically Project Backpack gave out 7,173 bags of food during the 2020/2021 school year. Project Backpack also delivered 72 boxes of Christmas Meals on December 19, 2020 and provided totes of snacks to Manawa Elementary School and to the Waupaca Learning Center for students in need.

Thank you for joining us in our mission:
"To stamp out hunger in area schools one student at a time".
We could not do this without your continued support!!

Jacci Peterson
Project Backpack Coordinator

Monthly Enrollment Count for SY2020-2021											
		3rd Fri					**2nd Fri**				
Grade	14-May-20	SEPT	OCT	NOV	DEC	JAN	JAN	FEB	MAR	APR	MAY
EC / Speech .5	11	2	2	3	4	4	4	4	4	4	4
4K .6	29	21	22	23	22	23	23	23	23	22	23
Kdg	39	30	30	30	30	30	30	31	31	32	32
1	28	35	35	35	35	35	34	34	33	33	33
2	52	25	26	26	26	25	25	27	27	25	28
3	31	57	57	57	57	58	58	58	57	57	57
4	35	32	32	32	31	31	30	31	32	32	32
5	54	31	32	31	30	30	30	30	30	29	29
6	39	49	50	50	50	50	50	49	49	49	49
7	38	40	40	40	40	39	39	38	38	36	34
8	53	40	40	40	39	39	39	39	39	40	40
9	59	60	59	59	60	60	60	60	60	60	60
10	52	60	60	60	60	60	60	59	59	58	59
11	61	54	53	53	53	53	53	53	53	52	50
12	53	63	64	64	64	63	63	63	63	64	64
Students Enrolled	634	599	602	603	601	600	598	599	598	593	594
Less OE IN (non-resident)	-22	-15	-15	-16	-16	-16	-16	-16	-16	-16	-16
Plus OE OUT (resident)	90	94	97	98	99	99	99	96	94	90	90
Less Tuition Sharing	-3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Students in CESA Program	1	2	2	2	1	2	2	2	2	2	2
Total Resident Count	**700**	**677**	683	684	683	682	680	678	675	668	669

Help us comply with state law, and to project future years' school enrollment. Please furnish the information requested. Thank you for your time.

Forms may be uploaded and sent to census@manawaschools.org or simply fill out, refold, tape & mail. Postage is paid!

PARENT/GUARDIAN #1 NAME

_____

_____

PARENT/GUARDIAN #2 NAME

_____

_____

ADDRESS

_____

PO BOX_____

CITY_____

TOWNSHIP_____

PHONE_____

CELL_____

CONCERNS REGARDING YOUR CHILD

_____

_____

_____

2021 CENSUS

Wisconsin State Law requires school districts to maintain a census of all residents of the school district from birth to 21 years of age.

**SIMPLY FILL OUT, REFOLD, TAPE & MAIL BY JUNE 31.
POSTAGE IS PAID!**

If you have any questions about this mailing, please call 596-2525.

MANAWA

CHILD LAST NAME	CHILD FIRST NAME	MI	DOB	AGE AS OF 6/30/2021	M/F/ NB	SCHOOL OF ATTENDANCE

SCHOOL DISTRICT OF MANAWA

800 BEECH ST.
MANAWA, WI 54949

School District of Manawa
Census
800 Beech Street
Manawa, WI 54949

2021
CENSUS

Please email
CENSUS@MANAWASCHOOLS.ORG

- If you have new neighbors.
- If you would like to be invited to school programs and community activities.

RETURN BY JUNE 31

INCLUDE ALL CHILDREN 21 YEARS AND YOUNGER IN YOUR HOUSEHOLD

TAPE TO SEAL HERE

To: Dr. Melanie J. Oppor, BOE
From: Danni Brauer
Date: 5/12/21
Re: May Update

- Forward and DLM assessments have been completed!! Students worked very hard on the assessments and were rewarded for their hard work with floats (rootbeer, orange, or grape).
- Classroom teachers began to choose Essential Standards for the area of Writing. There was a lively debate about how to best prepare students at each grade level. We are working really hard to ensure instruction is focusing on the skills that will make our students most successful.
- The team is finishing the organization of classroom schedules for next year. Schedules will prioritize time for instructional coaching, ELA, and Math instruction.
- A new bank of 8 swings has been ordered. I am working on scheduling excavating and wood chips. The wood chips on the playground now contain many larger pieces of wood including some sticks. This is a safety hazard. Schoolyard-grade wood chips are expensive so the plan is to upgrade the playing surface as we get new equipment.
- I am in the process of setting priorities for professional development for the 2021-22 school year at MES. Instructional coaching in the areas of ELA and Math will only be part of the plan. Teachers need time to be able to observe their teaching partners and teachers in other districts. I would also like to bring in experts for ELA and math throughout the school year to keep teachers' skills fresh and innovative.

To: Dr. Melanie Oppor, Manawa Board of Education
Fr: Dan Wolfgram, Principal Little Wolf HS, Manawa Middle School
Date: 5/12/2021
Re: Staff and Program Highlights - May 2021

ACT Aspire and Forward Testing Update: On Thursday, May 6, juniors and seniors were excused for in-person attendance so the ACT Aspire and Forward tests could be administered in the best possible testing environment. I am happy to report that the change in logistics enabled staff to proctor these assessments with minor challenges. Special thanks to Ms. Connolly for her organization and leadership. Make-up testing will continue through May 21 for those students who were absent. Advanced Placement (AP) tests will also be finished by Friday, May 14.

New Fitness Center Equipment: New equipment has arrived and is being utilized by students, staff, and the community. Pictured below is the most recent addition of a Peck-Deck.

       Peck-Deck:

School District of Manawa
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2525
Fax: (920) 596-5308

Little Wolf High School
Manawa Middle School
515 E. Fourth St
Manawa, WI 54949
Phone: (920) 596-2524
Fax: (920) 596-2655

Manawa Elementary
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2238
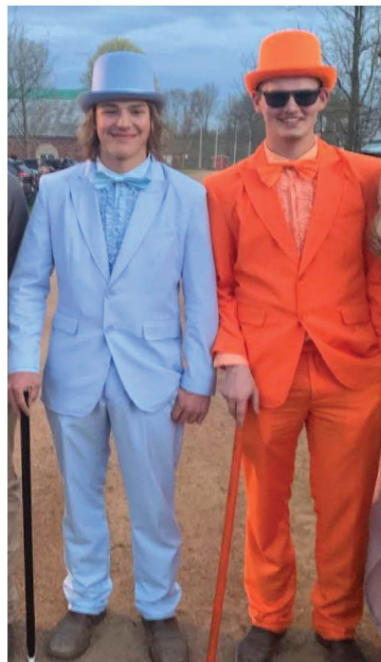Fax: (920) 596-5339

ManawaSchools.org

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🐦 / ManawaSchools

Accolades for Forensics Students: Congratulations to this year's Little Wolf Forensics Team. This year was especially challenging as the team competed virtually by submitting videos for asynchronous evaluation from judges in school districts across the state.

- Eight students performed as individuals in the categories of Informative Speech, Poetry, Prose, and Farrago. (a mix of different types of works)
- Seven students performed at State - Ethan Tellock and Reanne Mikkelson received perfect scores. and gold medals, Grade Tohm and Kate Phelan received silver medals, and Kayla Loughrin, Xochitl Grimm, and Connor Schaefer received bronze medals.

Thanks to Mrs. Konkol and Mrs. Sernau for their organization and leadership to provide these students with these opportunities this year!

Kudos to Music Students: Congratulations to Mr. Rohan and Ms. Gruman for facilitating this year's virtual solo and ensemble festival for music students. Students made recordings and were adjudicated by judges around the state. The extra effort to support these students is greatly appreciated! 14 instrumental students participated in the festival with two advancing to the state level. 22 vocal students participated with one advancing to the state level.

Senior Recognition Night: Thanks to the Manawa Lion's Club, Mrs. Gast, and Ms. Connolly for their sponsorship and organization of this year's Senior Recognition Night. The event took place on Sunday, May 2 in the Little Wolf High School Commons and was well-received. In lieu of having a meal, the Manawa Lion's Club sponsored a specialty cookie as a parting treat for all attendees. Thank you to the Scholarship Committee and the Manawa community for their ongoing philanthropy and generous scholarship opportunities for students. A grand total of $219,506 was awarded to seniors from both local scholarships and educational institutions.

Promcoming 2021: The 2020-2021 Promcoming, a fun blend of Prom and Homecoming, was celebrated at Little Wolf High School the week of April 26 - 30. The week concluded with the traditional dance held this year for the first time at the Union Thresheree Grounds in Symco on Saturday, May 1. Due to the Covid-19 pandemic, this year's Homecoming events were embedded as part of the weeklong celebration for students. The events included student dress-up days, Wednesday night games, eating contests, and the slip and slide experience. The freshman, sophomores, juniors, and seniors competed for points to win the cherished "spirit cup" trophy. This year's seniors emerged victorious by the end of the week.

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ManawaSchools.org

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To: Dr. Melanie Oppor
Fr: Dawn Millard
Date: 4/5/2021
Re: 2021-2022 Varsity Volleyball Head Coach

I am recommending Stephanie Steiger for the 2021-2022 Varsity Volleyball Head Coach position.

Name	Position	Information
Stephanie Steiger	Varsity Volleyball Head Coach	Ms. Steiger is a LWHS graduate who played volleyball from 7th-12th grade. She continued playing volleyball after graduating from high school at UW Fox for two years. She has also played in a recreational manner since then. She has had many coaching experiences including coaching club volleyball and the JV2 volleyball team in Manawa for two years. Her knowledge of volleyball is very extensive. Ms. Steiger knows how to build a good rapport with her players and communicates well with them and their parents, as well. Ms. Steiger understands the basic and advanced skills needed by volleyball players in order to be successful on the court. She is open to working with others to make sure that she will be providing the best all-around experience that she can to her players. She would be a great addition to our coaching staff in this AD's opinion. For all of these reasons, I am recommending her for this position.

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Students choosing to excel; realizing their strengths.

To:	Board of Education
From:	Carmen O'Brien
cc:	Dr. Melanie Oppor
Date:	5/10/2021
Re:	Business Office Monthly Update - May

This is the first year that I have been in charge of issuing contracts. Each employee group requires a different type of contract, issued at different times, with different information. Thus far, the following contracts, memoranda of understanding (MOUs) and letters of intent have been distributed.

Administration

All 2-year contract renewals were issued in March and have been returned.

Professional Teaching Staff

All contracts went out the beginning of April. The deadline to return them is June 15th.

Support Staff

12-month Staff – All MOUs were distributed the beginning of May. Staff have until June 15, 2021 to return their MOU for the 2021-22 school year.

School-year (9+ month) Staff – Letters of intent went out to this employee group. The letter states that the SDM intends to hire the employee at the start of the next school year. The employee is to sign and return a copy of the letter by June 15, 2021 as a statement of their intent to return to the SDM for the next school year.

Substitute Employees

Letters of intent went out to our substitute employees. The letter states that the SDM intends to employ these substitutes in the upcoming school year. A postage-paid envelope was supplied so that a copy of the signed letter could be returned to the SDM by June 15, 2021 indicating that they would like to remain on the substitute employee call list.

The next contracts to be issued will be summer school staff. Then, fall athletic coaches and other paid activities advisors require MOUs prior to the start of the season. School-year (9+ month) staff will receive their MOUs in August. Additionally, any new staff hired is issued a contract after BOE approval.

I participated in the Skyward Virtual Spring Conference. I attended ten sectionals over three days. This is part of my on-going professional development to keep learning new features in Skyward, the financial software that the SDM uses.

I had several meetings involving the District insurances this past month. I corresponded several times with Kathy Johnson, the WERMC Independent Risk Management Consultant. WERMC stand for Wisconsin Educators Risk Management Cooperative. This group of 54 school districts and CESAs collaboratively negotiate and purchase insurances specifically needed by educational organizations. A Health, Dental, and Vision insurance meeting was held virtually with employees on May 6, 2021. This meeting was to review these benefit plans that begin on July 1, 2021. All employees were invited to attend and a recording of the meeting was posted on the district website in the human resources area of the staff section. I also met with the rep from Student Assurance, the company that the District purchases student insurance from and received renewal information.

Summer school starts in just a few weeks and I met with our directors and Dr. Oppor about the program. Summer school plays an important part of our fiscal plan in that the District can count summer school as part of the student membership that factors in to the revenue limit calculation. The calculation is:

- 48,600 summer school minutes = 1 summer school full-time equivalent (FTE)
- 1 summer school FTE = 0.4 regular FTE

Therefore…

- 1 regular FTE = 72,900 summer school minutes
- 1 regular FTE = approximately $10,000

Summer School has provided the SDM with the following FTEs in the recent past:

Summer Year	FTEs
2020	4
2019	6
2018	7
2017	8
2016	8
2015	9

Declining enrollment and the pandemic has affected summer school attendance. I am hopeful for a big increase this summer with new programs and increased opportunities for our students planned.

May 6, 2021

April Transportation Report

Prepared For: School District of Manawa

To Whom it May Concern,

The month of April had 19 days of In-person learning and one day of Asynchronous learning. There were seven extra-curricular activity trips.

I have started to work with Carmen for the bus registration for the new school year. Not much has changed, just will offer an online option. This is still a work in process but will be nice once finished.

Bus rules continued to be enforced, as well as wearing face coverings. We are following CDC guidelines, which is face coverings are required on school buses. There has not been too much of an issue, but still have some that like to take off their face covering.

Bus evacuation drills were conducted in April. The drivers went over the procedure of what to do when there would be a fire, or any emergency on the bus. The students were taught how to use the two-way radio, emergency windows, roof hatch, and emergency door. They were also shown where the emergency equipment is located on the bus.

We have one new driver to welcome, Paul Olk. Paul will be driving extra-curricular events and serve as a substitute driver. He is excited to get behind the wheel!

If you know of anyone that would like to drive sports teams to their games, please send them our way!

If anyone has any questions, comments, or concerns, please do not hesitate to contact us: (920) 389-1500 or my email is: Jacob.elsner@kobussen.com

Thank you,

Jacob Elsner
Terminal Manager
Kobussen Buses LTD

Technology Board Report

May 13, 2021

Transition & Documentation

A major focus over the next few weeks is to organize technical documentation for my successor. Important passwords have already been preserved in a secure password manager.

Chromebook Program - Preparing for 2021-22

Our goal is to sort, clean, and label devices in June to help prepare them for the fall of 2021. There will be some work to do after registration as school rosters finalize. But, we hope to have most of the task complete in early summer.

Print Services Renewal

I recommended we renew our print services contract with EO Johnson during the May 11 finance committee meeting. The proposal by EO Johnson provided the most value. Over the last five years they have demonstrated excellent service.

Summer Purchasing

Planning is beginning for summer purchasing. We intend to order the standard equipment including teacher laptops, desktop computers, and display screens. Fall Chromebooks have already been purchased and have arrived.

<u>Minutes of a May 5, 2021 School District of Manawa Curriculum Committee Meeting</u>

The meeting began at 6:00 p.m.
Board Committee Members: Hollman (C), Jepson, J. Johnson
In Attendance: Hollman, Jepson, J. Johnson, Dr. Oppor, Mr. Wolfram, Mrs. Sernau, Mrs. O'Brien
Timer: Hollman
Recorder: J. Johnson

1. Consider Endorsement of Secondary Math Curriculum as Presented
   a. Seventh Grade Math
   b. Eighth Grade Math
   c. AP Calculus AB
   d. Precalculus & Trigonometry
   <u>Motion by</u> J. Johnson /Jepson to Recommend Endorsement of Secondary Math Curriculum to the full Board as Presented. Motion carried.

2. Consider Endorsement of Recommendation to Change from the Adopted Lucy Calkins's Phonics Units of Study for Grades 4K-2 to Really Great Reading as Presented.
   <u>Motion by</u> J. Johnson / Jepson to Recommend Endorsement of Really Great Reading as New Phonics Units of Study for Grades 4K-2 to the full Board as Presented. Motion carried.

3. Consider Endorsement of Pre-ACT (SY2021-22) and Mosaic Adaptive Academic Learning (SY2022 and beyond) to Replace the ACT Periodic as the Grades 9 & 10 Universal Screener as Presented
   <u>Motion by</u> J. Johnson / Jepson to Recommend Endorsement of Pre-ACT (SY 2021-22) and Mosaic Adaptive Academic Learning (SY 2022 and beyond) to Replace the ACT Periodic as the Grades 9 & 10 Universal Screener to the full Board as Presented. Motion carried.

4. Receive Presentation on 2021 ACT Results (Information): Informational
5. Future Academic Goals Planning (Information): Informational
6. Curriculum Committee Planning Guide - Informational
7. Next Meeting Date: June 1, 2020 6:00 p.m.
8. Next Meeting Items:
   a. Begin Annual Handbook Review (spread across June, July, & August)
   b. Consider Endorsement of the International Society for Technology in Education (ISTE) Scope & Sequence as Presented (Information / Action)
9. Adjourn -<u>Motion by</u> J. Johnson / Jepson to adjourn at 7:31 p.m.

<u>Minutes of a May 11, 2021 School District of Manawa Finance Committee Meeting</u>

The hybrid meeting began at 5:00 p.m.
Board Committee Members: Pethke (C), J. Johnson, R. Johnson
In Attendance: Pethke, J. Johnson, Carmen O'Brien, Dr. Melanie Oppor, and R. Johnson joined at 5:15 p.m.
Timer: Pethke   Recorder: J. Johnson

1. Consider endorsement of Printer and Support Services recommendation (Action <u>Motion by</u> J. Johnson / Pethke to Endorse the Printer and Support Services to EO Johnson to the full Board as Presented. Motion carried. R. Johnson absent.

   R. Johnson joined at 5:15 p.m.

2. Review of WERMC, WI Educators Risk Management Cooperative, insurance policies - Kathy Johnson, Independent Risk Management Consultant - Informational

3. Monthly Financial Summary - March - Informational

4. Executive Summary - Informational

5. Fund Balance Policy Review - Informational

6. Finance Committee Planning Guide - Informational

7. Next Finance Committee Meeting Date: June 8, 2021 6:00 p.m.

8. Next Finance Committee Items:
      1.
      2.
9. <u>Motion by</u> J. Johnson / R. Johnson to adjourn the meeting at 6:42 p.m.

<u>Minutes of a May 4, 2021 School District of Manawa</u>
<u>Buildings and Grounds Committee Meeting</u>

The meeting began at 6:00 p.m. at Manawa Elementary Board Room
Board Committee Members: R. Johnson (C), Griffin, Hollman
In Attendance: R. Johnson, Griffin, Hollman, Dr. Melanie Oppor
Timer / Recorder: R. Hollman

1. Review MS/HS Paving Project - Matt McGregor from Hoffman - Informational
2. Buildings & Grounds Budget Summary - Informational
3. Consider Remaining Funding in Operational Referendum for Green Space
    a. Dormant seeding
    b. Outdoor Classroom - picnic tables and/or benches
    TABLE remaining funding in Operational Referendum for Green Space until they have a
    better idea on how the space will be used.

4. Review Exterior Bleacher Installation Project
    a. Possible final use on Memorial Day weekend for graduation ceremony on
        May 29.
    b. Removal of old bleachers by volunteers on May 30 or 31.
    c. Concrete pad preparation and pouring beginning on June 1 and allowing for 2-3
        days for fast cure time.
    d. Southern Bleacher installation begins on June 28.
5. Review Gym Refinishing Project - Informational - Sanding and Seal will take place June
    18 & 19, 2021
6. Solar Customer Hosted Renewable Solutions Project Update - Informational
7. Pfefferle Project Update - Informational
8. Culligan MS/HS Water Softener Repairs - Informational
9. Consider Endorsement of MS/HS Gym Fans and Cages Replacement - about 6 weeks
    lead time. <u>Motion by</u> Hollman / Griffin to Endorse MS/HS Fans and Cages Replacement
    to Master Electric LLC to the full Board for a cost of $4,514

10. Buildings & Grounds Committee Planning Guide (Information)
11. Set Next Meeting Date: May 25, 2021 5:00 p.m.
12. Next Meeting Items:
    a. Consider Building a Storage Building for the MS/HS Property (Information /
        Action)
    b. MS/HS Gym Wall Mats (Information / Action)
13. Motion by Griffin / Hollman to Adjourn at 7:11 p.m.

<u>Minutes of a May 12, 2021 School District of Manawa</u>
<u>Policy and Human Resources Committee Meeting</u>

The hybrid meeting began at 6:01 p.m.
Board Committee Members: J. Johnson (C), Pethke, Reierson
In Attendance: J. Johnson, Pethke, Reierson, Dr. Melanie Oppor
Timer / Recorder: Pethke

1. Consider Endorsement of Summer School 2021 Staffing as Presented.
    <u>Motion by</u> Pethke /Reierson to endorse the Summer School Staffing as Presented.
    Motion carried.

2. Review CDC Outdoor Face Covering Updates Related to Districtwide Reopening Plan
    TABLED from 05-03-2021 BOE Meeting. <u>Motion by</u> Pethke / Reierson to approve the
    Outdoor Face Covering with the updated date of June 4, 2021 to the full board as
    presented.

3. Consider Endorsement of Summer School Mitigation Plan as Presented.
    <u>Motion by</u> Reierson / Pethke to endorse the Summer School Mitigation Plan with the
    addition of defining time to allow children to be unmasked during summer school
    activities and the encouragement that it is acceptable for those not comfortable removing
    masks to do so to the full board. Motion carried.

4. Consider Endorsement of HS Band Field Trips for Parades/Events as Presented.
    <u>Motion by</u> Pethke/Reierson endorse HS Band Field Trips for Parades/Events to the full
    board as presented. Motion carried.

5. Consider Endorsement of a School-sponsored Student Vaccination Clinic for Approved
    Age Groups - Informational

6. Consider Endorsement of Revised Policy 0165.1 - Notice of Regular Meetings.
    <u>Motion by</u> Reierson/Pethke to Adjust the Notice of Regular Meeting 0165.1 to include
    the information where the meeting is posted and removal of the Racine Journal to the
    full board. Motion carried.

7. Consider Endorsement of Waupaca County Shared Social Worker Position for the
    2021-22 School Year as Presented Tabled from 04-26-21 BOE Meeting.
    <u>Motion by</u> Pethke / Johnson to endorse the Waupaca County Shared Social Worker
    position for 2021-22 School Year to the full board as presented. Reierson opposed.
    Motion carried.

8. Review Policy 9130 - Public Request, Suggestions, or Complaint.
    <u>Motion by</u> Reierson/ Pethke to recommend Policy 9130 be brought forward to full board
    for review. Motion carried.

9. Review WI 118.03 / PO2510 - Adoption of Textbooks. <u>Motion by</u> Pethke / Reierson to table until June meeting. Motion carried.

10. Review WI 118.125 / PO8330 - Student Records - Informational

11. Discuss a Board of Education News Article for the Wolf Pack Express.
    Dr. Oppor will add to the next board meeting agenda for full board discussion.
    a. Schedule
    b. Topics
    c. Other

12. Discuss Board Goals/Key Performance Indicators -Information
    Staff and program highlights will be shared with the board on a monthly basis.

13. Policy & Human Resources Committee Planning Guide- Informational

14. Set Next Meeting Date: June 2, 2021 6:00 p.m.

15. Next Meeting Items:
    a. Begin SY2021-22 Handbook Updates (Information / Action)
    b.
16. <u>Motion by</u> Pethke / Reierson to adjourn at 8:49 p.m.

Course Name:	7th Grade Math		
Credits:			1
Prerequisites:	n/a		
Description:	The idea behind the 7th grade Math class is to introduced topics and build on the students' prior knowledge by investigating new number sets and adding new skills and malleability within those number sets. Topics in this course include: The Number System, Expressions and Equations, Ratios and Proportional Relationships, and Geometry.		
Academic Standards:	Wisconsin State Standards in Mathematics (2011)		

Units:	Unit Length:	Unit Standards:	Unit Outcomes:
Integers	25 days	7.NS.1A-D, 7.NS.2A-D, 7.NS.3	Use and justify rules of addition, subtraction, multiplication, and division of integers. Find the absolute values of integers. Add, subtract, multiply, and divide integers.
Rational Numbers	20 days	7.NS.1A-D, 7.NS.2A-D, 7.NS.3	Add, subtract, multiply and divide rational numbers. Apply properties of operations as strategies to perform operations with rational numbers. Convert a rational number to a decimal using division.
Expressions and Equations	25 days	7.EE.1, 7.EE.2, 7.EE.4A	Add, subtract, factor, and expand linear expressions with rational coefficients. Understand that rewriting expressions in different forms can show how the quantities are related. Write, graph, and solve one-step equations (including negative numbers). Solve two-step equations. Compare algebraic solutions to arithmetic solutions.
Inequalities	20 days	7.EE.4B	Solve one-step inequalities involving integers and rational numbers. Solve two-step inequalities. Graph one- and two-step inequalities.
Ratios and Proportions	20 days	7.RP.1, 7.RP.2A-D, 7.RP.3	Find unit rates associated with ratios of fractions, areas, and other quantities in like or different units. Decide whether two quantities are proportional using ratio tables. Identify the constant of proportionality (unit rate) in tables, equations, diagrams, and verbal descriptions. Represent proportional relationships with equations. Use proportionality to solve ratio problems.
Constructions	20 days	7.G.2, 7.G.5	Use supplementary, complementary, vertical, and adjacent angles. Draw geometric shapes with given conditions, focusing on triangles and quadrilaterals. Represent proportional relationships with equations. use proportionality to solve ratio problems.
Circles and Areas	16 days	7.G.4, 7.G.6	Understand pi and its estimates. Use values of pi to estimate and calculate the circumference and area of circles. Find perimeters and areas of composite two-dimensional figures, including semi-circles.
Surface Area	4 days	7.G.6	Solve problems involving surface areas of objects, including prisms.
Percents	16 days	7.EE.3, 7.RP3	Compare fractions, decimals, and percents. Use proportionality to solve percent problems. Use the percent equation.
Probability and Statistics	9 days	7.SP.5, 7.SP.7A, 7.SP.8A-B	Understand that probability is the likelihood of an event occuring, expressed as a number from zero to one.Develop probability models and use them to find probabilities. Find the probabilities of compound events.

Unit Name: Integers	Length: 25 days		
Standards: 7.NS.1A-D, 7.NS.2A-D, 7.NS.3	Outcomes: Use and justify rules of addition, subtraction, multiplication, and division of integers. Find the absolute values of integers. Add, subtract, multiply, and divide integers.		
Essential Questions: How can you use integers to represent the velocity and speed of an object? Is the sum of two integers positive, negative, or zero? How are adding integers and subtracting integers related? Is the product of two integers positive, negative, or zero? Is the quotient of two integers positive, negative, or zero?	Learning Targets: Define the absolute value of a number. Find the absolute values of numbers. Apply real-life situations. Add integers. Show that the sum of a number and its opposite is zero. Subtract integers. Multiply integers. Divide integers.		
Topic 1: Integers and Absolute Value	Length: 5 days		
Standard(s): 7.NS.1, 7.NS. 2, 7.NS.3	Academic Vocabulary: integer, absolute value		
Lesson Frame:	We will: Explore absolute value on a number line.		
	I will: Find absolute values of given integers.		
Lesson Frame:	We will: Investigate integers and absolute values.		
	I will: Compare values.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Adding Integers	Length: 5 days		
Standard(s): 7.NS.1A, 7.NS.1B, 7.NS.1D, 7.NS.3	Academic Vocabulary: opposites, additive inverse		
Lesson Frame:	We will: Demonstrate addition on a number line and with integer tiles.		
	I will: Add integers with the same sign.		
Lesson Frame:	We will: Practice addition on integers on a number line.		
	I will: Add integers with different signs.		
Lesson Frame:	We will: Discuss and review order of operations and properties of addition.		
	I will: Add more than two integers with varying signs.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Subtracting Integers	Length: 5 days		
Standard(s): 7.NS.1C, 7.NS.1D, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Explore what happens when subtracting integers using a number line and with integer tiles.		
	I will: Subtract integers.		
Lesson Frame:	We will: Evaluate expressions with subtraction.		
	I will: Subtract integers.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Multiplying Integers	Length: 5 days		
Standard(s): 7.NS.2A, 7.NS.2C, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review multiplication as an expression of repeated addition.		
	I will: Apply rules of integer addition.		
Lesson Frame:	We will: Investigate the signs of products using positive and negative numbers.		
	I will: Multiply integers with the same signs and with different signs.		
Lesson Frame:	We will: Explore the application of exponents to multiplication of integers.		
	I will: Evaluate expressions with exponents.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 5: Dividing Integers	Length: 5 days		
Standard(s): 7.NS.2B, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review the results of multiplying integers, with regard to product signs.		
	I will: Apply the same rules to quotient signs.		
Lesson Frame:	We will: Investigate the signs of quotients using positive and negative numbers.		
	I will: Divide integers with the same signs and with different signs.		
Lesson Frame:	We will: Review given values and substitution.		
	I will: Evaluate expressions with positive and negative integers.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Rational Numbers	Length: 20 days		
Standards: 7.NS.1A-D, 7.NS.2A-D, 7.NS.3	Outcomes: Add, subtract, multiply and divide rational numbers. Apply properties of operations as strategies to perform operations with rational numbers. Convert a rational number to a decimal using division.		
Essential Questions: How can you use a number line to order rational numbers? How can you use what you know about adding integers to add rational numbers? How can you use what you know about subtracting integers to subtract rational numbers? Why is the product of two negative rational numbers positive?	Learning Targets: Understand that a rational number is an integer divided by an integer. Convert rational numbers to decimals. Add rational numbers. Apply real-life situations. Subtract rational numbers. Multiply and divide rational numbers.		
Topic 1: Rational Numbers	Length: 5 days		
Standard(s): 7.NS.2B, 7.NS.2D	Academic Vocabulary: rational number, terminating decimal, repeating decimal		
Lesson Frame:	We will: Review converting fractions to decimals using division.		
	I will: Write rational numbers as decimals.		
Lesson Frame:	We will: Review place value and simplifying fractions.		
	I will: Write decimals as fractions.		
Lesson Frame:	We will: Explore using a number line to show number order.		
	I will: Order rational numbers on a number line.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Adding Rational Numbers	Length: 5 days		
Standard(s): 7.NS.1A, 7.NS.1B, 7.NS.1D, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review the sign rules for addition of integers.		
	I will: Add rational numbers.		
Lesson Frame:	We will: Review substitution, order of operations, and simplifying fractions.		
	I will: Evaluate expression with rational numbers.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Subtracting Rational Numbers	Length: 5 days		
Standard(s): 7.NS.1C, 7.NS.1D, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review the sign rules for subtraction of integers.		
	I will: Subtract rational numbers.		
Lesson Frame:	We will: Investigate using a number line to find distance.		
	I will: Find the distance between two numbers on a number line, and apply to real-life situations.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Multiplying and Dividing Rational Numbers	Length: 5 days		
Standard(s): 7.NS.2A, 7.NS.2B, 7.NS.2C, 7.NS.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review the sign rules for multiplication and division of integers.		
	I will: Divide rational numbers and Multiply rational numbers.		
Lesson Frame:	We will: Review properties of multiplication.		
	I will: Multiply more than two rational numbers, and apply to real-life situations.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Expressions and Equations	Length: 25 days		
Standards: 7.EE.1, 7.EE.2, 7.EE.4A	Outcomes: Add, subtract, factor, and expand linear expressions with rational coefficients. Understand that rewriting expressions in different forms can show how the quantities are related. Write, graph, and solve one-step equations (including negative numbers). Solve two-step equations. Compare algebraic solutions to arithmetic solutions.		
Essential Questions: How can you simplify an algebraic expression? How can you use algebra tiles to add or subtract algebraic expressions? How can you use algebra tiles to solve addition or subtraction equations? How can you use multiplication or division to solve equations? How can you use algebra tiles to solve a two-step equation?	Learning Targets: Apply properties of operations to simplify algebraic expressions. Apply properties of operations to add and subtract linear expressions. Write simple equations. Solve equations using addition or subtraction. Solve equations using multiplication or division. Apply real-life situations. Solve two-step equations.		
Topic 1: Algebraic Expressions	Length: 5 days		
Standard(s): 7.EE.1, 7.EE.2	Academic Vocabulary: like terms, simplest form, coefficient, variable, constant		
Lesson Frame:	We will: Discuss the parts that make up expressions and equations.		
	I will: Identify terms and like terms.		
Lesson Frame:	We will: Review order of operations and mathematical properties.		
	I will: Simplify an algebraic expression.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Adding and Subtracting Linear Expressions	Length: 5 days		
Standard(s): 7.EE.1, 7.EE.2	Academic Vocabulary: linear expression		
Lesson Frame:	We will: Explore the vertical and horizontal methods for finding the sum of expressions.		
	I will: Add linear expressions.		
Lesson Frame:	We will: Explore the vertical and horizontal methods for finding the difference of expressions.		
	I will: Subtract linear expressions.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Solving Equations Using Addition or Subtraction	Length: 5 days		
Standard(s): 7.EE.4A	Academic Vocabulary: equivalent equations		
Lesson Frame:	We will: Investigate the addition and subtraction properties of equality.		
	I will: Solve equations using properties of equality.		
Lesson Frame:	We will: Practice finding key words/phrases and numerical information in word sentences and word problems.		
	I will: Write an equation from a word sentence or word problem.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Solving Equations Using Multiplication or Division	Length: 5 days		
Standard(s): 7.EE.4A	Academic Vocabulary: reciprocal		
Lesson Frame:	We will: Investigate the multiplication and division properties of equality.		
	I will: Solve equations using properties of equality.		
Lesson Frame:	We will: Review using the multiplicative inverse property.		
	I will: Solve an equation using a reciprocal.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 5: Solving Two-Step Equations	Length: 5 days		
Standard(s): 7.EE.4A	Academic Vocabulary: n/a		
Lesson Frame:	We will: Discuss the steps needed to solve a two-step equation.		
	I will: Solve a two-step equation.		
Lesson Frame:	We will: Review like terms.		
	I will: Combine like terms before solving an equation.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Inequalities	Length: 20 days		
Standards: 7.EE.4B	Outcomes: Solve one-step inequalities involving integers and rational numbers. Solve two-step inequalities. Graph one- and two-step inequalities.		
Essential Questions: How can you use a number line to represent solutions of an inequality? How can you use addition or subtraction to solve an inequality? How can you use multiplication or division to solve an inequality?	Learning Targets: Write and graph inequalities. Use substitution to check whether a number is a solution of an inequality. Solve inequalities using addition or subtractions. Apply real-life situations. Solve inequalities using multiplication or division. Solve multi-step inequalities.		
Topic 1: Writing and Graphing Inequalities	Length: 5 days		
Standard(s): 7.EE.4B	Academic Vocabulary: inequality, solution of an inequality, solution set, graph of an inequality		
Lesson Frame:	We will: Review the inequality symbols and practice finding key words/phrases and numerical values in word sentences.		
	I will: Write an inequality.		
Lesson Frame:	We will: Explore using substitution to check possible answers.		
	I will: Check solutions to inequalities.		
Lesson Frame:	We will: Explore using a number line graph to visually show the possible solutions of an inequality.		
	I will: Graph an inequality.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Solving Inequalities Using Addition or Subtraction	Length: 5 days		
Standard(s): 7.EE.4B	Academic Vocabulary: properties of inequality		
Lesson Frame:	We will: Investigate using the addition property of inequality.		
	I will: Solve an inequality using addition.		
Lesson Frame:	We will: Practice using the subtraction property of inequality.		
	I will: Solve an inequality using subtraction.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Solving Inequalities Using Multiplication or Division	Length: 5 days		
Standard(s): 7.EE.4B	Academic Vocabulary: n/a		
Lesson Frame:	We will: Explore using multiplication and division properties of inequality with positive numbers.		
	I will: Solve an inequality using multiplication or division with positive numbers.		
Lesson Frame:	We will: Explore using multiplication and division properties of inequality with negative numbers.		
	I will: Solve an inequality using multiplication or division with negative numbers.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Solving Two-Step Inequalities	Length: 5 days		
Standard(s): 7.EE.4B	Academic Vocabulary: n/a		
Lesson Frame:	We will: Review steps and rules for solving two-step equations, and realize they are the same for two-step inequalities.		
	I will: Solve two-step inequalities.		
Lesson Frame:	We will: Interpret inequality graphs to decide the solutions.		
	I will: Graph an inequality.		
Lesson Frame:	We will: Explore situations in which inequalities are used and solved for solutions.		
	I will: Apply inequalities to real-life situations.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Ratios and Proportions	Length: 20 days		
Standards: 7.RP.1, 7.RP.2A-D, 7.RP.3	Outcomes: Find unit rates associated with ratios of fractions, areas, and other quantities in like or different units. Decide whether two quantities are proportional using ratio tables. Identify the constant of proportionality (unit rate) in tables, equations, diagrams, and verbal descriptions. Represent proportional relationships with equations. Use proportionality to solve ratio problems.		
Essential Questions: How do rates help you describe situations? How can proportions help you decide when things are "fair"? How can you write a proportion that solves a problem in real-life? How can you use ratio tables and cross products to solve proportions?	Learning Targets: Find ratios, rates, and unit rates. Find ratios and rates involving ratios of fractions. Use equivalent ratios to determine whether two ratios form a proportion. Use the Cross Products Property to determine whether two ratios form a proportion. Write proportions. Solve proportions. Solve proportions using multiplication or the Cross Products Property. Use a point on a graph to write and solve proportions.		
Topic 1: Ratios and Rates	Length: 5 days		
Standard(s): 7.RP.1, 7.RP.3	Academic Vocabulary: ratio, rate, unit rate, complex fraction		
Lesson Frame:	We will: Discuss the definitions and examples of ratio and rate.		
	I will: Find ratios and rates.		
Lesson Frame:	We will: Investigate ratio tables and graphs.		
	I will: Find a rate from a ratio table and a graph.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Proportions	Length: 5 days		
Standard(s): 7.RP.2A	Academic Vocabulary: proportion, proportional, cross products		
Lesson Frame:	We will: Investigate ratios as fractions.		
	I will: Determine whether two ratios form a proportion.		
Lesson Frame:	We will: Investigate ratios as fractions or complex fractions and by using substitution.		
	I will: Determine whether two quantities are proportional.		
Lesson Frame:	We will: Explore the Cross Products Property.		
	I will: Identify proportional relationships.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Writing Proportions	Length: 5 days		
Standard(s): 7.RP.2C, 7.RP.3	Academic Vocabulary: n/a		
Lesson Frame:	We will: Explore using tables, columns, or rows to formulate proportions.		
	I will: Write a proportion.		
Lesson Frame:	We will: Practice writing and solving proportions using mental math.		
	I will: Solve a simple proportion.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Solving Proportions	Length: 5 days		
Standard(s): 7.RP.2B, 7.RP.2C	Academic Vocabulary: n/a		
Lesson Frame:	We will: Discuss various methods to use when solving proportions.		
	I will: Solve proportions using multiplication.		
Lesson Frame:	We will: Practice using various methods to solve proportions.		
	I will: Solve proportions using the Cross Product Property.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Constructions	Length: 20 days		
Standards: 7.G.2, 7.G.5	Outcomes: Use supplementary, complementary, vertical, and adjacent angles. Draw geometric shapes with given conditions, focusing on triangles and quadrilaterals. Represent proportional relationships with equations. Use proportionality to solve ratio problems.		
Essential Questions: What can you conclude about the angles formed by two intersecting lines? How can you classify two angles as complementary or supplementary? How can you classify triangles? How can you classify quadrilaterals?	Learning Targets: Identify adjacent and vertical angles. Find angle measures using adjacent and vertical angles. Classify pairs of angles as complementary, supplementary, or neither. Find angle measures using complementary and supplementary angles. Understand that the sum of the angle measures of any triangle is 180 degrees. Find missing angle measures in triangles. Understand that the sum of the angle measures of any quadrilateral is 360 degrees. Find missing angle measures in quadrilaterals.		
Topic 1: Adjacent and Vertical Angles	Length: 5 days		
Standard(s): 7.G.5	Academic Vocabulary: adjacent angles, vertical angles, congruent angles		
Lesson Frame:	We will: Explore the requirements and characteristics of certain angles.		
	I will: Name angles.		
Lesson Frame:	We will: Investigate missing angle measures and use prior knowledge about angles.		
	I will: Identify adjacent or vertical angles and find the missing values associated with them.		
Lesson Frame:	We will: Practice using a protractor.		
	I will: Construct angles.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Complementary and Supplementary Angles	Length: 5 days		
Standard(s): 7.G.5	Academic Vocabulary: complementary angles, supplementary angles		
Lesson Frame:	We will: Discuss what complementary and supplementary angles are.		
	I will: Classify pairs of angles.		
Lesson Frame:	We will: Practice using the definitions of angles.		
	I will: Identify complementary and supplementary angles and solve for the missing value.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Triangles	Length: 5 days		
Standard(s): 7.G.2, 7.G.5	Academic Vocabulary: congruent sides		
Lesson Frame:	We will: Investigate different classifications of angles by their angle measures and side lengths.		
	I will: Classify triangles.		
Lesson Frame:	We will: Explore the idea of all triangles having the same interior angle measure sum.		
	I will: Find angle measures of triangles.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Quadrilaterals	Length: 5 days		
Standard(s): 7.G.2	Academic Vocabulary: quadrilateral, kite, rhombus, trapezoid, parallelogram		
Lesson Frame:	We will: Investigate the various properties of different 4-sided shapes.		
	I will: Classify quadrilaterals.		
Lesson Frame:	We will: Explore the concept of all interior angle measures of quadrilaterals the same sum.		
	I will: Find an angle measure of a quadrilateral.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Circles and Area	Length: 16 days		
Standards: 7.G.4, 7.G.6	Outcomes: Understand pi and its estimates. Use values of pi to estimate and calculate the circumference and area of circles. Find perimeters and areas of composite two-dimensional figures, including semi-circles.		
Essential Questions: How can you find the circumference of a circle? How can you find the perimeter of a composite figure? How can you find the area of a circle? How can you find the area of a composite figure?	Learning Targets: Describe a circle in terms of radius and diameter. Understand the concept of pi. Find circumference of circles and perimeters of semicircles. Find perimeters of composite figures. Find areas of circles and semicircles. Find areas of composite figures by separating them into familiar figures. Apply real-life situations.		
Topic 1: Circles and Circumference	Length: 4 days		
Standard(s): 7.G.4	Academic Vocabulary: circle, center, radius, diameter, circumference, pi, semicircle		
Lesson Frame:	We will: Discuss the structure of a circle and its components.		
	I will: Find a radius and a diameter.		
Lesson Frame:	We will: Investigate the formula for distance around a circle.		
	I will: Find circumference of circles.		
Lesson Frame:	We will: Explore adapting the circumference formula to be used for semicircles.		
	I will: Find the perimeter of a semicircle region.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Perimeters of Composite Figures	Length: 4 days		
Standard(s): 7.G.4	Academic Vocabulary: composite figure		
Lesson Frame:	We will: Investigate the makeup of composite figures.		
	I will: Estimate a perimeter using grid paper.		
Lesson Frame:	We will: Practice using formulas and substitution with composite figures.		
	I will: Find a perimeter.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Areas of Circles	Length: 4 days		
Standard(s): 7.G.4	Academic Vocabulary: n/a		
Lesson Frame:	We will: Discuss the area of a circle formula.		
	I will: Find areas of circles.		
Lesson Frame:	We will: Adapt the area of a circle formula.		
	I will: Find the area of a semicircle.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Area of Composite Figures	Length: 4 days		
Standard(s): 7.G.6	Academic Vocabulary: n/a		
Lesson Frame:	We will: Discuss and review prior knowledge about areas of circles and other 2D figures.		
	I will: Find an areas using grid paper.		
Lesson Frame:	We will: Practice using area formulas and substitution.		
	I will: Find areas of composite figures.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Surface Area	Length: 4 days		
Standards: 7.G.6	Outcomes: Solve problems involving surface areas of objects, including prisms.		
Essential Questions: How can you find the surface area of a prism?	Learning Targets: Use two-dimensional nets to represent three-dimensional solids. Find surface areas of rectangular and triangular prisms.		
Topic 1: Surface Area of Prisms	Length: 4 days		
Standard(s): 7.G.6	Academic Vocabulary: lateral surface area		
Lesson Frame:	We will: Discuss and create nets to display 3D objects in a 2D plane.		
	I will: Find the surface area of a rectangular and a triangular prism.		
Lesson Frame:	We will: Explore the rules and formula for surface area of a cube.		
	I will: Find the surface area of a cube.		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Percents	Length: 16 days
Standards: 7.EE.3, 7.RP3	Outcomes: Compare fractions, decimals, and percents. Use proportionality to solve percent problems. Use the percent equation.
Essential Questions: How does the decimal point move when you rewrite a percent as a decimal and when you rewrite a decimal as a percent? How can you order numbers that are written as fractions, decimals, and percents? How can you use models to estimate percent questions? How can you use an equivalent form of the percent proportion to solve a percent problem?	Learning Targets: Write percents as decimals. Write decimals as percents. Apply real-life situations. Compare and order fractions, decimals, and percents. Use the percent proportion to find parts, wholes, and percents. Use the percent equation to find parts, wholes, and percents.
Topic 1: Percents and Decimals	Length: 4 days
Standard(s): 7.EE.3	Academic Vocabulary: n/a
Lesson Frame:	We will: Review place-value to hundredths place, and review division by 100.
	I will: Write percents as decimals.
Lesson Frame:	We will: Discuss what happens when you multiply a decimal by 100.
	I will: Write decimals as percents.
Lesson Frame:	We will: Review reducing fractions.
	I will: Write a fraction as a percent and a decimal.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 2: Comparing and Ordering Fractions, Decimals, and Percents	Length: 4 days
Standard(s): 7.EE.3	Academic Vocabulary: n/a
Lesson Frame:	We will: Review using a number line to order values.
	I will: Compare fractions, decimals, and percents.
Lesson Frame:	We will: Explore situations in the real-world that use various representations of values.
	I will: Apply real-life situations.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 3: The Percent Proportion	Length: 4 days
Standard(s): 7.RP.3	Academic Vocabulary: n/a
Lesson Frame:	We will: Review percents as being a part of a whole, and discuss *is over of*.
	I will: Find a percent.
Lesson Frame:	We will: Review solving simple equations and writing proportional relationships.
	I will: Find a part or finding a whole.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 4: The Percent Equation	Length: 4 days
Standard(s): 7.RP.3, 7.EE.3	Academic Vocabulary: n/a
Lesson Frame:	We will: Explore the percent equation.
	I will: Find a part of a number.
Lesson Frame:	We will: Practice using the percent equation.
	I will: Find a percent.
Lesson Frame:	We will: Review estimation and checking for reasonableness.
	I will: Find a whole.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Probability and Statistics	Length: 9 days
Standards: 7.SP.5, 7.SP.7A, 7.SP.8A-B	Outcomes: Understand that probability is the likelihood of an event occuring, expressed as a number from zero to one.Develop probability models and use them to find probabilities. Find the probabilities of compound events.
Essential Questions: In an experiment, how can you determine the number of possible results? How can you describe the likelihood of an event? How can you find the number of possible outcomes of one or more events?	Learning Targets: Identify and count the outcomes of experiments. Understand the concept .of probability and the relationship between probability and likelihood. Find probabilities of events. Use tree diagrams, tables, or a formula to find the number of possible outcomes. Find probabilities of compound events.
Topic 1: Outcomes and Events	Length: 3 days
Standard(s): 7.SP.5	Academic Vocabulary: experiment, outcomes, event, favorable outcomes
Lesson Frame:	We will: Discuss what is involved in an experiment and define the terms.
	I will: Identify outcomes.
Lesson Frame:	We will: Explore further the possibilities and results an event can have.
	I will: Count outcomes.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 2: Probability	Length: 3 days
Standard(s): 7.SP.5, 7.SP.7A	Academic Vocabulary: probability
Lesson Frame:	We will: Investigate the parameters of probabilities and how they can be represented.
	I will: Describe the likelihood of an event.
Lesson Frame:	We will: Discuss the probability ratio.
	I will: Find and use a probability.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 3: Compound Events	Length: 3 days
Standard(s): 7.SP.8A, 7.SP.8B	Academic Vocabulary: sample space, Fundamental Counting Principle, compound event
Lesson Frame:	We will: Explore what a sample space is and how it can be represented.
	I will: Find a sample space.
Lesson Frame:	We will: Discuss the Fundamental Counting Principle.
	I will: Find the total number of possible outcomes.
Lesson Frame:	We will: Investigate compound events and how they can be represented.
	I will: Find the probability of a compound event.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Course Name:	8th Grade Math		
Credits:	1		
Prerequisites:	n/a		
Description:	The idea behind the 8th grade Math class is to revisit previously introduced topics and build on the students' understanding by adding new skills and look for deeper comprehension of the concept. Topics in this course include: The Number System, Expressions and Equations, Functions, Geometry, and Statistics and Probability.		
Academic Standards:	Wisconsin State Standards in Mathematics (2011)		

