AGENDA for the *REGULAR MEETING*
OF THE TRUSTEES OF JEFFERSON HIGH SCHOOL DISTRICT # 1
**** 6:30 p.m. February 17, 2015 **** Jefferson High School Library
(Board packet available upon request at the Central Office.)

This agenda is subject to changes until the Friday preceding the meeting. Please check the school website at www.jhs.k12.mt.us for the most current agenda and the packet of associated materials for the meeting.

A. Call to order-Chairperson
1. Pledge of Allegiance

B. Announcements and Public Comment. *Please see information printed on the back of the agenda and in the brochure at the entrance to the meeting about speaking to the board during this time.*

C. Student Report – Student Council

D. Staff Report

E. Committee Reports - *brief review*
a. Technology committee

F. Administration Reports – *The board briefly reviews the written reports provided in board packet. Some specific, anticipated items are listed below. Board action is not taken on items in a report unless the item is listed as an action item in the new or unfinished business sections of the agenda.*
1. Clerk/Business Manager
2. Principal/A.D.
3. Superintendent
    a. February Count Date (ANB Calculation)
    b. Building Reserve Levy information
    c. Cross-curriculum activities

G. Unfinished Business- Action is always possible for Unfinished Business items.

H. New Business – Action is always possible for New Business items.
1. Personnel – Action
    a. Substitute Applications –
2. Strategic Planning Session – possibly March 25
3. Legislative Update
4. Technology Update funding – possible use of metal mines and year-end funds
5. Helena district approaching potential JHS students (update)

I. Communication and Comments
1. Letters to the Board

J. Commendations and Recognition

K. Consent Agenda
1. Approval of Previous Minutes and High School Claims and Accounts – action

L. Follow-up/Adjournment – upcoming three months
1. Chair/Superintendent article for paper

REGULARLY SCHEDULED HIGH SCHOOL BOARD MEETING: 6:30 P.M. March 17, 2015
CHAIR-APPROVED AGENDA ITEMS ARE DUE IN THE DISTRICT OFFICE BY THE LAST FRIDAY OF THE MONTH PRIOR TO THE BOARD MEETING.

All board meetings are generally held in the Jefferson High School Library, on the third Tuesday of each month at 6:30 p.m. (Exceptions often occur in May and August to follow legal requirements.) For updates, call the district office at 225-3740.

Jefferson High School Board Members

Sabrina Steketee, chair (Boulder area position)
[illegible] LeTexier (Basin area position)
[illegible] Pierce (At-Large position)
Larry Rasch (At-Large position)
Pat Lewis, vice-chair (At-Large position)
Stan Senechal (Clancy area position)
Denise Brunett (MT City area position)

Draft Mission Statement

The Jefferson High School District #1's mission is to provide the best possible education for our youth for whatever path of life they choose; to be the school of choice for students, teachers, and staff; and to be the heart of the communities we serve.

Our vision for the future, second draft:

Students:

– Achieve high test scores and graduation rates that are competitive nationally;
– Graduate with a plan for life that they feel well equipped to pursue;
– Choose our school over other options because of our solid reputation;
– Feel happy, challenged, safe and supported throughout their time here;
– Appreciate and fully engage in our activities that augment our core curriculum; and
– Have access to technology that enhances their learning opportunities.

Teachers:

– Actively support students with their time, attention and obvious commitment;
– Have the tools and resources necessary to do optimal work;
– Are proud to work here and of their contribution to the school;
– Are committed to continuing education and the use of best practices;
– Look at our District as a long-term career commitment; and
– Feel confident about the Board's decisions and plans.

Our Administration and Board

-Commit to be knowledgeable about best practices
– Establish, devote themselves to, and evaluate their priority goals on a regular basis; and
– Work as a collaborative team to make decisions that always focus on what's best for students, teachers and our communities.

Our communities:

[illegible]nowledgeable of and highly respect our commitment to excellence; and
[illegible]port our work in many ways – their time, funds, levy votes, ideas, and enthusiasm about our students and their activities.

Announcements and Public Comment. The board welcomes and encourages public comment and wishes the public comment process to be fair and orderly. Written comments may be submitted to the board through the District Clerk's office. Individuals wishing to address the board at the board meeting must sign in on the sheet provided. The clerk will collect the sheet when the meeting begins. Comments on topics that are on the agenda may be made when the meeting reaches that item's point on the agenda. Comments on non-agenda items may be made during the "Public Comment" agenda item. The Board would like to remind everyone in attendance that to avoid violations of individual rights of privacy, a member of the public wishing to address the Board during this time will not be allowed to make comments that would infringe upon the privacy rights of any student, staff member, or member of the general public during his/her designated time to speak. Abusive or obscene comments will not be allowed. Time allowed for comments may be limited. Individuals will only be called upon twice for the same topic after all persons have been called upon and as time permits. The Board may not respond to and will not take action on non-agenda topics at this meeting but may schedule the topic on the agenda of a subsequent meeting.

From the desk of:

February 2015

The county is still in the process of converting their software to the same company we use – Black Mountain. This week I should receive my first monthly report on the new system. I'm looking forward to it!

I'm slowly catching up in the office. There are a few piles to reduce and then I'll be in good shape. The staff members have been informed of the deadline for next year's requisition submissions – March 12. Mr. Angelo (business) completed his submission before the day of the initial email was through. Ms. Wallace (English/Library), upon hearing this, had hers in the next day, followed shortly by Ms. Getten (Counseling/Library). From Workers' Comp. I have received 5 pairs of IceTrekkers for the teachers who go to and from AYA. So far none of them have requested to use them.

March 26 the District 4 MASBO meeting will be held in Bozeman. I have to organize part of it so am trying to find new and different presenters for one or two of the sessions. In doing so, I ran across a gal at MSU who is a former MTSBA president and now teaches leadership classes. I'm hoping she and some of her students can give us some energy.

As always, I can't seem to find much to let you know about the District Office. My daily work, while mostly enjoyable, doesn't lend itself well to reporting.

2-17-15 Principal's Report

On February 9 and 10 Mrs. Williams and I attended the Tech Summit in Bozeman. There were many good sessions. I especially liked the presentation by Mike Ruyle and Tami O'Neill about the use of Performance Based education in their Bridger Academy. They are beginning to utilize this in some of the regular Bozeman High classes as well. Mrs. Williams and I are looking to try this with one of her freshman classes in 2015-2016. There were many other interesting topics that I would be glad to talk to you about, including 3D printers.

We (Mrs. Getten, Mr. Norbeck, Mr. Sturdevant, seven students and myself) visited Montana City School, Clancy School and Boulder Elementary School to talk with eighth graders about Jefferson High School and the opportunities that are available. Our students did a magnificent job of discussing their positive experiences here at JHS.

Mr. Norbeck and I visited with two folks about communicating about Jefferson High. There is still much to consider and discuss before we go any further.

The Graduation Matters Rally held on January 28 was an enormous success and a very positive experience for those in attendance. There were about 400 students in attendance at the rally!!!!!

The Looney robotics presentation was a hit with all students that attended, including the Clancy and Boulder middle school students.

I would be happy to discuss any of these items further.

AD's Report

We qualified two wrestlers for state and everyone wrestled well and with great effort at Divisionals in Choteau. We simply need to strive to get more wrestlers on future teams.

At state speech and debate we had a second place winner in Lincoln-Douglas Debate and a third place winner in Serious Oral Interpretation.

The Basketball teams are having very good seasons. Hopefully both teams will be heading to Divisionals in Billings.

We got the bid for Divisional Golf on May 5 at Bill Roberts Municipal Golf Course.

#TECHSUMMIT2015 Presentations

DAY 1 – Monday, February 9th, 2015

8:00 - 9:00 a.m.
Check-In / Continental Breakfast (Foyer)

9:00 - 9:30 a.m.
Conference Kick-Off (Madison)

9:30 – 10:15 a.m.
Flywheel: A Cutting Edge System to Personalize Education in the Bridger Alternative Program (Madison)
Dr. Mike Ruyle and Tami O'Neill (Bozeman Public Schools)

The Bridger Alternative Program has been supporting a student-centered, performance-based approach to education since 2010. This educational model personalizes education for every student while increasing engagement as well as rigor and relevance in maintaining high expectations. Flywheel is a student data management program that organizes the numerous student learning objectives and goals for the students in the Bridger Alternative Program. Therefore, Flywheel is the technology that helps facilitate this new model of education. This will be your chance to see how this cutting-edge technology is helping usher in a new paradigm in education.

10:15 - 10:30 a.m.
Break & Snacks Sponsored By Edgenuity

10:30 – 12:00 p.m.
Keynote: Leveraging Technology to Customize Learning (Madison)
Dr. Julie Mathiesen (TIE)

Customized Learning is a technologically empowered, learner focused alternative to the Industrial Age System of school. What if every day, every learner was met with customized learning experiences at precise developmental and achievement levels, was learning in the most effective learning style with content of interest, was challenged, was successful and left school eager to come back tomorrow? This is not only possible with today's technologies it is inevitable. Industry has figured out how to mass customize products and services, and education is poised for this leap.

12:00 - 1:00 p.m.
Lunch Sponsored By First Call Computer Solutions (Atrium)

1:10 - 2:00 p.m. Breakout Session 1

Curating Digital Content for Customized Learning (Madison)
Dr. Julie Mathiesen (TIE)

Providing alternative pathways through the curriculum is a bold step in customizing learning for students. This session will provide you with information to enhance and diversify your current curriculum. From Activate Instruction to Gooru and others, an abundance of digital content exists for our creative use with students. Bring your own device and join us as we discover ways to offer flexible alternatives to standardized, textbook-driven curricula.

or proprietary command line interfaces. Covering: Meraki MX, MR, System Manager.

9:50 - 10:00 a.m.
Break & Snacks Sponsored By Gaggle (Atrium)

10:00 - 10:50 a.m. Breakout Session 5

Are you Munki-ing Around? (Madison)
Zack McCauley (Bozeman Public Schools)

Are you still managing labs of computers by hand or with Apple Remote desktop? Are you having staff run updates by hand or mass installing a bunch of packages? Are you tired of program developers creating flawed update packages, or just a bad update service? The answer, Munki around a little! We will be going over a wonderful Open Source, Free, and Community driven Update service called Munki. It helps manage software, updates, printers, etc. and is always being developed by Mac Admins for Mac Admins. It will help alleviate the stress of having a critical update occur that breaks current systems (e.g., Oracle's Java, Adobe's Flash & Reader, etc).