Units:	Unit Length:	Unit Standards:	Unit Outcomes:
Equations	15 days	8.EE.7A-B	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. Show that a linear equations in one variable has one solution, infinitely many solutions, or no solution by transforming the equation into simpler forms.
Transformations	26 days	8.G.1A-C, 8.G.2, 8.G.3, 8.G.4	Verify the properties of translations, reflections, and rotations. Describe translations, reflections, and rotations using coordinates. Identify dilations. Understand that figures are congruent (or similar) when they can be related by a sequence of translations, reflections, and rotations (and dilatations). Describe a sequence that exhibits congruence or similarity between two figures.
Angles and Triangles	20 days	8.G.5	Classify and determine the measure of angles created when parallel lines are cut by a transversal. Demonstrate that the sum of the interior angle measures of a triangle is 180 degrees and apply this fact to find the unknown measures of angles and the sum of the angles of polygons. Use similar triangles to solve problems that include height and distance.
Graphing and Writing Linear Equations	24 days	8.EE.5, 8.EE.6, 8.F.4	Use similar triangles to explain why the slope is the same between any two points on a line. Graph proportional relationships, interpreting the unit rate as the slope. Compare proportional relationships represented in different ways. Derive y = mx and y = mx +b.
Systems of Linear Equations	20 days	8.EE.7A-B, 8.EE.8A-C	Show that a linear equation in one variable has one solution, infinitely many solutions, or no solution by transforming the equation into simpler forms. Solve multi-step equations. Understanding that the solution of a system of two linear equations in two variables corresponds to the point of intersection of their graphs. Solve systems of two linear equations in two variables graphically and algebraically.
Functions	18 days	8.F,1, 8.F.2, 8.F.3, 8.F.4	Understand the definition of a function. Compare and write functions represented in different ways (words, tables, graphs). Understand that y = mx +b is a linear function and recognize nonlinear functions.
Real Numbers and the Pythagorean Theorem	21 days	8.NS.1, 8.NS.2, 8.EE.2, 8.G.6, 8.G.7, 8.G.8	Understand that every rational number has a decimal expansion that terminates or repeats. Understand that numbers that are not rational are irrational. Compare irrational numbers using rational approximations. Evaluate square roots and cube roots, including those resulting from solving equations. Use the Pythagorean Theorem to find missing measures of right triangles and distances between points in the coordinate plane.
Data Analysis and Displays	7 days	8.SP.1, 8.SP.2, 8.SP.3	Construct and interpret scatter plots. Find and assess lines of fit for scatter plots.
Exponents	15 days	8.EE.1	Use the properties of integer exponents to generate equivalent expressions.

Unit Name: Equations	Length: 15 days
Standards: 8.EE.7a-b	Outcomes: Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. Show that a linear equation in one variable has one solution, infinitely many solutions, or no solution by transforming the equation into simpler forms.
Essential Questions: How can you solve multi-step equations and check the reasonableness of your solution? How can you solve an equation that has variables on both sides? How can you use a formula for one measurement to write a formula for a different measurement?	Learning Targets: Solve simple equations using addition, subtraction, multiplication, or division. Use inverse operations to solve multi-step equations. Use the Distributive Property to solve multi-step equations. Solve equations with variables on both sides. Determine whether equations have no solution or infinitely many solutions. Rewrite equations to solve for one variable in terms of the other variable(s).
Topic 1: Solving Simple and Multi-Step Equations	Length: 7 days
Standard(s): 8.EE.7a, 8.EE.7b	Academic Vocabulary: inverse operations, addition property of equality, subtractions property of equality, multiplication property of equality, division property of equality
Lesson Frame:	We will: review what an equation is/has and what it means to get a solution
	I will: solve simple equations using addition, subtraction, multiplication, or division.
Lesson Frame:	We will: identify what inverse means and which operations are inverses of each other
	I will: use inverse operations to solve multi-step equations.
Lesson Frame:	We will: review what distributive property is
	I will: use the distributive property to solve multi-step equations.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 2: Solving Equations with Variables on Both Sides	Length: 5 days
Standard(s): 8.EE.7a, 8.EE.7b	Academic Vocabulary: variable term, constant term
Lesson Frame:	We will: review steps to solve complex equations
	I will: solve equations with variables on both sides.
Lesson Frame:	We will: investigate possible solution outcomes
	I will: determine whether equations have no solution or infinitely many solutions.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 3: Rewriting Equations and Formulas	Length: 3 days
Standard(s): 8.EE.7b	Academic Vocabulary: literal equation, formula
Lesson Frame:	We will: discuss how to solve for certain variables when more than one is present.
	I will: rewrite equations to solve for one variable in terms of the other variable(s).
Lesson Frame:	We will: review what a formula is
	I will: recognize that a formula is a type of literal equation and be able to rewrite formulas to solve for one variable in terms of the other
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Transformations	Length: 26 days
Standards: 8.G.1A-C, 8.G.2, 8.G.3, 8.G.4	Outcomes: Verify the properties of translations, reflections, and rotations. Describe translations, reflections, and rotations using coordinates. Identify dilations. Understand that figures are congruent (or similar) when they can be related by a sequence of translations, reflections, and rotations (and dilatations). Describe a sequence that exhibits congruence or similarity between two figures.
Essential Questions: How can you identify congruent figures? How can you arrange tiles to make a tessellation? How can you reflect an image? What are the three basic ways to move an object in a plane? How can you use proportions to help make various multimedia products? How do changes in dimensions of similar geometric figures affect the perimeters and the areas of the figures? What does it mean to enlarge or reduce a figure in the coordinate plane?	Learning Targets: name corresponding angles and corresponding sides of congruent figures. Identify congruent figures. Identify translations. Translate figures in the coordinate plane. Identify reflections. Reflect figures in the x-axis or the y-axis of the coordinate plane. Identify rotations. Rotate figures in the coordinate plane. Use more than one transformation to find images of figures. Name corresponding angles and corresponding sides of similar figures. Identify similar figures. Find unknown measures of similar figures. Understand the relationship between perimeters of similar figures. Understand the relationship between areas of similar figures. Find ratios of perimeters and areas for similar figures. Identify dilations. Use more than one transformation to find images of figures.
Topic 1: Congruent Figures	Length: 3 days
Standard(s): 8.G.2	Academic Vocabulary: congruent, congruent figures, corresponding angles, corresponding sides
Lesson Frame:	We will: discuss congruency and corresponding angles and sides.
	I will: name corresponding angles and corresponding sides of congruent figures.
Lesson Frame:	We will: explore the criteria of congruent figures
	I will: identify congruent figures.
Lesson Frame:	We will: examine how we can use known information of congruent figures to find missing measures
	I will: practice using congruent figures to find unknown measures
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 2: Translations	Length: 4 days
Standard(s): 8.G.1, 8.G.2, 8.G.3	Academic Vocabulary: transformation, image, translation
Lesson Frame:	We will: investigate what happens when a figure is translated
	I will: identify a translation
Lesson Frame:	We will: display a variety of ways to calculate a translation on a graph
	I will: translate figures in the coordinate plane.
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 3: Reflections	Length: 4 days
Standard(s): 8.G.1, 8.G.2, 8.G.3	Academic Vocabulary: reflection, line of reflection
Lesson Frame:	We will: discuss the characteristics of a mirror image
	I will: identify a reflection
Lesson Frame:	We will: investigate direction and quadrants resulting in a reflection in the x-axis
	I will: demonstrate a reflection in the x-axis
Lesson Frame:	We will: investigate direction and quadrants resulting in a reflection in the y-axis
	I will: demonstrate a reflection in the y-axis
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 4: Rotations	Length: 8 days
Standard(s): 8.G.1, 8.G.2, 8.G.3	Academic Vocabulary: rotation, center of rotation, angle of rotation
Lesson Frame:	We will: demonstrate the characteristics of a rotation
	I will: identify a rotation
Lesson Frame:	We will: practice different techniques to use in order to rotate a figure in the coordinate plane
	I will: be able to rotate a figure in two directions and at various degrees of rotation
Lesson Frame:	We will: discuss sequences of transformations that result in prime and double prime images
	I will: follow a sequence of transformations to end in the correct resulting image on the coordinate plane
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 5: Similar Figures	Length: 3 days
Standard(s): 8.G.4	Academic Vocabulary: similar figures
Lesson Frame:	We will: explore characteristics of similar figures
	I will: identify similar figures
Lesson Frame:	We will: discover how knowing some information of similar figures allows us to find missing information
	I will: use similar figures to find unknown measures
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 6: Perimeters and Areas of Similar Figures	Length: 3 days
Standard(s): 8.G.4	Academic Vocabulary: ratio, proportions
Lesson Frame:	We will: review the meaning and set-up of ratios in context of using perimeters and areas of similar figures
	I will: find the ratios of the perimeters and areas of similar figures
Lesson Frame:	We will: review what a proportion is and how it is written
	I will: use proportions to find perimeters and areas
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 7: Dilations	Length: 1 days
Standard(s): 8.G.3	Academic Vocabulary: dilation, center of dilation
Lesson Frame:	We will: discuss the concept of enlarging or reducing the size of a figure
	I will: identify a dilation
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Angles and Triangles	Length: 20 days		
Standards: 8.G.5	Outcomes: Classify and determine the measure of angles created when parallel lines are cut by a transversal. Demonstrate that the sum of the interior angle measures of a triangle is 180 degrees and apply this fact to find the unknown measures of angles and the sum of the angles of polygons. Use similar triangles to solve problems that include height and distance.		
Essential Questions: How can you describe angles formed by parallel lines and transversals? How can you describe the relationship among the angles of a triangle? How can you find the sum of the interior angle measures and the sum of the exterior angle measures of a polygon? How can you use angles to tell whether triangles are similar?	Learning Targets: identify the angles formed when parallel lines are cut by a transversal. Find the measures of angles formed when parallel lines are cut by a transversal. Understand that the sum of the interior angle measures of a triangle is 180 degrees. Find the measure s of interior and exterior angles of triangles. Find the sum of the interior angle measures of polygons. Understand that the sum of the exterior angle measures of a polygon is 360 degrees. Find the measures of interior and exterior angles of polygons. Understand the concept of similar triangles. Identify similar triangles. Use indirect measurement to find missing measures.		
Topic 1: Parallel Lines and Transversals	Length: 5 days		
Standard(s): 8.G.5	Academic Vocabulary: transversal, interior angles, exterior angles, alternate interior angles, alternate exterior angles		
Lesson Frame:	We will: review and discuss properties of parallel lines. Explore what occurs when a transversal cuts parallel lines.		
	I will: identify and find angle measures when two parallel lines are cut by a transversal		
Lesson Frame:	We will: review the characteristics and appearance of corresponding angles		
	I will: use corresponding angles to find missing measures		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Angles of Triangles	Length: 5 days		
Standard(s): 8.G.5	Academic Vocabulary: interior angles of a polygon, exterior angles of a polygon		
Lesson Frame:	We will: rediscover that all interior angle measure of a triangle must equal 180 degrees		
	I will: use interior angle measures of a triangle to find the missing angle measure(s)		
Lesson Frame:	We will: explore how the interior angle measures of a triangle are related to the exterior angle measure of a triangle		
	I will: use the exterior angle measures of a triangle formula to determine the measure of the exterior angle		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Angles of Polygons	Length: 5 days		
Standard(s): 8.G.5	Academic Vocabulary: polygon, convex, concave, regular polygon		
Lesson Frame:	We will: use our knowledge of triangles to determine the formula for finding the sum of the interior angle measures of any polygon		
	I will: find the sum of the interior angle measures of polygons		
Lesson Frame:	We will: explore what happens when we know some of the pieces of information, but not all information about the sides and angles of polygons		
	I will: use multiple steps in order to find a missing interior angle measure of a polygon		
Lesson Frame:	We will: discuss what occurs on the exterior of a polygon and how all exterior angles of a polygon add up to 360 degrees		
	I will: find the missing exterior angle measure(s) of a polygon		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Using Similar Triangles	Length: 5 days		
Standard(s): 8.G.5	Academic Vocabulary: indirect measurement		
Lesson Frame:	We will: explore what happens with the angles of two similar triangles		
	I will: identify similar triangles		
Lesson Frame:	We will: use real-world examples of when indirect measurement would be useful using similar triangles		
	I will: calculate the missing measure using indirect measurement		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Graphing and Writing Linear Equations	Length: 24 days
Standards: 8.EE.5, 8.EE.6, 8.F.4	Outcomes: Use similar triangles to explain why the slope is the same between any two points on a line. Graph proportional relationships, interpreting the unit rate as the slope. Compare proportional relationships represented in different ways. Derive y = mx and y = mx +b.
Essential Questions: How can you recognize a linear equation? How can you draw a linear equation's graph? How can you use the slope of a line to describe the line? How can you describe the graph of the equation y = mx? How can you describe the graph of the equation y = mx + b? How can you describe the graph of the equation ax + by = c? How can you write an equation of a line when you are given the slope and the y-intercept of the line?	Learning Targets: Understand that lines represent solutions of linear equations. Graph linear equations. Find slopes of lines by using two points. Find slopes of lines from tables. Identify parallel and perpendicular lines in the same plane. Write and graph proportional relationships. Find slopes and y-intercepts of graphs of linear equations. Graph linear equations written in slope-intercept form. Graph linear equations written in standard form. Write equations of lines in slope-intercept form.
Topic 1: Graphing Linear Equations	Length: 4 days
Standard(s): 8.EE.5	Academic Vocabulary: linear equation, solution
Lesson Frame:	We will: investigate equations written in y = mx + b form and apply substitution
	I will: graph a linear equation
Lesson Frame:	We will: discuss the circumstances that occur when given the equations y = a and x = b
	I will: graph a horizontal and a vertical line
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 2: Slope of a Line	Length: 4 days
Standard(s): 8.EE.6	Academic Vocabulary: slope, rise, run
Lesson Frame:	We will: explore different methods to determine the slope of a line
	I will: find the slope of a line
Lesson Frame:	We will: examine situations that involve horizontal lines and vertical lines
	I will: find the slope of a horizontal line and of a vertical line
Lesson Frame:	We will: practice using a table to investigate the data provided
	I will: find the slope from a table
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 3: Graphing Proportional Relationships	Length: 4 days
Standard(s): 8.EE.5, 8.EE.6	Academic Vocabulary: direct variation equation
Lesson Frame:	We will: discuss how proportional relationships can be displayed using an equation and its graph
	I will: graph a proportional relationship
Lesson Frame:	We will: practice how to use direct variation equations
	I will: write and use a direct variation equation
Lesson Frame:	We will: examine proportional relationships and use linear equations and graphs to compare
	I will: compare proportional relationships
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 4: Graphing Linear Equations in Slope-Intercept Form	Length: 4 days
Standard(s): 8.EE.6	Academic Vocabulary: x-intercept, y-intercept, slope-intercept form
Lesson Frame:	We will: explore what intercepts are and where they are located in slope-intercept form
	I will: identify slopes and y-intercepts
Lesson Frame:	We will: discuss how knowing slope-intercept form can result in graphing a line
	I will: graph a linear equation in slope-intercept form
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 5: Graphing Linear Equations in Standard Form	Length: 4 days
Standard(s): 8.EE.6	Academic Vocabulary: standard form
Lesson Frame:	We will: investigate the process of rewriting equations written in one form into another form to graph it
	I will: graph a linear equation in standard form
Lesson Frame:	We will: explore other methods for rewriting equations in order to graph them
	I will: graph a linear equation in standard form
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 6: Writing Equations in Slope-Intercept Form	Length: 4 days
Standard(s): 8.F.4	Academic Vocabulary: n/a
Lesson Frame:	We will: compile previous lessons to formulate an equation
	I will: write equations in slope-intercept form
Lesson Frame:	We will: practice reading the graph of a line and determine its equation
	I will: write an equation
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Systems of Linear Equations	Length: 20 days		
Standards: 8.EE.7A-B, 8.EE.8A-C	Outcomes: Show that a linear equation in one variable has one solution, infinitely many solutions, or no solution by transforming the equation into simpler forms. Solve multi-step equations. Understanding that the solution of a system of two linear equations in two variables corresponds to the point of intersection of their graphs. Solve systems of two linear equations in two variables graphically and algebraically.		
Essential Questions: How can you solve a system of linear equations? How can you use substitution to solve a system of linear equations? How can you use elimination to solve a system of linear equations? Can a system of linear equations have no solution? Can a system of linear equations have many solutions?	Learning Targets: Write and solve systems of linear equations by graphing. Write and solve systems of linear equations by substitution. Write and solve systems of linear equations by elimination. Solve systems of linear equations with no solution or infinitely many solutions. Solve real-life problems.		
Topic 1: Solving Systems of Linear Equations by Graphing	Length: 5 days		
Standard(s): 8.EE.8a-c	Academic Vocabulary: system of linear equations, solution of a system of linear equations		
Lesson Frame:	We will: explore what happens when we graph two linear equations in the same plane		
	I will: solve a system of linear equations by graphing		
Lesson Frame:	We will: review how to turn words and contextual clues into mathematical sentences (equations)		
	I will: practice writing real-world situations as equations and graphing the solution of the system of linear equations		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Solving Systems of Linear Equations by Substitution	Length: 5 days		
Standard(s): 8.EE.b-c	Academic Vocabulary: n/a		
Lesson Frame:	We will: revisit the concept of substitution and create a process for using in within a system of linear equations		
	I will: solve a system of linear equations by substitution		
Lesson Frame:	We will: explore how systems of linear equations can be used in everyday situations		
	I will: solve real-life problems by solving a system of linear equations by substitution		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Solving Systems of Linear Equations by Elimination	Length: 5 days		
Standard(s): 8.EE.8b-c	Academic Vocabulary: n/a		
Lesson Frame:	We will: investigate what elimination means and how we can use it when noticing similarities in a system of linear equations		
	I will: solve a system of linear equations by elimination		
Lesson Frame:	We will: explore when additional steps in the process of using elimination might be needed		
	I will: solve a system of linear equations by elimination		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Solving Special Systems of Linear Equations	Length: 5 days		
Standard(s): 8.EE.8a-c	Academic Vocabulary: infinite		
Lesson Frame:	We will: investigate systems of linear equations forming parallel lines on the graph or false algebraic statements		
	I will: solve a system of linear equations using two methods to show there is no solution		
Lesson Frame:	We will: investigate systems of linear equations forming only one line on the graph or true algebraic statements w/o a variable		
	I will: solve a system of linear equations using two methods to show there is infinitely many solutions		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Functions	Length: 18 days		
Standards: 8.F,1, 8.F.2, 8.F.3, 8.F.4	Outcomes: Understand the definition of a function. Compare and write functions represented in different ways (words, tables, graphs). Understand that y = mx +b is a linear function and recognize nonlinear functions.		
Essential Questions: How can you use a mapping diagram to show the relationship between two data sets? How can you represent a function in different ways? How can you use a function to describe a linear pattern? How can you recognize when a pattern in real life is linear or nonlinear?	Learning Targets: Define relations and functions. Determine whether relations are functions. Describe patterns in mapping diagrams. Write function rules. Use input-output tables to represent functions. Use graphs to represent functions. Understand that the equation y = mx + b defines a linear function. Write linear functions using graphs or tables. Compare linear functions. Identify linear or nonlinear functions from tables or graphs. Compare linear and nonlinear functions.		
Topic 1: Relations and Functions	Length: 4 days		
Standard(s): 8.F.1	Academic Vocabulary: inputs, outputs, relation, mapping diagram, function		
Lesson Frame:	We will: examine mapping diagrams and decipher information from them		
	I will: list the ordered pairs of a relation		
Lesson Frame:	We will: investigate mapping diagrams further for more specific results		
	I will: determine whether relations are functions		
Lesson Frame:	We will: practice reading mapping diagrams		
	I will: describe a mapping diagram		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 2: Representations of Functions	Length: 5 days		
Standard(s): 8.F.1	Academic Vocabulary: function rule		
Lesson Frame:	We will: explore what function rules are		
	I will: write function rules		
Lesson Frame:	We will: practice using algebraic and mathematical properties		
	I will: evaluate a function		
Lesson Frame:	We will: explore data representations of functions		
	I will: graph a function		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 3: Linear Functions	Length: 4 days		
Standard(s): 8.F.2, 8.F.3, 8.F.4	Academic Vocabulary: linear function		
Lesson Frame:	We will: review how to find the slope of a line by its graphed points and y-intercept		
	I will: write a linear function using a graph		
Lesson Frame:	We will: review how to find the slope of a line by its ordered pairs and y-intercept		
	I will: write a linear function using a table		
Lesson Frame:	We will: explore functions in various forms to make determinations about them		
	I will: compare linear functions to one another		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		
Topic 4: Comparing Linear and Nonlinear Functions	Length: 5 days		
Standard(s): 8.F.3	Academic Vocabulary: nonlinear function		
Lesson Frame:	We will: investigate x and y tables		
	I will: identify functions from tables		
Lesson Frame:	We will: interpret graphs		
	I will: identify functions from graphs		
Lesson Frame:	We will: examine various equations		
	I will: identify a nonlinear function		
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:		

Unit Name: Real Numbers and the Pythagorean Theorem	Length: 21 days
Standards: 8.NS.1, 8.NS.2, 8.EE.2, 8.G.6, 8.G.7, 8.G.8	Outcomes: Understand that every rational number has a decimal expansion that terminates or repeats. Understand that numbers that are not rational are irrational. Compare irrational numbers using rational approximations. Evaluate square roots and cube roots, including those resulting from solving equations. Use the Pythagorean Theorem to find missing measures of right triangles and distances between points in the coordinate plane.
Essential Questions: How can you find the dimensions of a square or circle when you are given its area? How is the cube root of a number different from the square root of a number? How are the lengths of the sides of a right triangle related? How can you find decimal approximations of square roots that are not rational?	Learning Targets: Find square roots of perfect squares. Evaluate expressions involving square roots. Use square roots to solve equations. Find cube roots of perfect cubes. Evaluate expressions involving cube roots. Use cube roots to solve equations. Provide geometric proof of the Pythagorean Theorem. Use the Pythagorean Theorem to find missing sides lengths of right triangles. Define irrational numbers. Approximate square roots.
Topic 1: Finding Square Roots	Length: 5 days
Standard(s): 8.EE.2	Academic Vocabulary: square root, perfect square, radical sign, radicand
Lesson Frame:	We will: discuss what square roots and perfect squares are
	I will: find the square roots of a perfect square
Lesson Frame:	We will: examine non-perfect squares
	I will: find square roots
Lesson Frame:	We will: practice and review simplifying expressions
	I will: evaluate expressions involving square roots
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 2: Finding Cube Roots	Length: 5 days
Standard(s): 8.EE.2	Academic Vocabulary: cube root, perfect cube
Lesson Frame:	We will: discuss what cube roots are
	I will: find cube roots
Lesson Frame:	We will: practice and review simplifying expressions
	I will: evaluate expressions involving cube roots
Lesson Frame:	We will: review evaluating expressions with given values
	I will: evaluate an algebraic expression
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 3: The Pythagorean Theorem	Length: 5 days
Standard(s): 8.EE.2, 8.G.6, 8.G.7, 8.G.8	Academic Vocabulary: theorem, legs, hypotenuse, Pythagorean Theorem
Lesson Frame:	We will: explore right triangles
	I will: find the length of a hypotenuse
Lesson Frame:	We will: practice using the Pythagorean Theorem
	I will: find the length of a leg
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Topic 4: Approximating Square Roots	Length: 6 days
Standard(s): 8.NS.1, 8.NS.2, 8.EE.2	Academic Vocabulary: irrational number, real number
Lesson Frame:	We will: explore the set of real numbers
	I will: classify real numbers
Lesson Frame:	We will: investigate square root values
	I will: approximate a square root
Lesson Frame:	We will: discuss and review number values on a number line
	I will: compare real numbers
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Data Analysis and Displays	Length: 7 days
Standards: 8.SP.1, 8.SP.2, 8.SP.3	Outcomes: Construct and interpret scatter plots. Find and assess lines of fit for scatter plots.
Essential Questions: How can you construct and interpret a scatter plot?	Learning Targets: Construct and interpret scatter plots. Describe patterns in scatter plots.
Topic 1: Scatter Plots	Length: 4 days
Standard(s): 8.SP.1	Academic Vocabulary: scatter plot, outliers, clusters
Lesson Frame:	We will: explore what scatter plots are and what they show
	I will: interpret a scatter plot
Lesson Frame:	We will: investigate date on a scatter plot
	I will: identify relationships
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 2: Lines of Fit	Length: 3 days
Standard(s): 8.SP.1, 8.SP.2, 8.SP.3	Academic Vocabulary: line of fit, line of best fit
Lesson Frame:	We will: revisit concepts of slope, y-intercepts, and linear equations
	I will: find a line of fit
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Unit Name: Exponents	Length: 15 days
Standards: 8.EE.1	Outcomes: Use the properties of integer exponents to generate equivalent expressions.
Essential Questions: How can you use exponents to write numbers? How can you use inductive reasoning to observe patterns and write general rules involving properties of exponents? How can you divide two powers that have the same base? How can you evaluate a nonzero number with an exponent of zero? How can you evaluate a nonzero number with a negative integer exponent?	Learning Targets: Write expressions using integer exponents. Evaluate expressions involving integer exponents. Multiply powers with the same base. Find a power of a power. Find a power of a product. Divide powers with the same base. Simplify expressions involving the quotient of powers. Evaluate expressions involving numbers with zero as an exponent. Evaluate expressions involving negative integer exponents.
Topic 1: Exponents	Length: 3 days
Standard(s): 8.EE.1	Academic Vocabulary: power, base, exponent
Lesson Frame:	We will: define exponents and display visual meaning
	I will: write expressions using exponents
Lesson Frame:	We will: discuss positive and negative expressions with exponents
	I will: evaluate expressions
Lesson Frame:	We will: review order of operations
	I will: use order of operations to evaluate expressions involving exponents
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 2: Product of Powers Property	Length: 4 days
Standard(s): 8.EE.1	Academic Vocabulary: product of powers property, power of a power property, power of a product property
Lesson Frame:	We will: explore the product of powers property
	I will: multiply powers with the same base
Lesson Frame:	We will: explore power of a power property
	I will: find a power of a power
Lesson Frame:	We will: explore power of a product property
	I will: find a power of a product
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 3: Quotient of Powers Property	Length: 4 days
Standard(s): 8.EE.1	Academic Vocabulary: quotient of powers property
Lesson Frame:	We will: explore quotient of powers property
	I will: divide powers with the same base
Lesson Frame:	We will: review order of operations and simplifying expressions with exponents
	I will: simplify an expression
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:
Topic 4: Zero and Negative Exponents	Length: 4 days
Standard(s): 8.EE.1	Academic Vocabulary: n/a
Lesson Frame:	We will: explore the use of zero and negative exponents
	I will: evaluate expressions using power properties and zero or negative exponents
Performance Tasks: any or all- exit tickets, assignments (various forms), quiz, test	Notes:

Course Name:	A.P. Calculus AB		
Credits:	1		
Prerequisites:	Pre-Calculus & Trigonometry (Recommended grade of B or better or by teacher approval)		
Description:	Equivalent to a first semester college calculus course. The basis of study includes limits and continuity, derivatives, integrals, and the applications. A TI-83 or TI-84 calculator is required. A TI-89 is not allowed.		
Academic Standards:	College Board Mathematical Practices for AP Calculus AB		
Units:	Unit Length:	Unit Standards:	Unit Outcomes:
Limits and Continuity	16 days	CHA 1-2B, Lim 1-2B, Lim 1-1E, Lim 1-1C, Lim 1-3C, Lim 1-2C, Lim 2-3D, Lim 2-2D, Lim 2-3B, Lim 2-3C, Lim 2-1E, Fun 1-3E, Cha 2-2B	Students will learn the concept of the limit in this unit. They will learn how to evaluate, notate and apply limits to real world applications. This unit will also explore rates of change and how to connect the limit to the following concept of the derivative.
Derivatives	35 days	Cha 2-1D, Cha 2-4C, Cha 2-1E, Fun 2-3E, Fun 3-1E, Cha 3-1E, Fun 3-1D, Fun 3-1C, Cha 3-2A	Students will learn how to take the derivative of various functions in this unit. They will also learn notation and begin investigating some uses of the derivative in real world applications.
Applications of Derivatives	24 days	Fun 1-3E, Fun 4-1E, Fun 4-2E, Fun 4-3D, Fun 4-2D, Fun 4-2A, Fun 4-3F, Cha 3-1F, Fun 4-1E, Fun 4-3E, Cha 3-1E, Cha 3-3F	Students will apply their knowledge of derivatives in this unit to solve real worlds problems. They will learn how derivatives relate to the graphs of functions and how tests can be used to picture important features of graphs.
The Definite Integral	19 days	Cha 4-4B, Lim 5-1F, Lim 5-2C, Fun 5-2D, Fun 5-1D, Fun 5-3D, Fun 5-3D, Fun 6-4C, Fun 6-1C	Students wil explore and learn about the definite integral. They will learn notation and properties of integrals and how the fundamental theorem of calculus makes a connection between derivative calculus and integral calculus.
Differential Equations and Mathematical Modeling	10 days	Fun 7-2C, Fun 7-3G, Fun 7-4D, Fun 6-1E, Fun 7-1E, Fun 7-3G	Students will get an introduction to differential equations in this unit. They will learn how antiderivatives can be used with various strategies to solve differential equations problems.
Applications of Definite Integrals	20 days	Cha 4-4B, Cha 4-3D, Cha 5-4C, Cha 5-1E, Cha 5-2B, Cha 5-3D, Cha 5-2D, Cha 5-4E, Cha 6-3D	Students will explore various applications of the definite integral in this unit. They will solve real world problems with rates of change and learn how the integral can be used to calculate geometric values such as area and volume.