Network Security for the Next Generation Technically Savvy Student Body (Clark)
Robin Maahs (Fortinet)

The P-20 arena is faced with many IT security challenges including the complexities of balancing compliance in a safe digital learning environment. Join us for the day in the life of a student who has elected not to take digital learning seriously and has attempted to evade the district's security to satisfy his entertainment needs. Learn about the measures that can be taken to redirect this student's attention back to the classroom.

Microsoft Azure: Bringing the Cloud to Education - 110 minute session (Aspen)
Flora Muglia (Microsoft)

Microsoft Azure is an open and flexible cloud platform that enables you to quickly build, deploy and manage applications across a global network of Microsoft-managed datacenters. You can also create an on-demand infrastructure that scales and adapts to your changing school or business needs, allowing you to integrate your existing school IT environment with the Microsoft Azure public cloud. Always up, always on, learn about how Microsoft Azure can increase efficiency, scalability and cost savings at your school.

10:50 - 11:00 a.m.
Break & Snacks Sponsored By Gaggle (Atrium)

11:00 - 11:50 a.m. Breakout Session 6

SMART Amp (Madison)
Liz Cunningham (TEST Inc.) & Kris Astle (SMART Technologies)

For more than 25 years SMART has been defined by innovation and by the desire to improve the way the world works and learns. While our product offering started with interactive whiteboards, it has significantly evolved to include interactive flat panels, interactive projectors, interactive tables and numerous other classroom solutions. SMART researchers have spent the last several years analyzing classroom practices in light of the recent influx of student devices and proliferation of wireless infrastructure occurring across the globe. These observations have lead SMART to an opportunity to elevate the relevance of classroom devices and

displays. In this session we will take you through an exciting new platform that has resulted from this research – SMART ampTM collaborative learning software. SMART ampTM provides students with a platform to create knowledge and evidence of their learning in a way that enhances collaboration, communication and sharing while facilitating assessment anytime, anywhere and from any device.

Communicating with Parents and Students (Lewis)
Samantha Pereira (Infinite Campus)

Learn how your students and parents can receive real-time access to their information as it is entered by teachers, counselors and staff. Students become more engaged with the anywhere, anytime learning and increased communication with teachers. Parents stay informed on assignments, grades, schedules and more to support their children's learning. In addition, the Campus Mobile Portal App is available to give your parents and students access to information from their iOS or Android device.

Presenting: Web 2.0 Tools (Clark)
Shaundel Krumheuer (Billings Public Schools)

Maximize student engagement and utilize student creativity and collaboration with the help of free and easy digital presentation tools. See how incorporating technology into your lessons can reinvigorate your classroom! We will be exploring tools students, teachers, and administrators can master!

Google Tips and Tricks from Three Tech-xperts (Hyalite)
Lindy Hockenbary (InTECHgrated PD), Nikki Vradenburg (Lamotte School), and Jessi Anderson (Powell County High School)

Three tech-savvy teachers will share their favorite tips and tricks for using Google. Tips for your classroom as well as your personal life will be shared. Come learn Google Doc features, Google Chrome extensions that will change your life, and more!

12:00 - 1:30 p.m.

Lunch Sponsored By Fatbeam / Visit with Exhibitors (Atrium)

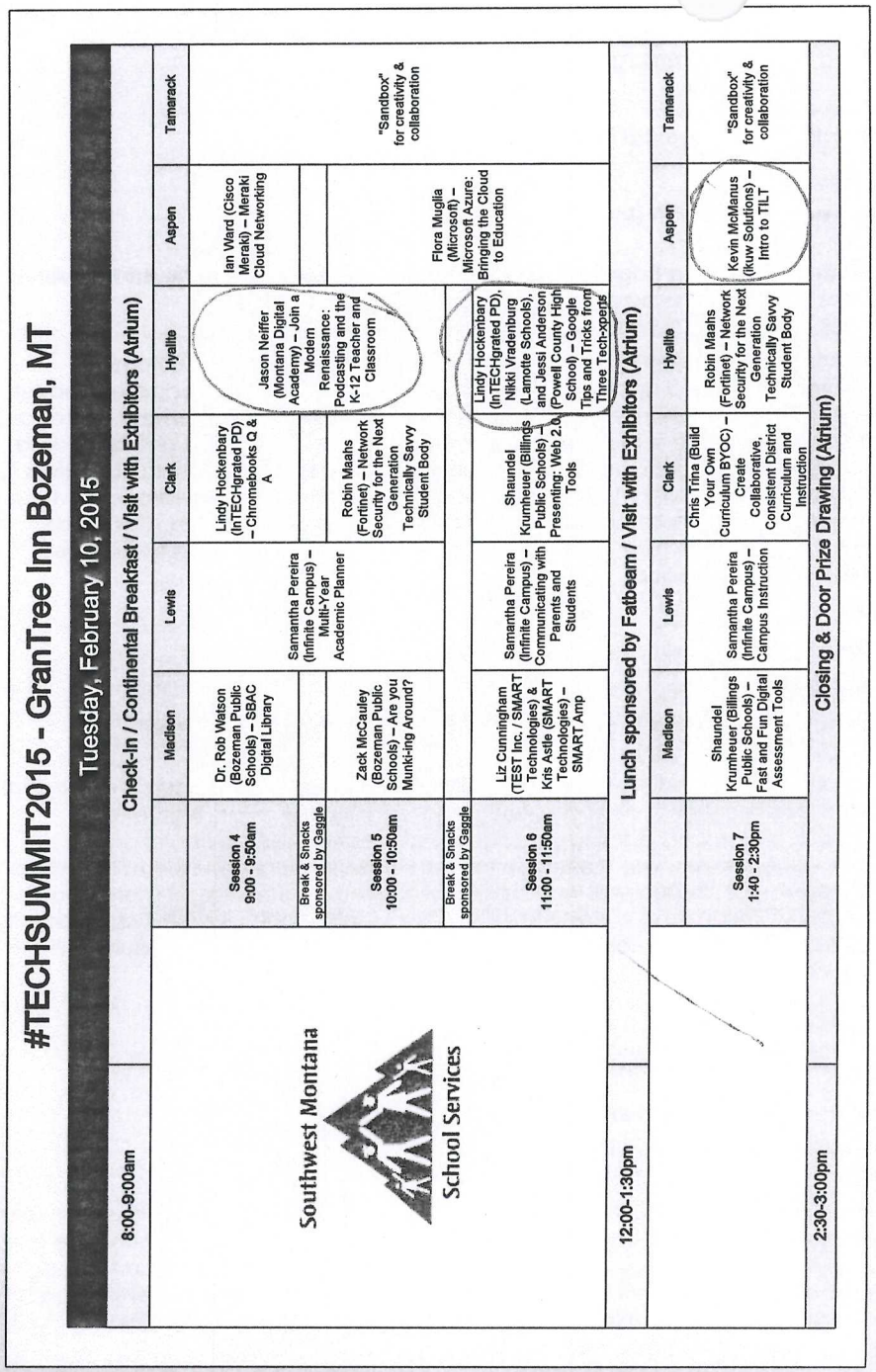
1:40 - 2:30 p.m. Breakout Session 7

Fast and Fun Digital Assessment Tools (Madison)
Shaundel Krumheuer (Billings Public Schools)

Digital assessment tools efficiently allow teachers to give timely feedback while engaging their students. This session will highlight a variety of assessment tools that can be used for everything from checks for understanding to exit tickets to summative assessment. Learn how to create innovative and engaging assessments.

Campus Instruction (Lewis)
Samantha Pereira (Infinite Campus)

Campus Instruction tools have decreased administrative tasks and support student learning. See the convenience of having all Instruction tools in one location: Grade Book, Seating Charts, Planner, Attendance, Online Assignments & Assessments, Roster, Reports and Messenger Center.



#TECHSUMMIT2015 - GranTree Inn Bozeman, MT

Monday February 9, 2015

8:00-9:00am	Check-In / Continental Breakfast (Foyer)
9:00-9:30am	Conference Kick-Off (Madison)
9:30-10:15am	Flywheel: A Cutting Edge System to Personalize Education in the Bridger Alternative Program with Dr. Mike Ryvle & Tami O'Neill (Madison)
10:15-10:30am	Break & Snacks sponsored by Edgenuity
10:30am-12:00pm	Keynote: Leveraging Technology to Customize Learning with Dr. Julie Mathiesen (Madison)
12:00-1:00pm	Lunch sponsored by First Call Computer Solutions (Atrium)

	Madison	Lewis	Clark	Hyalite	Aspen	Tamarack
Session 1 1:10 - 2:00pm	Dr. Julie Mathiesen (Technology & Innovation in Education TIE) – Curating Digital Content for Customized Learning		Katie Kotynski (Great Falls Public Schools) – Awesome Office 365	Miles McGeehan (Bozeman Public Schools) – Digital Dozen Workshop	Brandon Vanderee (Pine Cove Consulting) – Data Backup and Recovery for Your District	
Break & Snacks sponsored by Fortinet		Dr. Robert Dosell (Three Forks Public Schools) – Digital Leadership				
Session 2 2:10- 3:00pm	Dr. Julie Mathiesen (Technology & Innovation in Education TIE) – Symbaloo for Personal Efficiency and Classroom Use		Molly Vang (Mountain Goat Instructional Design) – Digital Tools For Science		Jason Neffer & Mike Agostinelli (Montana Digital Academy) – Stepping Stones: Setting up Future Online Students for Success	"Sandbox" for creativity & collaboration
Break & Snacks sponsored by Fortinet						
Session 3 3:10- 4:00pm	Michael Holland (Michael Holland Productions) – How 3D Printing is Changing our World and Why it Matters	Dr. Travis Anderson (Southwest Montana School Services) – NearPod for Classroom Application	Dash SanMiguel (Edgenuity) – Improving Student Outcomes through Personalized Learning	Miles McGeehan (Bozeman Public Schools) – Professional Development for 1-1 Initiatives	Brandon Vanderee (Pine Cove Consulting) – Bridging the Gap	
4:30-6:30pm	Social & Light Hors D'oeuvres sponsored by Pine Cove Consulting & T.E.S.T. / Visit with Exhibitors (Atrium)					

Southwest Montana School Services

Create Collaborative, Consistent District Curriculum and Instr Clark)
Chris Trina (Build Your Own Curriculum BYOC)

See how districts are effectively pulling together curriculum, instruction, and assessment at the district level in a way that provides value to the classroom teacher. Using the technology tool BuildYourOwnCurriculum, districts across the country are effectively designing, maintaining, analyzing, sharing, and disseminating consistent, standards-aligned curriculum and assessment. See how leveraging technology can increase teacher engagement in district curriculum, leading to success for all students.

Network Security for the Next Generation Technically Savvy Student Body (Hyalite)
Robin Maahs (Fortinet)

The P-20 arena is faced with many IT security challenges including the complexities of balancing compliance in a safe digital learning environment. Join us for the day in the life of a student who has elected not to take digital learning seriously and has attempted to evade the district's security to satisfy his entertainment needs. Learn about the measures that can be taken to redirect this student's attention back to the classroom.

Intro to TILT (Aspen)
Kevin McManus (ikuw Solutions)

TILT (Technology Inspired Learning & Training) is a training platform inspired by the flipped classroom model and developed by ikuw Solutions. TILT combines the best of online, video-based instruction with the power and social learning of instructor-led training. Join us in this informative session to see how ikuw is changing how people learn in the 21st century.

2:30 - 3:00 p.m.
Closing & Door Prize Drawing (Atrium)

Thank you for coming! We hope you enjoyed our 2nd Annual Tech Summit and will join us again next year!

#TECSUMMIT2015 Presentations

DAY 2 – Tuesday, February 10th, 2015

8:00 - 9:00 a.m.

Check-In / Continental Breakfast / Visit with Exhibitors (Atrium)

9:00 - 9:50 a.m. Breakout Session 4

SBAC Digital Library (Madison)
Dr. Rob Watson (Bozeman Public Schools)

An important piece of the MT Common Core State Standards implementation is the implementation of the SBAC assessment system. All schools experienced the summative assessment component during the pilot last spring, however there are other critical components to the assessment system: the formative assessment digital library and the interim assessments. The SBAC Digital Library has been created by MT teachers for MT teachers and it is free for all schools. In this presentation we will explore the creation of the SBAC Digital Library and take a virtual tour of the various components.

Multi-Year Academic Planner - 110 minute session (Lewis)
Samantha Pereira (Infinite Campus)

Learn how the Multi-year Academic Planner (MYAP) allows schools to organize a student's academic plan through their entire high school career. See how students can choose an academic pathway up to four years in advance of graduation and then track their progress in real time. Even better, if that same student decides to change their graduation path, MYAP will give them step-by-step instructions on what classes they need to take.

Chromebooks Q & A (Clark)
Lindy Hockenbary (InTECHgrated PD)

Do you have questions about the Chromebook? What it is? How it compares to other devices? How it works in the classroom? Come to this session to get your Chromebook questions answered. There will be a Chromebook on hand to test drive as well.

Join a Modern Renaissance: Podcasting and the K-12 Teacher and Classroom - 110 minute session (Hyalite)
Jason Neiffer (Montana Digital Academy)

The hit podcast Serial, from the makers of the long-time public radio show This American Life, has uncovered an underground revolution in the creation, delivery and consumption of digital audio and video media: the podcast. Join 40 million other tech-savvy media consumers taking advantage of the extraordinary content available, both from established content producers like PBS, The Discovery Channel and National Public Radio to upstart producers like TWiT and 5 by 5, on their desktops, tablets and smartphones. Classrooms can join the revolution by producing their own content, as discussed in the sectional.

Meraki Cloud Networking (Aspen)
Ian Ward (Cisco Meraki)

Cisco Meraki products are built from the ground up for cloud management, and come out of the box with centralized management, layer 7 device and application visibility, real time web-based diagnostics, monitoring, reporting, and much, much more. Cisco Meraki deploys quickly and easily, without training

Digital Leadership - 110 minute session (Lewis)
Dr. Robert DoBell (Three Forks School District)

This sectional will focus on the elements that administrators need to become 21st century educational leaders. Districts need to leverage social media to inform, and push information out in a district or school brand. Social media is a wonderful outlet to leverage this type of leadership. A focus on the need for professional development for all staff to successfully become connected educators begins with the district/school leadership team. A step by step process will be shared to get administrators and then all teachers within an organization connected to a professional learning network leveraging twitter and Facebook as some of the tools. If time permits several other web 2.0 tools/ projects will be shared as well. Google Apps for Education, IPAD Cart Deployment, and our Fiber Optic Internet investigation/journey.

Awesome Office 365 (Clark)
Katie Kotynski (Great Falls Public Schools)

If you think Google Docs are cool, then come see how Office 365 has the same collaborative features plus the option of working in full version of the Office products you know and love. Find out how schools can get Office 365 for free for their students and staff to download Office Professional Plus 2013 or 2011 Mac on 10 devices, get one terabyte of storage space for every teacher and student in their OneDrive as well as use the OneNote Creator App to create a digital textbook for all of their students along with the ability for the teacher to peak into the students notebooks anytime, online. OneNote is free for any computer, Mac or PC, as well as Android and iDevices. It creates a Content Library, a Collaborative Space as well as individual space for each student.

Digital Dozen Workshop - 110 minute session (Hyalite)
Miles McGeehan (Bozeman Public Schools)

Participants will explore a variety of free digital tools that provide the opportunity to redefine classroom instruction and enhance student creativity, communication, collaboration, and critical thinking. This is a hands-on workshop with frequent colleague/small group interaction.

Data Backup and Recovery for Your District (Aspen)
Brandon Vancleeve (Pine Cove Consulting)

Proper backup and recovery of our districts critical information and applications is becoming more and more of a priority. Without those applications and data, our schools cannot function. This presentation will provide a general overview of Pine Cove's backup solution 'Restore, Powered by Veeam,' as well as, provide a deep technical dive into the product.

2:00 - 2:10 p.m.

Break & Snacks Sponsored By Fortinet (Atrium)

2:10 - 3:00 p.m. Breakout Session 2

Symbaloo for Personal Efficiency and Classroom Use (Madison)
Dr. Julie Mathiesen (TIE)

Bring your technology device and join me to learn how Symbaloo can increase your personal efficiency. We will also explore ways to leverage this tool for use in your classroom. Start by creating a free education account at www.symbalooedu.com.

Digital Tools F ence (Clark)
Molly Ward (M in Goat Instructional Design)

As technology rapidly advances, we struggle to determine how and when technology may be best used in education. Molly Ward, M.S. Science Education works to move away from using "technology for technology's sake", toward thoughtful integration of technology to enhance science education instruction and assessment. Molly will discuss some of her experiences in effective use of technology in indoor and outdoor science education settings and provide some resources for educators to try. Molly Ward, a Bozeman native, is Top Goat and owner at Mountain Goat Instructional Design, LLC (www.mtngoatinstructionaldesign.com) since early 2014 and has experience working in several local educational non-profits (the Project WET Foundation, the Museum of the Rockies and Montana Outdoor Science School) as well as Yellowstone National Park.

Stepping Stones: Setting up Future Online Students for Success (Aspen)
Jason Neiffer & Mike Agostinelli (Montana Digital Academy)

Through feedback and program evaluation, MTDA is embarking on several pilot projects to help students prepare for the rigor and independence of an online learning environment. The Stepping Stones curriculum, developed by MTDA staff, gives students an opportunity to build the soft and hard skills required to be great online learners. This sectional will introduce our formal and informal data leading our development and design, the curriculum itself and MTDA's plans to bring online learning to the next group of students in Montana.

3:00 - 3:10 p.m.

Break & Snacks Sponsored By Fortinet (Atrium)

3:10 - 4:00 p.m. Breakout Session 3

How 3D Printing is Changing our World and Why it Matters (Madison)
Michael Holland (Michael Holland Productions)

Michael Holland Productions is a creative content studio specializing in natural history exhibit features. Michael's work can be found in the exhibit halls of several museums in the U.S. (including Bozeman's own Museum of the Rockies) and overseas. Because his current exhibition could only be realized with 3D printing, Michael has taken a keen interest in this technology. His presentation will explain how 3D printing works and discuss the various processes and materials available, explore some interesting applications of 3Dprinting in a variety of industries, and offer some thoughts on the future of this technology and how it will impact our lives. As an example of the educational potential of 3D printing, Michael will be sharing several of the 3D printed objects that are at the core of his currently in-production museum exhibition, MacroMicro. Through these objects, participants will see how 3D printing can enable them to experience nature like never before.

NearPod for Classroom Application (Lewis)
Dr. Travis Anderson (SWMSS)

This breakout session will focus on Nearpod and how this program can be utilized in the classroom. Topics discussed during this breakout session focus on how Nearpod can be used to: track formative assessment, increase student engagement, utilize previously created electronic presentations, and create opportunities for flipped-learning. Don't miss this opportunity to learn how Nearpod can be utilized in your classroom.

Improving Student Outcomes through Personalized Learning (C
Dash SanMiguel (Edgenuity)

Learn how districts across the country have utilized Edgenuity's digital curriculum in their blended and online programs to reduce dropout rates, recover credits, enhance course offerings, and increase test scores, and challenge advanced students.

Successful Professional Development for 1-1 Initiatives (Hyalite)
Miles McGeehan (Bozeman Public Schools)

Research demonstrates that one-to-one initiatives may not live up to expectations unless proper professional development is in place. Furthermore, professional development too often focuses on "how the device works," rather than focusing on the important instructional shifts that accompany the innovations of a ubiquitous classroom computing environment. In the 2013-14 school year, the Bozeman School District began a tiered rollout of classroom chromebooks within elementary and middle school classrooms. Participating teachers attended ongoing professional development/collaboration sessions throughout the year. Professors from Montana State University's Education Department collaboratively conducted a thorough program evaluation and found numerous significant positive impacts regarding student performance and perceptions regarding learning. This session will provide an overview of research findings and focus on direct examples of the ongoing professional development/collaboration opportunities that supported teacher efficacy during the shift to one-to-one computing.

Bridging the Gap (Aspen)
Brandon Vancleeve (Pine Cove Consulting)

What is our technology vision? How are we funding that vision? How can we support that vision? These are all questions that our districts should be asking as they pursue the delivery of technology education to their students. We will dive into the Pine Cove's planning wheel for technology integration and how you can apply this wheel to your district. This presentation is designed to be an open forum to learn from each other on how we can continue to provide better technology access to our staff and students.

4:30 - 6:30 p.m.

Social & Light Hors d'Oeuvres Sponsored by Pine Cove Consulting & T.E.S.T / Visit with Exhibitors (Atrium)

Join us for networking and a chance to win great prizes! You'll find one free drink ticket in your nametag sleeve!