Unit Name: Limits and Continuity	Length: 16 days
Standards: CHA 1-2B, Lim 1-2B, Lim 1-1E, Lim 1-1C, Lim 1-3C, Lim 1-2C, Lim 2-3D, Lim 2-2D, Lim 2-3B, Lim 2-3C, Lim 2-1E, Fun 1-3E, Cha 2-2B	**Outcomes:** Students will learn the concept of the limit in this unit. They will learn how to evaluate, notate and apply limits to real world applications. This unit will also explore rates of change and how to connect the limit to the following concept of the derivative.
Essential Questions: How do limits describe the behavior of a function? What are the strategies used to determine the limit of a function? What determines continuity and how can you find and describe discontinuities?	**Learning Targets:** Students will be able to: -Calculate average and intantaneous rates of change. -Calculate limits as x approaches positive or negative infinity. -Identify intervals on which a function is continuous. -Find the equation of a tangent and a normal line to a curve.
Topic 1: Rates of Change and Limits	Length: 4 days
Standard(s): CHA 1-2B, Lim 1-2B, Lim 1-1E, Lim 1-1C, Lim 1-3C, Lim 1-2C	Academic Vocabulary: Average Speed, Instantaneous Speed, Limit, One-Sided Limit, Two-Sided Limit, Sandwich Theorem
Lesson Frame:	We will explore the definition of a limit and how it can be used to find rates of change.
	I will calculate average and intantaneous rates of change.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Limits Involving Infinity	Length: 3 days
Standard(s): Lim 1-2B, Lim 1-1E, Lim 2-3D, Lim 2-2D	Academic Vocabulary: Infinite Limits, End Behavior Model
Lesson Frame:	We will investigate what happens at the end of a function.
	I will calculate limits as x approaches positive or negative infinity.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Continuity	Length: 3 days
Standard(s): Lim 2-3B, Lim 2-3C, Lim 2-1E, Fun 1-3E	Academic Vocabulary: Continuity, Continuous Function, Intermediate Value Theorem
Lesson Frame:	We will define continuity and the properties of continuous functions.
	I will identify intervals on which a function is continuous.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 4: Rates of Change and Tangent Lines	Length: 4 days
Standard(s): Cha 2-2B	Academic Vocabulary: Average Rate of Change, Tangent, Normal Line
Lesson Frame:	We will define a tangent line and discuss its relation to slope.
	I will find the equation of a tangent and a normal line to a curve.

Unit Name: Limits and Continuity	Length: 16 days
Standards: CHA 1-2B, Lim 1-2B, Lim 1-1E, Lim 1-1C, Lim 1-3C, Lim 1-2C, Lim 2-3D, Lim 2-2D, Lim 2-3B, Lim 2-3C, Lim 2-1E, Fun 1-3E, Cha 2-2B	**Outcomes:** Students will learn the concept of the limit in this unit. They will learn how to evaluate, notate and apply limits to real world applications. This unit will also explore rates of change and how to connect the limit to the following concept of the derivative.
Essential Questions: How do limits describe the behavior of a function? What are the strategies used to determine the limit of a function? What determines continuity and how can you find and describe discontinuities?	**Learning Targets:** Students will be able to: -Calculate average and intantaneous rates of change. -Calculate limits as x approaches positive or negative infinity. -Identify intervals on which a function is continuous. -Find the equation of a tangent and a normal line to a curve.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Derivatives	Length: 35 days
Standards: Cha 2-1D, Cha 2-4C, Cha 2-1E, Fun 2-3E, Fun 3-1E, Cha 3-1E, Fun 3-1D, Fun 3-1C, Cha 3-2A	**Outcomes:** Students will learn how to take the derivative of various functions in this unit. They will also learn notation and begin investigating some uses of the derivative in real world applications.
Essential Questions: How do you find the slope of a curve at an instantaneous point? How can you find the derivative of a function using the limit process? What rules allow you to find the derivative of a function without using the entire limit process?	**Learning Targets:** Students will be able to: - Calculate the slope of a function using the definition of a derivative. - Tell where a function is not differentiable. - Use the rules of differentiation to calculate a derivative. - Use derivatives to analyze straight line motion. - Use the rules of differentiation to calculate derivatives for the six basic trigonometric functions. - Differentiate a composite function. - Find the derivative of an implicitly defined function. - Calculate the derivative of an inverse trigonometric function. - Calculate the derivative of an exponential and a logarithmic function.
Topic 1: Derviative of a Function	Length: 3 days
Standard(s): Cha 2-1D, Cha 2-4C, Cha 2-1E, Fun 4-2D	Academic Vocabulary: Derivative, Derivative Notation
Lesson Frame:	We will define a derivative and practice writing notations for derivatives.
	I will calculate the slope of a function using the definition of a derivative.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 2: Differentiability	Length: 2 days
Standard(s): Fun 2-3E	Academic Vocabulary: Differentiable, Intermediate Value Theorem for Derivatives
Lesson Frame:	We will explore where functions fail to have derivatives.
	I will tell where a function is not differentiable.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 3: Rules for Differentiation	Length: 4 days
Standard(s): Fun 3-1E	Academic Vocabulary: Power Rule, Product Rule, Quotient Rule, Second Derivative
Lesson Frame:	We will define the basic shortcut rules for taking derivatives.
	I will use the rules of differentiation to calculate a derivative.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 4: Velocity and Other Rates of Change	Length: 4 days
Standard(s): Cha 3-1E, Cha 3-2A	Academic Vocabulary: Instantaneous Rate of Change, Velocity, Speed, Acceleration
Lesson Frame:	We will explore how derivatives tie into real worl applications of velocity and acceleration.
	I will use derivatives to analyze straight line motion.

Unit Name: Derivatives	Length: 35 days
Standards: Cha 2-1D, Cha 2-4C, Cha 2-1E, Fun 2-3E, Fun 3-1E, Cha 3-1E, Fun 3-1D, Fun 3-1C, Cha 3-2A	**Outcomes:** Students will learn how to take the derivative of various functions in this unit. They will also learn notation and begin investigating some uses of the derivative in real world applications.
Essential Questions: How do you find the slope of a curve at an instantaneous point? How can you find the derivative of a function using the limit process? What rules allow you to find the derivative of a function without using the entire limit process?	**Learning Targets:** Students will be able to: - Calculate the slope of a function using the definition of a derivative. - Tell where a function is not differentiable. - Use the rules of differentiation to calculate a derivative. - Use derivatives to analyze straight line motion. - Use the rules of differentiation to calculate derivatives for the six basic trigonometric functions. - Differentiate a composite function. - Find the derivative of an implicitly defined function. - Calculate the derivative of an inverse trigonometric function. - Calculate the derivative of an exponential and a logarithmic function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 5: Derivatives of Trigonometric Functions	Length: 3 days
Standard(s): Fun 3-1D	Academic Vocabulary: Harmonic Motion, Jerk
Lesson Frame:	We will define the rules for taking the derivative of basic trigonometric functions.
	I will use the rules of differentiation to calculate derivatives for the six basic trigonometric functions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 6: Chain Rule	Length: 3 days
Standard(s): Fun 3-1C	Academic Vocabulary: Chain Rule, Power Chain Rule
Lesson Frame:	We will investigate composite functions and how to use the chain rule to take the derivative.
	I will differentiate a composite function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 7: Implicit Differentiation	Length: 3 days
Standard(s): Fun 3-1E	Academic Vocabulary: Implicit Differentiation,
Lesson Frame:	We will investigate implicitly defined functions and learn to take derivatives of them.
	I will find the derivative of an implicitly defined function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 8: Derivatives of Inverse Trigonometric Functions	Length: 3 days
Standard(s): Fun 3-1E	Academic Vocabulary: Inverse Trigonometric Function

Unit Name: Derivatives	Length: 35 days
Standards: Cha 2-1D, Cha 2-4C, Cha 2-1E, Fun 2-3E, Fun 3-1E, Cha 3-1E, Fun 3-1D, Fun 3-1C, Cha 3-2A	Outcomes: Students will learn how to take the derivative of various functions in this unit. They will also learn notation and begin investigating some uses of the derivative in real world applications.
Essential Questions: How do you find the slope of a curve at an instantaneous point? How can you find the derivative of a function using the limit process? What rules allow you to find the derivative of a function without using the entire limit process?	Learning Targets: Students will be able to: - Calculate the slope of a function using the definition of a derivative. - Tell where a function is not differentiable. - Use the rules of differentiation to calculate a derivative. - Use derivatives to analyze straight line motion. - Use the rules of differentiation to calculate derivatives for the six basic trigonometric functions. - Differentiate a composite function. - Find the derivative of an implicitly defined function. - Calculate the derivative of an inverse trigonometric function. - Calculate the derivative of an exponential and a logarithmic function.
Lesson Frame:	We will derive a formula for taking the derivative of inverse trigonometric functions.
	I will calculate the derivative of an inverse trigonometric function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 9: Derivatives of Exponential and Logarithmic Functions	Length: 4 days
Standard(s): Fun 3-1E	Academic Vocabulary: Exponential Function, Logarithmic Function
Lesson Frame:	We will explore how derivatives can be used on logarithmic and exponential functions.
	I will calculate the derivative of an exponential and a logarithmic function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Applications of Derivatives	Length: 24 days		
Standards: Fun 1-3E, Fun 4-1E, Fun 4-2E, Fun 4-3D, Fun 4-2D, Fun 4-2A, Fun 4-3F, Cha 3-1F, Fun 4-1E, Fun 4-3E, Cha 3-1E, Cha 3-3F	**Outcomes:** Students will apply their knowledge of derivatives in this unit to solve real worlds problems. They will learn how derivatives relate to the graphs of functions and how tests can be used to picture important features of graphs.		
Essential Questions: How can the derivative be used to find key information on a graph of a function? How do you use the derivative to optimize a function? How do you use linearization and differentials to estimate values of a function?	**Learning Targets:** Students will be able to: -Determine the local and absolute extrema of a function. -Find the open intervals in which a function is increasing and decreasing. -Use the first derivative test to find local extrema of a function. -Solve an application problem that asks to find a minimum or maximum value. -Use a linearization to approximate the value of a square root value. -Solve a real world problem that involves multiple rates of change.		
Topic 1: Extreme Values of Functions	Length: 4 days		
Standard(s): Fun 1-3E, Fun 4-1E	Academic Vocabulary: Extreme Value, Extreme Value Theorem, Absolute Extreme, Local Extreme		
Lesson Frame:	We will define basic vocabulary for finding the highest and lowest points of a function.		
	I will determine the local and absolute extrema of a function.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 2: Mean Value Theorem	Length: 3 days		
Standard(s): Fun 1-3E, Fun 4-2E	Academic Vocabulary: Mean Value Theorem, Increasing Functions, Decreasing Functions		
Lesson Frame:	We will explore how derivatives can be used to find where functions are increasing or decreasing.		
	I will find the open intervals in which a function is increasing and decreasing.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 3: Connecting f' and f" with the Graph of f	Length: 4 days		
Standard(s): Fun 4-3D, Fun 4-2E, Fun 4-2D	Academic Vocabulary: First Derivative Test, Concavity, Points of Inflection, Second Derivative		
Lesson Frame:	We will learn how to use tests to make finding maximums and minimums easier.		
	I will use the first derivative test to find local extrema of a function.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 4: Optimization	Length: 4 days		
Standard(s): Fun 4-2A, Fun 4-3F	Academic Vocabulary: Optimization, Constraint, Objective Equation		
Lesson Frame:	We will learn the optimization process and how it can be used to find minimums and maximums.		
	I will solve an application problem that asks to find a minimum or maximum value.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 5: Linearizations and Differentials	Length: 3 days		
Standard(s): Cha 3-1F	Academic Vocabulary: Linear Approximation, Differential, Absolute Change, Relative Change, Percentage Change		
Lesson Frame:	We will explore how tangent lines and derivatives can be used in conjunction with estimation.		
	I will use a linearization to approximate the value of a square root value.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 6: Related Rates	Length: 4 days		
Standard(s): Fun 4-1E, Fun 4-3E, Cha 3-1E, Cha 3-3F	Academic Vocabulary: Related Rate Equation		
Lesson Frame:	We will explore problems that relate multiple rates of change and how derivatives can be used to solve them.		
	I will solve a real world problem that involves multiple rates of change.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		

Unit Name: The Definite Integral	Length: 19 days		
Standards: Cha 4-4B, Lim 5-1F, Lim 5-2C, Fun 5-2D, Fun 5-1D, Fun 5-3D, Fun 5-3D, Fun 6-4C, Fun 6-1C	Outcomes: Students wil explore and learn about the definite integral. They will learn notation and properties of integrals and how the fundamental theorem of calculus makes a connection between derivative calculus and integral calculus.		
Essential Questions: How does the definite integral connect to the concept of derivatives? How can you find the area under the curve of a function?	Learning Targets: Students will be able to: -Approximate the area under a curve using rectangles. -Use definite integral notation to expess the area under the curve. -Apply rules for definite integrals to find the average value of a function. -Apply the fundamental theorem of calculus to evaluate a definite integral. -Use trapezoids to estimate the area under the curve.		
Topic 1: Estimiting With Finite Sums	Length: 3 days		
Standard(s): Cha 4-4B, Lim 5-1F, Lim 5-2C	Academic Vocabulary: Distance, Rectangular Approximation Method		
Lesson Frame:	We will connect rates of change back to function values with area under the curve.		
	I will approximate the area under a curve using rectangles.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 2: Definite Integrals	Length: 3 days		
Standard(s): Fun 5-2D	Academic Vocabulary: Riemann Sums, Definite Integral		
Lesson Frame:	We will define a definite integral and learn the notation used to write them.		
	I will use definite integral notation to expess the area under the curve.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 3: Definite Integrals and Antiderivatives	Length: 4 days		
Standard(s): Fun 5-1D, Fun 5-3D	Academic Vocabulary: Average Value, Mean Value Theorem for Definite Integrals		
Lesson Frame:	We will learn the basic properties of definite integrals and how to apply them together.		
	I will apply rules for definite integrals to find the average value of a function.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 4: Fundamental Theorem of Calculus	Length: 4 days		
Standard(s): Fun 5-3D, Fun 6-4C, Fun 6-1C	Academic Vocabulary: Fundamental Theorem Part 1, Fundamental Theorem Part 2		
Lesson Frame:	We will connect derivatives to the antiderivative and learn how the processes can work together.		
	I will apply the fundamental theorem of calculus to evaluate a definite integral.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 5: Trapezoidal Rule	Length: 3 days		
Standard(s): Lim 5-1F	Academic Vocabulary: Trapezoidal Approximations		
Lesson Frame:	We will learn how to improve rectangular approximation methods using trapezoids.		
	I will use trapezoids to estimate the area under the curve.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		

Unit Name: Differential Equations and Mathematical Modeling	**Length:** 10 days
Standards: Fun 7-2C, Fun 7-3G, Fun 7-4D, Fun 6-1E, Fun 7-1E, Fun 7-3G	**Outcomes:** Students will get an introduction to differential equations in this unit. They will learn how antiderivatives can be used with various strategies to solve differential equations problems.
Essential Questions: How can antiderivatives be used to solve equations with derivatives in them? What techniques can be uesd to solve initial value problems?	**Learning Targets:** Students will be able to: -Solve an initial value problem using antiderivatives. -Compute an indefinite integral using u-substitution methods. -Use separation of variables to solve a differential equation.
Topic 1: Slope Fields and Differential Equations	Length: 3 days
Standard(s): Fun 7-2C, Fun 7-3G, Fun 7-4D	Academic Vocabulary: Differential Equations, Slope Fields
Lesson Frame:	We will define a differential equation and explore strategies to solve them.
	I will solve an initial value problem using antiderivatives.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Antidifferentiation by Substititution	Length: 3 days
Standard(s): Fun 6-1E	Academic Vocabulary: Indefinite Integrals, U-Substitution
Lesson Frame:	We will create a method for finding the antiderivative of a function that needs to use substitution.
	I will compute an indefinite integral using u-substitution methods.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Separable Differential Equations	Length: 2 days
Standard(s): Fun 7-1E, Fun 7-3G	Academic Vocabulary: Separable Differential Equation, Law of Exponential Change
Lesson Frame:	We will explore differential equations with both x and y on the same size and formalize a way to solve them.
	I will use separation of variables to solve a differential equation.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Applications of Definite Integrals	**Length:** 20 days
Standards: Cha 4-4B, Cha 4-3D, Cha 5-4C, Cha 5-1E, Cha 5-2B, Cha 5-3D, Cha 5-2D, Cha 5-4E, Cha 6-3D	**Outcomes:** Students will explore various applications of the definite integral in this unit. They will solve real world problems with rates of change and learn how the integral can be used to calculate geometric values such as area and volume.
Essential Questions: How can you use integrals to solve real world problems involving rates of change? How can you find the area between two curves in the plane? How can integrals be used to find volumes of solid objects?	**Learning Targets:** Students will be able to: -Integrate a rate of change function to find net change. -Use integration to find the area between two curves. -Use integration to calculate volumes of solids. -Use integration to calculate the length of a curve.
Topic 1: Integral as Net Change	Length: 3 days
Standard(s): Cha 4-4B, Cha 4-3D	Academic Vocabulary: Net Change, Consumption, Work
Lesson Frame:	We will investigate the connection of integrals and rates of change in real world problems.
	I will integrate a rate of change function to find net change.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Areas in the Plane	Length: 4 days
Standard(s): Cha 5-4C, Cha 5-1E, Cha 5-2B	Academic Vocabulary: Area Between Curves
Lesson Frame:	We will formalize techniques for finding the areas of shapes in the x-y plane.
	I will use integration to find the area between two curves.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Volumes of Solids	Length: 4 days
Standard(s): Cha 5-3D, Cha 5-2D, Cha 5-4E	Academic Vocabulary: Cross Section, Volume of Revolution, Disk Method, Shell Method
Lesson Frame:	We will explore how integrals can be used to find the volume of 3 dimensional objects.
	I will use integration to calculate volumes of solids.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 4: Lengths of Curves	Length: 3 days
Standard(s): Cha 6-3D	Academic Vocabulary: Sine Wave, Arc Length
Lesson Frame:	We will explore how integrals can be used to find the length of curves.
	I will use integration to calculate the length of a curve.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Course Name:	Pre-Calculus & Trigonometry		
Credits:	1		
Prerequisites:	Advanced Algebra (Recommended grade of C or better or by teacher approval)		
Description:	Prepares students for college mathematics. The basic structure of this course is built around the study of functions, their properties, graphs and applications in society. Functions included in this course: linear, polynomial, rational, trigonometric, exponential and logarithmic. Also included in this course is the study of polar coordinates and complex numbers, sequences and series, and probability. The purchase of a graphing calculator is highly recommended for this course. A TI-83 or TI-84 calculator is required.		
Academic Standards:	Wisconsin State Standards in Mathematics (2011)		
Units:	Unit Length:	Unit Standards:	Unit Outcomes:
Functions and Graphs	26 days	HSFBFB3, HSF.IF.A.2, HSF.IF.A.1, HSF.IF.C.8.A,HSF.BF.B.3, HSA-CED.A.2, HSF-BF.A.1a, HSF-LE.A.1b, HSF-LE.A.2, HSF.IF.C.7.B, HSF.IF.C.7.B, HSF.BF.A.1.C, HSF.BF.B.4	Students will use the information in this unit to be able to graph and analyze various types of functions. Students will learn how to describe key aspects of a function and rewrite equations of functions.
Polynomial and Rational Functions	24 days	HSA-SSE.A.2, HSA-SSE.B.3a, HSA.APR.D.6, HSA.APR.A.1, HSA.REI.B.4, HSA.APR.B.2, HSA.REI.A.2, HSF.IF.C.7.D	Students will understand how to factor algebraic expressions and use factoring and division techniques to solve equations. Students will also learn how to simplify and solve expressions and equations with rational terms.
Exponential and Logarithmic Functions	24 days	8.EE.A.1, HSF.LE.A.3, 8.NS.A.1, HSN.RN.A.1, HSN.RN.B.3, HSF.BF.B.5, HSF.LE.A.4	Students will utilize algebraic properties to rewrite exponential and logarithmic expressions. Students will extend their knowledge of logarithms and exponents to solve equations and real world problems.
Basic Triangle Trigonometry	16 days	HSF.TF.A.1, HSG.SRT.C.6, HSG.SRT.C.8, HSG.SRT.D.11	Students will be able to solve right triangles using geometric principles and basic trigonometry. Students will also be able to solve problems involving triangles without right angles using the law of sines and the law of cosines.
Graphs of Trigonometric Functions	15 days	HSF.TF.A.2, HSF.TF.A.3, HSF.TF.B.5, HSF.TF.B.7	Students will memorize the unit circle and use it to find values of trigonometric functions. Students will extend their knowledge of the unit circle to graph both sinusoidal curves as well as other trigonometric functions. Students will also understand how inverse trigonometric functions can be used in trigonometry.
Analytic Trigonometry	17 days	HSF.TF.C.8, HSF.TF.C.9, HSF.TF.B.7	Students will use information learned in this unit about how the interrelationships among the six basic trigonometric functions make it possible to write trigonometric expressions in various equivalent forms.

Unit Name: Functions and Graphs	Length: 26 days
Standards: HSFBFB3, HSF.IF.A.2, HSF.IF.A.1, HSF.IF.C.8.A,HSF.BF.B.3, HSA-CED. A.2, HSF-BF.A.1a, HSF-LE.A.1b, HSF-LE.A.2, HSF.IF.C.7.B, HSF.IF.C.7.B, HSF.BF.A. 1.C, HSF.BF.B.4	**Outcomes:** Students will use the information in this unit to be able to graph and analyze various types of functions. Students will learn how to describe key aspects of a function and rewrite equations of functions.
Essential Questions: How can you determine which family a function belongs to? How can you write the domain and range of a function? How can you draw the graph of a given function? How can you perform operations within a function	**Learning Targets:** Students will be able to: -Graph a function using transformations. -Use interval notation to write a set of real numbers. -Calculate the domain and range of a function both graphically and analytically. -Find and label extrema for a given function both graphically and analytically. -Determine whether a function is even, odd, or neither both graphically and analytically. -Write an equation in slope-intercept form given enough information. -Graph a piecewise function. -Graph a transformed version of the greatest integer function. -Write a single function defined as the composition of two functions. -Find the inverse of a function and prove that it is the inverse of the original function.
Topic 1: Parent Functions & Transformations	Length: 3 days
Standard(s): HSFBFB3	Academic Vocabulary: Stretch, Shrink, Transformation, Translation, Reflection
Lesson Frame:	We will classify families of functions and identify transformations of parent functions.
	I will graph a function using transformations.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 2: Interval Notation	Length: 2 days
Standard(s): HSF.IF.A.2	Academic Vocabulary: Interval
Lesson Frame:	We will define interval notation.
	I will use interval notation to write a set of real numbers.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 3: Domain and Range	Length: 3 days
Standard(s): HSF.IF.A.1	Academic Vocabulary: Function, Domain, Range, Vertical Line Test
Lesson Frame:	We will review domain and range as well as how to determine if a graph represents a function.
	I will calculate the domain and range of a function both graphically and analytically.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 4: Extreme Values	Length: 2 days
Standard(s): HSF.IF.C.8.A	Academic Vocabulary: Extreme Value, Maximum, Minimum, Local/Relative, Absolute, Increasing, Decreasing
Lesson Frame:	We will define and classify various forms of extrema on a function.
	I will find and label extrema for a given function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Functions and Graphs	Length: 26 days
Standards: HSFBFB3, HSF.IF.A.2, HSF.IF.A.1, HSF.IF.C.8.A,HSF.BF.B.3, HSA-CED.A.2, HSF-BF.A.1a, HSF-LE.A.1b, HSF-LE.A.2, HSF.IF.C.7.B, HSF.IF.C.7.B, HSF.BF.A.1.C, HSF.BF.B.4	**Outcomes:** Students will use the information in this unit to be able to graph and analyze various types of functions. Students will learn how to describe key aspects of a function and rewrite equations of functions.
Essential Questions: How can you determine which family a function belongs to? How can you write the domain and range of a function? How can you draw the graph of a given function? How can you perform operations within a function	**Learning Targets:** Students will be able to: -Graph a function using transformations. -Use interval notation to write a set of real numbers. -Calculate the domain and range of a function both graphically and analytically. -Find and label extrema for a given function. -Determine whether a function is even, odd, or neither both graphically and analytically. -Write an equation in slope-intercept form given enough information. -Graph a piecewise function. -Graph a transformed version of the greatest integer function. -Write a single function defined as the composition of two functions. -Find the inverse of a function and prove that it is the inverse of the original function.

Topic 5: Even and Odd Functions	Length: 2 days
Standard(s): HSF.BF.B.3	Academic Vocabulary: Symmetry, Even Function, Odd Function
Lesson Frame:	We will explore even and odd functions and symmetry within a function.
	I will determine whether a function is even, odd, or neither both graphically and analytically.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	

Topic 6: Linear Functions	Length: 3 days
Standard(s): HSA-CED.A.2, HSF-BF.A.1a, HSF-LE.A.1b, HSF-LE.A.2	Academic Vocabulary: Slope, Intercept, Slope-Intercept Form, Point-Slope Form, Parallel, Perpendicular
Lesson Frame:	We will review linear functions in slope-intercept form.
	I will write an equation in slope-intercept form given enough information.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 7: Piecewise Functions	Length: 3 days
Standard(s): HSF.IF.C.7.B	Academic Vocabulary: Piecewise Function
Lesson Frame:	We will explore how to read and graph piecewise-defined functions.
	I will graph a piecewise function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 8: Greatest Integer Function	Length: 2 days
Standard(s): HSF.IF.C.7.B	Academic Vocabulary: Integer, Greatest Integer Function, Step Function
Lesson Frame:	We will practice graphing step functions and define the greatest integer operation.
	I will graph a transformed version of the greatest integer function.

Unit Name: Functions and Graphs	Length: 26 days
Standards: HSFBFB3, HSF.IF.A.2, HSF.IF.A.1, HSF.IF.C.8.A,HSF.BF.B.3, HSA-CED. A.2, HSF-BF.A.1a, HSF-LE.A.1b, HSF-LE.A.2, HSF.IF.C.7.B, HSF.IF.C.7.B, HSF.BF.A. 1.C, HSF.BF.B.4	**Outcomes:** Students will use the information in this unit to be able to graph and analyze various types of functions. Students will learn how to describe key aspects of a function and rewrite equations of functions.
Essential Questions: How can you determine which family a function belongs to? How can you write the domain and range of a function? How can you draw the graph of a given function? How can you perform operations within a function	**Learning Targets:** Students will be able to: -Graph a function using transformations. -Use interval notation to write a set of real numbers. -Calculate the domain and range of a function both graphically and analytically. -Find and label extrema for a given function. -Determine whether a function is even, odd, or neither both graphically and analytically. -Write an equation in slope-intercept form given enough information. -Graph a piecewise function. -Graph a transformed version of the greatest integer function. -Write a single function defined as the composition of two functions. -Find the inverse of a function and prove that it is the inverse of the original function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 9: Composite Functions	Length: 2 days
Standard(s): HSF.BF.A.1.C	Academic Vocabulary: Function Composition
Lesson Frame:	We will explore operations that can be used between operations including function compostion.
	I will write a single function defined as the composition of two functions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Topic 10: Inverse Functions	Length: 2 days
Standard(s): HSF.BF.B.4	Academic Vocabulary: Inverse
Lesson Frame:	We will define the inverse of a function and investigate inverse operations.
	I will find the inverse of a function and prove that it is the inverse of the original function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Polynomial and Rational Functions	**Length:** 24 days
Standards: HSA-SSE.A.2, HSA-SSE.B.3a, HSA.APR.D.6, HSA.APR.A.1, HSA.REI.B.4, HSA.APR.B.2, HSA.REI.A.2, HSF.IF.C.7.D	**Outcomes:** Students will understand how to factor algebraic expressions and use factoring and division techniques to solve equations. Students will also learn how to simplify and solve expressions and equations with rational terms.
Essential Questions: How can you choose the best factoring technique for a given polynomial? How can you manipulate and analyze functions with rational expressions? How can you find the roots of any given polynomial equation?	**Learning Targets:** Students will be able to: -Factor a trinomial with a leading coefficient that is not 1 into to binomials. -Use grouping to factor a third degree polynomial. -Simplify a rational expression and state its excluded values -Use synthetic division to find the quotient of two polynomials and inclued the remainder. -Pick the simplest method necessary and use it to solve a quadratic equation. -Find the rational zeros of a cubic polynomial. -Solve a rational equation and check to make sure I don't have extraneous solutions. -Analytically find the asymptotes of a rational function and use them to draw a graph.
Topic 1: Factoring Trinomials	Length: 2 days
Standard(s): HSA-SSE.A.2, HSA-SSE.B.3a	Academic Vocabulary: Monomial, Trinomial, Factor, FOIL
Lesson Frame:	We will review factoring trinomials by both removing common factors and using th FOIL pattern.
	I will factor a trinomial with a leading coefficient that is not 1 into to binomials.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Advanced Factoring Methods	Length: 3 days
Standard(s): HSA-SSE.A.2	Academic Vocabulary: Factor, Grouping, Difference/Sum of Cubes
Lesson Frame:	We will explore advanced factoring methods and use them to factor polynomials with a degree greater than 2.
	I will use grouping to factor a third degree polynomial.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Rational Expressions	Length: 3 days
Standard(s): HSA.APR.D.6	Academic Vocabulary: Rational Expression, Excluded Values
Lesson Frame:	We will investigate rules for simplifying rational expressions.
	I will simplify a rational expression and state its excluded values
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 4: Synthetic and Long Division	Length: 2 days
Standard(s): HSA.APR.A.1	Academic Vocabulary: Quotient, Remainder, Synthetic Division
Lesson Frame:	We will explore the processes used for dividing one polynomial by another.
	I will use synthetic division to find the quotient of two polynomials and inclued the remainder.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Polynomial and Rational Functions	Length: 24 days
Standards: HSA-SSE.A.2, HSA-SSE.B.3a, HSA.APR.D.6, HSA.APR.A.1, HSA.REI.B.4, HSA.APR.B.2, HSA.REI.A.2, HSF.IF.C.7.D	**Outcomes:** Students will understand how to factor algebraic expressions and use factoring and division techniques to solve equations. Students will also learn how to simplify and solve expressions and equations with rational terms.
Essential Questions: How can you choose the best factoring technique for a given polynomial? How can you manipulate and analyze functions with rational expressions? How can you find the roots of any given polynomial equation?	**Learning Targets:** Students will be able to: -Factor a trinomial with a leading coefficient that is not 1 into to binomials. -Use grouping to factor a third degree polynomial. -Simplify a rational expression and state its excluded values -Use synthetic division to find the quotient of two polynomials and inclued the remainder. -Pick the simplest method necessary and use it to solve a quadratic equation. -Find the rational zeros of a cubic polynomial. -Solve a rational equation and check to make sure I don't have extraneous solutions. -Analytically find the asymptotes of a rational function and use them to draw a graph.
Topic 5: Solving Quadratic Equations	Length: 3 days
Standard(s): HSA.REI.B.4	Academic Vocabulary: Root, Zeros, Quadratic Formula
Lesson Frame:	We will review three processes for solving a quadratic equation.
	I will pick the simplest method necessary and use it to solve a quadratic equation.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 6: Rational Root Theorem	Length: 3 days
Standard(s): HSA.APR.B.2	Academic Vocabulary: Rational Root, Zeros
Lesson Frame:	We will explore how to use the rational root theorem to find possible solutions zeros of a polynomial.
	I will find the rational zeros of a cubic polynomial.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 7: Solving Rational Equations	Length: 3 days
Standard(s): HSA.REI.A.2	Academic Vocabulary: Rational Equation, Extraneous Solution
Lesson Frame:	We will investigate processes for solving rational equations.
	I will solve a rational equation and check to make sure I don't have extraneous solutions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 8: Graphing Rational Functions	Length: 3 days
Standard(s): HSF.IF.C.7.D	Academic Vocabulary: Asymptote, End Behavior, Discontinuity,
Lesson Frame:	We will explore asymptotic behavior on rational functions.
	I will analytically find the asymptotes of a rational function and use them to draw a graph.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Exponential and Logarithmic Functions	**Length:** 24 days
Standards: 8.EE.A.1, HSF.LE.A.3, 8.NS.A.1, HSN.RN.A.1, HSN.RN.B.3, HSF.BF.B.5, HSF.LE.A.4	**Outcomes:** Students will utilize algebraic properties to rewrite exponential and logarithmic expressions. Students will extend their knowledge of logarithms and exponents to solve equations and real world problems.
Essential Questions: How can you use an exponential groth or decay model to solve a real world problem? How can you rewrite exponential and logarithmic expressions using algebraic properties? How can you solve equations containing exponents and logarithms?	**Learning Targets:** Students will be able to: -Simplify expression using the rules of exponents. -Graph an exponential growth and an exponential decay model. -Simplify expressions that include the number e. -Rewrite expressions from radical form into exponent form and vice versa. -Rewrite expressions in logarithmic form into exponential form and vice versa. -Utilize the properties of logarithms to condense and expand logarithmic expressions. -Evaluate logarithms using the change of base formula. -Use logarithms to solve exponential equations. -Use exponents to solve logarithmic equations.
Topic 1: Rules of Exponents	Length: 3 days
Standard(s): 8.EE.A.1	Academic Vocabulary: Exponent, Base, Zero Power Rule
Lesson Frame:	We will review the rules of exponents.
	I will simplify expression using the rules of exponents.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Graphing Exponential Functions	Length: 2 days
Standard(s): HSF.LE.A.3	Academic Vocabulary: Exponential Growth, Exponential Decay
Lesson Frame:	We will investigate graphs of exponential equations and use them in mathematical models.
	I will graph an exponential growth and an exponential decay model.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Euler's Number	Length: 2 days
Standard(s): 8.NS.A.1	Academic Vocabulary: The Number e
Lesson Frame:	We will analyze Euler's number and it's importantance in real-world situations.
	I will simplify expressions that include the number e.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 4: Radicals and Rational Exponents	Length: 3 days
Standard(s): HSN.RN.A.1, HSN.RN.B.3	Academic Vocabulary: Index, Radical Expression, Radicand, Rational Exponent
Lesson Frame:	We will explore the connection between rational exponents and radicals.
	I will rewrite expressions from radical form into exponent form and vice versa.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 5: Basic of Logarithms	Length: 2 days
Standard(s): HSF.BF.B.5	Academic Vocabulary: Exponential Form, Logarithmic Form
Lesson Frame:	We will define the operation of logarithm and explore its meaning.
	I will rewrite expressions in logarithmic form into exponential form and vice versa.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 6: Properties of Logarithms	Length: 2 days
Standard(s): HSF.BF.B.5	Academic Vocabulary: Power Rule, Product Rule, Quotient Rule
Lesson Frame:	We will define the basic properties of logarithms.
	I will utilize the properties of logarithms to condense and expand logarithmic expressions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 7: Change of Base Formula	Length: 2 days
Standard(s): HSF.BF.B.5	Academic Vocabulary: Change of Base Formula
Lesson Frame:	We will learn the change of base formula and how it can be used to evaluate logarithms
	I will evaluate logarithms using the change of base formula.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 8: Solving Exponential Equations	Length: 3 days

Unit Name: Exponential and Logarithmic Functions	**Length:** 24 days		
Standards: 8.EE.A.1, HSF.LE.A.3, 8.NS.A.1, HSN.RN.A.1, HSN.RN.B.3, HSF.BF.B.5, HSF.LE.A.4	**Outcomes:** Students will utilize algebraic properties to rewrite exponential and logarithmic expressions. Students will extend their knowledge of logarithms and exponents to solve equations and real world problems.		
Essential Questions: How can you use an exponential groth or decay model to solve a real world problem? How can you rewrite exponential and logarithmic expressions using algebraic properties? How can you solve equations containing exponents and logarithms?	**Learning Targets:** Students will be able to: -Simplify expression using the rules of exponents. -Graph an exponential growth and an exponential decay model. -Simplify expressions that include the number e. -Rewrite expressions from radical form into exponent form and vice versa. -Rewrite expressions in logarithmic form into exponential form and vice versa. -Utilize the properties of logarithms to condense and expand logarithmic expressions. -Evaluate logarithms using the change of base formula. -Use logarithms to solve exponential equations. -Use exponents to solve logarithmic equations.		
Standard(s): HSF.LE.A.4	Academic Vocabulary: Exponential Equation		
Lesson Frame:	We will explore strategies for solving exponential equations.		
	I will use logarithms to solve exponential equations.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 9: Solving Logarthmic Equations	Length: 3 days		
Standard(s): HSF.BF.B.5	Academic Vocabulary: Logarithmic Equation		
Lesson Frame:	We will explore strategies for solving logarithmic equations.		
	I will use exponents to solve logarithmic equations.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		

Unit Name: Basic Triangle Trigonometry	Length: 16 days		
Standards: HSF.TF.A.1, HSG.SRT.C.6, HSG.SRT.C.8, HSG.SRT.D.11	Outcomes: Students will be able to solve right triangles using geometric principles and basic trigonometry. Students will also be able to solve problems involving triangles without right angles using the law of sines and the law of cosines.		
Essential Questions: How can you solve real world problems involving right triangle? What trigonometric properties can be used to solve problems involving triangles without right angles?	Learning Targets: Students will be able to: -Convert back and forth between radian and degree measurements for angles. -Calculate the sides of a 45-45-90 and a 30-60-90 right triangle. -Use sohcahtoa to solve for the angles and sides of a right triangle. -Use the law of cosines to solve a real world story problem. -Use the law of sines to solve a real world story problem. -Solve a real life problem using a trigonometric property.		
Topic 1: Angles in Radians and Degree	Length: 2 days		
Standard(s): HSF.TF.A.1	Academic Vocabulary: Degree, Radian, Coterminal Angle, Quadrantal Angle, Standard Position		
Lesson Frame:	We will define what a radian is and how it can be used to measure angles.		
	I will convert back and forth between radian and degree measurements for angles.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 2: Special Right Triangles	Length: 2 days		
Standard(s): HSG.SRT.C.6	Academic Vocabulary: Special Right Triangle (30-60-90, 45-45-90)		
Lesson Frame:	We will review finding legths of sides of special right triangles.		
	I will calculate the sides of a 45-45-90 and a 30-60-90 right triangle.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 3: Right Triangle Trigonometry	Length: 3 days		
Standard(s): HSG.SRT.C.8	Academic Vocabulary: Trigonometric Function, Hypotenuse, Sine, Cosine, Tangent, Sohcahtoa		
Lesson Frame:	We will define the basic trigonometric functions and understand how the can be used to solve right triangles.		
	I will use sohcahtoa to solve for the angles and sides of a right triangle.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 4: Law of Cosines	Length: 2 days		
Standard(s): HSG.SRT.D.11	Academic Vocabulary: Law of Cosines		
Lesson Frame:	We will define the law of cosines and explore how to use it to solve for the angles and sides of a triangle.		
	I will use the law of cosines to solve a real world story problem.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 5: Law of Sines	Length: 2 days		
Standard(s): HSG.SRT.D.11	Academic Vocabulary: Law of Sines		
Lesson Frame:	We will define the law of sines and explore how to use it to solve for the angles and sides of a triangle.		
	I will use the law of sines to solve a real world story problem.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		
Topic 6: Applications of Basic Triangle Trigonometry	Length: 3 days		
Standard(s): HSG.SRT.C.8	Academic Vocabulary: Angle of Depression, Angle of Elevation		
Lesson Frame:	We will practice modeling real life situations that can be solved with trigonometric properties.		
	I will solve a real life problem using a trigonometric property.		
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:		