Jefferson High School District #1
Board of Trustees

Superintendent's Report

Date: February 17, 2015

Agenda Item: F-3

3a-February Count Day (2015-16 ANB calculation)

I have completed and submitted the MAEFAIRS report for the Montana Office of Public Instruction. The data includes the fall, winter, and spring student counts. There is a two student overall decline from the fall and spring counts. Budgetary information is also included in the report that will be used for preparation of the 2015-16 budget.

Recommendation
Use the provided data in conjunction with district costs to set the 2015-16 budget.

3b-Building Reserve Levy information

I have provided the Montana Code for a Building Reserve Levy as well as a question and answer regarding the usage and need for running such a levy. It is important to identify the areas within the district where such funds could be used. I prioritized list of needs will need to be generated prior to seeking a levy.

Recommendation
Actively research and pursue the opportunity to use such a levy to address areas of need within the school district.

3c-Cross-curriculum opportunities

I have been exploring the possibility of providing more opportunities for cross-curriculum opportunities with the JHS curriculum. Currently, there is discussion of integrating some of the chemistry curriculum with welding as well as technical math with the shop classes. A formal proposal will be drafted to explain how the classes may operate.

I have included an article outlining the importance of providing such classes and the benefits to students.
Recommendation
Allow the opportunity to explore these program opportunities and implement if possible.

MAEFAIRS
Montana Office of Public Instruction

Spring Student Count For ANB Summary By District
February 2, 2015 Enrollment

County: 22 Jefferson **School Year:** 2014-2015
District: 0457 Jefferson H S **Budget Unit:** H1

SCHOOLS IN THIS DISTRICT

0611 Jefferson High School

TOTAL STUDENT COUNT FOR ANB BY GRADE - DISTRICT

Grade	Fall	Winter	Spring
9th Grade H1	53	55	53
10th Grade H1	50	49	52
11th Grade H1	60	59	58
12th Grade H1	41	40	39
H1 Total	**204**	**203**	**202**
District Total:	**204**	**203**	**202**

Students who turned 19 on or before September 10, 2014 are included in total student count for ANB by grade.

OTHER STUDENT COUNTS FOR ANB - DISTRICT

Student Count Type	Fall	Winter	Spring
Early Graduates H1	N/A	0	1

FY2015-16 BASIC & PER-STUDENT ENTITLEMENTS

Budget Unit	Based on Current Year ANB			Based on 3-Year Avg ANB		
	ANB	Basic Entitlement	Per ANB Entitlement	ANB	Basic Entitlement	Per ANB Entitlement
H1	212	300,000.00	1,407,309.00	222	300,000.00	1,473,136.50 *

FY2015-16 INDIAN EDUCATION FOR ALL($20.40/ANB)

Level	Based On Current Year ANB		Based On 3-Year Avg ANB	
	ANB	Entitlement	ANB	Entitlement
HS	212	4,324.80	222	4,528.80*

DETERMINING ANB USED TO CALCULATE FY2015-16 BUDGET LIMITS

Below is the calculation used to determine whether the FY2015-16 budget limits are based on the current year ANB or the 3-year average ANB. The ANB that generates the highest ANB-based funding will be used for most FY2015-16 budgeting purposes.

	ANB-Based Funding - Current Year ANB				ANB-Based Funding - 3-Year Avg ANB			
	Basic Entitlement	Per ANB Entitlement	Ind Ed For All	Total	Basic Entitlement	Per ANB Entitlement	Ind Ed For All	Total
HS	300,000.00	1,407,309.00	4,324.80	1,711,633.80	300,000.00	1,473,136.50	4,528.80	1,777,665.30 *

Highest ANB-Based Funding 1,777,665.30

MAEFAIRS
Montana Office
of Public Instruction

Spring Student Count For ANB Summary By District
February 2, 2015 Enrollment

County:	**22 Jefferson**	**School Year:**	**2014-2015**
District:	**0457 Jefferson H S**	**Budget Unit:**	**H1**

ANB for FY2016 budget H1 222

FY2015-16 PAYMENTS

DSA	792,592.02
Indian Education For All	4,528.80

Student Achievement Gap

American Indian Students Counted For The FY2016 Student Achievement Gap Payment 12

* Used to calculate FY2015-2016 budget limits

20-9-502. Purpose and authorization of building reserve fund by election -- levy for school transition costs. (1) The trustees of any district, with the approval of the qualified electors of the district, may establish a building reserve for the purpose of raising money for the future construction, equipping, or enlarging of school buildings, for the purpose of purchasing land needed for school purposes in the district, or for the purpose of funding school transition costs as provided in subsections (5) and (6). In order to submit to the qualified electors of the district a building reserve proposition for the establishment of or addition to a building reserve, the trustees shall pass a resolution that specifies:
(a) the purpose or purposes for which the new or addition to the building reserve will be used;
(b) the duration of time over which the new or addition to the building reserve will be raised in annual, equal installments;
(c) the total amount of money that will be raised during the duration of time specified in subsection (1)(b); and
(d) any other requirements under 15-10-425 and 20-20-201 for the calling of an election.
(2) Except as provided in subsections (5)(b) and (6), a building reserve tax authorization may not be for more than 20 years.
(3) The election must be conducted in accordance with the school election laws of this title, and the electors qualified to vote in the election must be qualified under the provisions of 20-20-301. The ballot for a building reserve proposition must be substantially in compliance with 15-10-425.
(4) The building reserve proposition is approved if a majority of those electors voting at the election approve the establishment of or addition to the building reserve. The annual budgeting and taxation authority of the trustees for a building reserve is computed by dividing the total authorized amount by the specified number of years. The authority of the trustees to budget and impose the taxation for the annual amount to be raised for the building reserve lapses when, at a later time, a bond issue is approved by the qualified electors of the district for the same purpose or purposes for which the building reserve fund of the district was established. Whenever a subsequent bond issue is made for the same purpose or purposes of a building reserve, the money in the building reserve must be used for the purpose or purposes before any money realized by the bond issue is used.
(5) (a) The trustees may submit a proposition to the qualified electors of the district for a levy to provide funding for transition costs incurred when the trustees:
(i) open a new school under the provisions of Title 20, chapter 6;
(ii) close a school;
(iii) replace a school building; or
(iv) consolidate with or annex another district under the provisions of Title 20, chapter 6.
(b) Except as provided in subsections (5)(c) and (6), the total amount the trustees may submit to the electorate for transition costs may not exceed the number of years specified in the proposition times the greater of 5% of the district's maximum general fund budget for the current year or $250 per ANB for the current year. Except as provided in subsection (6), the duration of the levy for transition costs may not exceed 6 years.
(c) If the levy for transition costs is for consolidation or annexation:
(i) the limitation on the amount levied is calculated using the ANB and the maximum general fund budget for the districts that are being combined; and
(ii) the proposition must be submitted to the qualified electors in the combined district.
(d) The levy for transition costs may not be considered as outstanding indebtedness for the purpose of calculating the limitation in 20-9-406.
(6) The trustees of a K-12 district shall impose a levy for transition costs to fund the payment required by 20-6-326(6)(b) when a proposition to create the K-12 district and to assess the transition levy has been approved pursuant to 20-6-326(2). The levy is limited to the amount required by 20-6-326(6)(b) for a period not to exceed 3 years.

Building Reserve Fund

Q: What is the last date to hold an election on the Building Reserve Fund?

A: Section 20-9-502, MCA, covers the fund but does not state an election deadline. The election must be held before the budget is set (no later than August 25th).

Q: Must the school district hold any election for a building reserve fund on the first Tuesday after the first Monday of May, the election date required for the General Fund election?

A: No. An election for a building reserve is a special election that is not required to be held the same date as the General Fund election.

Q: If the district intends to borrow money from the MT Board of Investments (BOI) and pledge the building reserve levy to repay the loan under MCA 20-9-503, can the cost of interest on the loan be included in the amount of the total building reserve?

A: Neither the laws nor administrative rules (ARMS) specifically address this question. However, it seems reasonable that the law that allows the building reserve levy to be pledged to repay a building loan would allow repayment of associated interest on the loan.

Q: Who can the district contact for more information on pledging the building reserve fund to repay a loan?

A: Contact David Ewer at the MT Board of Investments at (406) 444-0257. It's a goodidea to call for information before calling an election.

Q: Can a building reserve election be done using a mail ballot?

A: Yes. MCA 13-19-104 allows a mail ballot for this type of election.

Q: How do you conduct a mail ballot election?

A: MCA 13-19-106 explains the process for mail ballots.

Q: What flexibility does a school district have in wording the ballot for a building reserve election?

A: MCA 20-9-502 says the ballot must be "substantially" in the form stated in that section. Although the law allows variance, the acceptable amount of variation from the example format would be a matter of legal interpretation. OPI recommends trustees consult their county attorney for advice on wording of ballots.

OPI Contact: Dennis Clague at (406) 444-1960 or email dclague@mt.gov

Deeper Learning: Why Cross-Curricular Teaching is Essential

ORIGINALLY PUBLISHED: JANUARY 15, 2013 | UPDATED: AUGUST 14, 2014

Share1.8K

It is time that teachers and administrators realize that public education has reached a dam in the river. We have gone about as far as we can go with isolated instruction and learning. While it may have served the purpose for the older generations, it does not meet the deeper learning needs of students today and tomorrow. Fortunately, deeper learning can be accelerated by consolidating teacher efforts and combining relevant contents, in effect, opening new spillways of knowledge.

Deep learning is like taking a long drought from a well of knowledge as opposed to only sipping from many different wells. Deep learning implies that students will follow a particular stream of inquiry to the headwaters, rather than simply sampling all the possible streams. Teachers know all too well the outside forces that pressure them to limit how deeply their students can drink from any single well.

Requirements

Undaunted, educators are committed to providing students full access to the well of deep-learning knowledge that will unlock their potential. But in order to get beyond the current eye-dropper doses of knowledge sampling in school curriculum, it requires that teachers and administrators understand and accept a few things:

1. Deep learning engages the whole student (and teacher) -- heart, mind, body, and soul.

2. It requires enthusiastic partners -- students, parents, and community.

3. It requires intensive preparation. Heather Wolpert-Gawron shared her experience of incorporating TED Talks into her curriculum and in doing so demonstrated what teachers need to do to prepare successful learning experiences that promote deep learning.

4. Assessment must mirror learning. Shawn Cornally provided wonderful suggestions on how teachers should change their gradebooks (and their instructional perspective) to logbooks, reflecting mastery of learning objectives rather than mere assignment completion.

5. Collaboration is necessary. Rebecca Alber explained that students must be taught how to collaboratively gain knowledge and skills in order to be expert learners and demonstrate their learning by applying and creating.