Unit Name: Graphs of Trigonometric Functions	Length: 15 days
Standards: HSF.TF.A.2, HSF.TF.A.3, HSF.TF.B.5, HSF.TF.B.7	**Outcomes:** Students will memorize the unit circle and use it to find values of trigonometric functions. Students will extend their knowledge of the unit circle to graph both sinusoidal curves as well as other trigonometric functions. Students will also understand how inverse trigonometric functions can be used in trigonometry.
Essential Questions: How can the unit circle be used to find exact measurements of trigonometric functions? How can a sinusoidal curve be used to model a real world problem? How can inverse trigonometric functions be used find angles in triangles?	**Learning Targets:** Students will be able to: -Memorize the unit cirlcle and use it to find exact values of trigonometric functions. -Graph a sinusoidal function with multiple transformations. -Draw the graph of a tangent function. -Find the value of an inverse trigonmetric expression using the unit circle.
Topic 1: The Unit Circle	Length: 4 days
Standard(s): HSF.TF.A.2, HSF.TF.A.3	Academic Vocabulary: Cosecant, Cotangent, Secant
Lesson Frame:	We will define all the values on the unit circle and practice memorizing them.
	I will memorize the unit cirlcle and use it to find exact values of trigonometric functions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Sinusoidal Functions	Length: 4 days
Standard(s): HSF.TF.B.5	Academic Vocabulary: Sinusoidal Curve, Amplitude, Period, Phase Shift, Vertical Shift
Lesson Frame:	We will investigate graphs of sine and cosine functions and how they can be transformed.
	I will graph a sinusoidal function with multiple transformations.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Graphs of Other Trigonometric Functions	Length: 2 days
Standard(s): HSF.TF.A.3	Academic Vocabulary: Asymptotes
Lesson Frame:	We will explore graphs of tangent, cotangent, secant, and cosecant functions.
	I will draw the graph of a tangent function.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	We will:
Topic 4: Inverse Trigonometric Functions	Length: 3 days
Standard(s): HSF.TF.B.7	Academic Vocabulary: Inverse Trigonometric Function, Arc(sin,cos,...)
Lesson Frame:	We will define inverse trigonometric functions and connect them to the standard trigonometric operations.
	I will find the value of an inverse trigonmetric expression using the unit circle.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

Unit Name: Analytic Trigonometry	**Length:** 17 days
Standards: HSF.TF.C.8, HSF.TF.C.9, HSF.TF.B.7	**Outcomes:** Students will use information learned in this unit about how the interrelationships among the six basic trigonometric functions make it possible to write trigonometric expressions in various equivalent forms.
Essential Questions: How are algebraic properties related to trigonometric functions? How can you rewrite a trigonometric expression into a more useful form? How can you use trigonometric identities to solve equations?	**Learning Targets:** Students will be able to: -Use basic trigonometric identities to simplify expressions. -Use the pythagorean identities in conjunction with previous knowledge to simplify expressions. -Use the sum and difference identities in conjunction with previous knowledge to simplify expressions. -Use knowledge of all trigonometric identities to simplify expressions with trigonometric functions. -Solve a trigonometric equation using an identity and inverse trigonometry.
Topic 1: Basic Trigonometric Identities	Length: 3 days
Standard(s): HSF.TF.C.8	Academic Vocabulary: Reciprocal Identities, Cofunction Identities, Even/Odd Identities, Quotient Identities
Lesson Frame:	We will define four basic sets of trigonometric identies.
	I will use basic trigonometric identities to simplify expressions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 2: Pythagorean Identities	Length: 2 days
Standard(s): HSF.TF.C.8	Academic Vocabulary: Pythagorean Identities
Lesson Frame:	We will define and prove the pythagorean identities of trigonometry,
	I will use the pythagorean identities in conjunction with previous knowledge to simplify expressions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 3: Sum and Difference Identities	Length: 3 days
Standard(s): HSF.TF.C.9	Academic Vocabulary: Sum/Difference Identities
Lesson Frame:	We will define and prove the sum and difference identities of trigonometric functions.
	I will use the sum and difference identities in conjunction with previous knowledge to simplify expressions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 4: Double, Half, and Power Reducing Identities	Length: 3 days
Standard(s): HSF.TF.C.9	Academic Vocabulary: Double Angle Identity, Half Angle Identity, Power Reducing Identity
Lesson Frame:	We will define and prove the double angle, half angle, and power reducing identities of trigonometric functions.
	I will use my knowledge of all trigonometric identities to simplify expressions with trigonometric functions.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:
Topic 5: Trigonometric Equations	Length: 4 days

Unit Name: Analytic Trigonometry	Length: 17 days
Standards: HSF.TF.C.8, HSF.TF.C.9, HSF.TF.B.7	Outcomes: Students will use information learned in this unit about how the interrelationships among the six basic trigonometric functions make it possible to write trigonometric expressions in various equivalent forms.
Essential Questions: How are algebraic properties related to trigonometric functions? How can you rewrite a trigonometric expression into a more useful form? How can you use trigonometric identities to solve equations?	Learning Targets: Students will be able to: -Use basic trigonometric identities to simplify expressions. -Use the pythagorean identities in conjunction with previous knowledge to simplify expressions. -Use the sum and difference identities in conjunction with previous knowledge to simplify expressions. -Use knowledge of all trigonometric identities to simplify expressions with trigonometric functions. -Solve a trigonometric equation using an identity and inverse trigonometry.
Standard(s): HSF.TF.B.7	Academic Vocabulary: Trigonometric Equation, Inverse Operation
Lesson Frame:	We will explore techniques for solving trigonometric functions.
	I will solve a trigonometric equation using an identity and inverse trigonometry.
Performance Tasks: Warmup Problems, Exit Tickets, Challenge Problems, Application Examples	Notes:

MANAWA

Students choosing to excel; realizing their strengths

To:	Board of Education
From:	Jacquelyn Sernau- District Reading Specialist
Date:	April 22, 2021
Re:	Literacy Updates/Request for changing curriculum materials

The purpose of this memo is to recommend to the Board a change from the adopted Lucy Calkins's Phonics Units of Study for grades 4K-2 to a different phonics curriculum through a company called Really Great Reading.

Per our comprehensive district literacy plan, phonics instruction is an identified focus area for the 2021-2022 school year. After extensive review of data and analyzing the types of skill gaps we are seeing in our students, it is apparent that making phonics instruction a top priority is imperative. Really Great Reading is a company that works to bring the science of reading alive in each classroom through explicit lessons and hands-on work for students using letter tiles and other manipulatives. They produce products that can be used within a whole group structure as well as for small groups of students. Manawa Elementary School is looking to use their phonics programs called: Launchpad (4K), Countdown (grade K), Blast (grade 1) and HD Word (grade 2).

In order for Phonics instruction to be effective, it must be systematic and explicit. We believe that following a series of programs from 4K through second grade will build a strong foundation for our students. Teachers are encouraged to take time over the summer to get familiar with the materials, and we will provide a day of in-house training and grade level planning over the summer as well. Teachers that have used these products with small groups of students have commented on students' growth, and teachers are showing excitement with the idea of being able to make a change to a program they truly believe in.

Please consider this recommendation to change from the Lucy Calkins's Phonics Units of Study to the Phonics programs through Really Great Reading as we work to close achievement gaps and build stronger readers at our elementary school.

To: Dr. Melanie Oppor, Curriculum Committee
Fr: Dan Wolfgram
Date: 4/26/2021
Re: Freshman and Sophomore Assessment Recommendation

_____

The purpose of this memo is to recommend the following assessment changes for 9th and 10th grade students to replace the ACT Aspire Periodic Assessment:

- Use of the PreACT Assessment for one year (2021-2022 school year). The cost for the PreACT assessment is $14.00 per student. (The previous assessment was $12.00 per student and has been accounted for in the 2021-2022 school budget, pending approval.)

- Transition to the recommended Mosaic Platform for the 2022-23 school year and beyond.

Reasons for the Changes:

ACT Aspire Periodic is in the process of being phased out. The ACT Aspire Periodic tests are short-duration assessments, designed to produce snapshots of each learner's achievement at intervals throughout the academic year. They help to identify if a learner's progress is at pace for success with the state mandated test ACT Aspire at the conclusion of the year, and identify corrective strategies for re-teaching. The tests have been in use this year at Little Wolf High School.

ACT recommends replacing the ACT Periodic with the PreACT for use with freshman and sophomores. Much like the ACT Periodic, the test is a multiple-choice assessment that provides students an early measure of college, technical school, and career readiness while serving as a practice opportunity and predictor of performance on the state mandated ACT assessment given to all juniors. Students also receive a personalized view of college and career possibilities based on their answers to the ACT Interest Inventory which can help them start thinking about career paths.

ACT Aspire Periodic will be integrated into the new Mosaic Adaptive Academic Learning platform in Grades 3-8 in Math, Reading, and English, but are not yet available for high school grades. When Mosasic is available in the 2022-2023 school year, this is the most desirable choice because it is an accurate predictor of scoring on the ACT and can be administered multiple times a year.

School District of Manawa
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2525
Fax: (920) 596-5308

**Little Wolf High School
Manawa Middle School**
515 E. Fourth St
Manawa, WI 54949
Phone: (920) 596-2524
Fax: (920) 596-2655

Manawa Elementary
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2238
Fax: (920) 596-5339

ManawaSchools.org

/ ManawaSchools

/ ManawaSchools

TO: SDM Finance Committee
CC: Dr. Oppor, Ms. O'Brien
FROM: Bryant Cobarrubias
DATE: May 5, 2021
SUBJECT: SDM Print Service Contract Renewal

The purpose of this memo is to recommend the School Board of Manawa renew our 5-year print services contract with EO Johnson. The "Option A" proposal submitted by EO Johnson offers the best value and will serve our staff and students well.

- The proposed devices are the same or higher quality than our current devices.

- The EO Johnson proposal will cost an estimated $6,500.28 less annually than the competitor's quote.

- EO Johnson has offered exemplary support the last five years. Conversations with their references indicates other customers are similarly served.

- The proposal will replace 14 devices and provide service for 16 office printers.

- EO Johnson will provide and support a wide-format printer. This will allow staff and students to produce 44'' wide posters.

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/ ManawaSchools

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HP LaserJet Managed E50145 series

Handle business solutions securely, plus help conserve energy with HP EcoSmart toner

Choose an HP LaserJet Enterprise printer designed to handle business solutions securely and efficiently, and helps conserve energy with HP EcoSmart black toner. Keep up with the demands of growing business with a printer you can rely on.[9]

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non-HP chip may not work, and those that work today may not work in the future. http://www.hp.com/go/learnaboutsupplies

HP LaserJet Managed E50145dn

The world's most secure printing[1]

- Each printer in your fleet checks its operating code and repairs itself from attacks.
- Your printer's outgoing network connections are inspected to stop suspicious requests and thwart malware.
- Memory activity is monitored to continually detect and stop attacks.
- Firmware is automatically checked during startup to determine if it's authentic code— digitally signed by HP.

Low costs, low energy use

- Stay productive with reliable cartridges, and help save energy while printing with HP EcoSmart black toner.[9]
- Spend less time replacing toner, and more on business. Choose optional high-yield toner cartridges.[2]
- Enhanced energy savings —up to 29% over prior products9 plus save with Auto-on/Auto-off technology.[3]
- This printer fits in tight places to boost performance in almost any workspace.

Your whole fleet. At your control.

- Centralize control of your printing environment with HP Web Jetadmin[5]—and help build business efficiency.
- Gain insights into print costs, behaviors, utilization to drive efficiencies with this cloud-based printer.
- Set security configuration policies and automatically validate settings for every HP printer in your fleet.[4]

Enhanced productivity keeps business moving

- Submit print jobs on the go and securely release them at any HP Roam-enabled office printer, securely.[8]
- Easily print from a variety of smartphones and tablets—generally no setup or apps required. [6]
- Don't wait for documents. Print your first page in as little as 5.9 seconds from energy-efficient sleep mode.

Product walkaround

1   ———————————————————————————————   5

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1. 2nd generation Hardware Integration Pocket[1]

2. Easy-access USB port[2]

3. Top cover release button

4. 100-sheet multipurpose tray 1 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)

5. 4.3-inch (10.9 cm) color touchscreen

6. 250-sheet output bin

7. Top cover (access to JetIntelligence toner cartridge)

8. Automatic two-sided printing

9. 550-sheet input tray 2 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)

10. Slot for cable-type security lock

11. Gigabit Ethernet, Host USB port

12. Hi-Speed USB 2.0 printing port

13. USB port for connecting external USB devices

Series at a glance

Model	HP LaserJet Managed E50145dn
Product number	1PU51A
Print speed (black)[3]	Up to 45/43 pages per minute (ppm) (letter/A4)
First page out (from ready)[4]	As fas as 5.9/5.9 seconds (letter/A4)
Automatic two-sided printing	√
100-sheet multipurpose tray 1, 550-sheet input tray 2	√
Optional 550-sheet paper tray	Add up to three
Optional printer cabinet	Add up to one
Input capacity (standard/maximum[5])	Up to 650/2,300 sheets
Recommended monthly page volume[6]	2,000 to 15,000 pages
Managed Cartridge yield	Black: ~23,000 pages
Optional wireless direct printing/NFC touch-to-print[9]	√

HP Services

Downtime can have serious consequences, so HP provides support beyond the standard warranty. You benefit from reduced risk, maximized uptime, predictable service delivery and no unbudgeted repair costs. HP Care Pack Services provide a comprehensive suite of protection services designed to keep HP hardware and software up and running so employees can stay productive.

For carepack availability visit: hp.com/go/cpc:

Top features

HP printers have the industry's strongest security[1] because they're always on guard, continually detecting and stopping threats while adapting to new ones. And only HP printers automatically self-heal from attacks, so IT doesn't need to intervene.

Good resource management is good business. Help reduce costs and energy use with an HP LaserJet designed to be more efficient than its predecessors, using HP JetIntelligence toner cartridges. HP, like you, is committed to keeping business moving.[8]

Every business values a problem solver. Help get more control with a robust management system and solutions that keep up with modern business.

Easy-to-use features, fast print speeds, and simple mobile printing options help you keep up with the speed of business.

Accessories

F2A72A HP LaserJet 550 Sheet Paper Tray
F2A73A HP LaserJet Printer Cabinet
1PV95A HP USB Port 100pc M507/M528 Accessory
5EL03A HP TAA Version Secure Hard Disk Drive
B5L28A HP Internal USB Ports
B5L29A HP Secure High Performance Hard Disk Drive
J8031A HP Jetdirect 2900nw Print Server
G6W84A HP 1 GB 90-Pin DDR3 DIMM
2MU47A Accessibility Assistant
J8030A HP Jetdirect 3000w NFC/Wireless Accessory
3JN69A HP JetDirect 3100w BLE/NFC/Wireless Accessory
2NR12A HP Removable Hard Drive Enclosure
X3D03A HP USB Universal Card Reader
Y7C05A HP HIP2 Keystroke Reader
4QL32A HP Legic Card Reader

Supplies

W9008MC HP Black Managed LaserJet Toner Cartridge (~23,000 pages)

Services

UB7E7E - HP 3 years Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7E8E - HP 4 years Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7E9E - HP 5y Next Business Day w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7F0E - HP3 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7F1E - HP 4 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7F2E - HP 5 years 4 hours 9x5 w/DMR LaserJet Enterprise E50145 MNGD SVC
UB7F3E - HP3 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC
UB7F4E - HP 4 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC
UB7F5E - HP 5 years Chnl Parts Only LaserJet Enterprise E50145 MNGD SVC

HP LaserJet Managed E50145 series

Model	HP LaserJet Managed E50145dn
Product number	1PU51A
Print	
Print speed[8],[9],	**Letter:** Up to 45 ppm (default) ; Up to 52 ppm (HP High Speed) Black; **2-sided:** Up to 36 ipm Black; **First page out:** As fast as 5.9 sec Black; **Print speed (Landscape, A5):** Up to 65 ppm Black
Print resolution	**Black (best)** Up to 1200 x 1200 dpi; **Black (normal)** Up to 600 x 600 dpi; **Black (fine lines)** Up to 1200 x 1200 dpi
Print technology	Laser; **Print resolution technology:** 300 dpi, 600 dpi, HP FastRes 1200, HP ProRes 1200
Print cartridges number	1 (black)
Standard print languages	HP PCL 6, HP postscript level 3 emulation, native PDF printing (v 1.7), Apple AirPrint™
Printer smart software features	Print preview, duplex printing, print multiple pages per sheet (2, 4, 6, 9, 16), collation, watermarks, store print jobs, easy-access USB
Printer management / HP SureSupply	HP Printer Assistant; HP Device Toolbox; HP Web JetAdmin Software; HP JetAdvantage Security Manager; HP SNMP Proxy Agent; HP WS Pro Proxy Agent; Printer Administrator Resource Kit for HP Universal Print Driver (Driver Configuration Utility - Driver Deployment Utility - Managed Printing Administrator)/ No
Connectivity	
Standard connectivity	2 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit Ethernet 10/100/1000T network
Network capabilities	HP Jetdirect 2900nw Print Server J8031A, HP Jetdirect 3000w NFC/Wireless Accessory J8030A, HP Jetdirect 3100w BLE/NFC/Wireless
Wireless capability	Optional, enabled with purchase of a wireless hardware accessory. Single band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3000w NFC/Wireless Accessory J8030A, Dual band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3100w BLE/NFC/Wireless Accessory 3JN69A, Dual band Wireless Station functionality available with HP Jetdirect 2900nw Print Server J8031A
Mobile printing capability[4]	Apple AirPrint™; Google Cloud Print™; HP ePrint; Mopria™ Certified; ROAM capable for easy printing
Memory	**Standard:** 512 MB; **Maximum:** 1.5 GB, MAX memory, when 1 GB Accessory DIMM is installed
Processor speed	1.2 GHz / **Storage:** 8 GB eMMC / **Hard disk:** Optional, 500 GB minimum encrypted hard disk drive
Duty cycle (monthly)[5]	**Letter:** Up to 150,000 pages; **Recommended monthly page volume[6]:** 2000 to 15,000
Paper handling	
Input	100-sheet multipurpose Tray 1, 550-sheet input Tray 2, automatic duplex printing; Up to 650 sheets Standard
Output	**Standard:** 250-sheet output bin; Up to 250 sheets Standard; **Transparencies:** Up to 75 sheets
Duplex Options	Automatic (standard)
Envelope feeder	No
Standard paper trays	2
Media types	Paper (bond, color, letterhead, plain, preprinted, prepunched, recycled, rough); envelopes; labels; cardstock; transparencies; user-defined
Media weight	Tray 1: 16 to 53 lb; tray 2+: 16 to 32 lb
Media sizes	Tray 1: letter, legal, executive, statement, 3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 8.5 x 13 in, envelopes (No. 9, No. 10, Monarch); Tray 2: letter, legal, executive, statement, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional 550-sheet tray: letter, legal, executive, statement, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional Automatic Duplexer: letter, legal, 8.5 x 13 in
Media Sizes Custom	Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2: 4.14 x 5.83 to 8.5 x 14 in; Optional 550-sheet Tray: 4.14 x 5.83 to 8.5 x 14 in
Dimensions (w x d x h)	16.46 x 14.80 x 12.83 in; **Maximum:** 16.46 x 25.16 x 12.83 in
Weight[2]	25.5 lb
What's in the box[1]	HP LaserJet Managed E50145dn Printer; Regulatory flyer; Unpack flyer; Installation Guide; Power cord; Warranty Cards; Support flyers/ phone number list
Replacement cartridges	HP Black Managed LaserJet Toner Cartridge (~23,000 pages) W9008MC
Warranty features	One-year, next-business day, onsite warranty. Warranty and support options vary by product, country and local legal requirements. Contact your Contractual Vendor or go to hp.com/support to learn about HP award winning service and support options in your region. (wty code 4G; wty ID A001)
Energy star certified	Yes
Energy efficiency compliance	Blue Angel; EPEAT® Silver; CECP; ENERGY STAR® qualified
Control panel	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle) display; Home button
Display	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle)
Software included	No software solutions are included in the Box, only on http://hp.com, http://123.hp.com
Fonts and typefaces	105 internal TrueType fonts scalable in HP PCL, 92 internal scalable fonts in HP postscript Level 3 emulation (Euro symbol built-in); 1 internal Unicode Fonts (Andale Mono World Type);2 Internal Windows Vista 8 Fonts (Calibri, Cambria);additional font solutions available via third-party flash memory cards; HP LaserJet Fonts and IPDS Emulation available at Http://www.hp.com/go/laserjetfonts
Compatible operating systems	Windows Client OS (32/64 bit), Win10, Win8.1, Win 8 Basic, Win8 Pro, Win8 Enterprise, Win8 Enterprise N, Win7 Starter Edition SP1, UPD Win7 Ultimate, Mobile OS, iOS, Android, Mac, Apple® macOS Sierra v10.12, Apple® macOS High Sierra v10.13, Apple® macOS Mojave v10.14, Discrete PCL6 Printer Driver, For more information on the supported operating systems go to http://support.hp.com, Enter your product name and search, Click on User Guides and enter your product name and search for User Guide, Search for your (Product Name) - User Guide, Search for the Supported Operating Systems section, UPD PCL6 / PS Printer Drivers, Supported Operating systems, For more information on the supported operating systems see http://www.hp.com/go/upd
Compatible network operating systems	Windows Server 2008 R2 64-bit, Windows Server 2008 R2 64-bit (SP1), Windows Server 2012 64-bit, Windows Server 2012 R2 64-bit, Windows Server 2016 64-bit, Failover Cluster 2008 R2, Failover Cluster 2012 R2, Terminal server 2008 R2, Remote Desktop server 2012 R2, Citrix Server 6.5, Citrix XenApp & XenDesktop 7.6, Novell iPrint server, Citrix Ready Kit Certification - Up to Citrix Server 7.18 for more information see http://citrixready.citrix.com, Linux- For more information see http://developers.hp.com/hp-linux-imaging-and-printing, Unix- For more information see http://www.hp.com/go/unixmodelscripts, UPD PCL6 / PS Printer Drivers, Supported for Compatible Network Operating systems please see http://hp.com/go/upd
Minimum system requirements	**PC:** 2 GB available hard disk space, Internet connection, USB port, Internet browser. (For Additional OS hardware requirements see microsoft.com); **Mac:** 2 GB Available hard drive Space, Internet connection or USB port, OS hardware requirements see apple.com
Power[12] [13]	**Power supply type:** Built-in 115V or 220V Power Supply; **Power supply required:** Input voltage: 100 V to 127 V nominal (+/-10%), 50 - 60 Hz nominal (+/- 3 Hz), 7.5 A; Input voltage: 220 V to 240 V nominal (+/-10%), 50 - 60 Hz nominal (+/- 3 Hz), 4 A; **Power consumption[11]:** 601 watts (Active Printing), 7.60 watts (Ready), 2.61 watts (Sleep), 0.06 watts (Auto-Off), 0.06 watts (Off), Auto Off/Wake on LAN 0.73 Watt; **Typical electricity consumption (TEC) number:** 1.257 kWh/Week (Blue Angel)/ 0.420 kWh/Week (Energy Star 3.0); **Best technical electricity consumption (TEC):** 1.257 kWh/week
Acoustics[14]	Acoustic power emissions: 6.8 B(A)
Operating environment	Operating temperature range: 50 to 90.5°F ; **Recommended operating temperature:** 59 to 80.6°F ; **Storage temperature range:** -4 to 104°F ; **Operating humidity range:** 10 to 80% RH ; **Recommended operating humidity range:** 30 to 70% RH
Security management	Identity management: Kerberos authentication; LDAP authentication; 1000 user PIN codes; optional HP and 3rd party advanced authentication solutions (e.g.; badge readers); Network: IPsec/firewall with Certificate; Pre-Shared Key; and Kerberos authentication; Supports WJA-10 IPsec configuration Plug-in; 802.1X authentication (EAP-PEAP; EAP-TLS); SNMPv3; HTTPS; Certificates; Access Control List; Data: Storage Encryption; Encrypted PDF & Email (uses FIPS 140 validated cryptographic libraries from Microsoft); Secure Erase; SSL/TLS (HTTPS); Encrypted Credentials; Device: Security lock slot; USB port disablement; hardware integration pocket for security solutions; Intrusion Detection with Red Balloon Security Technology - Constant in-device monitoring for attacks; SureStart Secure Boot – BIOS Integrity Checking with self-healing capability; Whitelisting - loads only known good code (DLLs, EXEs,...); Connection Inspector - helps ensure network connections to device are safe, Security management: Compatible with HP JetAdvantage Security Manager, HP Printer Security Plugin for Microsoft SCCM, Device Security Syslog Messages processed and accessable in ArcSight, Splunk, and McAfee(ESM) SIEMs

[1] In box cartridge yields 5,000 black pages based on ISO/IWC 19752 and continuous printing. Actual pages may vary considerably based on images printed and other factors. For more information, visit: http://www.hp.com/go/learnaboutsupplies.
[2] With print cartridges
[3] Declared yield value in accordance with ISO/IEC 19752. Actual yields vary considerably based on images printed and other factors. For more information, visit: http://www.hp.com/go/learnaboutsupplies
[4] To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth® Low Energy (BLE) beaconing capabilities. Customer can purchase the HP Jetdirect 3100w BLE/NFC/Wireless accessory or the RadBeacon USB.
[5] Duty cycle is defined as the maximum number of pages per month of imaged output. This value provides a comparison of product robustness in relation to other HP LaserJet or HP Color LaserJet devices, and enables appropriate deployment of printers and MFPs to satisfy the demands of connected individuals or groups.
[6] HP recommends that the number of pages per month of imaged output be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period.
[7] Measured using ISO 24734 Feature Test, A5 Landscape Feed. Speed may vary based on content, PC, media orientation, and media type.
[8] Measured using ISO/IEC 24734, excludes first set of test documents. For more information see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity.
[9] Measured using ISO/IEC 17629. For more information see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity.
[10] EPEAT® registered where applicable. EPEAT registration varies by country. See http://www.epeat.net for registration status by country
[11] Power requirements are based on the country/region where the printer is sold. Do not convert voltages. This will damage the printer and void the product warranty. Power consumption values typically based on measurement of 115 V device.
[12] Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Energy Star value typically based on measurement of 115 V device.
[13] Best TEC is not applicable to the ES 2.0 TEC. This measurement was made with the printer configuration optimized for energy efficiency. Minimum Sleep Delay was used, Wi-Fi Direct was disabled, and Active I/O - Energy Efficient Ethernet was used.
[14] Acoustic values are subject to change. For current information see http://www.hp.com/support. Configuration tested: base model, simplex printing, A4 paper at an average of 43 ppm.

To learn more, visit hp.com

Data sheet

HP Color LaserJet Managed E65150 series

This HP Color LaserJet with JetIntelligence merges performance, energy efficiency, and security.[1]

This HP Color LaserJet Printer with JetIntelligence combines exceptional performance and energy efficiency with professional-quality documents right when you need them—all while protecting your network with the industry's deepest security.[1]

Dynamic security enabled printer. Only intended to be used with cartridges using an HP original chip. Cartridges using a non–HP chip may not work, and those that work today may not work in the future.
http://www.hp.com/go/learnaboutsupplies

HP Color LaserJet Managed E65150dn

The World's most secure printing[1]

- With HP Sure Start, each printer regularly checks its operating code and repairs itself from attempted hacks.
- Help prevent potential attacks and take immediate action with instant notification of security issues.
- Centralize control of your printing environment with HP Web Jetadmin—and help build business efficiency.[2]
- Give workgroups what they need to succeed. Easily choose and deploy over 175 HP and third-party solutions.

High speed performance meets energy efficiency

- Speed through tasks and save paper. Print two-sided documents at up to 50 images per minute.[3]
- This printer wakes up fast and prints your first page fast.[4]
- This printer uses exceptionally low amounts of energy thanks to its innovative design and toner technology.
- Paper handling options include a wheeled stand and 550-sheet input feeder for paper sizes A6 to legal .

Pages, Performance, and Protection.

- Produce sharp text, bold blacks, and crisp graphics with precision black toner.
- Spend less time replacing toner, and more on business. Choose high-yield toner cartridges.[5]
- Help retain the Original HP quality you paid for with anti-fraud and cartridge authentication technology.

HP Color LaserJet Managed E65150dn

Product walkaround

1. 500-sheet output bin
2. Cartridge door release button
3. Front door (access to toner cartridges)
4. Built-in automatic two-sided printing
5. 550-sheet tray 2 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)
6. 4.3-inch (10.9 cm) color graphics display with touchscreen
7. Hardware Integration Pocket[1]
8. Easy-access USB port[2]
9. 100-sheet multipurpose tray 1 supports media sizes up to 8.5 x 14 inches (216 x 356 mm)
10. Lower right door (access to paper path)
11. Slot for cable-type security lock
12. Built-in Gigabit Ethernet port
13. Hi-Speed USB 2.0 printing port
14. USB port for connecting external USB devices

Front view
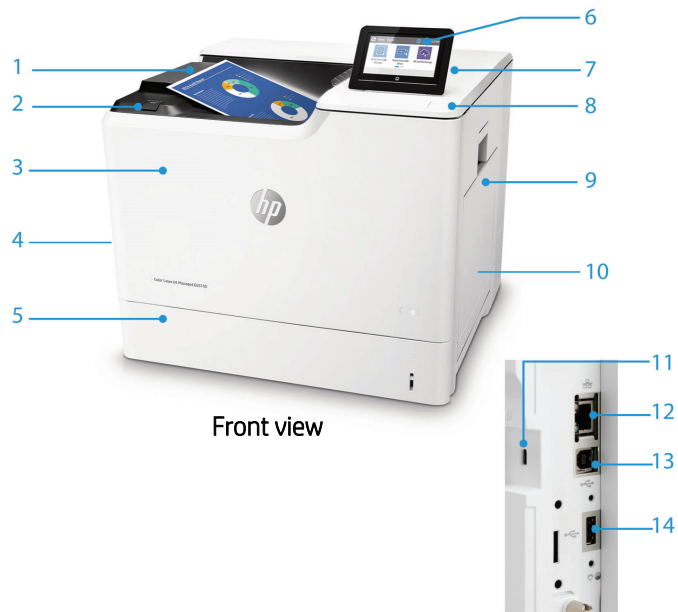
Series at a glance

Model	HP Color LaserJet Managed E65150dn
Product number	3GY03A
Functions	Print
Print speeds[3]	Letter/A4: Up to 50/47 pages per minute (ppm) (black and color) A5 landscape: Up to 74 ppm (black and color)
First page out (black and color)	From ready: As fast as 6.4/6.5 seconds (letter/A4)[4] From sleep: As fast as 8.4/8.5 seconds (letter/A4)[5]
100-sheet multipurpose tray 1, 550-sheet tray 2	√
Optional paper-handling accessories[6]	See Paper-handling accessories table below for details
Input capacity (standard/maximum[7])	Up to 650/3,200 pages
Managed Cartridge yields[8]	Black: ~32,200 pages Color: ~28,000 pages
Recommended Monthly Page Volume (RMPV)[9]	3,000 to 24,000 pages
Wireless direct[10]/NFC touch-to-print[11]/BLE[12]	Optional
Wireless networking[13]	Optional

[1] Solutions deployed through the Hardware Integration Pocket (HIP) may require additional purchase. [2] An administrator must enable the easy-access USB port before use. 3 Measured using ISO/IEC 24734; excludes first set of test documents. For more information, see hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity. [4] Measured using ISO/IEC 17629. Exact speed varies depending on the system configuration, software application, driver, and document complexity. Learn more at hp.com/go/printerclaims. [5] Measured after 15 minutes in sleep. Exact speed varies depending on the system configuration, software application, driver, document complexity, and time in sleep. [6] The printer comes standard with the 100-sheet multipurpose tray 1 and 550-sheet tray 2. Add up to two additional 550-sheet paper feeders; or add one of the other accessories (1x550-sheet paper feeder with stand and cabinet, 3x550-sheet paper feeder and stand, or 1x550 and 2,000-sheet HCI feeder and stand). All optional accessories support media sizes up to 8.5 x 14 inches (216 x 356 mm). [7] Purchase of optional paper trays required to reach maximum input capacity. [8] Average black declared yields based on ISO/IEC 19752 and continuous printing. Average color composite (C/M/Y) declared yields based on ISO/IEC 19798 and continuous printing. Actual yields vary considerably based on images printed and other factors. For details see hp.com/go/learnaboutsupplies. HP Managed Cartridges are not included in printer purchase; purchase separately. [9] Recommended Monthly Page Volume: HP recommends that the number of printed pages per month be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period. [10] Wireless direct printing can be added by purchasing the optional HP Jetdirect 3000w NFC/wireless direct accessory (J8030A). If selected, you cannot also select the HP Jetdirect 3100w BLE/NFC/Wireless Accessory (3JN69A) or HP Jetdirect 2900nw Print Server (J8031A). Mobile device needs to be connected directly to the signal of a wireless direct supported MFP or printer prior to printing. Depending on mobile device, an app or driver may also be required. For details, see hp.com/go/mobileprinting. [11] Touch-to-print can be added by purchasing the optional HP Jetdirect 3000w NFC/Wireless Direct Accessory. Mobile device must support Near Field Communication (NFC)-enabled printing. For more information, see hp.com/go/businessmobileprinting. [12] Bluetooth® Low Energy is optional on the HP Color LaserJet Managed E65150dn with the addition of the HP Jetdirect 3100w BLE/NFC/Wireless Accessory (3JN69A). If selected, you cannot also select the HP Jetdirect 2900nw Print Server (J8031A) or the HP Jetdirect 3000w NFC/Wireless Accessory (J8030A). Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. [13] Wireless networking can be added with the selection of the optional HP Jetdirect 2900nw Print Server (J8031A). If selected, you cannot also select the HP Jetdirect 3100w BLE/NFC/Wireless Accessory (3JN69A) or HP Jetdirect 3000w NFC/Wireless Accessory (J8030A). Wireless performance is dependent on physical environment and distance from access point, and may be limited during active VPN connections.

HP Services

Downtime can have serious consequences, so HP provides support beyond the standard warranty. You benefit from reduced risk, maximized uptime, predictable service delivery and no unbudgeted repair costs. HP Care Pack Services provide a comprehensive suite of protection services designed to keep HP hardware and software up and running so employees can stay productive.

For carepack availability visit: hp.com/go/cpc

Top features

Only HP enterprise printers repair themselves from attacks in real time while offering outstanding manageability. Automatically monitor threats, detect intrusions, and validate operating software while centrally managing your fleet with ease.[1]

With speeds up to 50 pages per minute[2], fast first page out and a variety of paper-handling options, you get confidence that your employees can speed through their tasks without interruption.

Help protect your printer using Original HP Toner cartridges with JetIntelligence.