In order for all this to happen in a sustainable way in our schools, deeper learning requires that groups of teachers pool their talents, resources, time, and efforts to maximize coherence, relevance, and connections among the content areas.

Cross-Curricular Teams

Without belaboring the point that teacher isolation has to end, unless teachers stop departmentalizing their teaching and start teaching knowledge in context of other knowledge, student learning will continue to be stuck at the dam. It is time for teachers to collaborate.

Teachers must take the first stroke and swim across the hall and start a collaboration with another teacher from a different department. For elementary teachers, work with other grade level teachers and dive into the math and science books, for example, and find common topics to prepare to teach math and science jointly rather than separately.

There are three general phases of teacher collaboration and interdisciplinary teaching:

- Aligned
- Cooperative
- Conceptual

Aligned Collaboration

To start collaboration, begin with alignment. The first thing to do is jump in and start wading in the same direction as your fellow teachers. Aligned collaboration is when a social studies department and the English department get together and agree that DBQ's (Document Based Questions) can count for English credit as well as social studies credit and then plan the year so that topics of study in history are taught concurrently with literary eras. In this way, students can construct a foundation, and are able to better generalize what is learned in history because they see the effect on literature.

Cooperative Collaboration

You and your fellow teachers need to synchronize your strokes to match your pace. For example, a math and science teacher get together and decide on the best way and the best time to teach *motion* and cooperatively agree to help each other teach it, either separately or jointly. When the math teacher needs models to show students what the math is good for, he obtains them from the science teacher, and when the science teacher needs the students to perform mathematical calculations, she utilizes the same process the math teacher used just a week before. In this way, students understand math and science with their heads above water, rather than drowning in confusion.

Conceptual Collaboration

Finally for conceptual collaboration, a teacher must dive into the deep water of conceptual understanding in the other content area. In other words, the teacher must know both subjects at high levels and be able to teach both conceptually. This is difficult for a single teacher to be expert in two subjects, so the solution is to combine forces and team teach.

Conceptual collaboration happens when an art teacher works closely with the science teacher and they both help students understand the effect of pigments and light by teaching together the science of *wavelengths, the electromagnetic spectrum*, and *the dual nature of light*. Or when a social studies and science teacher do a triple gainer into the deep end by team teaching a project-based learning activity of the renaissance period illustrating how history affects science and how science affects history.

As demonstrated above, we can promote deep learning by encouraging multiple teachers working together in helping students to understand math in the context of science, coordinating timelines of scientific discovery and literature, and demonstrating how a painter uses light to express meaning. This is just like what happens to a river that is too fragmented into little streams. When the streams are channeled together it then can develop a deep flow. So it is with learning. When professional educators combine their energies and reinforce the same deep learning, the stream of information is clearer for the student, the learning activities are more fluid, and the student's reservoir of knowledge and skills fills faster.

What About Students?

One problem remains. After years of sipping knowledge, getting students to deeply learn is a daunting challenge. It is hard to get students to drink knowledge deeply or drink at all if they are rarely thirsty. Parched minds become satisfied with minimum learning expectations and some, especially as they approach middle and high school, begin to believe that school cannot quench their thirst as well as other societal options.

Working together, teachers can help students re-acquire the thirst for knowledge they were born with. The task of all educator teams is therefore two-fold: provide a rich, rigorous, and relevant flow of knowledge and skills, and then find a way to lead the students to this water and then make them thirsty enough to drink deeply.

Students and teacher teams focusing on learning deeply have the force to achieve learning beyond the traditional education dam and shoot out over the spillway to not only understand the torrent of available knowledge, but to also add to it in phenomenal ways.

The tremendous power of a river is diminished when it is fragmented into little streams. However, when the streams are channeled together, it then can develop a deep flow. So it is with learning. As demonstrated above, we can promote deep learning by encouraging multiple teachers working together in helping students to understand math in the context of science, coordinating timelines of scientific discovery and literature, and demonstrating how a painter uses light to express meaning. When professional educators combine their energies and reinforce the same deep learning, the stream of information is clearer for the student, the learning activities are more fluid, and the student's reservoir of knowledge and skill fills faster.

P.O. Box 206
Paradise, MT 59856

January 23, 2015

Mr. Tim Norbeck. Superintendent
Jefferson Public Schools
312 Main Street
P.O. Box 838
Boulder, MT 59632

SUBJECT: RESIGNATION WITH REGRET OF EMMA A. EHRET

After experiencing a great year teaching at Jefferson High School, I regret to inform you that I must resign from my position as the art teacher.

My experience at Jefferson High has been the best any beginning teacher could have. The faculty and the administration are fantastic and helpful. The students participate and I have watched them grow as artists and individuals. The opportunity to learn from the faculty and the students has been an invaluable and rewarding experience. However, an unexpected turn of events is sending me in another direction so it is with regret and deep sadness that I submit this letter. I am so thankful I was granted the opportunity to begin my professional teaching career at Jefferson High School.

Please feel free to contact me at any time regarding this resignation letter. In addition to contacting me at school, you can reach me at 406-370-6344 or by email at emmaehret@hotmail.com.

Thank you again.

Sincerely,

Emma A. Ehret

C:file

* Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Amount / Line Amount	PO #	Fund Org	Acct/Source/ Prog-Func	Obj Proj
16205		374 BLUE CROSS & BLUE SHIELD	538.00				
1		01/12/15 Rask premium	538.00		201	100-1000	260
	# of Claims	**1** **Total:**	**538.00**				

538.00

JEFFERSON HIGH SCHOOL
Fund Summary for Claims
For the Accounting Period: 2/15

Fund/Account	Amount
201 HIGH SCHOOL GENERAL FUND	
101	$538.00
Total:	**$538.00**

. Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Amount / Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
15980		1183 HARLOW'S SCHOOL BUS SERVICE, INC.	15,002.38						
1		February contract	15,002.38*			210	100-2700	513	
16200		4672 ITC INFORMATION TECHNOLOGY CORE	1,761.00						
1		790796 01/22/15 microsoft licensing	1,761.00*	8471		228	100-1000	682	
16201		1346 JOSTENS INC	203.84						
1		17098420 01/05/15 diplomas & covers	46.76	7860		201	999		
PO Accounting		(Org/Prog/Func/Obj/Proj: -100-2400-610-							
2		17098420 01/05/15 diplomas, trophies	157.08	8196		201	999		
PO Accounting		(Org/Prog/Func/Obj/Proj: -100-1000-610-							
16204		899 EMPIRE OFFICE MACHINES, INC.	95.96						
1		0192877 01/21/15 guidance supplies	95.96	7899		201	999		
PO Accounting		(Org/Prog/Func/Obj/Proj: -100-2100-610-							
16208		3766 ACADIA MONTANA	2,154.36						
1		8297427 01/26/15 alta care	2,154.36*			215	280-1000	330	524
16209		899 EMPIRE OFFICE MACHINES, INC.	62.19						
1		193157 02/09/15 guidance supplies	62.19	7899		201	999		
O Accounting		(Org/Prog/Func/Obj/Proj: -100-2100-610-							
16211		4633 COMMERCIAL ENERGY OF MT INC.	2,500.16						
1		28388 02/03/15 Gas for NWE System	2,422.78			201	100-2600	411	
2		28389 02/03/15 Gas for NWE System	77.38			201	100-2600	411	
16212		4752 SOFTPLAN ARCHITECTURAL DESIGN	1,500.00						
1		5094503 12/19/14 software w/dvds 1st payme	1,500.00*	8447		215	395-1640	680	204
16213		385 BOULDER MONITOR & JEFFERSON CO.	96.00						
1		00018100 01/05/15 Fafsa Help	96.00			201	100-2100	610	
16214		4760 BUTTE GM AUTO CENTER	114.00						
1		303761 02/09/15 drivers ed brake	114.00*	8487		218	100-1000	610	
16215		4370 STURDEVANT, DANIEL	194.26						
1		011815 01/18/15 Hotel Rooms	194.26			201	720-3500	582	
16216		3623 THREE FORKS HIGH SCHOOL	42.00						
1		012115 01/21/15 lunches	42.00	8475		201	710-3400	582	

Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Amount / Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
16217		2717 CITY OF BOULDER	2,342.74						
1		02/02/15 Water and Sewer	2,342.74		201		100-2600	610	
16218		1828 MT HIGH SCHOOL ASSOCIATION	100.00						
1		01/28/15 meeting registrations	100.00	8492	201		720-3500	582	
16219		3602 POWER TOWNSEND	237.09						
1		410577 12/23/14 wood for trophy case	237.09	8491	201		100-2600	610	
16220		3602 POWER TOWNSEND	83.78						
1		410755 12/24/15 handrail and brackets	83.78	8490	201		100-2600	615	
16221		321 BRUCO, INC	186.92						
1		335421 01/30/15 snap back	161.55	8493	201		100-2600	610	
2		335421 01/30/15 ship/handling	25.37		201		100-2600	610	
16222		1650 MEADOW GOLD GREAT FALLS	430.56						
1		305715 01/05/15 milk	67.65		201		910-3100	630	
2		60202804 01/08/15 milk	89.33		201		910-3100	630	
3		60202934 01/15/15 milk	101.32		201		910-3100	630	
4		60206052 01/22/15 milk	82.93		201		910-3100	630	
		60203189 01/29/15 milk	89.33		201		910-3100	630	
16223		1737 NORTHWESTERN ENERGY	6,556.07						
1		02/03/15 Electric charges	4,274.19		201		100-2600	412	
2		02/03/15 Natural gas charges	2,281.88		201		100-2600	411	
16224		899 EMPIRE OFFICE MACHINES, INC.	62.19						
1		0193157 02/09/15 guidance supplies	62.19	7899	201		999		
PO Accounting (Org/Prog/Func/Obj/Proj: -100-2100-610-									
16225		1830 MT SCHOOL BOARDS ASSOCIATION	3,038.00						
1		30037 01/27/15 MTSBA dues and insurance	3,038.00*		201		100-2300	810	
16226		4049 AMAZON.COM	46.28						
1		1617355441 Ajax Motors 1.5 v	31.50*	8444	215		100-1000	610	210
2		1617355441 batteries	14.83*	8444	215		100-1000	610	210
3		1617355441	-0.05*		215		100-1000	610	210
16228		157 HARDWARE HANK	24.92						
1		75244 01/07/15 science o supplies	24.92	8181	201		999		
PO Accounting (Org/Prog/Func/Obj/Proj: -100-1511-610-									

* Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Amount / Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
16229		157 HARDWARE HANK	117.82						
1		75145 01/02/15 paint brush	3.38		201		100-2600	615	
2		75614 01/26/15 stepladder	79.99		201		100-2600	615	
3		75626 01/23/15 bulb	21.98		201		100-2600	615	
4		75492 01/16/15 tape and solder	12.47		201		100-2600	610	
16230		4708 SCHOOL IN SITES	540.00						
1		32415 11/20/14 web hosting district	360.00*	8431	228		100-1000	680	
2		32415 11/20/14 Web hosting school	180.00*	8431	228		100-1000	680	
16231		4686 ANGELO, AJ	33.35						
1		02/09/15 gas mileage	33.35		201		710-3400	582	
16232		4134 ENNIS HIGH SCHOOL ACTIVITIES	30.50						
1		01/31/15 Friday lunches	12.50	8478	201		710-3400	582	
2		01/31/15 Saturday lunches	18.00	8478	201		710-3400	582	
16233		4134 ENNIS HIGH SCHOOL ACTIVITIES	24.00						
1		02/03/15 tournament fees	24.00	8480	201		710-3400	582	

# of Claims 28 Total: 37,580.37

37,580.37

JEFFERSON HIGH SCHOOL
Fund Summary for Claims
For the Accounting Period: 2/15

Fund/Account	Amount
201 HIGH SCHOOL GENERAL FUND	
101	$16,462.35
210 HIGH SCHOOL TRANSPORTATION FUN	
101	$15,002.38
215 HIGH SCHOOL MISC PROGRAMS FUND	
101	$3,700.64
218 HIGH SCHOOL TRAFFIC EDUCATION	
101	$114.00
228 TECHNOLOGY FUND	
101	$2,301.00
Total:	**$37,580.37**

School
. Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Claim $	Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
16233		4134 ENNIS HIGH SCHOOL ACTIVITIES	24.00							
1		02/03/15 tournament fees		24.00	8480	201		710-3400	582	
		Claim Total for District		**24.00**						
16234		4728 Mastercard Tech	690.81							
1		3379412 12/17/14 wifi install, fuser for p		125.99*	8457	228		100-1000	615	
2		4412221 12/17/14 wifi install, fuser for p		197.24*	8457	228		100-1000	615	
3		4412221 12/18/14 wifi install, fuser for p		131.25*	8457	228		100-1000	615	
4		3792213 12/23/14 wifi install, fuser for p		27.09*	8457	228		100-1000	615	
5		4412221 12/17/14 wifi install, fuser for p		203.25*	8457	228		100-1000	615	
6		12/26/14 Computer supplies		5.99*	8380	228		100-1000	610	
		Claim Total for District		**690.81**						
16235		1451 L & P GROCERY	26.26							
1		0163060012 01/29/15 breakfast items		26.26	8476	201		710-3400	582	
		Claim Total for District		**26.26**						
16236		4717 Mastercard Admin 1	1,853.66							
1		500177529 12/17/14 treadmill		1,350.00*	8446	201		100-1000	660	
2		500177529 12/17/14 recumbent bike		495.00*	8446	201		100-1000	660	
		500177529 12/17/14 treadmill		8.66*		201		100-1000	660	
		Claim Total for District		**1,853.66**						
16237		4726 Mastercard Maintenance	60.76							
1		3106 12/29/14 oak		60.76	8489	201		100-2600	610	
		Claim Total for District		**60.76**						
16238		1183 HARLOW'S SCHOOL BUS SERVICE, INC.	6,970.40							
1		2435 01/29/15 Wrestling		2,229.38		201		720-3500	582	
2		2435 01/29/15 bbb		1,628.46		201		720-3500	582	
3		2435 01/29/15 gbb		1,628.46		201		720-3500	582	
4		2435 01/29/15 speech		224.10		201		710-3400	582	
5		2435 01/29/15 athletic downtime		1,200.00		201		720-3500	582	
6		2435 01/29/15 activity downtime		60.00		201		710-3400	582	
		Claim Total for District		**6,970.40**						
16239		3766 ACADIA MONTANA	1,716.73							
1		8362613 02/09/15 Altacare		1,716.73*		215		280-1000	330	524
		Claim Total for District		**1,716.73**						
16240		4763 KARL TYLER CHEVROLET	112.90							
1		340175 02/06/15 Suburban tow		112.90		201		100-2600	440	
		Claim Total for District		**112.90**						

School
.. Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Claim $ / Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
16241		1086 GIULIO DISPOSAL SERVICES, INC.	155.00						
1		85507 01/31/15 Disposal	155.00		201		100-2600	431	
		Claim Total for District	**155.00**						
16242		4225 PSAT/NMSQT	462.00						
1		385002254 01/23/15 psat tests	462.00	8376	201		100-2100	610	
		Claim Total for District	**462.00**						
		Total High School	**12,072.52**						

School
.. Over spent expenditure

Claim / Line #	Warrant	Vendor #/Name / Invoice #/Inv Date/Description	Claim $ / Line Amount	PO #	Fund	Org	Acct/Source/ Prog-Func	Obj	Proj
16233		4134 ENNIS HIGH SCHOOL ACTIVITIES	24.00						
1		02/03/15 tournament fees	24.00	8480	201		710-3400	582	
		Claim Total for District	**24.00**						
16234		4728 Mastercard Tech	690.81						
1		3379412 12/17/14 wifi install, fuser for p	125.99*	8457	228		100-1000	615	
2		4412221 12/17/14 wifi install, fuser for p	197.24*	8457	228		100-1000	615	
3		4412221 12/18/14 wifi install, fuser for p	131.25*	8457	228		100-1000	615	
4		3792213 12/23/14 wifi install, fuser for p	27.09*	8457	228		100-1000	615	
5		4412221 12/17/14 wifi install, fuser for p	203.25*	8457	228		100-1000	615	
6		12/26/14 Computer supplies	5.99*	8380	228		100-1000	610	
		Claim Total for District	**690.81**						
16235		1451 L & P GROCERY	26.26						
1		0163060012 01/29/15 breakfast items	26.26	8476	201		710-3400	582	
		Claim Total for District	**26.26**						
16236		4717 Mastercard Admin 1	1,853.66						
1		500177529 12/17/14 treadmill	1,350.00*	8446	201		100-1000	660	
2		500177529 12/17/14 recumbent bike	495.00*	8446	201		100-1000	660	
		500177529 12/17/14 treadmill	8.66*		201		100-1000	660	
		Claim Total for District	**1,853.66**						
16237		4726 Mastercard Maintenance	60.76						
1		3106 12/29/14 oak	60.76	8489	201		100-2600	610	
		Claim Total for District	**60.76**						
16238		1183 HARLOW'S SCHOOL BUS SERVICE, INC.	6,970.40						
1		2435 01/29/15 Wrestling	2,229.38		201		720-3500	582	
2		2435 01/29/15 bbb	1,628.46		201		720-3500	582	
3		2435 01/29/15 gbb	1,628.46		201		720-3500	582	
4		2435 01/29/15 speech	224.10		201		710-3400	582	
5		2435 01/29/15 athletic downtime	1,200.00		201		720-3500	582	
6		2435 01/29/15 activity downtime	60.00		201		710-3400	582	
		Claim Total for District	**6,970.40**						
16239		3766 ACADIA MONTANA	1,716.73						
1		8362613 02/09/15 Altacare	1,716.73*		215		280-1000	330	524
		Claim Total for District	**1,716.73**						
16240		4763 KARL TYLER CHEVROLET	112.90						
1		340175 02/06/15 Suburban tow	112.90		201		100-2600	440	
		Claim Total for District	**112.90**						

2135 Charlotte St., Suite 2
Bozeman, MT 59718
http://www.pinecc.com
800.432.0346

pine:cove
CONSULTING

Virtual Server Upgrade

Quote # 000646 v1

Prepared for:

Jefferson High School

Prepared by:

Pine Cove Sales Team

Tuesday, February 03, 2015

Jefferson High School
Tim Norbeck
312 S. Main
Boulder, MT 59632
tim.norbeck@jhs.k12.mt.us

Dear Tim,

Thank you for the opportunity to provide a proposal for Server upgrades at Jefferson High School.

The proposal includes the following:

2 - HP DL380 Servers

- 16 Drive Bays - (4 Empty Bays for Expansion on each server)
- (2) 2.5GHz Quad Core Processors Per Server
- 128GB of Ram per server
- (2) 300GB Raid 1 Drives for Operating System
- (10) 300GB 15K SAS Drives for Storage - Raid 5 with Hot Spare - 2.4TB Useable Space per Server
- 1GB Flash Backed Raid Card on each server
- 4x1GB Ethernet ports per server
- (2) 750W Power Supplies

Turnkey Implementation

Pine Cove will build servers and burn in raid
Servers will ship completely built
Pine Cove will assist in loading OS
Pine Cove will assist in server migration to new hosts

Pine Cove Sales Team

Pine Cove Consulting

Hardware

Qty	Description
2	**HPQ DL380PR08 8SFF CTO SERVER**
2	**HPQ E5-2609V2 2.50GHz-10MB 4C 1P DL380P**
2	**HPQ E5-2609V2 2.50GHz-10MB 4C 1P DL380P**
2	**HPQ ETHERNET 1GBE 4P 331FLR FIO ADPTR**
16	**HPQ 16GB 2RX4 PC3-14900R-13 MEMORY MOD**
2	**HPQ 1GB FBWC SMART ARRAY P-SERIES**
2	**HPQ SFF DRIVE CAGE KIT DL380/385**
2	**HPQ SMART ARRAY 1GB FBWC P420 CNTRLR**
4	**HPQ 300GB 10K 6G SAS SFF 2.5IN HDD**
20	**HPQ 300GB 15K 6G SAS SFF 2.5IN HDD**
4	**HPQ 750W CS HE POWER SUPPLY**
4	**HPQ 1.83M PWR CORD 110V C13-5-15 10A**
2	**HPQ 2U SFF BB RAIL KIT G8**
2	**HPQ 2U SECURITY BEZEL KIT DL380 G8**
1	**Installation and Configuration** Pre-Build Servers and migration

Hardware

Qty	Description

Total:	**$27,080.40**

Prepared by:

Pine Cove Consulting
Pine Cove Sales Team

Fax 406.794.0505
sales@pinecc.com

Prepared for:

Jefferson High School
Tim Norbeck
312 S. Main
Boulder, MT 59632
tim.norbeck@jhs.k12.mt.us
4062253740

Quote Information:

Quote #: 000646
Version: 1
Delivery Date: 02/03/2015
Expiration Date: 03/03/2015

Quote Summary

Description	Amount
Total:	**$27,080.40**

TERMS: Due on receipt of invoice.