Accessories

P1B09A	HP Color LaserJet 550-sheet Paper Feeder
P1B10A	HP Color LaserJet 550-sheet Paper Feeder with Stand and Cabinet
P1B11A	HP Color LaserJet 3x550-sheet Paper Feeder with Stand
P1B12A	HP Color LaserJet 1x550/2000-sheet Feeder and Stand
B5L28A	HP Internal USB Ports
B5L29A	HP Secure High Performance Hard Disk Drive
J8031A	HP Jetdirect 2900nw Print Server
E5K48A	HP 1 GB DDR3 x32 144-Pin 800MHz SODIMM
2MU47A	Accessibilty Assistant
J8030A	HP Jetdirect 3000w NFC/Wireless Accessory
3JN69A	HP JetDirect 3100w BLE/NFC/Wireless Accessory
2NR12A	HP Removable Hard Drive Enclosure
X3D03A	HP USB Universal Card Reader
Y7C05A	HP HIP2 Keystroke Reader
4QL32A	HP Legic Reader
E5K49A	HP 2 GB DDR3x32 144-Pin 800MHz SODIMM Accessory

Supplies

W9000MC	HP Black Managed LaserJet Toner Cartridge (~32,200 pages)
W9001MC	HP Cyan Managed LaserJet Toner Cartridge (~28,000 pages)
W9002MC	HP Yellow Managed LaserJet Toner Cartridge (~28,000 pages)
W9003MC	HP Magenta Managed LaserJet Toner Cartridge (~28,000 pages)

Services

U9PD4E	HP 5 year Next Business Day w/DMR Service for Color LaserJet E65xxx Managed
U9PD7E	HP 5 year 4 hour 9x5 w/DMR Service for Color LaserJet E65xxx Managed
U9PE2PE	HP 2 years Post Warranty Next Business Day w/DMR Service for Color LaserJet E65xxx Managed
U9PE4PE	HP 2 year Post Warranty 4 hour 9x5 w/DMR Service for Color LaserJet E65xxx Managed

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[1] Based on HP review of 2018 published security features of competitive in-class printers. Only HP offers a combination of security features that can monitor to detect and automatically stop an attack then self-validate software integrity in a reboot. For a list of printers, visit hp.com/go/PrintersThatProtect. For more information: hp.com/go/printersecurityclaims. [2] Measured using ISO/IEC 24734, excludes first set of test documents. For more information, see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

HP Color LaserJet Managed E65150 series

Technical Specifications	HP Color LaserJet Managed E65150dn (3GY03A)
Print speed	**Letter:** Up to 50 ppm black; Up to 50 ppm color; **A4:** Up to 47 ppm black; Up to 47 ppm color[15]; **First Page Out Letter:** As fast as 6.4 sec black; As fast as 6.4 sec color; **First Page Out A4:** As fast as 6.5 sec black; As fast as 6.5 sec color[13]; **Print Speed (Portrait, A5):** Up to 74 ppm black; Up to 74 ppm color[14]
Print resolution	**Black (best):** Up to 1200 x 1200 dpi; **Colour (best):** Up to 1200 x 1200 dpi
Print Technology	Laser; **Print Resolution Technologies:** 600 x 600 dpi; HP ImageRet 3600, HP ProRes 1200 (1200 x 1200 dpi), Pantone© Calibrated
Print Cartridges Number	4 (1 each black, cyan, magenta, yellow)
Standard Print Languages	HP PCL 6, HP PCL 5 (HP PCL 5 driver available from the Web only), HP postscript level 3 emulation, native PDF printing (v 1.7), Apple AirPrint™
Printer Smart Software Features	Print preview, duplex printing, print multiple pages per sheet (2, 4, 6, 9, 16), collation, watermarks, store print jobs, easy-access USB, HP EasyColor
Printer Management	HP Printer Assistant; HP Device Toolbox; HP Web JetAdmin Software; HP JetAdvantage Security Manager; HP SNMP Proxy Agent; HP WS Pro Proxy Agent; Printer Administrator Resource Kit for HP Universal Print Driver (Driver Configuration Utility - Driver Deployment Utility - Managed Printing Administrator)
Standard Connectivity	1 Hi-Speed Device USB 2.0; 2 Hi-Speed USB 2.0 Host; 1 Gigabit Ethernet; 1 Hardware Integration Pocket
Network Capabilities	Yes, via HP Jetdirect Ethernet embedded print server (standard) which supports: 10Base-T, 100Base-Tx, 1000Base-T; 802.3az (EEE) support on Fast Ethernet and Gig Links; IPsec (standard); 802.11a/b/g/n wireless networking (optional).
Wireless Capability	Optional, enabled with purchase of a wireless hardware accessory. Single band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3000w NFC/Wireless Accessory J8030A, Dual band Wireless Station and Wi-Fi Direct functionality available with HP Jetdirect 3100w BLE/NFC/Wireless Accessory 3JN69A, Dual band Wireless Station functionality available with HP Jetdirect 2900nw Print Server J8031A
Mobile Printing Capability	Apple AirPrint™; Google Cloud Print™; HP ePrint; Mopria™ Certified; ROAM capable for easy printing[8]
Memory	**Standard:** 1 GB; **Maximum:** 2 GB MAX memory, when Accessory DIMM is installed
Processor Speed	1.2 GHz / **Hard disk:** Optional, 500 GB (with accessory B5L29A)
Duty Cycle	**Monthly, letter:** Up to 150,000 pages[10]; **Recommended Monthly Page Volume:** 3,000 to 24,000[11]
Paper Handling	**Input Capacities:** 100-sheet multi-purpose tray, 550-sheet input tray 2; Up to 650 sheets standard labels legal; **Output Capacities:** 500-sheet output bin; Up to 500 sheets standard labels legal; **Duplex Options:** Automatic (standard); **Envelope Feeder:** No; **Standard Paper Trays:** 2; **Media Types Supported:** Paper (plain, light, bond, recycled, mid-weight, heavy, mid-weight glossy, heavy glossy, extra heavy, extra heavy glossy, cardstock, card glossy), color transparency, labels, letterhead, envelope, preprinted, colored, rough, opaque film, user-defined; **Media Weight Supported:** Tray 1: 16 to 58 lb (plain) 32 to 58 lb (glossy); Tray 2 and automatic two-sided printing unit: 16 to 90 lb (plain) 32 to 58 lb (glossy); Optional Trays 3, 4, 5 1x550-sheet feeders: 16 to 90 lb (plain) 32 to 58 lb (glossy); Optional Tray 4 2,000-sheet high capacity input: 16 to 58 lb (plain); **Media Sizes Supported:** Tray 1: letter, legal, executive, statement, 3 x 5 in, 4 x 6 in, 5 x 7 in, 5 x 8 in, 8.5 x 13 in, envelopes (No. 9, No. 10, Monarch); Tray 2: letter, legal, executive, statement, 4 x 6 in, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional 550-sheet trays: letter, legal, executive, statement, 4 x 6 in, 5 x 7 in, 5 x 8 in, 8.5 x 13 in; Optional 2000-sheet tray: letter, legal; **Media Sizes Custom:** Tray 1: 3 x 5 to 8.5 x 14 in; Tray 2: 4 x 5.83 to 8.5 x 14 in; Optional 550-sheet trays: 4 x 5.83 to 8.5 x 14 in; Optional 2000-sheet tray: custom sizes not supported
Product Dimensions	**W x D x H:** 20.08 x 18.03 x 17.32 in; **Maximum:** 37.91 x 30.31 x 20.16 in
Product Weight	68.9 lb[3]
What's in the box	HP Color LaserJet Printer; HP Black, Cyan, Magenta and Yellow Original LaserJet Toner Cartridges (toner cartridges installed); Documentation (Hardware Install Guide); Power cord; Fixed-Size Cassette Guides[2]
Replacement Cartridges	HP Black Managed LaserJet Toner Cartridge (~32,200 pages) W9000MC; HP Cyan Managed LaserJet Toner Cartridge (~28,000 pages) W9001MC; HP Yellow Managed LaserJet Toner Cartridge (~28,000 pages) W9002MC; HP Magenta Managed LaserJet Toner Cartridge (~28,000 pages) W9003MC[7]
Warranty Features	One-year, next-business day, onsite warranty. Warranty and support options vary by product, country and local legal requirements. Go to hp.com/support to learn about HP award winning service and support options in your region. (wty code 4G)
Energy Efficiency Compliance	ENERGY STAR® qualified; EPEAT® Silver; CECP[1]
Control Panel	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle) display; Home button
Display Description	4.3-in (10.92 cm) Color Graphics Display (CGD) with touchscreen; rotating (adjustable angle)
Software Included	No software solutions are included in the Box, only on http://hp.com, http://123.hp.com
Fonts and Typefaces	105 internal TrueType fonts scalable in HP PCL, 92 internal scalable fonts in HP Postscript level 3 emulation (Euro symbol built-in); 1 internal Unicode font (Andale Mono WorldType); 2 Internal Windows Vista 8 Fonts (Calibri, Cambria); additional font solutions available via third-party flash memory cards; HP LaserJet Fonts and IPDS Emulation available at http://www.hp.com/go/laserjetfonts
Compatible Operating Systems	Windows Client OS (32/64 bit), Win10, Win8.1, Win 8 Basic, Win8 Pro, Win8 Enterprise, Win8 Enterprise N, Win7 Starter Edition SP1, UPD Win7 Ultimate, Mobile OS, iOS, Android, Mac, Apple® macOS Sierra v10.12, Apple® macOS High Sierra v10.13, Apple® macOS Mojave v10.14, Discrete PCL6 Printer Driver, For more information on the supported operating systems go to http://support.hp.com, Enter your product name and search, Click on User Guides and enter your product name and search for User Guide, Search for your (Product Name) - User Guide, Search for the Supported Operating Systems section, UPD PCL6 / PS Printer Drivers, Supported Operating systems, For more information on the supported operating systems see www.hp.com/go/upd[12]
Compatible Network Operating Systems	Windows Server 2008 R2 64-bit, Windows Server 2008 R2 64-bit (SP1), Windows Server 2012 64-bit, Windows Server 2012 R2 64-bit, Windows Server 2016 64-bit, Failover Cluster 2008 R2, Failover Cluster 2012 R2, Terminal server 2008 R2, Remote Desktop server 2012 R2, Citrix Server 6.5, Citrix XenApp & XenDesktop 7.6, Novell iPrint server, Citrix Ready Kit Certification - Up to Citrix Server 7.18 for more information see http://citrixready.citrix.com, Linux- For more information see http://developers.hp.com/hp-linux-imaging-and-printing, Unix- For more information see http://www.hp.com/go/unixmodelscripts, UPD PCL6 / PS Printer Drivers, Supported for Compatible Network Operating systems please see http://hp.com/go/upd
Minimum System Requirements	**PC:** 2 GB available hard disk space, Internet connection, USB port, Internet browser. For additional OS hardware requirements see microsoft.com; **MAC:** 2 GB available hard drive space, Internet connection or USB port, OS hardware requirements see apple.com
Power	**Power Supply Type:** Built-in 115V or 220V Power Supply; **Power Requirements:** Input voltage: 100V to 127V nominal (+/-10%), 50 - 60Hz nominal (+/- 3Hz), 12 A; Input voltage: 220V to 240V nominal (+/-10%), 50 - 60Hz nominal (+/-3Hz), 6 A; **Power Consumption:** 690 watts (printing), 31 watts (ready), 0.7 watts (sleep), 0.7 watts (Auto Off/Manual On), 0.1 (Manual Off)[4]; **TEC number:** ES: 1.96 kWh/Week; BA: 1.93 kWh/Week[5] **Best (TEC):** 1.93 kWh/Week[6]
Acoustics	**Acoustic Power Emissions:** 6.7 B(A); **Acoustic Pressure Emissions:** 52 dB(A)[9]
Operating Environment	**Operating Temperature Range:** 50 to 90.5°F; **Recommended Operating Temperature:** 59 to 80.6°F; **Storage Temperature Range:** -4 to 104°F; **Operating Humidity Range:** 10 to 80% RH; **Recommended Humidity Operating Range:** 30 to 70% RH
Security Management	Identity management: Kerberos authentication; LDAP authentication; 1000 user PIN codes; optional HP and 3rd party advanced authentication solutions (e.g.; badge readers); Network: IPsec/firewall with Certificate; Pre-Shared Key; and Kerberos authentication; Supports WJA-10 IPsec configuration Plug-in; 802.1X authentication (EAP-PEAP; EAP-TLS); SNMPv3; HTTPS; Certificates; Access Control List; Data: Storage Encryption; Encrypted PDF & Email (uses FIPS 140 validated cryptographic libraries from Microsoft); Secure Erase; SSL/TLS (HTTPS); Encrypted Credentials; Device: Security lock slot; USB port disablement; hardware integration pocket for security solutions; Intrusion Detection with Red Balloon Security Technology - Constant in-device monitoring for attacks; SureStart Secure Boot - BIOS Integrity Checking with self-healing capability; Whitelisting - loads only known good code (DLLs, EXEs, ...); Security management: Compatible with HP JetAdvantage Security Manager, Device Security Syslog Messages processed and accessable in Arcsight and Splunk SIEMs

[1] EPEAT® registered where applicable. EPEAT registration varies by country. See http://www.epeat.net for registration status by country. 2 Standard cartridges included; yields 12,500 black and 10,500 color composite (C/M/Y) pages. Average black declared yields based on ISO/IEC 19752 and continuous printing. Average color composite (C/M/Y) declared yields based on ISO/IEC 19798 and continuous printing. Actual yields vary considerably based on images printed and other factors. For details see http://www.hp.com/go/learnaboutsupplies. 3 With print cartridges. 4 Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Power consumption values typically based on measurement of 115 V device. 5 Power requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty. Energy Star value typically based on measurement of 115 V device. 6 Based on the BA TEC method with the following possible exceptions: 1 minute or less sleep delay setting, Wi-Fi disabled. 7 Average black declared yields based on ISO/IEC 19752 and continuous printing. Average color composite (C/M/Y) declared yields based on ISO/IEC 19798 and continuous printing. Actual yields vary considerably based on images printed and other factors. For details see http://www.hp.com/go/learnaboutsupplies. 8 To enable HP Roam, some devices may require firmware to be upgraded and an optional accessory to add Bluetooth® Low Energy (BLE) beaconing capabilities. Subscription may be required. For more information, visit http://hp.com/go/roam 9 Acoustic Values are subject to change. Configuration tested: base model, simplex printing, A4 paper at an average of 48 ipm. 10 Duty cycle is defined as the maximum number of pages per month of imaged output. This value provides a comparison of product robustness in relation to other HP LaserJet or HP Color LaserJet devices, and enables appropriate deployment of printers and MFPs to satisfy the demands of connected individuals or groups. 11 HP recommends that the number of pages per month of imaged output be within the stated range for optimum device performance, based on factors including supplies replacement intervals and device life over an extended warranty period. 12 Solution software available on http://www.123.hp.com 13 Measured using ISO/IEC 17629. For more information see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity. 14 Measured using ISO/IEC 24734, excludes first set of test documents. For more information see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity. 15 Measured using ISO/IEC 24734, excludes first set of test documents. For more information see http://www.hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity.

Learn more at hp.com

Product walkaround

1   250-sheet automatic document feeder
    supports media up to 290 x 432 mm (11 x 17 inches) (A3)

2   Flatbed scanner handles sheets up to 297 x 432 mm
    (11.7 x 17 inches)

3   20.3 cm (8.0 inch) colour touchscreen control panel tilts
    up for easier viewing

4   Pull-out keyboard (Flow MFP E87660z only)

5   Right door (access to the print path)

6   100-sheet multipurpose tray 1 supports media
    up to 290 x 432 mm (11 x 17 inches) (A3)

7   Front door access to toner cartridges

8   Hardware Integration Pocket (for connecting accessory
    and third-party devices)[1]

9   Easy-access USB port[2]

10 500-sheet output bin

11 Automatic two-sided printing

12 HP Secure High-Performance Hard Disk

13 520-sheet tray 2 supports media up to A4

14 520-sheet tray 3 supports media up to 290 x 432 mm
    (11 x 17 inches) (A3)

15 Slot for cable-type security lock

16 2 Hi-Speed USB 2.0 Host ports

17 Gigabit Ethernet port

18 Hi-Speed USB 2.0 Device port

HP Color LaserJet Managed Flow MFP E87660z Plus shown

I/O panel

Series at a glance

	HP Color LaserJet Managed MFP E87660du Plus	HP Color LaserJet Managed MFP E87660dn Plus	HP Color LaserJet Managed Flow MFP E87660z Plus
Product number	5FM82A	Z8Z16A	Z8Z17A
Functions	Print, copy, and scan (fax and wireless optional)	Print, copy, and scan (fax and wireless optional)	Print, copy, and scan (fax and wireless optional)
Print speed (black and colour)[3]	A3: Up to 30 pages per minute (ppm); A4: Up to 60 pages per minute (ppm)	A3: Up to 30 pages per minute (ppm); A4: Up to 60 pages per minute (ppm)	A3: Up to 30 pages per minute (ppm); A4: Up to 60 pages per minute (ppm)
ADF capacity	Standard, 100 sheets	Standard, 250 sheets	Standard, 250 sheets
Scan speeds (black and colour)[4]	**Simplex/duplex:** Up to 80 ipm/160 ipm (b&w); up to 80 ipm/160 ipm (colour)	**Simplex/duplex:** Up to 90 ipm/180 ipm (b&w); up to 90 ipm/180 ipm (colour)	**Simplex/duplex:** Up to 120 ipm/240 ipm (b&w); up to 120 ipm/240 ipm (colour)
Advanced workflow features	Scan-to-E-mail; Scan-to-network folder (stand alone solution); Scan to Cloud; Scan to USB; Scan-to-SharePoint	Scan-to-E-mail; Scan-to-network folder (stand alone solution); Scan to Cloud; Scan to USB; Scan-to-SharePoint	Scan-to-E-mail; Scan-to-network folder (stand alone solution); Scan to Cloud; Scan to USB; Scan-to-SharePoint
Optional Input Capacity	1,040 sheet tray; 2,000 sheet tray; 3,000 sheet tray	1,040 sheet tray; 2,000 sheet tray; 3,000 sheet tray	2,150 sheet tray; 3,000 sheet tray
Optional output accessories	Job Separator, Inner Finisher stapler-stacker, booklet maker, 2/3 hole punch, 2/4 hole punch, Swedish hole punch	Job Separator, Inner Finisher stapler-stacker, booklet maker, 2/3 hole punch, 2/4 hole punch, Swedish hole punch	Job Separator, Inner Finisher stapler-stacker, booklet maker, 2/3 hole punch, 2/4 hole punch, Swedish hole punch

[1] Solutions deployed through the Hardware Integration Pocket (HIP) may require additional purchase. [2] An administrator must enable the easy-access USB port before use. [3] Measured using ISO/IEC 24734, excludes first set of test documents. For more information, see hp.com/go/printerclaims. Exact speed varies depending on the system configuration, software application, driver, and document complexity. [4] Scan speed measured from ADF at default 300 dpi (black-and-white, grayscale, and colour). Actual processing speeds may vary depending on scan resolution, network conditions, computer performance, and application software.

HP Services

Downtime can have serious consequences, so HP provides support beyond the standard warranty. You benefit from reduced risk, maximized uptime, predictable service delivery and no unbudgeted repair costs. Choose from:

Optimized Care (optimum performance and stability): 4 hour Onsite Support, Maintenance Kit Replacement Service, Installation with Network Configuration Service

Standard Care (high level of uptime): Next Business Day Onsite Support, Maintenance Kit Replacement Service, Installation with Network Configuration Service

Basic Care (minimum recommended support): Next Business Day Onsite Support

4 hour Onsite Support: Onsite support within four hours after a service call received within the coverage window

Next Business Day Onsite Support: Onsite service the next business day after the service call is received

Maintenance Kit Replacement Service: Onsite replacement of your printer's maintenance kit including parts, materials, and labor

Installation with Network Configuration Service: Assembly, network configuration, and basic administrator familiarization. For more information about HP Care Pack, HP Contractual, or HP Managed Print Services, visit hp.com/go/printservices

Mac

Windows 10

Top Features

Quality colour printing for a great value is a smart choice for any business. Produce premium, professional-quality colour documents at a competitive low cost with an HP Color LaserJet MFP built to make your work—and your business—look its best.

Annoying interruptions and complex maintenance can slow down printing, and ultimately, the pace of business. Avoid pauses in productivity with an HP LaserJet MFP designed for maximum uptime, so you can count on reliable results day in and day out.

Only HP Enterprise printers repair themselves from attacks in real time, with built-in security to help keep your network safe. Automatically monitor threats, detect intrusions, and validate operating software with security offered only by HP.[1]

Accelerate workflow, improve accuracy, and easily connect people throughout your organization. Complete high-volume scan jobs super-fast—up to 180 ipm[2]—and avoid extra steps with a Flow MFP designed for maximum productivity.

Product

5FM82A	HP Color LaserJet Managed MFP E87660du Plus
Z8Z16A	HP Color LaserJet Managed MFP E87660dn Plus
Z8Z17A	HP Color LaserJet Managed Flow MFP E87660z Plus

Accessories

CC487A	HP LaserJet MFP Analog Fax Accessory 500
Y1F98A	HP LaserJet Dual Cassette Department Feeder
Y1G01A	HP LaserJet Department Job Separator
Y1G03A	HP LaserJet Inner Finisher Hole 2/4 Punch
Y1G04A	HP LaserJet Inner Finisher Swedish Punch
Y1G07A	HP LaserJet Booklet Finisher
Y1G12A	HP LaserJet Hole Punch Swedish Accessory
Y1G20A	HP LaserJet 3000 Sheet HCI Dept Tray
Y1G21A	HP LaserJet 2000-sheet HCI Input Tray

Supplies

W9050MC	HP Black Managed LaserJet Toner (54,500 pages)
W9051MC	HP Cyan Managed LaserJet Toner (52,000 pages)
W9052MC	HP Yellow Managed LaserJet Toner (52,000 pages)
W9053MC	HP Magenta Managed LaserJet Toner (52,000 pages)
W9054MC	HP Black Managed LaserJet Imaging Drum (160,000 pages)
W9055MC	HP Managed LaserJet Imaging Drum (145,000 pages)

HP Care Packs

U9LS7E	HP 1-yr NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LS8E	HP 3-yr NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LS9E	HP 4-yr NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT0E	HP 5-yr NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT1E	HP 3-yr 4 hour 9x5 SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT2E	HP 4-yr 4 hour 9x5 SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT3E	HP 5-yr 4 hour 9x5 SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT4E	HP 1-yr NBD Parts Exch SVC for Color LaserJet E876xx MFP Managed (Channel Only)
U9LT5E	HP 3-yr NBD Parts Exch SVC for Color LaserJet E876xx MFP Managed (Channel Only)
U9LT6E	HP 4-yr NBD Parts Exch SVC for Color LaserJet E876xx MFP Managed (Channel Only)
U9LT7E	HP 5-yr NBD Parts Exch SVC for Color LaserJet E876xx MFP Managed (Channel Only)
U9LT8PE	HP 1-yr Post Warranty NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LT9PE	HP 2-yr Post Warranty NBD SVC w/Defective Media Retention for Color LaserJet E876xx MFP Managed
U9LU0PE	HP 1-yr Post Warranty 4 hour 9x5 SVC w/Defective Media Retention for Color Laseret E876xx MFP Managed

Protect your investment with HP Care Pack. Let HP certified engineers resolve your technical issues. For more details on HP Care Pack, go to hp.com/go/cpc

Paper

CG964A	HP Professional Glossy Laser Paper 120 gsm-250 sht/A4
CG965A	HP Professional Glossy Laser Paper 150 gsm-150 sht/A4
CG966A	HP Professional Glossy Laser Photo Paper 200 gsm-100 sht/A4
Q6550A	HP Professional Matt Laser Photo Paper-100 sht/A4
CG969A	HP Professional Glossy Laser Paper 120 gsm-250 sht/A3

Contact HP via phone: Asia: 65 6253 8500

Solutions
HP Web Jetadmin: hp.com/go/wja
HP Universal Print Driver: hp.com/go/upd
HP Imaging and Printing Security Center: hp.com/go/ipsc

[1] Based on HP review of 2016 published security features of competitive in-class printers. Only HP offers a combination of security features that can monitor to detect and automatically stop an attack then self-validate software integrity in a reboot. For a list of printers, visit hp.com/go/PrintersThatProtect. For more information: hp.com/go/printersecurityclaims [2] Scan speed measured from ADF at default 300 dpi (black-and-white, grayscale, and colour). Actual processing speeds may vary depending on scan resolution, network conditions, computer performance, and application software.

Technical specifications

Model	HP Color LaserJet Managed MFP E87660du Plus	HP Color LaserJet Managed MFP E87660dn Plus	HP Color LaserJet Managed Flow MFP E87660z Plus
Product number	5FM82A	Z8Z16A	Z8Z17A
Functions	Print, Copy, Scan (fax and wireless optional)		
Print			
Duplex print options	Automatic (standard)		
Print speed[1]	Black (A4, normal): Up to 60 ppm; Black (A3, normal): Up to 30 ppm; Black (tabloid, normal): Up to 30 ppm; Black (A4, duplex): Up to 60 ipm; Black (tabloid, duplex): Up to 30 ipm; Colour (A4, normal): Up to 60 ppm; Colour (A3, normal): Up to 30 ppm; Colour (tabloid, normal): Up to 30 ppm; Colour (A4, Duplex): Up to 60 ipm; Colour (tabloid, duplex): Up to 30 ipm		
First page out[2]	Black (A4, ready): As fast as 6.9 seconds; Black (A4, sleep): As fast as 20 seconds; Colour (A4, ready): As fast as 8.0 seconds; Colour (A4, sleep): As fast as 20 seconds		
Print technology	Laser		
Print resolution	Black (best): Up to 1200 x 1200 dpi reduced speed; Black (normal): Up to 600 x 600 dpi; Colour (best): Up to 1200 x 1200 dpi reduced speed		
Print cartridges number	4 (1 each black, cyan, magenta, yellow)		
Standard print languages	HP PCL 6, HP Postscript level 3 emulation, PDF (v 1.7), AirPrint™ compatible, Pcl5, GCP compatible, BMP, TIFF		
Printer management	HP Printer Assistant, HP Utility (Mac), HP Device Toolbox, HP Web JetAdmin Software, HP JetAdvantage Security Manager, HP SNMP Proxy Agent, HP WS Pro Proxy Agent, Printer Administrator Resource Kit for HP Universal Print Driver (Driver Configuration Utility - Driver Deployment Utility - Managed Printing Administrator)		
Scan			
Scan technology	Type: Flatbed, ADF; Technology: Platen Scanner CCD Digital-CIS		
Scan speed[3]	Simplex/duplex: Up to 80 ipm/160 ipm (b&w); up to 80 ipm/160 ipm (colour)	Simplex/duplex: Up to 90 ipm/180 ipm (b&w); up to 90 ipm/180 ipm (colour)	Simplex/duplex: Up to 120 ipm/240 ipm (b&w); up to 120 ipm/240 ipm (colour)
Scan resolution	Enhanced: Up to 600 x 600 dpi; Hardware: Up to 600 x 600 dpi; Optical: Up to 600 x 600 dpi		
Digital sending standard features	Digital Send: PDF, Hi-Compression PDF, JPEG, TIFF, MTIFF, XPS, PDF/A; Scan to easy access USB: PDF, Hi-Compression PDF, JPEG, TIFF, MTIFF, XPS, PDF/A	Scan to E-mail; Save-to-Network Folder; Save-to-USB drive; Send to Sharepoint; Send to FTP; Send to sFTP; Send to LAN Fax; Send to Internet Fax; Local Address Book; SMTP over SSL; Blank Page Removal; Edge Erase; Auto Colour Sense; Compact PDF; Auto Straighten	Scan to E-mail; Save-to-Network Folder; Save-to-USB drive; Send to Sharepoint; Send to FTP; Send to sFTP; Send to LAN Fax; Send to Internet Fax; Local Address Book; SMTP over SSL; Blank Page Removal; Edge Erase; Auto Colour Sense; Auto Crop To Content; Compact PDF; Auto Tonescale; Auto Orientation; Multi-Pick Detect; Auto Straighten; Auto Crop To Page; OCR
Scan size	Flatbed (max): 297 x 432 mm; ADF (max): 297 x 432 mm		Flatbed (max): 105 x 148 mm; ADF (max): 109.22 x 1397 mm
Scan input modes	Front panel applications: Copy; E-mail; Fax; Save to Network Folder; Save to USB; Save to Device Memory; Open Extensibility Platform (OXP) applications		
Scan file format	Digital Send: PDF, Hi-Compression PDF, JPEG, TIFF, MTIFF, XPS, PDF/A; Scan to easy access USB: PDF, JPEG, TIFF, MTIFF, XPS, PDF/A; Print from easy access USB: PDF, PS, Print Ready files (.prn, .pcl, .cht)		Digital Send: PDF, Hi-Compression PDF, JPEG, TIFF, MTIFF, XPS, PDF/A, TEXT (OCR), Unicode TEXT (OCR), RTF (OCR), Searchable PDF (OCR), Searchable PDF/A (OCR), HTML (OCR), CSV (OCR); Scan to easy access USB: PDF, JPEG, TIFF, MTIFF, XPS, PDF/A, TEXT (OCR), Unicode TEXT (OCR), RTF (OCR), Searchable PDF (OCR), Searchable PDF/A (OCR), HTML (OCR), CSV (OCR); Print from easy access USB: PDF, PS, Print Ready files (.prn, .pcl, .cht)
Copy			
Copy smart software features	Better remote diagnosis and repair; Higher first time fix rates; Full toner, LLC utilization; Capture un-billed pages from reconnected network devices, personal printers; On-site access to service training; A3 LaserJets are designed for fewer LLC replacements and faster repairs.		
Copy speed[4]	Black (A4, normal): Up to 60 cpm; Black (A3, normal): Up to 30 cpm; Colour (A4, normal): Up to 60 cpm; Colour (A3, normal): Up to 30 cpm; Black Duplex (A4): Up to 60 cpm; Black Duplex (A3): Up to 30 cpm; Colour (A4, Duplex): Up to 60 cpm; Colour (A3, Duplex): Up to 30 cpm		
First copy out	Black (A4): As fast as 5.2 seconds; Colour (A4): As fast as 6.2 seconds; Black (A4, sleep): As fast as 20.5 seconds; Colour (A4, sleep): As fast as 20.5 seconds		
Copy resolution	Black (text and graphics): Up to 600 x 600 dpi; Colour (text and graphics): Up to 600 x 600 dpi		
Max. number of copies	Up to 999 copies		
Copier resize	25 to 400%		
Copier settings	Two-sided copying; scalability; image adjustments (darkness, contrast, background cleanup, sharpness); optimized text/picture (text, mixed, printed picture, photograph); N-Up; N or Z-ordering; content orientation; collation; booklet; ID Scan; job build; job Storage; watermark; stamps; book mode scans; erase edges; automatically detect colour/mono; image Preview		
Fax			
Fax speed[5]	33.6 kbps		
Fax resolution	Up to 300 x 300 dpi (400 x 400 dpi for received faxes only)		
Fax features	Auto fax reduction supported: Yes; Auto-redialing: Yes; Fax delayed sending: No; Distinctive ring detection supported: No; Fax forwarding supported: Yes; Junk barrier supported: Yes; Maximum speed dialing numbers: Up to 1000 numbers (each with 210 destinations); PC interface supported: Yes; Fax polling supported: Yes (poll to receive only)		
Fax memory	Fax memory (A4): Up to 500 pages		
Connectivity			
Standard connectivity	3 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit Ethernet 10/100/1000T network;); 1 Hardware Integration Pocket		
Mobile printing capability[6]	Yes		
Network ready	Standard (built-in Gigabit 10/100/1000T Ethernet)		
Wireless capability	No wireless capabilities standard. There are optional accessories (common to all current Jedi products) that support wireless. These are listed in the connectivity section, above.		
Network Capabilities	Standard (built-in Gigabit 10/100/1000T Ethernet)		
Memory	Standard: 7 GB; Maximum: 7 GB		
Hard Disk	Two 500 GB Standard, embedded HP High-Performance Secure Hard Disk, Total 1000 GB; AES 256 hardware encryption or greater; Secure erase capabilities (Secure File Erase-Temporary Job Files, Secure Erase-Job Data, Secure ATA Erase-Disk). Note: U.S. government SKU uses 500 GB FIPS 140-2 validated hard disk accessory instead.		
Processor speed	1.2 GHz		
Duty cycle (monthly)	Up to 300,000 pages; Recommended monthly page volume: Up to 50,000 pages		

Model	HP Color LaserJet Managed MFP E87660du Plus	HP Color LaserJet Managed MFP E87660dn Plus	HP Color LaserJet Managed Flow MFP E87660z Plus
Paper handling			
Input	100-sheet multi-purpose tray, 2 x 520-sheet input tray, 100 sheet ADF; Optional 1,040 sheet tray; Optional 2,000 sheet tray; Optional 3,000 sheet tray	100-sheet multi-purpose tray, 2 x 520-sheet input tray, 250 sheet ADF; Optional 1,040 sheet tray; Optional 2,000 sheet tray; Optional 3,000 sheet tray	100-sheet multi-purpose tray, 2 x 520-sheet input tray, 250 sheet ADF; Optional 2,150 sheet tray; Optional 3,000 sheet tray
Output	500 sheet face-down output bin		
Media type	Plain, HP EcoEFICIENT, HP Matte 90g, Light 60-74g, Bond, Recycled, HP Matte 105g, HP Matte 120g, HP Soft Gloss 120g, HP Glossy 120g, Mid-Weight 96-110g,Heavy 111-130g, Mid-WtGlossy 96-110g, Heavy Glossy 111-130g, HP Matte 150g, HP Glossy 150g, Extra Heavy 131-175g, XHvyGlossy 131-175g, HP Matte 200g, HP Glossy 200g, Carstock 176-220g, Card Glossy 176-220g, Light Paperboard 221-255g, Paperboard 256-300g, Heavy Paperboard, Colour Transparency, Labels, Letterhead, Envelope, Heavy Envelope, Preprinted, Prepunched, Coloured		
Media weight	**Tray 1, 2, 3:** 60 to 300 g/m²		
Media sizes custom	**Tray 1:** 98 x 139.7 to 320 to 457.2 mm; **Tray 2:** 98 x 139.7 to 297 to 390 mm; **Tray 3:** 140 x 182 to 320 x 457.2 mm		
Dimensions (W x D x H)	585 x 764.3 x 883.7 mm	585 x 785 x 932.2 mm	
Weight	100.9 kg	113.1 kg	
What's in the box	Engine; TCU; Drums; Assy-Color WG Nameplate and Label; Power Cords; Hardware install and setup documentation; Support flyers. DOES NOT INCLUDE TONER		
Warranty features	90-day parts only. Extended Warranty and support options vary by product, country and local legal requirements. Go to hp.com/support to learn about HP award winning service and support options in your region.		
Systems			
Compatible operating systems	Windows Client OS (32/64 bit)-, Win10, Win8.1, Win 8 Basic, Win8 Pro, Win8 Enterprise, Win8 Enterprise N, Win7 Starter Edition SP1, UPD Win7 Ultimate, Mobile OS-, iOS, Android, Mac-, Apple® macOS Sierra v10.12, Apple® macOS High Sierra v10.13, Apple® macOS Mojave v10.14, Discrete PCL6 Printer Driver-, For more information on the supported operating systems go to support.hp.com, Enter your product name and search, Click on User Guides and enter your product name and search for User Guide, Search for your (Product Name) - User Guide, Search for the Supported Operating Systems section, UPD PCL6 / PS Printer Drivers-, Supported Operating systems, For more information on the supported operating systems see hp.com/go/upd		
Minimum system requirements	**PC:** 2 GB available hard disk space, Internet connection, USB port, Internet browser. For additional OS hardware requirements see microsoft.com **Mac:** 2 GB available hard drive space, Internet connection or USB port, OS hardware requirements see apple.com		
Security management	Management security: SNMPv3, SSL/TLS, WPA2-Enterprise, 802.1X authentication (EAP- PEAP, EAP-TLS), IPP over TLS, IPsec/Firewall with Certificate, Pre-Shared Key Authentication, and Kerberos Authentication; Support for WJA-10 IPsec Configuration using IPsec Plug-in		
Fonts and Typefaces	95 scalable TrueType fonts		
Control panel	20.3 cm (8.0-in) Colour Graphics Display (CGD) with touchscreen; rotating (adjustable angle) display; illuminated Home button (for quick return to the Home menu); USB High-speed 2.0 port; Hardware Integration Pocket		20.3 cm (8.0-in) Colour Graphics Display (CGD) with touchscreen; rotating (adjustable angle) display; illuminated Home button (for quick return to the Home menu); USB High-speed 2.0 port; Hardware Integration Pocket; Pull-out Keyboard
Display	20.3 cm (8.0-in) touchscreen, SVGA Colour Graphic Display (CGD)		
Power	**Power supply type:** Internal (Built-in) power supply; **Power supply required:** Input voltage: 110 to 127Vac (+/- 10%), 220 to 240Vac (+/- 10%), 50/60 Hz (+/- 3%); **Power consumption:**[7] 1121 watts (printing), 65 watts (ready), 12 watts (sleep), 0.5 watts (auto-off), 0.1 watts (off)		
Software included	No software solutions are included in the Box, only on hp.com, 123.hp.com		
Acoustics	**Acoustic power emissions (active, printing):** 7.5 B(A) printing color simplex using A4 paper at 60 ppm; **Acoustic power emissions (ready):** 4 B(A) ready; **Acoustic power emissions (active scan):** 7.75 B(A) ADF scan colour simplex using A4 paper at 80 ipm; **Acoustic power emissions (active copy):** 6.9 B(A) ADF copy colour simplex and print color simplex using A4 paper; **Acoustic pressure emissions bystander (active, printing):** 49 dB(A) printing colour simplex using A4 paper at 40 ppm; **Acoustic pressure emissions bystander (ready):** Inaudible; **Acoustic Pressure Emissions Bystander (active scan):** 60 dB(A) ADF scan colour simplex using A4 paper at 80 ipm; **Acoustic pressure emissions bystander (active copy):** 54 dB(A) ADF copy colour simplex and print colour simplex using A4 paper		
Environmental ranges	**Operating temperature range:** 15 to 30⁰C; **Recommended operating temperature:** 15 to 30⁰C; **Non-operating humidity range:** 10 to 80% RH; **Operating humidity range:** 20 to 80% RH; **Recommended operating humidity range:** 20 to 80% RH		
Safety approvals and requirements	IEC 60950-1:2005 +A1:2009 +A2:2013 (International); EN60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013 (EU); EN 60825-1:2014 / IEC 60825-1:2014 (Class 1 Laser Product); EN 62479:2010 / IEC 62479:2010; EN 62471-1:2008 /IEC 62471-1:2006; Low Voltage Directive 2014/35/EU with CE Mark (Europe); GS Certificate (Germany, Europe); UL/cUL Listed and UC CoC (US/Canada); CAN/CSA C22.2 No. 60950-1-07 2nd Ed. 2011-12; Compliance with Laser safety standards 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser notice No. 50, Dated June 24, 2007. Other safety approvals as required by individual countries		
Supported network protocols	IPv4/IPv6: Apple Bonjour Compatible (Mac OS 10.2.4 or higher), SNMPv1/v2c/v3, HTTP, HTTPS, FTP, TFTP, Port 9100, LPD, WS Discovery, IPP, Secure-IPP, IPsec/Firewall; IPv6: DHCPv6, MLDv1, ICMPv6; IPv4: Auto-IP, SLP, Telnet, IGMPv2, BOOTP/DHCP, WINS, IP Direct Mode, WS Print; Other: NetWare NDS, Bindery, NDPS, ePrint; Google Cloud Print 2.0		

To learn more, visit hp.com

QUALITY, QUANTITY, SPEED.
PRODUCTION REDEFINED.

CANON SEE IMPOSSIBLE

The Canon imagePROGRAF 60" PRO-6100S and 44" PRO-4100S large-format printers are built for advanced printing solutions. With an 8-Color LUCIA PRO ink system, these printers are ideal for bringing production signage, commercial photography, and proofing businesses to the next level.

LUCIA PRO ink
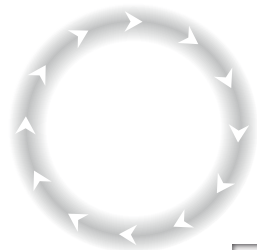
FINE
Full-photolithography Inkjet
Nozzle Engineering

L-COA PRO

Color consistency, fast print speeds, and low running cost are why the PRO Series line of large-format printers were engineered.

FEATURES
- Intelligent Media Handling
- 4.3" touch screen
- Borderless printing
- 1.28" print head
- LUCIA PRO 8-color ink system
- High-speed L-COA PRO processor
- High-precision unibody design
- Multifunction Roll System (optional on the PRO-4100S)
- Multipositional basket
- High-capacity ink tanks
- Advanced software and workflow solutions
- Compact design
- Wi-Fi® connectivity
- Direct USB drive printing
- Sub-Ink Tank System

compact

PRODUCTION REDEFINED

Canon thought of every detail when it came to building the ultimate large-format production printer—intelligent media handling, a large 4.3" touch screen operation panel, torque control on the Take-up unit, a Sub-Ink Tank System, and a compact size to reach a whole new level of performance.

INTELLIGENT MEDIA LOADING

For the first time ever, an imagePROGRAF printer can load and recognize paper without the need for human intervention. Simply set the roll holder in the printer and the media will automatically feed into the device. The built-in multi-sensor measures the surface reflection and the media thickness to determine the media type, without the need to manually enter it.

REMAINING MEDIA ESTIMATION

Accurately measure the remaining media on a roll without the need to print a bar code, saving both ink and media.

MULTIFUNCTION ROLL SYSTEM

The Canon Multifunction Roll System, standard on the PRO-6100S and optional on the PRO-4100S, can be used in two different ways—enabling a second roll of media to be loaded on the printer, or the unit can be configured as a bi-directional Take-up unit.

SUB-INK TANK SYSTEM

The Sub-Ink Tank System acts as an ink reservoir for the printer, working to remove all the ink in the tank before having to replace it—helping eliminate any wasted ink and decreasing your cost per print! The empty tanks can then be replaced on the fly, without stopping the printer and ruining the print. This is extremely useful during your long print jobs.