_____ ure

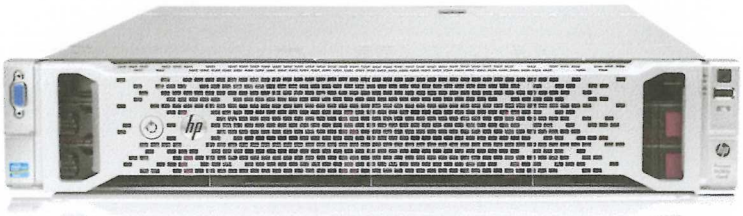
_____ Date

Data sheet

HP ProLiant DL380p Gen8 Server

The no compromise data center standard

Respond to rapid data growth in a manner that protects your IT budget with the DL380p Gen8 server, designed to change with your evolving needs.



Are technology advances holding you back from making the right investments?

To accommodate explosive data growth, today's data center managers are forced to continually adopt new technologies and ever-more-efficient management tools. They also wrestle with pressing questions about how to keep pace with immediate demands while making wise strategic investments.

The ProLiant DL380p Gen8 Server is engineered to protect your server investment and extend the life of your data center with reliability, accessibility, and serviceability. This versatile rack-optimized server balances efficiency and performance, and makes management simple and effective. It is designed to be future-proof, with the HP-exclusive Flexible LAN-On-Motherboard (FlexibleLOM), giving you a choice of 1 Gb or 10 Gb network interface controllers (NICs). This flexibility allows easy upgradability for future NIC capacities as they become available during the Gen8 lifecycle—giving you a server that is future-ready, today.

Propel your business forward with next-generation technology

The HP ProLiant DL380p Gen8 Server:

- Increases performance with greater processor core count, memory capacities, and internal storage capacities
- Improves manageability with next-generation HP Smart Array technology
- Enhances serviceability with improved fan cage, baffle, and PCIe riser solutions; HP Smart Socket guides; and new thin cabling and cable guides
- Enables a variety of customer-selected primary network solutions with FlexibleLOM NICs
- Provides embedded provisioning tools, active health monitoring, and system maintenance capabilities built using the industry-leading HP Integrated Lights-Out (iLO) Management Engine

Whether you are an enterprise-class data center or a small or midsize business looking to expand in the future, the HP ProLiant DL380p Gen8 Server provides configuration flexibility that can cater to your growing server needs while driving ongoing gains in efficiency.

ey features and benefits

Intel® Xeon® E5-2600 and E5-2600 v2 series processors	Up to 30% more performance[1]
4 Channels per DIMM and 24 memory DIMM slots	2X the memory capacity over G7 with 768 GB maximum memory
Up to 25 small form factor (SFF) or 12 large form factor (LFF) hard drives	Up to two times the internal storage capacity[2]
Flexible Network options (FlexibleLOM)	Flexibility of choice with 4x1 G or 2x10 G Ethernet; or 2x10 G FlexFabric
Up to 6 PCIe slots	200% more I/O capacities with PCIe 3.0[3]
HP SmartStorage Solution	Up to 200% more performance with HP SmartDrives, HP Smart Array[4]
HP iLO Management Engine	4th generation iLO manageability
HP Active Health	Always-on root-cause diagnostics[5]
HP Specific Options	Enhanced performance with additional GPU support for high workload acceleration

Increase performance, durability, and storage capacity

The HP ProLiant DL380p Gen8 Server brings you:

- Higher performance, power efficiency and security via Intel Xeon E5-2600 and E5-2600 v2 processors, including Intel QuickPath, Integrated Memory Controller, Turbo Boost, Intelligent Power Technologies, Trusted Execution Technology, and Intel Secure Key and Intel OS Guard
- Greater memory bandwidth, DIMM count, and new memory health programs with less downtime with HP SmartMemory; new memory slots allow up to 768 GB of maximum memory and 512 GB at maximum speeds of 1866 MHz
- Complete data protection with embedded HP Smart Array P420i RAID controller, transportable Flash Backed Write Cache (FBWC), and RAID 6 options
- Quicker access to data, increased storage bandwidth, and cutting-edge storage performance with up to 25 SFF HP SmartDrives and new Smart Array RAID controllers
- Communication with HP Intelligent Power Distribution Units (PDUs) with high-efficiency (up to 96% efficient) common-slot power supplies (460 W, 750 W, or 1200 W)
- Enhanced computing with 2x double wide GPU support[5]
- Available ENERGY STAR® qualified configurations
- Cable management flexibility with a redesigned ambidextrous cable management arm option
- Customize your server's primary networking solution today and meet future needs with FlexibleLOM options (choice of 1 Gb, 10 Gb, 10 Gb Base-T, Ethernet, FCoE, or InfiniBand).

[1] Performance results per Intel® testing on E5-2600 v2 processors over previous generation. June 2013.
[2] Additional internal storage capacities over G7 (total LFF storage capacity = 36 TB SAS, 48 TB SATA, 4.8 TB SSD); (supporting SSD/SAS/SATA in SFF/LFF).
[3] More I/O bandwidth to the processor resulting in ver latency as compared with G7 version (Gen8 40 lanes/processor, G7 = 24 lanes/processor).
[4] HP Gen8 Smart Arrays bring significant.
[5] HP internal lab testing, HP, 2011.

echnical specifications

Processor	Intel Xeon E5-2600 and E5-2600 v2 Series (up to 12 cores, up to 3.5 GHz)
Chipset	Intel C600
Memory	(24) DDR3 DIMMs, up to 1866 MHz, ECC, Lock-step, and Online Spare
Maximum memory	768 GB (24 DIMM slots x 32 GB LRDIMMs)
Internal storage	Supports SATA, SAS, or SSD drives (8+8 or 25) 2.5-inch hot plug bays/(8 or 12) 3.5-inch hot plug bays
Maximum internal storage	30 TB SAS (SFF); 48 TB SATA (LFF); 20 TB SSD (SFF)
Networking	1 FlexibleLOM
I/O slots	Choice of: 4x1 Gb, 2x10 Gb Ethernet, 2x10 Gb Base-T, or 2x10 Gb FlexFabric 6 PCIe slots: Riser 1 1x16 PCIe 3.0 FL/FH; 1x8 PCIe 3.0 HL/FH; 1x4 PCIe 2.0 HL/FH Riser 2 (Optional) 1x16 PCIe 3.0 FL/FH; 1x8 PCIe 3.0 HL/FH; 1x8 PCIe 3.0 HL/FH or 1x16 PCIe 3.0 FL/FH; 1x16 PCIe 3.0 HL/FH
Ports	Front: 2 USB; Rear: 4 USB, video (1600 x 1200), network; Internal: 1 USB, 1 SD Card
Power supplies	460 W, 750 W, 1200 W (92%, 94%, or 96% efficient) AC or DC hot plug redundant
Integrated management	HP iLO Management Engine
Additional features	Up to 2 double wide graphics cards supported
Form factor	2P/2U Rack
QuickSpecs	h18000.www1.hp.com/products/quickspecs/14212_div/14212_div.html

Unlock your server's capacity with HP StoreVirtual VSA and gain fully-featured shared storage for your applications right on your server: hp.com/go/freeVSA

Remove tedious, time-consuming tasks with an intuitive, configurable management system

The HP ProLiant DL380p Gen8 Server:

- Takes strengths from products like HP SmartStart, HP Smart Update Manager, and HP ProLiant Support Packs on Intelligent Provisioning and enhances them with the latest ease-of-use features and places them on the system board for instant access.
- Starts working the moment a power cord and an Ethernet cable are connected to the server. Agentless hardware monitoring and alerting capabilities are built into the server with HP Agentless Management (runs on the iLO 4 chipset).
- Provides 24x7 continuous health monitoring with HP Active Health System that logs 100% configuration changes and helps quicken analysis of problems with HP Service and Support.[5]

Redefine the server experience

- Automated Energy Optimization improves the server's ability to analyze and respond to "3D sea of sensors" data within the server.
- The server self-identifies location and inventory through HP Insight Control for maximum workload optimization across the entire data center.
- The server maintains precise control of server fans to direct cooling and reduce unnecessary fan power with the first 3D array of temperature sensors that is part of HP-unique Thermal Discovery.
- Dynamic Workload Acceleration delivers smarter data protection for ever-increasing drive capacities, real-time workload-aware analysis to optimize and adapt storage performance, and 6x faster solid state performance versus the previous generation.
- User-inspired design features—HP SmartDrives, Smart Socket guide, flat cabling design, and easy tool-less access—anticipate your needs and help eliminate common issues that result in downtime of customer-serviceable components.

OneView helps enterprises close the IT management gap by bringing the best of the consumer world to the enterprise, allowing teams to work in a more natural and collaborative way. Visit hp.com/go/management-oneview

HP Services

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment. hp.com/go/hpfinancialservices

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment. hp.com/go/factoryexpress

n the skills you need with ExpertOne training and certification from HP. With HP ProLiant training, you will accelerate your technology transition, improve operational performance, and get the best return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability. hp.com/learn/proliant

HP Technology Services offers a set of consultancy, deployment, and support solutions designed to meet the lifecycle needs of your IT environments.

HP Care Pack Services for industry-standard servers include support for qualified options at no additional cost.

HP Foundation Care services delivers scalable support packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HP Collaborative Support. This service offers a single point of contact for server problem diagnosis, hardware problem resolution, basic software problem diagnosis, fault isolation, and resolution if available to HP. In case the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

If you are running business-critical environments, HP offers **HP Proactive Care** or **HP Critical Advantage.** These services help you deliver high levels of application availability through proactive service management.

All service options include HP Insight Remote Support for secure remote monitoring, diagnosis, and problem resolution. Also included is the HP Support Center that provides access to information, tools, and experts to support HP business products. hp.com/go/services

Learn more at
hp.com/servers/DL380p-gen8

hp.com/qref/dl380pgen8

Sign up for updates
hp.com/go/getupdated

Share with colleagues

Rate this document

opyright 2012–2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only arranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

ENERGY STAR is a registered mark owned by the U.S. government. Intel and Intel Xeon are trademarks of Intel Corporation in the U.S. and other countries.