C M Y PM PBK MBK MBK GY PC Y M C
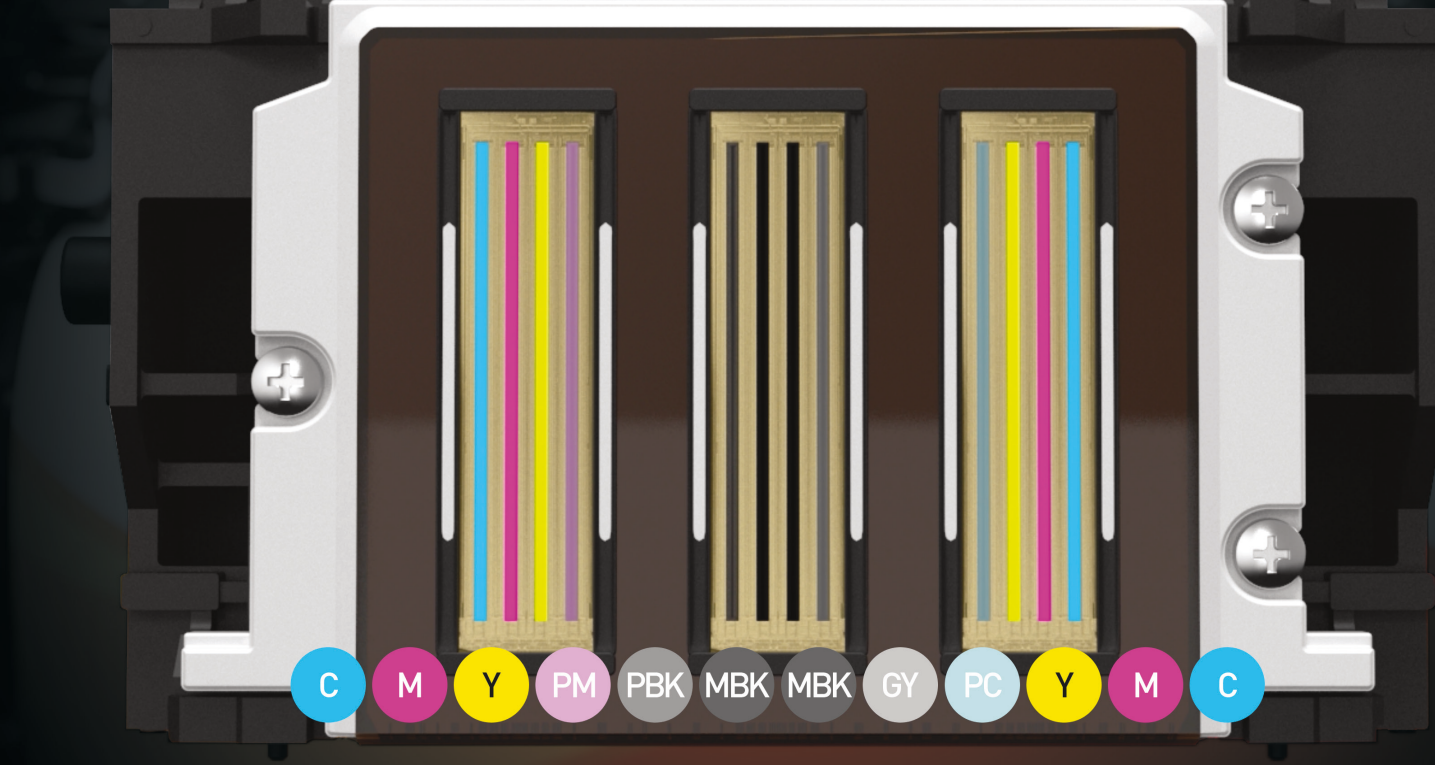
Embedded innovations woven together, deliver outstanding performance each and every time.

1.28"-WIDE PRINT HEAD

At the heart of the imagePROGRAF PRO-6100S and PRO-4100S printers is a single 1.28"-wide print head with 18,432 nozzles. These PRO Series printers are able to produce stunning prints with less passes, making these the fastest Canon 8-color, large-format printers ever!

LUCIA PRO INK SYSTEM

The LUCIA PRO ink set adopts microencapsulated 8-color pigment inks. These inks help you achieve fantastic color reproduction, image clarity, and fine lines, all ideal for creating vivid posters and advertising displays.

This ink set helps:
- Enhance red color performance
- Reduce graininess
- Enhance dark area reproduction

To enhance print performance, the 8 colors use all 12 ink channels in the print head. The LUCIA PRO ink is arranged in a mirror layout on the print head, symmetrically arranging the colors: C, M, Y, and MBK. This layout allows for the same ejection order of the four key colors during the bi-directional printing process, resulting in faster print speeds.

ANTI-CLOGGING TECHNOLOGY

The PF-10 print head with FINE technology generates fast print speeds and helps reduce the possibility of clogging, so ink and media aren't wasted. Ink ejection conditions are precisely checked by sensors to ensure optimal performance. If a clog is detected, another nozzle will automatically provide backup, helping to reduce the possibility of a misprint.

L-COA PRO

LUCIA PRO ink

FINE
Full-photolithography Inkjet
Nozzle Engineering

COLOR CALIBRATION
Producing the correct color is paramount when printing high-quality work. The built-in Color Calibration function uses a multi-sensor to read color density and to calibrate the printer, so that the last print can look identical to the first.

Need color consistency in different locations? The PRO Series gives you the ability to calibrate up to 50 printers across the world with the single click of a button.

L-COA PRO IMAGE PROCESSOR
Big jobs need fast processing. This high-precision control engine performs the high-speed processing of massive amounts of image data, generates the printing data, and controls the optimal ink layout for achieving faster print speeds.

UNIBODY DESIGN
The unibody structure was designed to provide a strong platform for stable print head scanning, resulting in precise ink droplet placement. The ultimate combination of speed and high-quality printing is achieved with this design.

BORDERLESS PRINTING
Print borderless on all paper sizes.

TRANSPARENT DESIGN
Easily check whether printing has begun and what paper size is loaded in the printer with the all new transparent media cover.

INPUT AND OUTPUT VERSATILITY

Canon-developed hardware and software innovations offer unique flexibility in any production environment.

Wi-Fi® CONNECTIVITY

Stay Connected. Wi-Fi connectivity is standard with the imagePROGRAF PRO Series.

OPERATION PANEL

The large 4.3" LCD operation panel utilizes smart phone touch screen technology for easy operation. The top three most-used commands—Load, Feed, and Cut—now have their own buttons below the operation panel for ease of use.

DIRECT USB DRIVE PRINTING

PDF and JPEG files can be directly printed on the imagePROGRAF PRO Series from a USB thumb drive. Simply input the thumb drive into the USB port on the printer, preview the image on the operation panel, and print! Fast and easy printing without the use of a computer.

MULTIPOSITIONAL BASKET

The PRO Series printers offer choices on how prints will be outputted based on the type and quantity being produced. Each comes standard with a multipositional basket that can be configured as any of the following:
- Catch basket
- Flatbed stacker
- Slope (used to display a print)
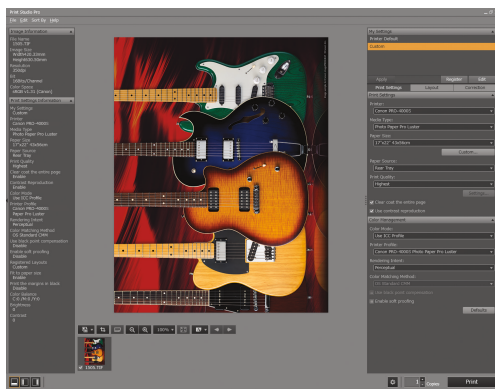
PRINTER MANAGEMENT SOLUTIONS

PROFESSIONAL PRINT & LAYOUT

Canon's Professional Print & Layout (PPL) software for imagePROGRAF PRO Series printers offers features that streamline your printing workflow.

Features include:
- Can be used as stand-alone RIP or as export module in Adobe® Photoshop®, Adobe Lightroom, or Canon Digital Photo Professional
- Create and save custom layouts
- Preview of multiple images at the bottom of the software
- 16-bit printing workflow
- Auto nesting

ACCOUNTING MANAGER

In today's printing environment, it's more important than ever to understand how much ink and media each print job is costing your business. Both Mac® and Microsoft® compatible, Accounting Manager serves as a powerful feature to accurately manage print costs. You can now track the amount of ink and paper being consumed for large-format printing for up to 50 printers!

QUICK UTILITY TOOLBOX

Quick Utility Toolbox is home to all the Canon PRO Series printer software and tools.

DEVICE MANAGEMENT CONSOLE

The Device Management Console software, ideal for fleet management, lets you perform color calibrations remotely. You can monitor the printer status of up to 50 units from any location in the world, be notified via e-mail when an error has occurred, or check the amount of ink left in the printers—without ever having to leave the comfort of your desk.

ADDITIONAL SOFTWARE AVAILABLE
- Free Layout Plus
- PosterArtist Lite
- Media Configuration Tool
- Direct Print & Share
- PosterArtist (optional)

imagePROGRAF PRO-6100S / 4100S

TECHNICAL INFORMATION

PRINT

Printing Technology	FINE: Full-Photolithography Nozzle Engineering
Head Configuration	12-Channel Integrated Type
Nozzle Configuration	1,536 Nozzles x 12 Channels: 18,432 Total
Minimum Droplet Size	4 Picoliters per Color
Maximum Print Resolution	Up to 2400 x 1200 dpi
Ink Information	Type: Pigment-Based LUCIA PRO Ink Technology PFI-1100 (160 ml): PBK, MBK, C, M, Y, PC, PM, GY PFI-1300 (330 ml): PBK, MBK, C, M, Y, PC, PM, GY PFI-1700 (700 ml): PBK, MBK, C, M, Y, PC, PM, GY

PRINTER SPECS

Print Head	PF-10 (1)
Colors	Photo Black, Matte Black, Cyan, Magenta, Yellow, Photo Cyan, Photo Magenta, Gray
Ink Tank Shipped with Printer	8 Colors: MBK/C/M/Y/PBK/PC/PM/GY (330 ml Tank, Each Color)
Hard Disk Capacity	500 GB
Printer Memory	3 GB
Printer Stand	Standard
Display	4.3" Color LCD Touch-screen
Size/Weight (with basket open)	**PRO-6100S**: 46.0" (H) x 78.7" (W) x 38.7" (D)/Approx. 359 lb. **PRO-4100S**: 46.0" (H) x 62.7" (W) x 38.7" (D)/Approx. 267 lb.

MEDIA

Media Feed	**PRO-6100S**: Front-Loading Roll Feed: Two* Rolls, Front Output **PRO-4100S**: Front-Loading Roll Feed: One Roll, Front Output Front-Loading Manual Feed: Front Loading, Front Output
Media Width	**PRO-6100S**: 6" - 60" (Cut-Sheet and Roll) **PRO-4100S**: 6" - 44" (Cut-Sheet and Roll)
Minimum Media Length	8"
Maximum Print Length**	59' (Roll Paper) 63" (Cut-Sheet)
Borderless Printing Widths	Custom roll width 6" – 60" (max width depending on printer) with micro margin technology
Media Thickness	.07 mm - .8 mm
Media Core Sizes	2" or 3" Core (with Supplied Adaptor)
Printable Margins	Roll Paper: Top: 3 mm; Bottom: 3 mm; Side: 3 mm Cut-Sheet: Top: 3 mm; Bottom: 20 mm; Side: 3 mm
Maximum Media Roll (Outer Dia.)	6.7" (170 mm)

GENERAL

Interfaces	Hi-Speed USB, 10/100/1000Base-T/TX, Wireless LAN (IEEE 802.11 b/g/n)***
Printer Language	Swift Graphic Raster (SGRaster)
Recommended Operating Environment*	Temperature: 59° - 86° F (15° - 30° C) Humidity: 10 - 80% (No Condensation)
Power Supply	AC 100-240 V (50-60 Hz)
Power Consumption	**PRO-6100S** Maximum: 109 W or Less **PRO-4100S** Maximum: 116 W or Less Standby: 2.0 W or Less Power Off: 0.3 W or Less
Printing Software	imagePROGRAF Printer Driver, Professional Print & Layout;∗∗ Free Layout Plus, Direct Print & Share,† PosterArtist Lite††
Optional Software	PosterArtist
OS Compatibility	32-bit: Windows® 7/8.1/10 64-bit: Windows® 7, Windows® 8.1, Windows® 10, Windows® Server 2008 R2, Windows® Server 2012/2012R, Windows® Server 2016, Windows® Server 2019 Mac OS X 10.10.5~OS X 10.11.6, Mac OS 10.12~ 10.15
Utilities	Accounting Manager, Device Management Console, Media Configuration Tool, Quick Utility Toolbox
User-Replaceable Items	Print Head (PF-10) Maintenance Cartridge (MC-30) Rotary Cutter (CT-07)
Options	**PRO-6100S**: Roll Holder Set (RH2-66) **PRO-4100S**: Multifunction Roll System (RU-43), Roll Holder Set (RH2-46)

For a complete listing of specifications, please visit usa.canon.com/largeformat.

Wi-Fi is a registered trademark of the Wi-Fi Alliance.

* If Multifunction Roll is used.
** The maximum printable length varies, depending on the application, OS, and RIP used.
*** Wireless printing requires a working network with wireless 802.11b/g or 802.11n capability. Wireless performance may vary based on terrain and distance between the printer and wireless network clients.
・ For the temperature and humidity conditions of papers, refer to the paper's packaging or the supplied instructions.
∗∗ Professional Print & Layout plug-in software is compatible with Adobe® Photoshop CC 2015-CC 2019, Adobe Photoshop Lightroom V6.X, CC 2015, Classic CC, Photoshop Elements 15, 2018, 2019, and Canon Digital Professional 4.92 or later.
† Direct Print & Share comes embedded with the imagePROGRAF large-format printers and is also available as a free download at http://usa.canon.com/downloads. You must sign up for the Google™ service separately. This service is subject to Google's terms and conditions. Based on Google's current services. Subject to change at Google's discretion.
†† Only available with the PRO-4100S.

For more information, call or visit
1.800.815.4000
CSA.CANON.COM/imagePROGRAF

Canon

CANON SOLUTIONS AMERICA

LUCIA PRO ink

FINE Full-photolithography Inkjet Nozzle Engineering

CANON GENUINE TONER, CARTRIDGE & PARTS

School District of Manawa
Print & Support Service RFP

May 3, 2021

Table of Contents

Who We Are

We will be the best at what we do: in our agility, which allows us to adapt, change, and stay at the forefront of our industries, and in our dedication to client success, which we hold paramount. As a team, we work tirelessly toward the highest of industry, business and personal performance standards, **together**.

Mary Jo Johnson
Owner/CEO

Dave Greene
President
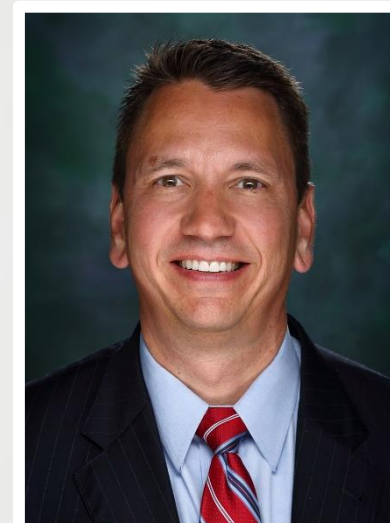
Peter Kujawa
Locknet Division President

Chris Fullarton
Sr. Vice President, Imaging

Who We Are

EO JOHNSON
BUSINESS TECHNOLOGIES

63 years of world-class service, certified as a woman-owned business enterprise

Diverse product line, partnering with some of the world's leading technology innovators

279 employees throughout the Upper Midwest

95% customer retention

Eight office locations throughout Wisconsin, Minnesota and Iowa

10 consecutive years among top managed service providers

70 experienced and industry-recognized service technicians and support team

Over 13,000 customers located across country

A History of Excellence

Emery (E.O.) Johnson opened the EO Johnson Company in Wausau, WI in May 1957.

Over the past six decades, EO Johnson has consistently taken new innovations to the business technology marketplace from copy machines, typewriters and fax machines to high volume color production printing machines, IT services, digital connectivity and networking, and document management systems.

Today, EO Johnson Business Technologies has seven offices in Wisconsin, Minnesota and Iowa.

The products and people have changed, but the relentless commitment to customer service is the same as when EO himself walked the halls of his company.

2020 Acquisition of Standard Dynamics in Burnsville, MN

2018

2017 Acquisition of Cornerstone and OEI in Wausau, 300 employees

280 employees

2014 Acquisitions of SPIN Business Group and Agosto Managed Services, Minneapolis office opened

2012 Acquisition of Locknet, 250 employees

2008 Acquisition of RMM in Wausau and Eau Claire

1994 Acquired Cornerstone Office Products in Rhinelander

1996 104 employees

1999 Mary Jo Johnson named CEO, entered La Crosse market

2003 Acquisition of AOS in Eau Claire

2005 Acquisition of AOS in La Crosse and Rochester

2006 167 employees

1990 Acquired Computerland

1976 25 employees

1966 9 employees

1965 Opened office in Eau Claire

1957 E.O. Johnson opens business in Wausau

WBE-Certified
Woman-Owned Business

For the past 21 years we have been growing under the strong leadership of Mary Jo Johnson. In 2011, she acquired full ownership of EO Johnson Business Technologies. She continues to embrace and uphold our four core values today: **We are Caring, Stability, Trustworthy and Customer Vision.**

Mary Jo Johnson
CEO and Owner

EOJOHNSON
BUSINESS TECHNOLOGIES

Why EO Johnson Business Technologies

- ✓ Headquarters in **Wisconsin**, 63-year, family-owned business
- ✓ **No hidden charges!**
- ✓ Tenured, local A+ and Net+ certified service technicians
- ✓ **Free** Print Image Help Desk Support
- ✓ Strategic Quarterly Business Reviews

Our Core Values

We are Caring

To us, this means we genuinely care about each other, our customers and our vendors. Like a family, we celebrate our successes and support each other with compassion in times of challenge. We believe in contributing our time and resources to the communities we are privileged to do business and raise our families in. We give each other the benefit of the doubt and believe in the importance of honesty, integrity and reliability.

Customer Vision

To us, customer vision means seeing the business through the customer's eyes and responding to each customer as a team to exceed their expectations. EO Johnson passionately believed in this founding principle for customer vision and still today, every employee at every level, serve our customers and each other with this in mind.

Trustworthy

We have invested decades building our reputation of being trustworthy, We believe in always doing the right thing, even when no one is watching. We have learned to trust and be trusted. As EO Johnson was fond of saying, "do the right things and the rights things will happen."

Stability

Stability results from the responsibility we have accepted and entrusted to one another, our customers and our community. We take pride in our rich history. We make decisions with our long-term in mind and recognize the stewardship of precious financial and human resources that contribute to the stability.

EO JOHNSON
BUSINESS TECHNOLOGIES

Awards Distinctions

As a company, we are honored to be recognized for the many ways we strive to provide world-class service, including these honors. Since our founding in 1957, it's been our goal to be industry leaders; we're humbled that these esteemed organizations celebrate our hard work and dedication.

The Marketplace Governor's Awards recognize Wisconsin businesses owned by minorities, women, and disabled Veterans in a number of categories. EO Johnson is certified as a Woman Owned Business by the State of Wisconsin Department of Administration Division of Enterprise Operations.

EO Johnson was a recipient of the Better Business Bureau's Torch Awards for Business Ethics and Integrity for demonstrating excellence in ethical practices, customer service, reputation, honest advertising, peer recognition, management practices, and employee training in ethical behavior within their industry and community.

EO Johnson was one of 13 providers around the world recognized by the Photizo Group as leaders in Managed Print Services (MPS). The MPS Leaders Index is regarded as the gold standard in managed print and document services, and participants are classified as forward-looking indicators of the evolving MPS landscape.

CompTIA awarded EO Johnson the CompTIA Managed Print Trustmark, a respected industry credential that signifies the company's adherence to best practices for technology service delivery and customer interaction. The Trustmark is designed specifically for technology businesses offering on premise print services via a managed services business model.

Who We Serve

EOJOHNSON BUSINESS TECHNOLOGIES

Think Green, Act Green

EO Johnson Business Technologies is committed to exploring green options companywide to lessen our impact on our planet, and we recognize that moving toward sustainability is also a value for many of our customers.

» Cartridge or toner bottle recycling program

» Copier refurbish program for local non-profits

» Partner with vendors who have well-established green practices

» Internal corporate recycling program

» Sales training on green qualities of products

EO JOHNSON
BUSINESS TECHNOLOGIES

Your Business. Better.

We solve problems that power businesses with document, copier, and managed IT solutions.

MULTIFUNCTION COPIERS & PRINTERS
Reliable copying and printing devices

TECHNOLOGY SOLUTIONS
Managed security and network management services
LOCKNET
AN EO JOHNSON COMPANY

PRODUCTION PRINT & FINISHING
Digital production presses, finishing and wide format
STANDARD Dynamics INC.
AN EO JOHNSON COMPANY

SECURE DOCUMENT MANAGEMENT
Coordinate and control the flow and storage of electronic and paper documents

BUSINESS CONSULTING SERVICES
Improve processes, performance and profits through strategic consultation

DOCUMENT SCANNING
Turn your paper, microfiche, or film into searchable electronic documents

MANAGED PRINT SERVICES
Strategies for your printer and copier fleet

EO JOHNSON
BUSINESS TECHNOLOGIES

Solutions

Print Imaging
Managed Print Services

Managed Print Services (MPS) is a managed services program designed to streamline and optimize a company's print environment by shifting the management and responsibility of device monitoring, maintenance, and supplies to a technology solutions provider, like EO Johnson Business Technologies.

Analysis

Print Optimization Recommendation

Implementation Plan

Regular Strategic Reviews

ImageGuard

One Vendor, an Entire Secure Environment

ImageGuard is a customizable print security offering from EO Johnson Business Technologies. It bolts the virtual door to your entire fleet of devices, no matter the brand.

Secure Protection

ImageGuard offers the highest level of protection for your entire fleet of devices, and it can even be added to your current Managed Print Services program.

Firmware Updates
Essential software updates and patches for your entire printer fleet

Security Checks
One comprehensive security plan for all devices, including current unsupported devices

Remediation
Customized reporting, outlining remediation of any security issues

Security Assessments
Vulnerability scans performed twice a year

EO JOHNSON
BUSINESS TECHNOLOGIES

MFP Vendor Assessment

IDC MarketScape U.S. Smart MFP
Vendor Assessment

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BUSINESS TECHNOLOGIES
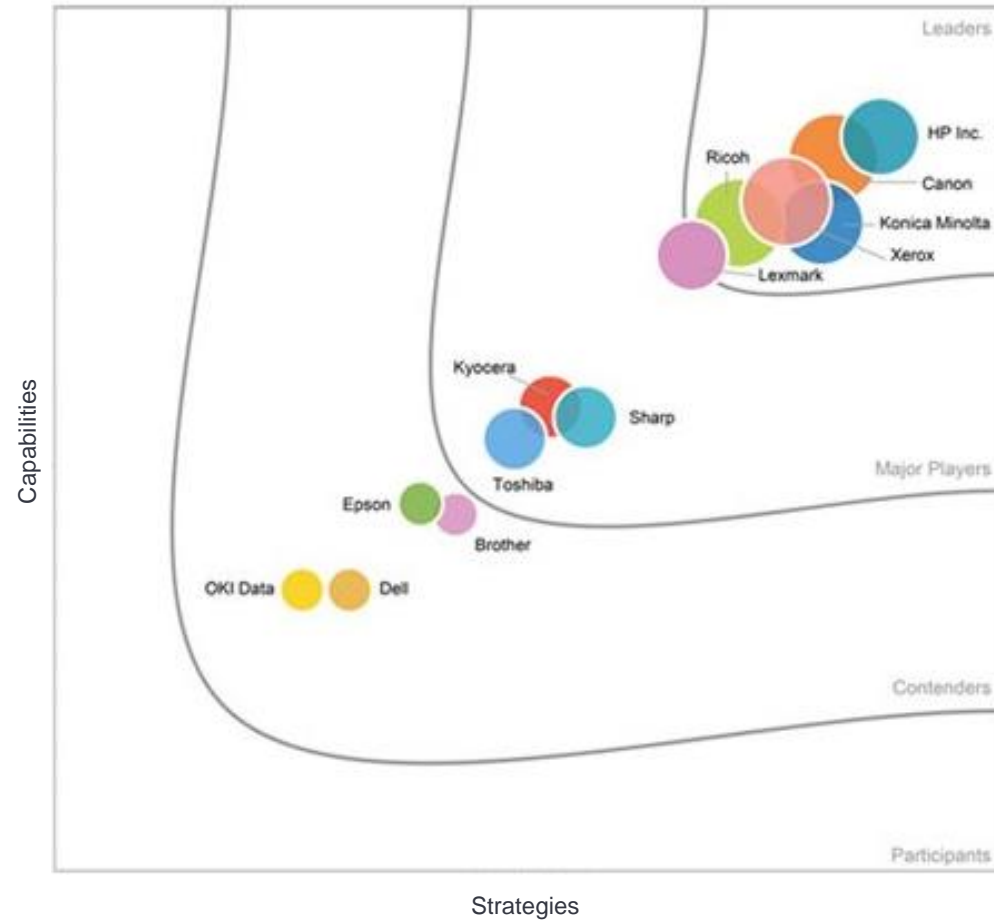
Source: IDC, 2018

Document Solutions

Centralized Print Volume Management
- ✓ 25% or more volume reduction easily obtainable
- ✓ Quota system capable (references provided)

Reporting Capabilities
- ✓ Numerous standard reports
- ✓ Fully customizable report capabilities
- ✓ Document Security

FollowMe Printing
- ✓ One print driver for all devices
- ✓ Secure print
- ✓ Built in redundancy

Integrated Scan
- ✓ No address books
- ✓ Authenticated scanning
- ✓ Document Security

Mobility Print
- ✓ Mobile device printing
- ✓ Mobile device printing trackable
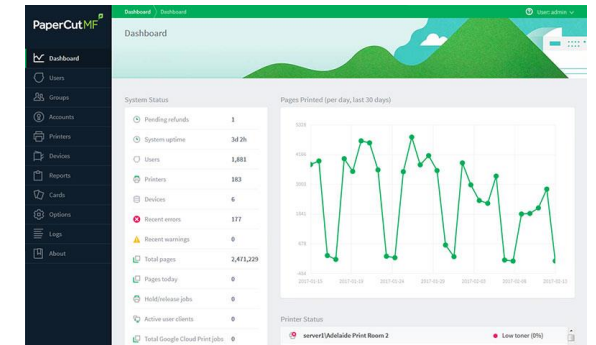
Managed Print Services

Managed Print Services

We don't just write printer contracts – with EO Johnson you have a true strategic partner for your business. Managed Print Services is a thorough process that looks at all the business aspects that inform your organization's print needs.

Analysis

We assess your real costs by gathering information onsite about your current document workflow. This helps us diagnose where opportunities exist for improvement and efficiency with your print needs.

Print Optimization Recommendation

Based on our analysis, we're ready to prescribe solutions. We'll recommend a print management strategy that will optimize and streamline your workflow. This can include the software, hardware and devices you're using, the toner and technology, and the impact to the amount of prints you're printing. Our holistic approach is designed to find the cost, time, and efficiency outcomes that work for you.

Implementation Plan

Working with a dedicated team from EO Johnson, we'll develop a detailed plan to minimize any downtime during installation. This includes assessments prior to deployment to ensure we're proactive in addressing issues.

Regular Reviews

Once your managed print strategy is up and running, we'll meet with you quarterly to evaluate your program, review page counts and cost breakdowns, and stay informed and proactive about your evolving business needs.

EO JOHNSON
BUSINESS TECHNOLOGIES

Benefits – Managed Print Services

Centralized fleet administration

All machines are networked.

Reduced and controlled expenses

Cut printing expenses, track print usage, and reduce energy consumption with new machines and environmentally friendly supplies.

Vendor consolidation

Reduce the number of machines and vendors.

Improved productivity

The right equipment is in the right locations.

Decreased demands on IT

We take the burden of servicing printers off your IT staff.

Automatic supply ordering

The system notifies us when supplies should be ordered so your staff doesn't have to order and warehouse supplies.

Improved infrastructure

You get new equipment, not old equipment that only gets serviced.

Tenured professional sales

Averaging 14 years with our company, our sales representatives are experienced and reliable.

EO JOHNSON
BUSINESS TECHNOLOGIES

Service & Supplies – Managed Print Services

- ✓ One hour response to maintenance request

- ✓ Maintain an average on-site response time of less than six hours after receiving initial maintenance request

- ✓ Maintain an average repair time of less than eight hours after receiving initial maintenance request

- ✓ Service parts and components meet original equipment manufacturers specifications

- ✓ We assume responsibility for hardware performance due to service parts and components

- ✓ We retain ownership of all service parts and components until they are placed in an output device

- ✓ We assume responsibility for recycling of all service parts

- ✓ EO Johnson can supply the client with a call completion notification

- ✓ If the device requires replacement, EO Johnson will ensure the configuration be transferred over to the new device

EO JOHNSON
BUSINESS TECHNOLOGIES

Plan for Success

Solutions
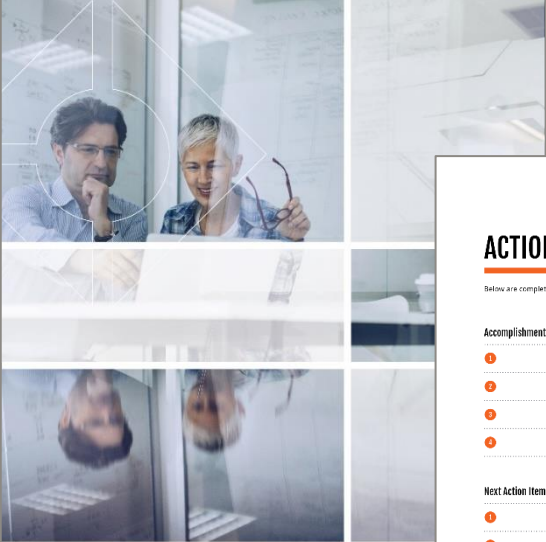
- Set per-page costs for users
- Pays for itself
- Designed for all print environments
- Self-maintaining
- Identify "worst offenders"
- Help to reduce overall impressions over five-year term

Strategic Business Reviews

- Reduce monthly print by reviewing strategic business review report
- Meet quarterly to review MPS plan
- Relocate machines to reduce number of clicks
- Help to reduce overall impressions over five-year term

EO JOHNSON
BUSINESS TECHNOLOGIES

Strategic Business Reviews

- ✓ Discuss overall performance and customer satisfaction

- ✓ Outline areas for improvement

- ✓ Review strategic goals and initiatives, ensure alignment

- ✓ Evaluate additional technology solutions based on client needs

- ✓ Implement strategic improvements

Managed Print Services Team

Chris Fullarton
Senior Vice President

Dave Johnson
Vice President

Steve Cain
MPS Director

Jeff Iverson
Regional Sales Mgr.

Matt Palecek
Sales Manager

Jim Reed
Sales Manager

Jason Morris
Sr. Account Executive

Adam Bragee
Account Executive

Kelli Jackson
Coordinator

Mark Weiler
Project Administrator

Michaela Mensing
Project Administrator

Brian Servais
Project Administrator

Jessica Gruna
Project Coordinator

Jeff Lane
MPS Specialist

Samantha Kropidlowski
Analyst

EOJOHNSON
BUSINESS TECHNOLOGIES

Certified Technicians

Kevin Hollar

Matt Van Den Heuvel

Mario Corvino

Mason Johnson

Phil Zeman

Ray Casar

Russ Michalski
Net+ Certified

Jorma Anderson

Kris Olson

Shane Swacker
Net+ Certified

Steve Ellenbecker
Net+, A+ Certified

Terry Boneske
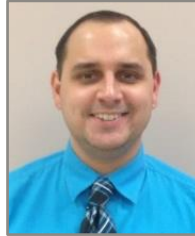Net+ Certified

Todd Osterbrink
Net+ Certified

Tom Stefonik
Net+, A+, CDIA+ Certified

Troy Miller

Jeff Blankenship
Net+ Certified

Anthony Occhipinti

Jackson Hillan

EO JOHNSON
BUSINESS TECHNOLOGIES

Certified Technicians

Bryan Thompson
Net+ Certified

Chuck Ingle

Dave Hensgen
Net+ Certified

Jason Bowe

Jeff McGeorge
Net+ Certified

Jim Block
Net+, CDIA+ Certified

Joseph Brost

John Dufresne

Gregory Kenow

John Fritz
Net+ Certified
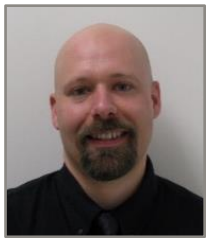
Kevin Smestuen

Mark Meeks

Neil Major
Net+ Certified

Paul Boucher

Paul Schindler
Net+ Certified

Shannon Burton

Curt Bremness

Bob Read

EO JOHNSON
BUSINESS TECHNOLOGIES

Certified Technicians

Paul Wolf
Net+ Certified

Rick Birtzer

Scott Wilkans
Net+ Certified

Tim Whiteside

Toby Robinson
Net+, A+, Security+ Certified

Tristan Fettes
Net+, A+ Certified

Chad Hanson
Net+ Certified

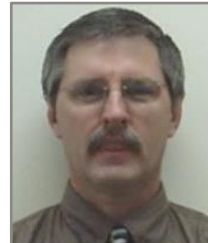**Paul Lenser**
Net+, A+ Certified

David Beltz

Dean Koopman
Net+ Certified

Jeffrey Carey

Larry Johnston

Jim Cummings

Dan Backhaus

Cordell Sagler

David Sesvold
Net+ Certified

Jeff Nelson

James Kohlhaas

EO JOHNSON
BUSINESS TECHNOLOGIES

Certified Technicians

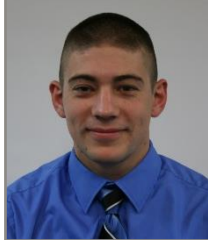Joseph Wallgren · Todd Cross · Jim Myszka · Cory Kufahl · Brendon Goetsch · Robert Potter · Cory Apfelbeck · DJ Adamski · Chris Schneider
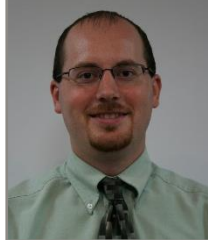
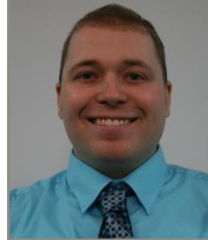Richard Culhane · Richard Dickinson · Aaron Ellerman · Heather Iczkowski · David Nutting · Ben Nikolay · Karlan Dietsche · Dan Smith · Jake Schoeder

EO JOHNSON BUSINESS TECHNOLOGIES

Service Management Team

Frank Paulich
VP of Service

Rick Koch
Wausau Service Mgr
Net+ Certified

Paul Schueller
Field Manager
Net+ Certified

Arlan Ulberg
Onalaska Service Mgr
CDIA+ Certified

Aaron Black
Net+ Certified

Certified Solutions Engineers
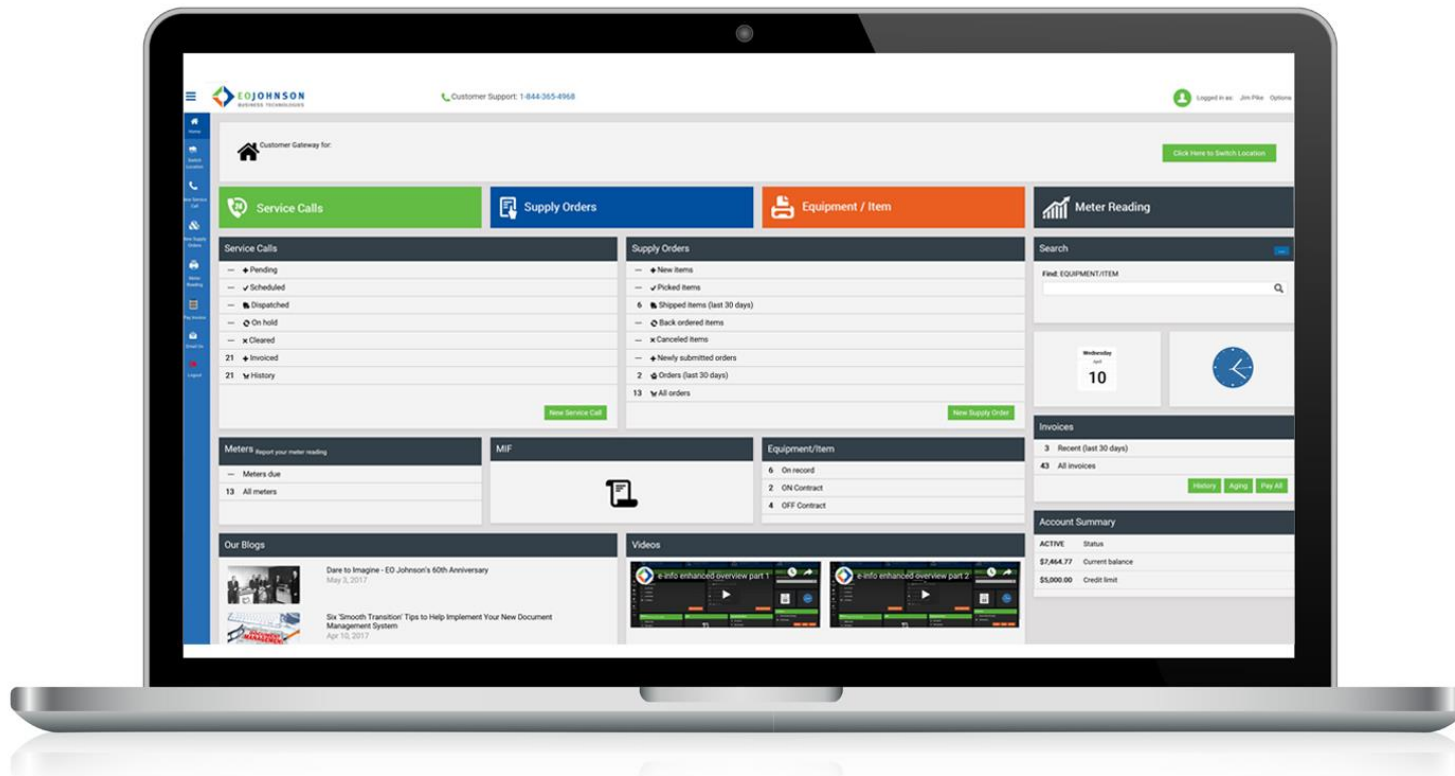

Matt Lambrecht
Net+ Certified

Allan Slaby

Matt Karbula

Dave Rice

Edward Owens
Net+, A+ Certified

EOJOHNSON
BUSINESS TECHNOLOGIES

e-Info Portal

Quickly and easily access your EO Johnson account information.

Service

View pending, scheduled, dispatched and requested service calls. Search service call lists for a previously requested call.

Orders

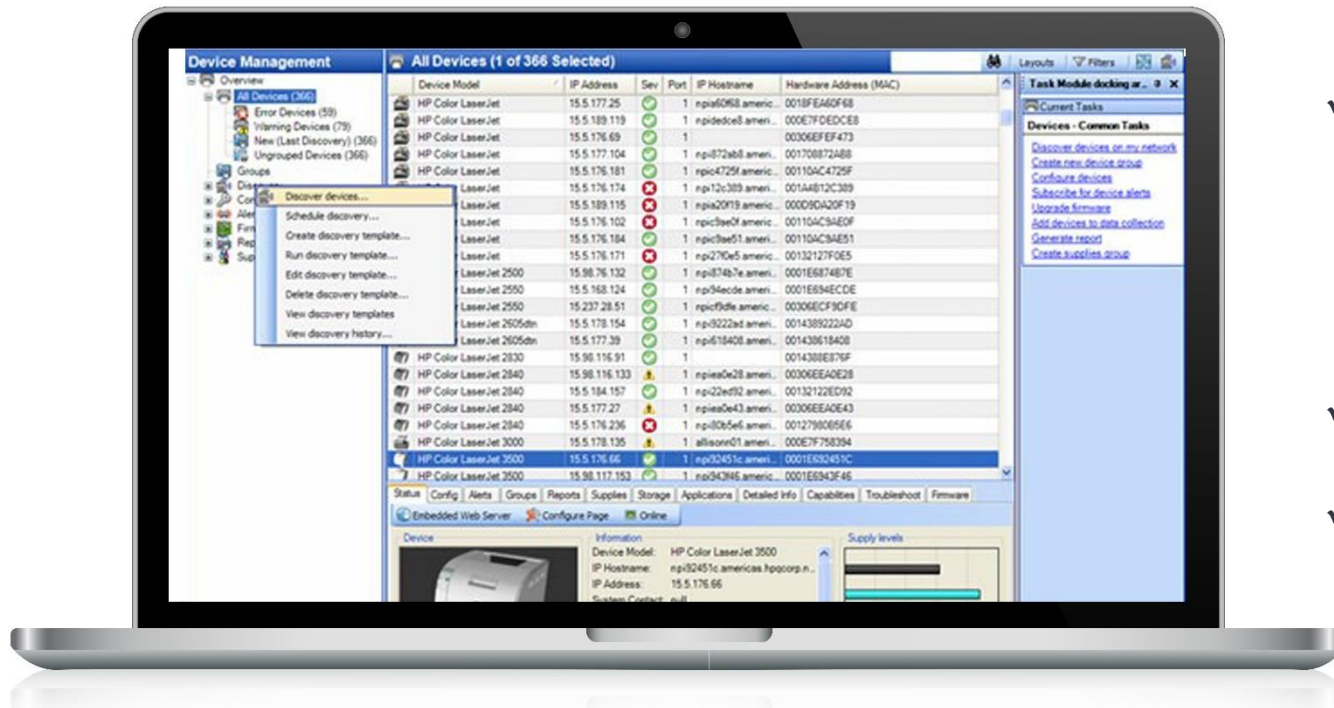Submit and view orders: new, picked, shipped, back order and canceled orders.

Account

View invoice history, account status, credit status and limit, and aging report.

Meter

Record meters, view due meters and meter history.

EOJOHNSON
BUSINESS TECHNOLOGIES

FM Audit

- ✓ **Supplies**
  - Automated supply replenishment

- ✓ **Meter Collection**
  - Automated meter collection

Central Device Management

✓ **Standard settings for all devices from one central point**
- Ricoh Streamline NX
- HP JetAdvantage Security Manager
- Canon ImageWare Management Console

✓ **Monitors and maintains firmware levels**

✓ **Reporting capabilities on device statistics**

Machine Placement

Model	Original Device Type	Location	Action	Replacement Device	Features/Accessories	PaperCut Functionality
HP LaserJet M401	Black Printer	District Office	Stays	HP LaserJet M401	35 ppm BW Printer, (1) 250 sheet tray	
Kyocera TASKalfa 3051ci	Color Copier	HS Office	New	HP Pagewide Managed Color MFP 77650zs with Inner Finisher 2CF59A	50 ppm CLR MFP, (4) 550 sheet tray, Up to 240 Images Per Minute single-pass ADF, fax	Follow Me Color & B/W - Card Reader
Kyocera TASKalfa 3051ci	Color Copier	District Office Copy Room	New	HP Pagewide Managed Color MFP 77650zs with Inner Finisher 2CF59A	50 ppm CLR MFP, (4) 550 sheet tray, Up to 240 Images Per Minute single-pass ADF, fax	Follow Me Color & B/W - Card Reader
Kyocera TASKalfa 3051ci	Color Copier	HS Business Ed (102)	New	HP Pagewide Managed Color Printer 55650dn L3U44A	50 ppm CLR Printer, (1) 500 sheet tray	Follow Me Color & B/W - Card Reader
Kyocera TASKalfa 3501i	Black Copier	FEAHS	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Kyocera TASKalfa 8001i	Black Copier	HS Copy Room	New	HP Mono LaserJet E82560z X3A82A	60 ppm BW MFP, (2) 520 sheet tray, (1) 2,000 sheet tray, Up to 240 Images Per Minute single-pass ADF, Inner finisher	Follow Me B/W - Card Reader
		HS Copy Room	New	HP Mono LaserJet E82560z X3A82A	60 ppm BW MFP, (2) 520 sheet tray, (1) 2,000 sheet tray, Up to 240 Images Per Minute single-pass ADF, Inner finisher	Follow Me B/W - Card Reader
Kyocera TASKalfa 8001i	Black Copier	Elementary/ Intermediate Work Rooms	New	HP Mono LaserJet E82560z X3A82A	60 ppm BW MFP, (2) 520 sheet tray, (1) 2,000 sheet tray, Up to 240 Images Per Minute single-pass ADF, Inner finisher	Follow Me B/W - Card Reader
		Elementary/ Intermediate Work Rooms	New	HP Mono LaserJet E82560z X3A82A	60 ppm BW MFP, (2) 520 sheet tray, (1) 2,000 sheet tray, Up to 240 Images Per Minute single-pass ADF, Inner finisher	Follow Me B/W - Card Reader
Kyocera FS 2100	Black Printer	MS 221 LAB	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Kyocera FS 1370	Black Printer	ES Library	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Kyocera FS 1370	Black Printer	HS Kitchen FS	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Kyocera FS 1370	Black Printer	HS TECH ED	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Kyocera FS 1370	Black Printer	HS ROOM 208	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Konica Minolta Bizhub 601	Black Copier	HS LIBRARY	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
Konica Minolta Bizhub 751	Black Copier	ES OFFICE	New	HP Mono LaserJet E82560z X3A82A	60 ppm BW MFP, (2) 520 sheet tray, (1) 2,000 sheet tray, Up to 240 Images Per Minute single-pass ADF, Inner finisher, fax	Follow Me B/W - Card Reader
		ES RM314A	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader
		ES RM321	New	HP LaserJet E50045dw	45 ppm BW Printer, (1) 550 sheet tray	Follow Me B/W - Card Reader

✓ **Right Size of Equipment**
- Precisely the right size of device with the right accessories per location

✓ **Additional Machines to Improve Productivity**
- Recommend two devices instead of one for improved productivity in work room locations when Option #1 is selected

✓ **Focus on Single Vendor**
- Unified user interface and reduced supply types

EO JOHNSON
BUSINESS TECHNOLOGIES

Section 1 – General Terms & Conditions

Section 1 - General Terms & Conditions

1. The SDM is a public entity and as such is exempt from all federal and state sales taxes.

    •   Will fully comply.

2. The Vendor shall deliver a solution which meets the specifications and requirements outlined in this document.

    •   Will fully comply.

3. SDM reserves the right to accept or reject any or all proposals in whole or in part, to waive informalities in the Proposal process or to accept any proposals most advantageous to the School District of Manawa.

4. SDM solicits the best possible value on all of our "Requests for Proposals". Because we are a public-school district, we are able to purchase directly from many of the state and federal government contracts. In the event that all proposals received are in excess of any existing state or federal contract that is available to SDM we may, at our discretion, reject all proposals and purchase directly from the vendor awarded the state or federal government contract.

5. References of three (3) K-12 school district accounts currently serviced, for whom comparable work has been performed, must be furnished. This list shall include district name, contact person, email address, mailing address and telephone number. Failure to include references may be ample cause for rejection.

    •   Will fully comply. Please see Appendix D for references.

6. The proposal must be submitted via email with the subject: "2021 SDM Print RFP Proposal" to: bcobarrubias@manawaschools.org by 12:00 PM CST on Monday, May 10, 2021 . No oral, faxed or telephone proposals will be considered. No late proposals will be accepted.

7. Decision of the winning vendor(s) will be announced May 17, 2021 pending Board of Education approval. Vendors will receive electronic notifications.

8. All items proposed must be new, not reconditioned or used.

    •   Will fully comply. All items are new unless specifically identified within specific option. Please see Appendix A for list of proposed equipment and specifications.

9. All prices are to be guaranteed until the project completion.

    •   Will fully comply.

EO JOHNSON
BUSINESS TECHNOLOGIES

Section 1 - General Terms & Conditions (Cont.)

10. Any maintenance costs or any other potentially hidden costs shall be identified as part of the proposal including annual fees for hardware/software.

    • Will fully comply.

11. The vendor is required to provide SDM the specific shipping company information.

    • Will fully comply.

12. Delivery of devices will commence after June 4, 2021.

    • Will fully comply.

13. Complete working solution must be in production by July 1, 2021.

    • Will fully comply.

14. All submitted proposals will be reviewed and evaluated by only those officials who have a legitimate interest. Any information within a proposal that a vendor considers to be proprietary should be identified as such in writing. Otherwise, SDM reserves the right to use any or all ideas presented with a proposal in any reply to this RFP. Selection or rejection of a vendor's proposal does not affect this right.

    • Will fully comply.

15. SDM is not liable for any costs incurred by the vendor prior to the issuance of any agreements, contracts or purchase orders, and will not pay for information solicited or obtained in response to this RFP. The information obtained will be utilized solely to determine the suitability of the products or services offered. Subsequent procurement, if any, will be in accordance with appropriate rules and regulations.

14. Vendors may schedule site visits between April 14, 2021 and April 30, 2021. Contact Bryant Cobarrubias via email at bcobarrubias@manawaschools.org or phone 920-596-5737 to schedule a site visit.

EO JOHNSON
BUSINESS TECHNOLOGIES

Section 2 – Functional Requirements

Section 2 – Functional Requirements

The proposed solution must fulfill the following requirements

1. Must have the ability to print from the following

   a. Microsoft Windows desktops & laptops

   b. Google Chromebooks

   c. Apple Mac desktops & laptops

      • Will fully comply.

2. Integrate with PaperCut

      • Will fully comply.

3. Scan to Email

   a. SDM uses Google Gmail for email

      • Will fully comply.

4. Lease Cost Reporting

   a. Lease cost broken down by print device by school

   b. Click cost per print device by school - Black & White and Color

   c. Click cost per user user - Black & White and Color

      • Will fully comply. Please see Appendix A - Proposal Submissions.

5. User account integration

   a. SDM uses Active Directory for user account management. Proposed solution shall integrate with on-premise Active Directory system.

      • Will fully comply.

6. Three (3) print devices must allow fax capabilities.

   a. SDM is open to alternative fax solutions including digital fax options.

      • Will fully comply. Please see Appendix A - Proposal Submissions for digital fax option.

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Section 2 – Functional Requirements (Cont.)

7. Must support "Follow Me" printing

   a. Users sign in using an assigned print code. Print code is assigned within Active Directory.

      • Will fully comply.

8. Print Device Features

   Devices, at a minimum, should include the following features based on level.

Level 1	Level 2	Level 3
Color printing Secure printing 11'' x 17'' Paper size Scan to email, fax, file Stapling, 3-hole punch 60 PPM High-capacity paper tray Pull printing	Color printing Secure printing 30 PPM Pull printing	Mono printing Secure printing 30 PPM Pull printing

      • Will fully comply.

9. No minimum per month click requirement during the months of June, July and August.

      • Will fully comply.

10. All print devices must print Duplex by default.

      • Will fully comply.

11. Color print devices must print Black and White by default.

      • Will fully comply.

Section 2 – Functional Requirements (Cont.)

12. A minimum of 1 device in each building must have the ability to print labels & envelopes.

    - Will fully comply.

13. Must include a print management solution (i.e. Papercut).

    - Will fully comply.

14. Paper quality and sizes must meet industry standards

    a. Must have adjustable trays for multiple paper sizes (i.e. 8.5x11, 11x17, Legal, etc.)

    b. Must support multiple weight paper (i.e. Card stock, Standard 20lb…etc.)

    - Will fully comply.

15. Allow elevated privileges for site administrators to pull their own reports.

    - Will fully comply.

16. Must provide a minimum of 1 spare toner per print device stored at each building site

    - Will fully comply.

17. Device Quantities

Device Level	Quantity
Level 1	9
Level 2	4
Level 3	3

    - Will fully comply.

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Section 3 – Support Services

Section 3 – Support Services

Describe Support Details

1. Describe onsite repair services provided by Vendor.

    - The maintenance agreement offered by EO Johnson includes all travel, mileage, parts, labor and toner. This also includes shipping cost of toner and recycling of old equipment. EO Johnson's certified technicians will perform all onsite repairs as needed. In addition, preventative maintenance will be performed while onsite to prevent future failures and the associated downtime.

2. Explain in detail how the proposed Print Management solution (i.e. Papercut) integrates and works with print devices.

    - The equipment that EO Johnson is proposing as part of this response integrates directly with the PaperCut solution. In addition, this level of integration allows for FollowMe print, integrated scan functionality which provides additional security and removes the need for address books, and allows for direct integration of the proposed cloud fax solution. PaperCut also integrates directly with Active Directory.

3. Explain in detail your support structure

    a. Local support

        - EO Johnson's support for the Manawa School District is based locally out of the Wausau office which is approximately 50 miles from Manawa. Many of the technicians that will support the equipment at Manawa School District live in the Stevens Point, Plover and Wisconsin Rapids areas. In addition, EO Johnson's PaperCut Engineers live in the central Wisconsin area as well.

    b. Phone support

        - EO Johnson's Phone Support is provided at no additional cost to the Manawa School District. EO Johnson's Phone Support is provided by local service technicians that are positioned throughout over service territory.

    c. Remote support

        - In addition to EO Johnson's phone support, the equipment within each of the proposals offer remote access capability to help maintain the functionality of equipment. This will allow for remote access to the devices to help troubleshoot issues and allow for technicians to fix the devices with fewer service calls. Also, this access will allow technicians to preemptively fix machines before the end users even know something is wrong.

    d. Service Level Agreements

        - Please see Appendix B for example of EO Johnson's Service Level Agreement (SLA).

    e. Escalation procedures

        - Please see Appendix C for description of EO Johnson's service escalation policy.

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Section 3 – Support Services (Cont.)

4.   Vendor shall provide initial training for technology and secretarial staff.

- EO Johnson does not have a specific charge for training as we consider that as part of any installation of equipment. Our philosophy is that if a user is comfortable and able to use a device, there will not be as many service calls generated. To that end, EO Johnson will coordinate any training activities with the District to ensure the staff is confident in using the equipment.   In addition, EO Johnson will work with the District to create a customized training document that supports any printing or document initiatives that the District may have.

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Section 4 – Documentation, Training, and Customer Feedback

Section 4 – Documentation, Training, and Customer Feedback

1. Describe any value-added services, training or peripherals provided with the proposal.

    - EO Johnson has provided the Manawa School District with exception services for the past 5 years and hopes to continue this relationship in the future. As part of this service, EO Johnson provides at no additional cost the following:

        - Unlimited local Help Desk support
        - Shipping costs for supplies
        - Customized training document
        - End user training
        - Remote equipment monitoring
        - Automated toner/supply replenishment
        - Quarterly Strategic Business Reviews
        - Recycling of removed equipment

2. Describe if you provide any beneficial software, online subscription services, reference materials, etc., that can be added with your contract.

    - Available as part of this proposal, optional management software can be provided at an additional cost. The management software varies by manufacturer and provides centralized management to include security patching and updating.

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Section 5 – Contracted Services for Continued Warranty Work

Section 5 – Contracted Services for Continued Warranty Work

1. Vendor is responsible for return and shipping of any defective equipment. The vendor must describe the process for removal and replacement of defective devices.

   - All new equipment as part of this proposal is guaranteed to meet or exceed the expectations of the Manawa School District. In the event of a 'problem' machine, EO Johnson will follow the escalation process to repair the device to the satisfaction of the District. If EO Johnson is unable to repair the device, a replacement device will be provided that meets or exceeds the original machine capabilities.

2. Service providers are not allowed within the schools without school district personnel. If the vendor wishes to view a site for some question of the warranty work, it shall be scheduled with the district.

   - Will fully comply.

3. Price quotes for non-warranty products from the vendor or products from the vendor beyond warranty date shall be required before charging or completing repair. Estimates shall be provided free of charge.

   - Will fully comply.

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Section 6 – System Requirements

Section 6 – System Requirements

1. Documentation for all components must be included with the proposal in order for the proposal to be considered.

   - Please see Appendix A for device specifications.

2. The SDM reserves the right to refuse any proposal not compliant to the specifications.

3. All systems purchased will be examined to determine if they meet proposed specifications. The vendor will correct any systems purchased that fail, or contain component substitutions different than those submitted in this proposal, without charge or the equipment will be refused.

   - Will fully comply.

4. All components must be warrantied for the term of the contract. The warranty must include replacement at the option of SDM or the repair of failed equipment upon agreed replacement cycle. Any shipping or pickup must be included in cost of contract.

   - Will fully comply.

5. Accessories:

   a. Vendor shall provide a list of accessories and associated costs related to the proposed print devices. Vendor must provide ordering information for accessories.
   b. Accessories are defined as cables, consumables and etc.

   - Will fully comply upon awarding of contract.

6. Vendor must provide information on availability of equipment and lead times.

   - Will fully comply upon awarding of contract.

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BUSINESS TECHNOLOGIES

Appendixes

Appendix A – Proposal Submissions

Option A, Proposal : HP 60 PPM

- Monthly Lease Hardware Base Payment:

  High School $606.92   plus 100% Service Volume $685.40 or 50% service volume $342.70
  Elementary School $565.06
  Total: $1,171.98

Option B, Proposal : HP 50 PPM

- Monthly Lease Hardware Base Payment:

  High School $550.45   plus 100% Service Volume $685.40 or 50% service volume $342.70
  Elementary School $542.48
  Total: $1,092.93

Option C, Proposal : Ricoh/HP

- Monthly Lease Hardware Base Payment:

  High School $542.40   plus 100% Service Volume $685.40 or 50% service volume $342.70
  Elementary School $603.10
  Total: $1,145.50

<u>Usage Per Page on HP or Ricoh</u> (in excess of allotted volume)
- B&W
  - MFD = $ .0042
  - Printer = $ .0083
- Color
  - MFD = $ .0350
  - Printer = $ .0478

At EO Johnson, we may seem higher in some areas, but we prefer to put costs out on the table and do not prefer to go the route of hidden fees. Some vendors may charge additional for install, helpdesk, shipping and handling of sending toner.

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All EO Johnson Business Technologies proposal include monochrome printing, color printing, equipment, toner, parts, maintenance, repair and full warranty. Also, configuration and licenses for PaperCut, Cloud Faxing (assuming that the fax lines are portable) and Large Format printer are listed separately.

Allotted Volume included in Monthly Base Payment 100% volume (can include 50% volume per month in future, this is an easier view)

- B&W pages (Monthly)
    - MFD = 52,406
    - Printer = 10,466

- Color pages (Monthly)
    - MFD = 10,084
    - Printer = 2,165   (if wanting to structure 50% volume/pages/mo. with hardware it would be $685.40/2 = $342.70)

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Additional Options

Papercut

- HP 60 PPM (Option A): $194.28/Month
- HP 50 PPM (Option B): $194.28/Month
- Ricoh/HP Option (Option C): $228.00/Month

  - Please note we have included 5 years of software assurance, 7 Fast Release devices, 5 hours of future support block time for updates, 2 hours of training, server installation and configuration is included in this proposal (please note: some vendors do not include these items upon bid and customers are charged according to use down the road). Our service with 2 local certified engineers that are located within 50 miles of the Manawa School District.
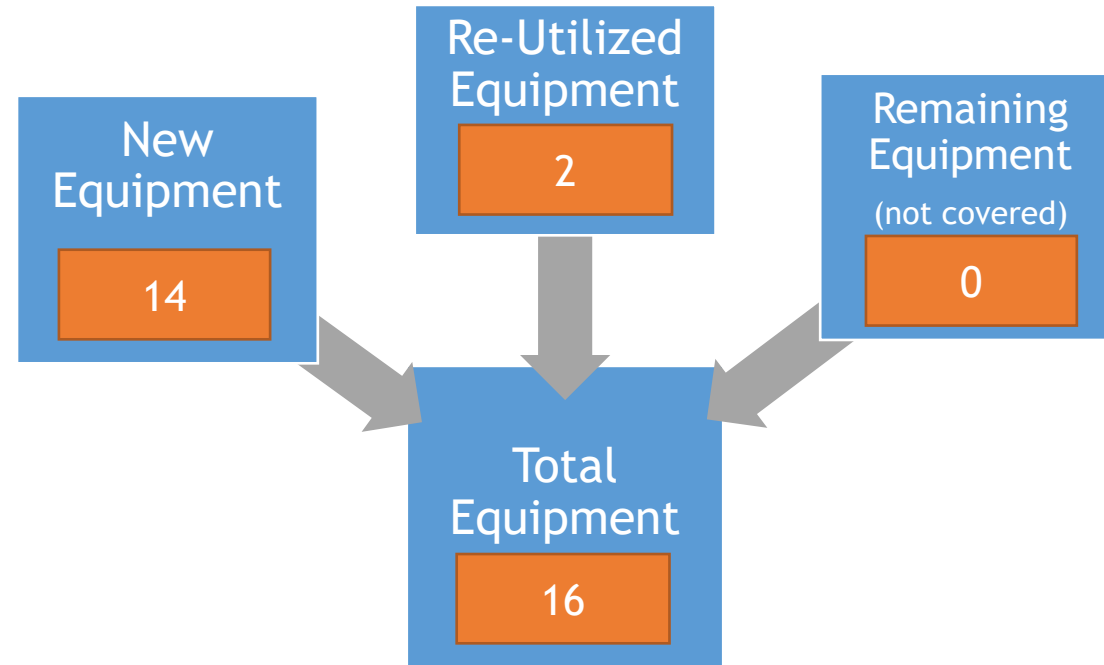
Cloud Faxing solution:

- $49.52/Month

  - Included
    - Training
    - Prepaid pages included
    - 3 portable fax lines. If less or more are needed, prices can be adjusted as we would move forward.

Large Format Option:

- $103.00/Month

  - Canon Image Prograf PRO4100s - 8 color
    - 2nd Roll Option available for an additional $990.00
    - 44" wide print capabilities
    - Includes: All set-up, delivery and loading onto the network with Canon certified EOJ technicians,
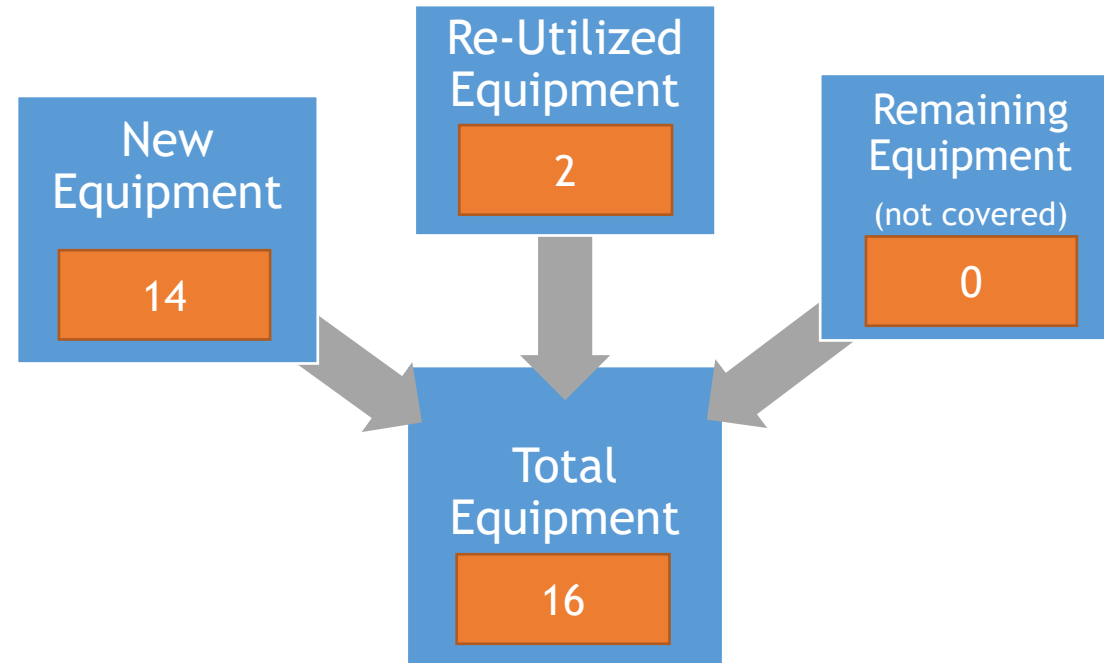
Option A, Proposal : HP 60 PPM

EO JOHNSON
BUSINESS TECHNOLOGIES

Option A, Proposal : HP 60 PPM

Manawa School District								
Current Device	Fax	Location	Action	Proposed Device	Accessories	Upgrade PPM	Upgrade Device Type	Machine Brochure Information
HP Color LaserJet Enterprise M553		HS STORAGE/ NOW RM 219 BUS. COMPUTER LAB	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
HP Color LaserJet Enterprise M553		HS GUIDANCE OFFICE	Stays	HP Color LaserJet Enterprise M553		40	Color Printer	HP Color LaserJet M553DN
HP LaserJet P4015		HS MAIN OFFICE PRINTER	Stays	HP LaserJet P4015		52	Black Printer	HP LaserJet P4015DN
Toshiba Estudio 4505AC		HS LMC	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC	Active	HS MAIN OFFICE COPIER	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 557		HS COMMONS	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 657		HS ROOM 300 LOUNGE	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 4505AC		HS RM 312 GRAPHICS ARTS	New	HP-E87660DN	HP CABINET (E87640/50Z) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 4505AC	Active	ELEM/DIST OFFICE/WRKRM	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP BOOKLET MAKER FINISHER WG (Y1G07A) HP HOLE PUNCH - 2/3 FOR EXTERNAL FINISHER (825/876 SERIES)	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 4505AC		ELEM/RM125B/MULTIPURPOSE	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC		ELEM/LMC COPIER	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 4505AC	Active	ELEM/MAIN OFFICE	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
Toshiba Estudio 657		ELEM/STAFF WRKRM	New	HP-E87660DN	HP 2000-SHEET HIGH CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87660DN
HP LaserJet P3010		ELEM/BLUE HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN
HP LaserJet P3010		ELEM/CHROMEBOX LAB	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
HP LaserJet P3010		ELEM/GREEN HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN

Option B, Proposal : HP 50 PPM

Option B, Proposal : HP 50 PPM

Manawa School District								
Current Device	Fax	Location	Action	Proposed Device	Accessories	Upgrade PPM	Upgrade Device Type	Machine Brochure Information
HP Color LaserJet Enterprise M553		HS STORAGE/ NOW RM 219 BUS. COMPUTER LAB	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
HP Color LaserJet Enterprise M553		HS GUIDANCE OFFICE	Stays	HP Color LaserJet Enterprise M553		40	Color Printer	HP Color LaserJet M553DN
HP LaserJet P4015		HS MAIN OFFICE PRINTER	Stays	HP LaserJet P4015		52	Black Printer	HP LaserJet P4015DN
Toshiba Estudio 4505AC		HS LMC	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC	Active	HS MAIN OFFICE COPIER	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 557		HS COMMONS	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 657		HS ROOM 300 LOUNGE	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 4505AC		HS RM 312 GRAPHICS ARTS	New	HP-E87650DN	HP CABINET (E87640/50Z) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 4505AC	Active	ELEM/DIST OFFICE/WRKRM	New	HP-E87660DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP BOOKLET MAKER FINISHER WG (Y1G07A) HP HOLE PUNCH - 2/3 FOR EXTERNAL FINISHER (825/876 SERIES)	60	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 4505AC		ELEM/RM125B/MULTIPURPOSE	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC		ELEM/LMC COPIER	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 4505AC	Active	ELEM/MAIN OFFICE	New	HP-E87650DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	50	Color Copier	HP Color LaserJet E87650DN
Toshiba Estudio 657		ELEM/STAFF WRKRM	New	HP-E87660DN	HP 2000-SHEET HIGH-CAPACITY TRAY E825/E876 SERIES (Y1G21A) HP INNER FINISHER (REQUIRES Y1G23A FOR E774/E776 SERIES) HP HOLE PUNCH - 2/3 FOR INNER FINISHER	60	Color Copier	HP Color LaserJet E87650DN
HP LaserJet P3010		ELEM/BLUE HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN
HP LaserJet P3010		ELEM/CHROMEBOX LAB	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
HP LaserJet P3010		ELEM/GREEN HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN

Option C, Proposal : Ricoh/HP

EO JOHNSON BUSINESS TECHNOLOGIES
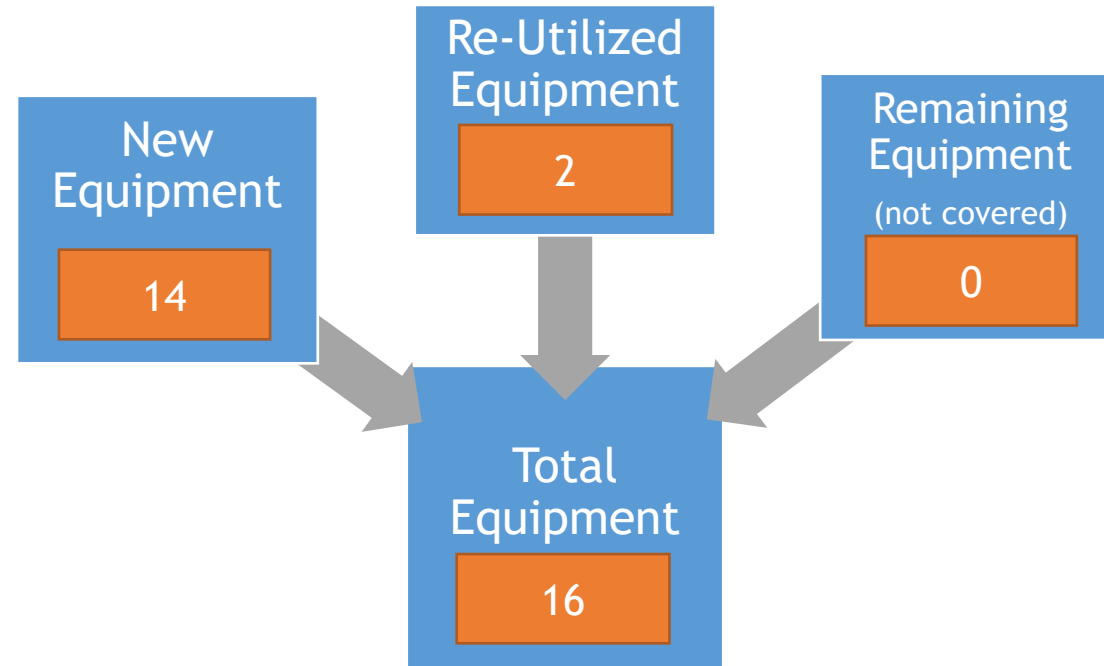
Option C, Proposal : Ricoh/HP

Manawa School District

Current Device	Fax	Location	Action	Proposed Device	Accessories	Upgrade PPM	Upgrade Device Type	Machine Brochure Information
HP Color LaserJet Enterprise M553		HS STORAGE/ NOW RM 219 BUS. COMPUTER LAB	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
HP Color LaserJet Enterprise M553		HS GUIDANCE OFFICE	Stays	HP Color LaserJet Enterprise M553		40	Color Printer	HP Color LaserJet M553DN
HP LaserJet P4015		HS MAIN OFFICE PRINTER	Stays	HP LaserJet P4015		52	Black Printer	HP LaserJet P4015DN
Toshiba Estudio 4505AC		HS LMC	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC	Active	HS MAIN OFFICE COPIER	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 557		HS COMMONS	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 657		HS ROOM 300 LOUNGE	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 4505AC		HS RM 312 GRAPHICS ARTS	New	IMC4500-RIC	CABINET TYPE F RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 4505AC	Active	ELEM/DIST OFFICE/WRKRM	New	IMC6000-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) BOOKLET FINISHER SR3270 (1000 SHEET) RICOH BRIDGE UNIT BU3090 RICOH PUNCH UNIT PU3080 (FOR SR3260 OR SR3270)	60	Color Copier	Ricoh IMC 6000
Toshiba Estudio 4505AC		ELEM/RM125B/MULTIPURPOSE	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
Toshiba Estudio 4505AC		ELEM/LMC COPIER	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 4505AC	Active	ELEM/MAIN OFFICE	New	IMC4500-RIC	RICOH PAPER FEED LCIT PB3290 (1000 X 2) RICOH INTERNAL FINISHER SR3250 (500 SHEET) RICOH PUNCH UNIT PU3070 NA (FOR INNER FINISHER SR3250)	45	Color Copier	Ricoh IMC 4500
Toshiba Estudio 657		ELEM/STAFF WRKRM	New	Ricoh Aficio MP6503	RICOH PAPER FEED LCIT (1000 X 2) RICOH FINISHER SR4120 RICOH PUNCH UNIT PU3060	65	Black Copier	Ricoh MP 6503
HP LaserJet P3010		ELEM/BLUE HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN
HP LaserJet P3010		ELEM/CHROMEBOX LAB	New	HP-E65150DN		50	Color Printer	HP Color LaserJet E65150DN
HP LaserJet P3010		ELEM/GREEN HOUSE	New	HP-E50145DN		45	Black Printer	HP LaserJet E50145DN

Appendix B – Sample Service Level Agreement (SLA)

EcoPrint Premier Service Level Agreement

1. Term of Agreement

This Agreement between Account Name, Account Address, Account City, State, ZIP (Client) and E.O. Johnson Company, Inc. (Service Provider) is effective upon the date signed. The term of this Agreement shall commence on the day the Services (defined below) begin, defined as the date the lease is signed (Commencement Date) and shall remain in force for a period of 5 years. The Service Agreement may be extended or renegotiated upon mutual written Agreement of both parties.

   a. This Agreement may be terminated by either Party upon ninety (90) days written notice if the other Party:

       i. Fails to fulfill in any material respect its obligations under this Agreement and does not cure such failure within thirty (30) days of receipt of such written notice.

       ii. Breaches any material term or condition of this Agreement and fails to remedy such breach within thirty (30) days of receipt of such written notice.

       iii. Terminates or suspends its business operations, unless it is succeeded by a permitted assignee under this Agreement.

   b. At the end of term, Client will not retain possession of any listed equipment per Addendum A with the exception of equipment listed under the category of "Existing Equipment - Service Only". Upon termination, Client will provide Service Provider a supplies list and return all supplies to Service Provider within five (5) days of termination. Client will be invoiced for any supplies not returned.

2. Description of Services

   a. Print Management Services (Services)

       i. Tasks to be performed by Service Provider
         1. Provide all proposed equipment per Addendum A.
         2. Assist Client in setup of newly installed Software and Hardware.
         3. Assist in configuring PC's to print/scan/fax from all installed equipment.
         4. Implement Tracking Software or similar software for billing purposes, supplies and service orders.
         5. Install and train on all software and hardware being implemented.
         6. This contract includes all proposed new equipment, parts, labor and supplies for all equipment under Cost Per Image Rental Agreement (Rental Agreement). Developer, toner, photoreceptor drum, belt and fuser oil will be provided at Client's request. All supplies remain property of Service Provider until consumed by Client.
         7. NOT included in this contract: Paper, all cost associated with network jacks and fax lines being moved, ink and print heads for wide format printers or any shipping cost associated with ship back of equipment under Rental Agreement.

         8. Agreement includes trade-in of all Printers and Copiers. Client will take possession of Hard Drives and will incur a $0.00 charge for each Hard Drive removed. If the client owns the hardware, the hard drive will be removed at no charge and it will be the clients sole decision on how to dispose of the hard drive.
         9. Service Provider will remove at NO CHARGE any other equipment that Client wishes to dispose of at the time of delivery which pertains to the Print Management Contract.
        10. Service Provider will provide a five (5) year "like-for-like" warranty on all new hardware listed on Addendum A. This warranty will only be utilized after Service Provider has attempted to cure the issue through escalated service measures, to be determined at Service Provider's discretion.

ii.   Client Responsibilities
1. **For the term of this contract, Client agrees to purchase all additional copiers, printers, etc. from Service Provider and add them to the Services under this contract. Equipment can be added to the Rental Agreement at any time but not returned for credit against past or future payments. Client understands for the term of this contract NO equipment (faxes, printers, copiers) can be added/reinstalled to the network without proper notification to Service Provider.**
2. Client is responsible for the cost of any equipment damage due to misuse or negligence by Client.
3. Client agrees to inform Service Provider before any printer is installed or moved.

b.   **Remote Diagnostics**
Equipment listed on Addendum A on this contract may have the ability to make daily remote contact over a secure connection directly to a dedicated server provided by the copier manufacturer for the purpose of recording machine related performance details. These details can be accessed by Service Provider technicians in order to improve the level of service to the machine and our clients. No user information or image data is ever transmitted.

c.   **Standard Managed Print Services Security**
Service Provider will secure each device to the best of its capabilities based on industry best practices. This includes, but is not limited to, tightening cipher suites, disabling SNMP, and configuring secure credentials on the device. All devices listed under Addendum A will undergo a hardening process at Service Provider or Client location on or before the day of deployment.

i.   At Client discretion, Client may perform a vulnerability scan upon completion of MPS deployment. Upon completion of the scan, remediation will be completed as deemed necessary by Client. This is considered outside the scope of the MPS contract and a minimum fee of $150.00 per hour will be charged for Service Provider to remediate any devices at Client's risk tolerance.

ii.   Service Provider will perform reactive firmware updates. These firmware updates are only provided through a secure portal (Remote Support tool) (i.e. Bomgar or equivalent) provided by Service Provider when given necessary access to Client's network. This service is chargeable at a rate of $150.00 per hour based on quarter hour increments. If travel to Client's sites is deemed necessary there is a $35.00 trip charge added to the $150.00 per hour rate for remediation. Client sign off is required after any and all remediation services.

d.   **Image Guard Vulnerability Coverage**
Service Provider will secure each device to the best of its capabilities based on industry best practices. This includes, but is not limited to, tightening cipher suites, disabling SNMP, and configuring secure credentials on the device. Service Provider will review these settings and make the appropriate changes based on Client risk tolerance (see Addendum B) which will be mutually agreed upon before the day of implementation. All devices listed under Addendum A will undergo a hardening process at Service Provider or Client location on or before the day of deployment.

i.   Service Provider is responsible to perform a vulnerability scan of all equipment listed on Addendum A upon completion of MPS deployment. At that time, remediation will be completed as deemed necessary based upon Client risk tolerance previously agreed upon to the best of Service Provider abilities utilizing available resources. All devices listed under Addendum A will undergo a vulnerly scan two times per year at which time Service Provider will remediate said devices based on the Client's original risk tolerance levels or mutually agreed upon obtainable results.

ii.   Service Provider will perform firmware updates, if available from manufacturers, two times during every contracted year.

iii. The Managed Print Services Vulnerability Coverage is based on the number of devices indicated below. Firmware updates will only be provided through a secure portal (Remote Support Tool I.e. Bomgar or equivalent) when given access to Client's network.

Number of Devices	Cost Per Device
1-50	$10.00
51-100	$9.00
101-150	$8.00
151-200	$7.00
200 +	$6.00

iv. If network access is not provided, there will be an additional charge of $5.00 per device per month. Service Provider will at no charge travel to Client's location to remediate all devices which are not able to be remediated remotely when a secure portal is provided. Client sign off is required after any and all remediation services.

3. Fees and Payment Schedule

a. #DIV/0!

b. Client agrees that the Service Provider is NOT responsible for overages run by the Client. Client agrees that the ESTIMATE ANNUAL VOLUME is an estimate. Client understands that software is available at an additional cost to help control print volume so Client can realize estimated savings.

c. Client agrees that any change orders, or requests for work outside of the scope of this agreement, requested by Client after execution of this agreement shall result in additional charges at the discretion of Service Provider.

d. Client is responsible for any electrical work external to equipment included under this agreement and the cost of any third party software programming.

e. Price Protection. During the term of the agreement Service Provider will not increase the service portion of this contract. Possible exceptions would include, addition of new/used hardware, software or services provided by the Service Provider.

f. **Electronic Billing**

E-billing ensures timely delivery of invoices and allows you to manage your account payments electronically.

E-Billing	
Accounts Payable Contact Information	
Name:	
Email:	

g. **Remote Diagnostics**

Remote services are diagnostic tools designed to automate service technician notifications, provide pre-emptive service notifications as parts end their expected life cycle, capture meter data automatically for invoicing purposes, and update firmware remotely at a specific time.

Remote Diagnostics	
Meter Contact Information	
Name:	
Title:	

h. **Electronic Information**

E-info is an interactive tool to access real time information on equipment, supply orders, service calls and more. For your convenience, you can view account information on any mobile device.

E-Info						
E-Info Contact Information List below the user/s who need access to e-info						
User Name:						
User Email:						
User Access:	Equipment	Sales Orders	Service Calls	Meter Entry	Account History	Service History

User Name:						
User Email:						
User Access:	Equipment	Sales Orders	Service Calls	Meter Entry	Account History	Service History

User Name:						
User Email:						
User Access:	Equipment	Sales Orders	Service Calls	Meter Entry	Account History	Service History

4. **Taxes**

   It is understood that any Federal, State, or Local Taxes applicable shall be added to each invoice for services or materials rendered under this Agreement. Client shall pay any such taxes unless a valid exemption certificate is furnished to Service Provider for the state of use.

5. **Service Coverage**

   Service Provider will provide an average of 4 hours service response time between the hours of 7:30 am – 5:00 pm CST, Monday through Friday, excluding Service Provider holidays. Service will be provided remotely or at the Client's location, depending on the nature of the issue and at the sole discretion of Service Provider.

6. **Connectivity to Existing Environment**

   Service Provider is responsible from the wall to the machine for printers, copiers, and MFD's. Client is responsible for supplying all Network Connections at all locations of contracted hardware, switches, patch cables etc. Client will also need to provide access to those connections, such as IP, Subnet, Gateway Addresses, Firewall access etc.

7. **Excluded Services**

   a. After all print drivers are loaded and initial installation is complete, Service Provider shall invoice Client for all network support, including but not limited to, reloading print drivers, troubleshooting applications or any pre-existing equipment owned by the Client. If a print driver issue occurs on a Client owned server, Service Provider will assist customer technician via phone if necessary to help resolve the problem. It is not the responsibility of Service Provider to repair existing network problems at the Client site for the purpose of loading drivers or initial setup and Client understands that it will result in billable hours to their account.

   b. All print driver installations performed by Service Provider will ALWAYS default to BLACK. Any print driver changes that are made after the initial install will be the sole responsibility of Client. Any color print charges due to those changes made by Client are billable.

   c. Service rendered under this Agreement does not include parts, equipment, or software not installed by Service Provider and not covered by vendor/manufacturer warranty or support, unless listed on Addendum A.

   d. Service Provider is not liable for transportation damages or loss of equipment in the event the customer moves the equipment or contracts with a third party to move the equipment. Client agrees to pay for any damages incurred from moving the equipment.

   e. Service rendered under this Agreement does not include service and repair made necessary by the alteration or modification of equipment other than that authorized by Service Provider, including alterations, software installations or modifications of equipment made by Client's employees or anyone other than Service Provider.

   f. Service rendered under this Agreement does not include programming (modification of software code) and program (software) maintenance.

   g. Client assumes and bears the risk of loss or damage to the equipment. If the equipment is lost or damaged while in Client's custody, Client agrees to replace the equipment or pay for repairs.

8. Miscelleous

This Agreement shall be governed by the laws of the State of Wisconsin. It constitutes the entire Agreement between Client and Service Provider for all MPS equipment. Its terms and conditions shall prevail should there be any variance with the terms and conditions of any *order* submitted by Client.

9. Other Terms and Conditions

    a.   Rights in Data and Works

        i.   Ownership of Developed Work. Client agrees that Service Provider is the owner of all right, title and interest in all material, intellectual property, and data developed pursuant to this Agreement with any and all additions, enhancements and modifications in connection with the performance of any Services provided by Service Provider after the date set forth above, provided however that during the term of this Agreement Service Provider shall grant Client a nonexclusive license agreement to use solutions, fixes, patches, programming, configurations and knowledge that Service Provider acquires during the course of providing Services.

        ii.   Ownership of Service Provider's Proprietary Material. Service Provider is the sole owner or licensee of patents, copyrights and of the intellectual property interests in software and other tools and products that it may utilize during provision of the Services ("Service Provider's Proprietary Material"). Unless stated to the contrary in the Written Agreement, this Agreement shall not grant Client any right, title, interest or license in Service Provider's Proprietary Material. Service Provider represents and warrants to Client that it has right to use, license or resell Service Provider's Proprietary Material, as the case may be, and covenants to indemnify, defend and hold Client harmless from any claim arising from the ownership of Service Provider's Proprietary Material.

    b.   Independent Contractor

Service Provider and Client are independent of one another and neither party's employees will be considered employees of the other party for any purpose. Nothing contained in this Agreement shall be deemed to create the relationships of employer and employee, master and servant, franchisor and franchisee, partnership or joint venture between the parties. Neither party has the authority to bind the other to any third party.

    c.   Confidential Information

        i.   *Non-Disclosure by Service Provider*. Service Provider agrees not to use, disclose, sell, reproduce or otherwise make available Client's Confidential Information except and only to the extent necessary to perform under this Agreement. Service Provider also agrees to secure and protect Client's Confidential Information and to take appropriate action by instruction or agreement with its employees, contractors or other agents who are permitted access to Client's Confidential Information to satisfy its obligations under this Section. Service Provider acknowledges that Client is required to maintain the confidentiality of its customers' and also desires and intends to maintain the confidential status of such elements of Client's Confidential Information. Upon receipt and discovery of possession of, or upon receipt of notice of any security breach with respect to Client's Confidential Data, Service Provider shall immediately: (i) notify Client of Service Provider's receipt and/or possession of, and/or Service Provider's discovery of any such security breach with respect to Client's Confidential Information, including without limitation such information as shall reasonably inform Client as to the nature, cause and scope of the disclosure and/or security breach and implement such further requirements as Client may reasonably impose, including without limitation the permanent deletion and destruction of all such Confidential Data as may then remain in Service Provider's possession and/or control.

        ii.   *Non-Disclosure by Client*. Client agrees not to use, disclose, sell, reproduce or otherwise make available Service Provider's Confidential Information except and only to the extent necessary to perform under this Agreement. Client also agrees to secure and protect Service Provider's Confidential Information and to take appropriate action by instruction or agreement with its employees, contractors or other agents who are permitted access to the Service Provider's Confidential Information to satisfy its obligations under this Section.

iii. Definitions

1. "Client's Confidential Information" shall mean Confidential Information of Client to which Service Provider may be exposed and which may include, for example and without limitation, personal, financial or other non-public information concerning Client, Client's business operations or Client's customer information.

2. "Service Provider's Confidential Information" shall mean Confidential Information of Service Provider to which Client may be exposed and which may include, for example, Service Provider's Proprietary Information; personal, financial or other non-public information concerning Service Provider or Service Provider's business operations; Service Provider's customer information or reports, studies, findings, data, plans or other records, and/or software related to Service Provider's Proprietary Information.

3. "Confidential Information" shall mean a party's information, not generally known by non-party personnel, used by the party and which is proprietary to the party or the disclosure of which would be detrimental to the party. Confidential Information includes, but is not limited to, work product resulting from or related to Services performed under this Agreement; internal personnel, financial, marketing and other business information and manner and method of conducting business; a party's strategic operations and other business plans and forecasts; and confidential information provided by or regarding a party's employees, customers, vendors and other contractors. The definition of Confidential Information does not include information that (i) was rightfully in the possession of a disclosing party prior to the date of disclosure of such information to disclosing party as demonstrated by competent evidence; or (ii) was in the public domain prior to the date of disclosing party coming into possession thereof, or become part of the public domain by publication or otherwise through no fault or unauthorized act or omission on the part of disclosing party; or (iii) is independently developed by disclosing party without reference to any Confidential Information, as demonstrated by competent evidence; or (iv) is acquired directly or indirectly by disclosing party from a source having the right to disclose such information, as demonstrated by competent evidence or (v) is required to be disclosed by law or regulation, in which case disclosing party will promptly notify the other party of such required disclosure, take all reasonable steps to limit the scope of such disclosure and secure the confidential treatment thereof by the recipient(s) consistent with the terms and conditions herein, and provide the other party with an opportunity to comment on such proposed disclosure.

iv. Use of Confidential Information. Each party understands that disclosure of the other party's Confidential Information could destroy the value of the information. Therefore, the parties agree to use commercially reasonable efforts to keep the Confidential Information of the other party in strictest confidence and to prevent the disclosure or publication of the other party's Confidential Information except as specifically authorized by this Agreement or with the express written permission of the party owning the Confidential Information. Each party hereby agrees to exercise at least the same degree of care to protect the other party's Confidential Information that it exercises to protect its own Confidential Information, and in any event, such care shall at least be reasonable care to prevent disclosure of the other party's Confidential Information to any third party. Internal dissemination of the other party's Confidential Information by either party shall be limited to those employees, party's agents, representatives, consultants, or affiliates whose duties justify the need to know such information and then only on the basis of a clear understanding by these individuals of their obligation to maintain the confidential status of such Confidential Information. Upon the completion of Services, each party shall discontinue using the other's Confidential Information, and, within thirty (30) days of receiving a request, shall return to the owner of the Confidential Information all Confidential Information and copies of Confidential Information that are identified in such request; provided, however, that each party's legal counsel may retain one copy of the returned Confidential Information in a secure location for purposes of identifying the responding party's obligations hereunder.

d. **Limitation of Liability, Indemnification and Disclaimer**

i. In no event shall Service Provider be liable to Client for the payment of any consequential, indirect, or special damages, including lost profits. The maximum aggregate amount Service Provider may be held liable to Client for any claims arising from services to be provided pursuant to this Agreement or any Written Agreement is the total amount paid by Client to Service Provider for services for the three (3) month period prior to the claim being made.

ii. Service Provider shall provide the service set forth in a workmanlike manner. Client acknowledges that no party, including Service Provider, can anticipate all future challenges to Client's security and Service Provider does not guarantee Client's security. Service Provider makes no warranty, express or implied, including, without limitation, any implied warranty of merchantability or any implied warranty of fitness for any particular purpose with respect to any patent, trademark, trade secret, know-how, tangible research property, information or data provided to Client hereunder, and hereby disclaims the same. Further, Service Provider makes no warranty regarding the achievement of any particular security status. Service Provider shall not be liable for any indirect, consequential or other damages suffered by Client or any of Client's licensees, successor, assigns or any others resulting from the provision of services.

iii. Client shall at all times hold the Service Provider harmless from any action, cause, cause of action, damages, costs, expenses, claims or demands whatsoever in law or in equity, which may arise from or grow out of or in any way be incident to the provisions of the Services or to any of the duties or obligations of the Agreement to be performed by Service Provider, its officers, employees, or agents unless the claim arises from Service Provider's intentional malfeasance, malicious acts or gross negligence. Client's indemnification obligations to Service Provider shall survive the termination of this agreement.

iv. Client acknowledges that Service Provider may hire third party contractors from time to time to provide routine service and maintenance to Client. Service Provider shall not be held liable by Client for any acts of such third party contractor unless the act at issue was undertaken at the specific request of Service Provider.

v. Client acknowledges that, at Client's request, Service Provider may sell, resell or distribute hardware, software or third party services to Client for Client's use. Client further acknowledges that Service Provider makes no warranties of any kind, expressed or implied of its' own regarding the functionality of the hardware, software or third party service, but instead relies on the warranties provided by the manufacturer or service provider of each such product or service.

vi. To the extent that Client requests that Service Provider provide "Software Updating" which term means the installation or integration of (i) Maintenance Updates; (ii) Patches; or (iii) Fixes provided by the manufacturer or distributor of software used by Clients. Service Provider's warranty regarding the Software Updating is that the Software Updating shall be performed or installed in a commercially reasonable manner. Client hereby acknowledges that Software Updating may cause multiple programs on Client's network to fail to work together causing the loss of use of a program or a loss of use of the network or server (an "Adverse Software Updating Event"). Upon the occurrence of an Adverse Software Updating Event, Service Provider shall use reasonable efforts to eliminate the Adverse Software Updating Event by either removing the Software Update or rectifying the inter program error, upon the request of Client. Client acknowledges that Client has elected to use and is solely responsible for all software and programs on its network. Client hereby specifically releases Service Provider from all claims regarding losses of any type suffered by Client as a result, in whole or part, of an Adverse Software Updating Event, unless such event was caused by the intentional, malicious or grossly negligent act of Service Provider.

e. Injunctive Relief
It is hereby understood and agreed that damages shall be an inadequate remedy in the event of a breach by Service Provider or Client of Section 9 (d) of this Agreement and that any such breach will cause the non-breaching party great and irreparable injury and damage. Accordingly, the parties agree that the non-breaching party shall be entitled, without waiving any additional rights or remedies otherwise available to such party at law or in equity or by statute, to injunctive and other equitable relief in the event of a breach or intended or threatened breach by the non-breaching party.

f. Other Provisions

i. Notices. Any notice or other communication required or permitted under this Agreement shall be given in writing and delivered by hand, US mail or email.

ii. Force Majeure. Service Provider is not responsible for failure to render Services due to circumstances beyond its control including, but not limited to, acts of God, Client building modifications, power failures or other adverse environmental conditions or factors.

iii. Waiver. No waiver of any breach of any of the provisions of this Agreement by either party shall be deemed a waiver of any preceding or succeeding breach of the same or any other provisions hereof. No such waiver shall be effective unless in writing and then only to the extent expressly set forth in writing.

iv. Entire Agreement. This Agreement constitutes the general terms and conditions upon which Service Provider will provide services to Client. This Agreement anticipates that Written Agreements requesting the Service will be entered into between Client and Service Provider.

v. Modifications. No modification of this Agreement shall be effective unless in writing and signed by both parties.

vi. Severability. If any provision of this Agreement is invalid or unenforceable under any statute or rule of law, the provision is to that extent to be deemed omitted, and the remaining provisions shall not be affected in any way.

vii. Jurisdiction - This Agreement shall be governed by the laws of the State of Wisconsin.

10. **Acceptance of Service Agreement**
This Service Agreement covers only those services on the agreed upon equipment. Service Provider must deem any equipment/services Client may want to add to this Agreement after the effective date acceptable. The addition of equipment/services not listed at the signing of this Agreement, if acceptable to Service Provider, shall result in an adjustment to the Client's charges.

IN WITNESS WHEREOF, the parties hereto have caused this Service Agreement to be signed by their duly authorized representatives as of the date set forth below.

Accepted by:

Authorized Signature	Account Name	Date
	Client	

Authorized Signature	EO Johnson	Date
	Service Provider	

Addendum A

Schedule of Equipment

Client: Account Name
Vendor: EO Johnson Company
Date:

New Equipment	Existing Equipment-Service & Supplies Only	Not Covered

CONFIDENTIAL

Authorized Signature

Account Name
Client

Date

Authorized Signature

EO Johnson
Service Provider

Date

Addendum B

Client Risk Tolerance

Please initial by the Vulnerability Tolerance Level which meets Client's needs.

Critically High Risk Tolerance _____
(Critical rated vulnerabilities typically have characteristics that make them relatively simple to abuse, or could result in root level compromise of affected

systems.) Examples: SNMP v1 Enabled, Unsupported/End of Life Firmware installed on the device.
- EOL/Obsolete Software Enabled
- Unneeded/Unused Protocols Enabled
- Null Authentication VNC Server Access
- Samba Remote Code Execution Vulnerability

High Risk Tolerance _____
(High rated vulnerabilities typically have characteristics that make them relatively difficult to abuse, exploitation could result in elevated privileges for the attacker, data loss, or downtime.) Examples: Default Credentials, SSLv3 Enabled
- Writeable SNMP Information
- Unauthenticated Access to FTP
- VNC Server Weak Password Encryption
- NetBIOS Authentication Errors

Medium Risk Tolerance _____
(Medium rated vulnerabilities typically have characteristics that require the attacker to reside on the same network, require elevated user privilege to

abuse, or are very difficult to abuse.) Examples: TLSv1 Enabled, Telnet/HTTP Enabled
- Ciphers Supported with Known Vulnerabilities
- Readable SNMP Information
- WINS Vulnerability
- NetBIOS Errors
- TLSv1.0, 1.1 Supported
- Multiple Cross-Site Scripting Vulnerabilities

Low Risk Tolerance _____
(Low rated vulnerabilities typically require local or physical access to the device to abuse.)
- SSL Certificate Errors
- Microsoft Windows Users with Privilege Errors

Informational _____
(Informational findings are not vulnerabilities, they typically include fingerprinting information and details of what was assessed.)
- Information from Device Gathered (Host Name, DNS, MAC address, etc.)

Vulnerability Scans
- Provide 1st vulnerability scan date _____
- Provide 2nd vulnerability scan date _____
- A seven day minimum advanced notice is required before any scan will be preformed

The purpose of this policy is to optimize machine performance ensuring customer satisfaction.

The process: E-automate (our Enterprise Reporting Program) flags any machine that incurs a second service call as a "Call Back" if the machine does not meet industry performance expectations for that model. On a weekly basis, Service Management receives the "Excessive Call Report" to identify all machines that incur three service calls within thirty days. Based on that information, Service Management takes the appropriate action including informing the sales team if their assistance is needed. Escalation is required whenever a client indicates dissatisfaction regarding machine performance.

Level One: E-automate or a Call Coordinator alerts a Technician of a "Call Back" or customer complaint.

Technicians are trained to follow a written total call procedure that includes performing preventative maintenance and upgrading firmware. They utilize all resources i.e. e-mailing service groups, contacting Lead Service Technicians or Product Specialists, and open a ticket with the vendor if problem persists.

Level Two: The call is escalated again when a technician is unable to repair a machine after exhausting Level One actions, or the machine has had three calls in thirty days as indicated by the Excessive Call Report.

At this point, technicians are <u>required</u> to contact Lead Service Technicians for advice and assistance. Vendor contact is also required by opening a ticket through technical support hotlines or websites if not already executed. Those ticket numbers are noted in e-automate. Digital service files (SMC or CSV) are downloaded for future escalation to vendor if necessary.

Level Three: When a problem persists after completion of steps one and two above.

The Lead Service Technician takes total ownership and joins the Technician or a Product Specialist on the call. Lead Service Technician escalates ticket through technical support hot line and contacts the vendor Support Manager directly. Lead Service Technician provides history and digital service files to vendor Support Manager. At this point, Service Managers are notified and keep informed of the progress and determine if loaner is needed.

Level Four: Problem persists after all previous attempts fail to resolve the problem.

Service Managers take ownership by communicating directly with the client. A loaner or replacement machine is provided while the machine is removed from the client as needed. Service Manager will handle additional escalation with vendor, coordinates vendor visit if applicable, and handle the return authorization process as needed.

Appendix D - References

Iola-Scandinavia School District
405 E. Division St.
Iola, WI 54945
Contact:
Sarah Thiel – Business Manager
thiels@iola.k12.wi.us
715.445.2411

Abbotsford School District
510 West Hemlock St.
Abbotsford, WI 54405
Contact:
Jesse Meddaugh – Technology Coordinator
jmeddaugh@abbotsford.k12.wi.us
715.223.2386

Wautoma Area School District
556 S Cambridge St.
Wautoma, WI 54982
Contact:
Eric Highlander – Director of Technology
highlandere@wautoma.k12.wi.us
920.787.7112 ext. 1113

Mosinee School District
591 WI-153
Mosinee, WI 54455
Contact:
Brady Mesenberg – Director of Technology
bmesenberg@mosineeschools.org
715.803.5053

EO JOHNSON
BUSINESS TECHNOLOGIES

Thank you

Tracy Wendt
Account Executive
twendt@eojohnson.com
715.261.4529

Matt Palecek
Wausau Sales Manager
mpalecek@eojohnson.com
715.261.4538

EO JOHNSON
BUSINESS TECHNOLOGIES

PROPOSAL NUMBER 24445 DATED 04-28-21

MASTER ELECTRICAL SERVICES LLC – FOR ALL YOUR ELECTRICAL NEEDS!

PROPOSAL SUBMITTED TO:	**WORK TO BE PERFORMED AT:**

NAME:	School District of Manawa Attn: Melanie Oppor	**LOCATION:**	Same
ADDRESS:	800 Beech Street Manawa, WI 54949		
EMAIL:	moppor@manawaschools.org	**PHONE NO.:**	596-2238

We hereby propose to furnish the materials and perform the labor necessary to wire the following;

☐   Take down six existing 56" fans and replace with six new 56" fans with new cages using existing power.

Thank you for the opportunity to serve you!

All material is guaranteed to be as specified, and the above work to be performed in accordance with the drawings and specifications submitted for above work and completed in a substantial workmanlike manner for the sum of:

Four thousand five hundred fourteen and 00/100 _____ Dollars **($ 4,514.00)**

Any alteration or deviation from above specification involving extra costs will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents, or delays beyond our controls. This proposal may be withdrawn by MES if not accepted within 5 days. Acceptance of this proposal provides a Personal Guaranty on behalf of the Acceptor and the above-named Company principals who he/she represents.

Due to the current volatility of the commodity markets (steel, copper, aluminum, brass, plastics, oil, etc.), we are not able to hold firm prices on materials or products for release any further out than factories or suppliers will guarantee. **PRICE IS GOOD AT TIME AND DATE OF ESTIMATE ONLY.** If this proposal is open beyond (30) days, contact us to establish revised pricing.

All materials shall remain the property of Master Electrical Services until paid in full. Customer will be responsible for any and all costs of collection, including, but not limited to, reasonable attorney's fees and filing fees for court actions.

The information and data contained is provided to you as an instrument of service, and intended for use and reference relative only to the specific project they describe. The information may not be copied, modified or released to a third party without the direct written permission of M.E.S. By acceptance of this information, you agree to this confidentiality clause.

Percentage of completion payments respectfully submitted: MASTER ELECTRICAL SERVICES LLC.
A 1.5% Service Charge will be added to all balances over 30 days.

Per:_____*David Mackowiak*_____
Dave Mackowiak (sls)

ACCEPTANCE OF PROPOSAL

The above prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified above.

Signature_____   Date_____

Master Electrical Services LLC
1913 Mill Street, New London, Wisconsin 54961
(920) 982-6467 FAX (920) 982-6484
General e-mail: general@master-electric.net

To: Board of Education

From: Jacquelyn Sernau and Mary Eck- Summer School Coordinators

Date: May 6, 2021

Re: Summer School Staffing

The purpose of this memo is to recommend the following staff for teaching summer school June 7-June 25.

Summer School Instructor Pay Rate: $25/hour (including prep)

**Summer School
Instructors/Assignments
2021**

Instructor's Name	Classes Assigned	Number of Hours/Day
Katie Sitter	Intro to 4K Cooking 5-8	4 hours/day for 15 days
Cathy McCoy	Bookin and Cookin Games Galore 4-5 Games Galore 2-3 PBL Genius Hour 4-5	4 hours/day for 15 days
Megan Schuelke	Characters and Crafts Reading K-2 Cooking 5-8	4 hours/day for 15 days
Missy Tassone	Bookin and Cookin Math and Logic 6-8 Games Galore 2-3 Computer 1-4	4 hours/day for 15 days
Corrie Ziemer	Great Escape Harry Potter -2 hours Dance and Tumbling Volleyball Camp	4 hours/day for 15 days July 14-18 3:30-5:00 (grades 4-6) 5:15-7:00 (grades 7-9)
Carrie Gruman	Guitar 3-8 Piano 2-5	7 hours/day for 15 days

	Guitar 9-12 Piano 6-12 Musical K-12	
Michelle Poppy	Camp Kindergarten	4 hours/day for 15 days
Valerie Pari	Math Madness Math Madness Math Madness Math Puzzles	4 hours/day for 15 days
Nate Ziemer	Sports 3-5 Sports 6-8 Outdoor Exploration- 2 hours	4 hours/day for 15 days
Brad Johnson	Weightlifting Health	1.5 hours/day 3 days/week *There will be July hours for weightlifting 4 hours/day for 15 days
Tom Polki	The Age of Trump	4 hours/day for 15 days
Meria Wright	Swimming/Mad Scientist Swimming/Mad Scientist Writing Robotics	Up to 4 hours/day for 15 days
Casey Johnson	Weightlifting Mad Scientist 3-5 Mad Scientist 1-2 Outdoor Exploration	1.5 hours/day 3 days/week *There will be July hours for weightlifting 4 hours/day for 15 days
Jake Kaczorowski	Weightlifting (6-12) Intro to Fitness Center	1.5 hours/day 3 days/week 1 hour/day for 15 days
Jeff Bortle	Weightlifting	1.5 hours/day 3 days/week *There will be July hours for weightlifting
Pat Collins	Weightlifting Basketball Skill & Drill	Weightlifting 1.5 hours/day 3 days/week *There will be July hours for weightlifting Skill/Drill: 3 hours/day for 10 days June 7-11 & June 14-18
Renee Behnke	Special Ed. Paraprofessional $15. 59/hour	Up to 4 hours/day for 15 days
Beth Trice	Intro to 4 K Book Club Special Education Resource	Up to 4 hours/day for 15 days

Sandy Cordes	Supervised Agricultural Experience	Variable per the daily log
Janine Connolly	Stress Busters Transitions	Stress Busters: 2 hours/day for 15 days Transitions: later in the summer TBD
Michele Koshollek	7-12 Tutoring	4 hours/day for 15 days
Mary Eck	7-12 Tutoring	4 hours/day for 15 days
Jason Kirby	Drivers' Education	4 hours/day for 15 days

When would face coverings be required on the school site? NEW

Per WI DHS guidance, face coverings will be worn on the school site (indoors) at all times and outdoors when physical distancing of 6 feet is not possible. (Event exceptions are found in the event plans.)

WIAA expectations will be followed for athletic activities.

This expectation will be in effect through the end of the day on June 4, 2021.

Summer School Mitigation Plan

Below you will find descriptions of the safety measures that will take place at both buildings.

Social Distancing
All classrooms will be set up 3 feet apart or as close to 3 feet apart as the room will allow. Students will maintain a distance of 3 feet from one another; however students and staff will be expected to maintain a 6-foot distance from each other. This includes traveling in the hallways and waiting in lines. If the community transmission rate increases, we will move back to 6 feet apart for students as a measure for social distancing.

Face Coverings
Masks will be required for staff and students, but situational masking is allowed, but not required. This means that if students are sitting at their desk/table (or actively playing/moving around outside) and are socially distanced, they may take off their mask; however, they are not required to do so if they are not comfortable. If social distancing cannot be ensured, masks are required. Instructors will define a time in each class period where students will have the opportunity for situational masking or provide an outdoor mask break. The district will provide cloth masks for those who need them. District provided masks will be laundered on site so clean masks will be available each day.

Traffic Patterns
Hallways will have a one-way traffic pattern. There will be arrows on the floor signifying the direction of traffic as is done during the school year.

Water Bottles/Bubblers
Students are encouraged to bring water bottles for use at school. Bubblers/Water fountains are covered and will not be used with the exception of the water bottle filler in the cafeteria.

Sports Skill and Drills
Masking and social distancing protocols will be implemented following the latest WIAA standards regarding COVID-19. Such protocols will be communicated with parents and students who are participating in the sport skill and drill activities.

**Aspects of the SDM Summer School Reopening Plan are subject to change as health and safety factors come to light.

Protocol for Suspected/Confirmed Cases of COVID-19

Symptoms of COVID-19 may appear 2-14 days after exposure to the virus. Symptoms are considered consistent with COVID-19 when one of the symptoms marked with a (*) or two of the other symptoms are present above baseline for that individual.

Cough*   **Shortness of breath or difficulty breathing***   **New loss of taste or smell***

Congestion or runny nose   **Fever or chills**   **Nausea or vomiting**   **Diarrhea**

Headache   **Fatigue**   **Muscle or body aches**   **Sore throat**

Parents should perform daily home symptom screening of students to promptly identify illness.

For information regarding the protocol if a teacher or staff member develops symptoms during the school day, visit this [document](#).

**Aspects of the SDM Summer School Reopening Plan are subject to change as health and safety factors come to light.

School District of Manawa
Students Choosing to Excel, Realizing Their Strengths

To: Dr. Melanie Oppor, Policy and Human Resources Committee
From: Dan Wolfgram
Date: 5/7/2021
Re: Memorial Day and Manawa Rodeo Instrumental Performances

_____

The purpose of this memo is to provide information regarding upcoming public performances for the Manawa Instrumental Music Department. The band will be performing at the following events:

Memorial Day Activities - May 31, 2021:
- 9:30 am - Royalton Cemetery
- 10:30 am - Symco Bridge/Symco Cemetery
- 11:30 am - Manawa Bridge
- 12:15 pm - Manawa (Little Wolf Cemetery)

Manawa Rodeo Parade - Saturday, July 3, 2021:
- 10:00 a.m. - Parade Route: Manawa Elementary School to the Mid-Western Rodeo Grounds.

Additional Considerations:
- All performances will be outside.
- Marching formation and concert formations will allow for social distancing.
- Students will be required to wear face coverings when unable to socially distance themselves.

School District of Manawa
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2525
Fax: (920) 596-5308

Little Wolf High School
Manawa Middle School
515 E. Fourth St
Manawa, WI 54949
Phone: (920) 596-2524
Fax: (920) 596-2655

Manawa Elementary
800 Beech Street
Manawa, WI 54949

Phone: (920) 596-2238
Fax: (920) 596-5339

ManawaSchools.org

/ ManawaSchools
/ ManawaSchools

School District of Manawa

To: Manawa Board of Education
From: Dr. Melanie J. Oppor
Date: April 13, 2021
Re: Onsite Social Worker

The purpose of this memo is to propose a partnership between the Waupaca County Department of Health and Human Services and the following partner districts: Iola-Scandinavia School District, Weyauwega/Fremont School District, Marion School District, and the School District of Manawa to share a 1.0 FTE social worker at an estimated cost of $75,000 or about $15,000 per member. The social worker would be onsite one day per week in the School District of Manawa. It is proposed that ESSER funds be used to pay for this position in the short term. An onsite social worker would provide social/emotional supports to students and their families. Additionally, the social worker would be the SDM/Waupaca County Department of Health and Human Services liaison for accessing additional wrap around services. The details of this collaboration will be forthcoming over the next several months. Please do not hesitate to contact me should questions arise. Thank you for your thoughtful consideration.

Book	Policy Manual
Section	0000 Bylaws
Title	NOTICE of REGULAR MEETINGS
Code	po0165.1
Status	First Reading
Last Revised	November 18, 2019
Last Reviewed	April 25, 2016

0165.1 - **NOTICE OF REGULAR MEETINGS**

Public notice of all meetings shall be given pursuant to statute. The Board shall cause to be posted at the Board office and in other locations considered appropriate by the Board, a notice listing the date, time, place, and subject matter of each regularly-scheduled meeting of the Board, including subjects intended for the consideration at any closed session, in the form which is reasonably likely to inform members of the public and the news media. To assure that notice of a meeting is specific enough to apprise the public of the purpose of the meeting, the following factors shall be considered: (1) the time and effort required to provide detailed notice; (2) the level of public interest in the particular subject; and (3) whether the meeting will involve routine or novel issues. The notice shall contain the name and address of the District and its telephone number. The notice shall be given at least twenty-four (24) hours prior to the meeting unless for good cause such notice is impossible or impractical, but in no case may the notice be less than two (2) hours in advance of the meeting.

The notice shall also contain the following statement:

"Upon request to the District Administrator, submitted twenty-four (24) hours in advance, the District shall make reasonable accommodation including the provision of informational material in an alternative format for a disabled person to be able to attend this meeting."

Notices of postings will be as follows: Manawa City Hall, Sturm Memorial Public Library, First State Bank of Manawa, the District Office bulletin board, and the School District of Manawa website.

The notice shall be given ~~to the Racine Journal and,~~ upon ~~the~~ written request, to an individual, organization, firm, or corporation. The news media shall be entitled to receive, at their request, copies of such notices free of charge.

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Legal	120.11(4), Wis. Stats.
	985.05(3), Wis. Stats.
	19.84, Wis. Stats.

Last Modified by Melanie Oppor on May 13, 2021

Book	Policy Manual
Section	9000 Relations
Title	PUBLIC REQUESTS, SUGGESTIONS, OR COMPLAINTS
Code	po9130
Status	First Reading
Last Revised	March 15, 2021
Last Reviewed	April 23, 2018

9130 - **PUBLIC REQUESTS, SUGGESTIONS, OR COMPLAINTS**

Any individual(s), having a legitimate interest in the staff, programs and operations of this District shall have the right to present a request, suggestion, or complaint to the District and the Board. At the same time, the Board reserves the right to protect District staff from harassment, disclosure of confidential information, and other violations of the staff or student's rights. It is the intent of this policy to provide guidelines for considering and addressing public requests, suggestions, or complaints in an efficient, reasonable, and equitable manner. Requests, suggestions, or complaints made by District staff members are covered by Policy 1422, Policy 3122, and Policy 4122. This policy is not to be used to appeal or to otherwise seek review of a personnel decision that was or could have been reviewed through the grievance policy, Policy 3340 or Policy 4340.

It is the desire of the Board to address any such matters through direct, informal discussions. It is only when attempts at informal resolution fail that more formal procedures shall be used.

Generally, requests, suggestions, or complaints reaching the Board or Board members shall be referred to the District Administrator for consideration. Only those items that are appropriate for consideration under this policy will be considered. The District Administrator may close out any such request presented to him/her that is not appropriate for consideration consistent with this policy. The Board reserves the right to reverse the District Administrator's decision to dismiss any item raised and to fully investigate or review the matter.

Guidelines for Matters Brought Forth Under This Policy

A. First Level

Generally, if the matter raised involves a staff member the individual(s) should discuss the matter with the staff member, if appropriate. The individual shall take appropriate action within his/her authority and District administrative guidelines to deal with the matter. Matters related to other aspects of the District operations, programming, or other decisions shall be brought generally to the administrator closest to the issue (e.g. if the matter relates to a decision, procedure, or the like in one of the schools, the matter should be raised first with the building principal or a designated person in the school).

Discussion with the staff member may not be appropriate in some situations including, for example, where the matter involves suspected child abuse, substance abuse, or any other serious allegation that may require investigation or inquiry by school officials prior to approaching the staff member.

As appropriate, the staff member shall report the matter and whatever action may have been taken to the immediate supervisor.

B. Second Level

If the matter has not been satisfactorily addressed at the First Level or it would be inappropriate to discuss the matter with the staff member, the individual(s) may discuss the matter with the staff member's supervisor, if applicable. Discussions with

the supervisor shall occur promptly following any discussion with the staff member. If the matter involves allegations of harassment, discrimination, bullying, or other conduct implicating other policies and investigative procedures, the supervisor shall proceed to follow the applicable procedures which may include informing the District Compliance Officer for further review.

Matters not involving staff members that are not resolved at the First Level may be brought to the Third Level.

C. Third Level

If the matter has not been satisfactorily addressed at the Second level, and the matter does not involve the District Administrator, the individual(s) may submit a written request for a conference to the District Administrator. This request should include:

1. the specific nature of the request, suggestion or complaint and a brief statement of the facts giving rise to it;

2. the respect in which it is alleged that the individual(s) (or child of a complainant) has been affected adversely, if at all, or an explanation of other adverse results or impact of the matter;

3. the action which the individual(s) wishes taken and the reasons why it is felt that such action be taken.

The request must be submitted promptly after discussion with the staff member's supervisor. The District Administrator shall respond in writing to the individual(s) and shall advise the Board of any resolution of the matter.

D. Fourth Level

If the matter has not been satisfactorily addressed at the Third Level, or at the First Level in the case of a matter involving the District Administrator, the individual(s) may submit a written request to the Board to address the matter. Any such request must be submitted within ten (10) business days of the latest attempt to resolve the matter. The written submission shall include all correspondences pertaining to the matter between the individual and any School District officials or employees.

The Board, after reviewing all material relating to the matter, will provide a written response or may, at its discretion, grant an opportunity to address the Board **prior to making a final decision on the matter.**

The Board's decision will be final on the matter. The Board may choose to consolidate complaints or other communications for consideration if more than one individual raises similar concerns before it, but reserves the right to refuse to consider any subsequent complaint on the same matter unless previously unknown material facts are raised.

If the individual(s) contacts an individual Board member to discuss the matter, the Board member may refer the individual(s) to this guideline or the District Administrator for further assistance.

Guidelines for Matters Regarding Instructional Materials

The District Administrator shall inform students and parents each year regarding their right to inspect instructional materials used as part of the educational curriculum and the procedure for completing such an inspection. See Policy 2414, AG 9130A ~~and Form 9130 F3~~.

If the request, suggestion, or complaint relates to instructional materials such as textbooks, library books, reference works, and other instructional aids used in the District, the following procedure shall be followed:

A. The criticism is to be addressed to the Curriculum Director, in writing, and shall include:

1. author;

2. title;

3. the complainant's familiarity with the material objected to;

4. sections objected to by page and item;

5. reasons for objection.

B. Upon receipt of the information, the Curriculum Director (or Curriculum Director designee **if the Curriculum Director and District Administrator are one in the same)** may, after advising the District Administrator of the complaint, and upon the District Administrator's approval, appoint a review committee, which shall comply with the open meetings law.

C. If the request, suggestion, or complaint relates to the human growth and development curriculum or instructional materials, it shall be referred to the advisory committee responsible for developing the human growth and development curriculum and advising the Board on the design, review, and implementation of the curriculum. (See Policy 2414).

D. The committee, in evaluating the questioned material, shall be guided by the following criteria:

   1. the appropriateness of the material for the age and maturity level of the students with whom it is being used

   2. the accuracy of the material

   3. the objectivity of the material

   4. the use being made of the material

E. The material in question may not be temporarily withdrawn from use pending final resolution of the matter.

F. The committee's recommendation shall be reported to the District Administrator in writing within ten (10) business days following the first meeting of the committee. The District Administrator will advise the individual(s), in writing, of the committee's recommendation and the District Administrator's decision. The District Administrator shall also advise the Board of the committee's recommendation and his/her decision.

G. The individual(s) may submit an appeal the District Administrator's decision in writing to the Board President within ten (10) business days of receiving the decision The written appeal and all written material relating to it shall be referred to the Board for review.

H. The Board shall review the matter and advise the individual(s), in writing, of its decision as soon as practicable. The Board shall determine on a case-by-case basis whether its review will include appearances by the petitioner and administration, be based on written submissions, or only on the record produced by the Committee and/or District Administrator.

No challenged material may be permanently removed from the curriculum or from a collection of resource materials except by action of the Board, and no challenged material may be removed solely because it presents ideas that may be unpopular or offensive to some. Any Board action to remove material will be accompanied by the Board's statement of its reasons for the removal.

Revised 11/19/18
Revised 7/22/19
Revised 4/27/20

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Legal   118.01, Wis. Stats.

                     118.019, Wis. Stats.

                     20 U.S.C. 1232h

Last Modified by Melanie Oppor on May 13, 2021

Wolf Pack Express 2021-2022

	EDITION	TOPICS	Board Member	Submissions Due	Submit to Editor	Final	Publication Date
1	August 2021	*Annual Notices*		July 15	July 22	July 29	August 5
2	October 2021			September 16	September 23	September 30	October 7
3	December 2021			November 11	November 18	November 24	December 2
4	January 2022	Christmas Programs		December 16	December 22	January 6	January 13
5	February 2022			January 13	January 20	January 27	February 3
6	April 2022			March 17	March 24	March 31	April 7
7	May 2022	Graduation		May 5	May 12	May 19	May 26
1	August 2022	Annual Notices		July 14	July 21	July 28	August 4