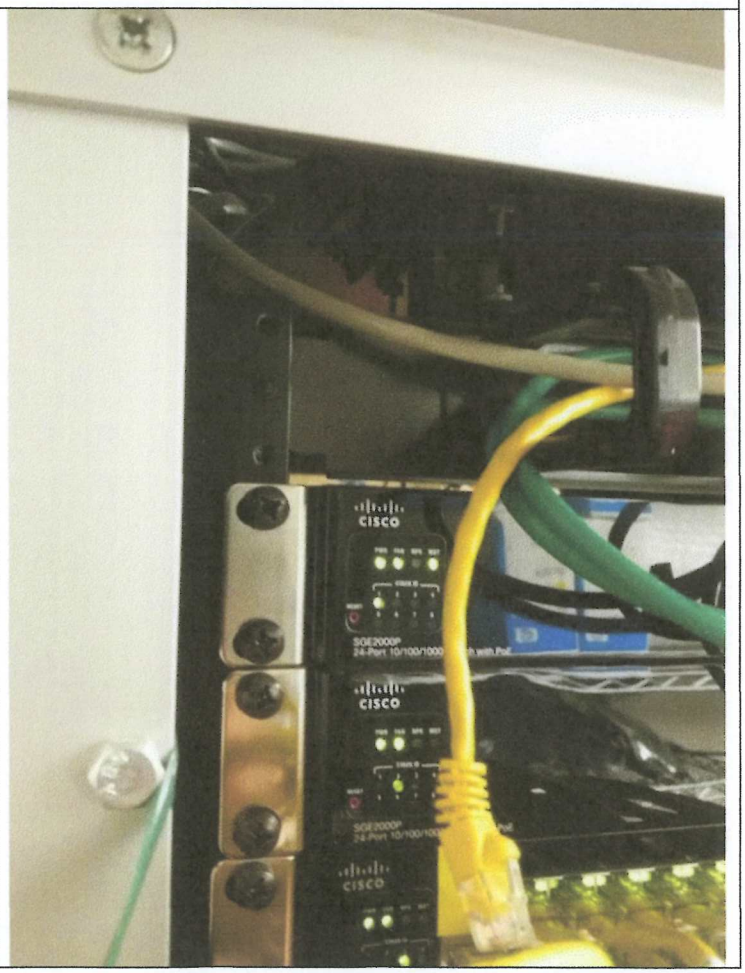
4AA3-9615ENW, May 2014, Rev. 4

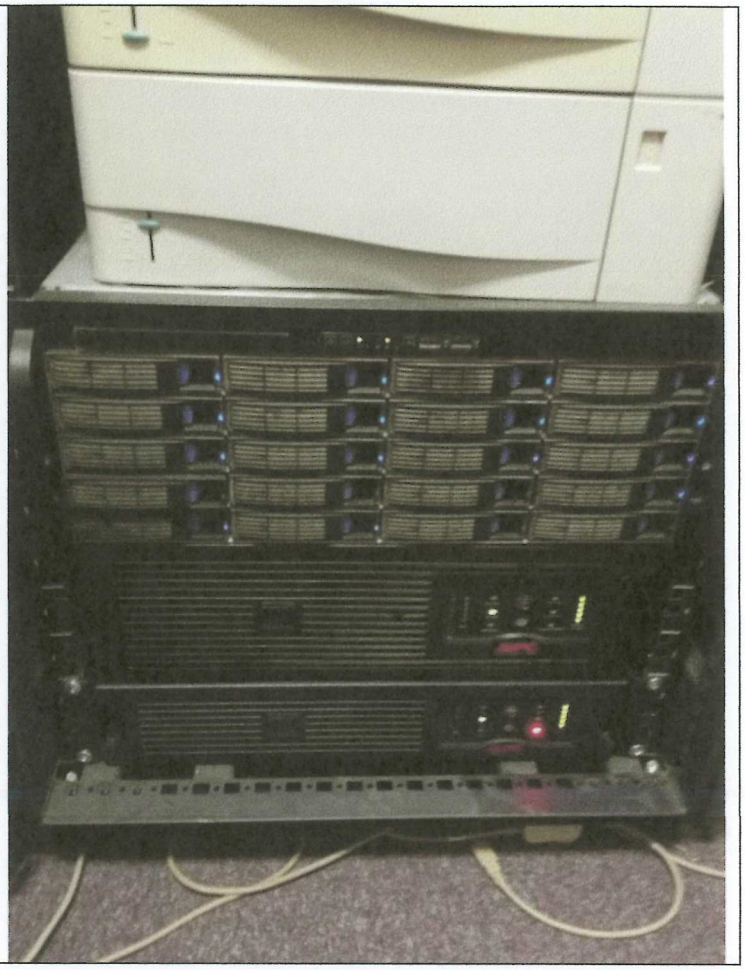
pinecove CONSULTING		Title: Jefferson High School IT Assessment	**Location: JHS – Boulder, MT**	
			Creation Date:	**1-20-2015**
			Revision Date:	

Pine Cove Employees for Assessment: -Names/Titles	Justin Hill – Director of Operations/Consultant
Location Contact 1: - Name - Title - Phone - Email	Tim Norbeck Superintendent 406-225-3317 Tim.norbeck@jhs.k12.mt.us
Location Contact 2: - Name - Title - Phone - Email	Alan Smith Director of IT Services 406-225-3317 Alan.smith@jhs.k12.mt.us
Purpose of Assessment:	IT Assessment
Location Map: - Need a couple of maps of each building	Customer provided building map and network diagrams
Internet Access: - Speed up/down - Type - Provider	2 Services 1- Century Link 20MB Bonded DSL 2- Montana Internet Corp. 30MB Fiber (wireless shot)
Content Filtering - Device/Software - What is filtered - Who controls what is filtered	Sonicwall
Helpdesk - What software/application - How is the helpdesk run - How is it received	None at present time, but investigating options. Currently people just track Alan down when they have issues.
Video Conferencing - Is video conferencing in use now - What equipment is in place - How is video used	One machine with a webcam for using Skype, etc…

Software: - Approval Process - Requirements - Purchasing Procedures - Rotation - Standardization - Web Based - Server Based - Workstation Based	Black Mountain – Self-Managed School Master Destiny Library Manager Labs use N-Computing solution Microsoft Office 365 Local Directory (AD)
Wireless Network: - Type - Centrally Managed - Security - Number of SSID's - Number of access points (Map?)	Enterasys (Extreme Networks) -Controller based (currently 1 controller, adding VM as a secondary controller) -1 VLAN and traffic get separated at controller instead of at the APs. -Several SSIDS (Public/Private/One for Chromebooks/One for Acellus) -Map Provided (12 APs)
Training: - How often - Timeline - Technician Training - Type of Training	Not assessed
Backup: - Software used - Tape or disk - On/Off Site - What is the critical data - Size of backup data	Local backup using Ashay -Not sure of Disaster Recovery capabilities -Currently backed up on same server as data -Not recommended and needs to be addressed -Plans to replicate to Elementary -Provides for remote backup
Printers: - Local Printers (count/make/model) - Network Printers (count/make/models) - Copy machines as printers	Several network and local printers include some centralized printing management software

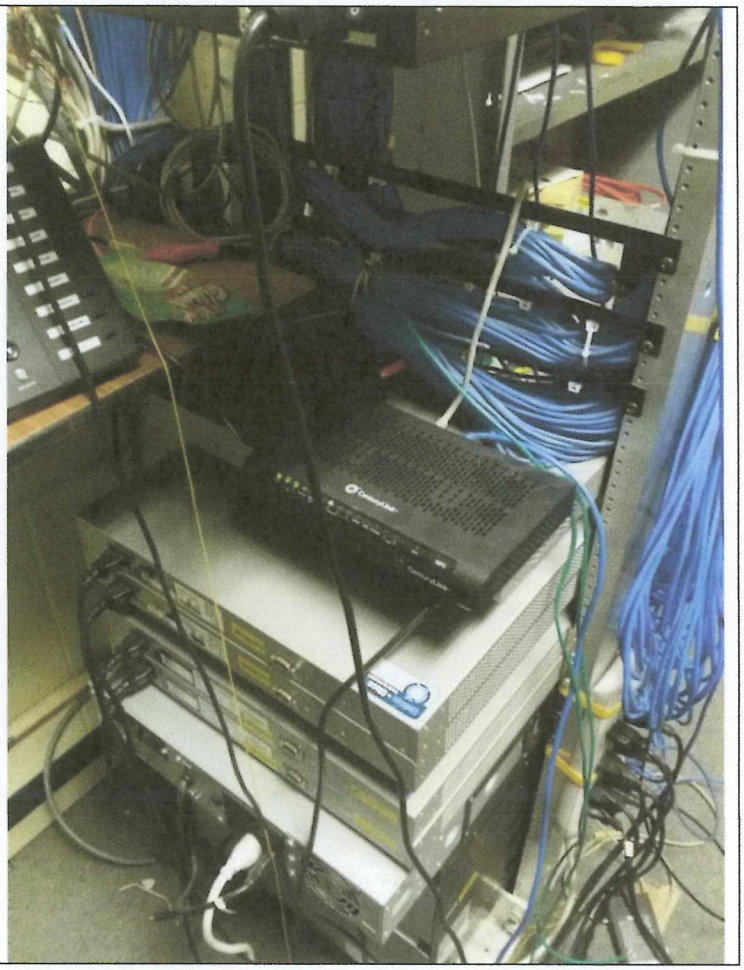
Anti-Virus: - Current Solution - Centrally managed	Sophos
Email/Email Archiving: - Email solution - In house or hosted - Any email archiving - SPAM Filter	Needs to be setup
Phone System: - Standard or VOIP - Make/Model of System - Analog/Digital Lines - Age of system - Whom manages phone system - Tied into Paging System - Tied into Access Control	Iwatsu VoIP system -Not a common system -Not tied into access control or paging system -Cannot separate VLANs on phone data ports
Remote Access: - Is there a VPN solution in place - Type of appliance/software - How is it currently used	Sonicwall VPN -Used by business manager for remote access -Not able to access everything at this time
Workstations: - Average age of workstations - Rotation plan for workstations - Common OS - How are they used - Patch management - Imaging/Management -Total number of workstations	-60 Chromebooks -Dell 6410 Laptops –Staff -1 Cart of Macbooks (2009/10 model) -Use Fog for imaging -Old mac server for "Golden Triangle" - Cannot upgrade to latest version of OSX Mavericks because server is too old -The labs use virtual desktop technology and thin clients
Servers: - Number of Physical Server - Number of Virtual Servers - Server functions - Common OS - Average age of physical servers - Rotation plan in place	Old Supermicro (self-built) servers -Not recommended and no tech support Running VMware ESXI 5.1. and 5.5 -5 physical hosts -See network diagram for actual servers and functions -Servers are over 5 years old (guess)

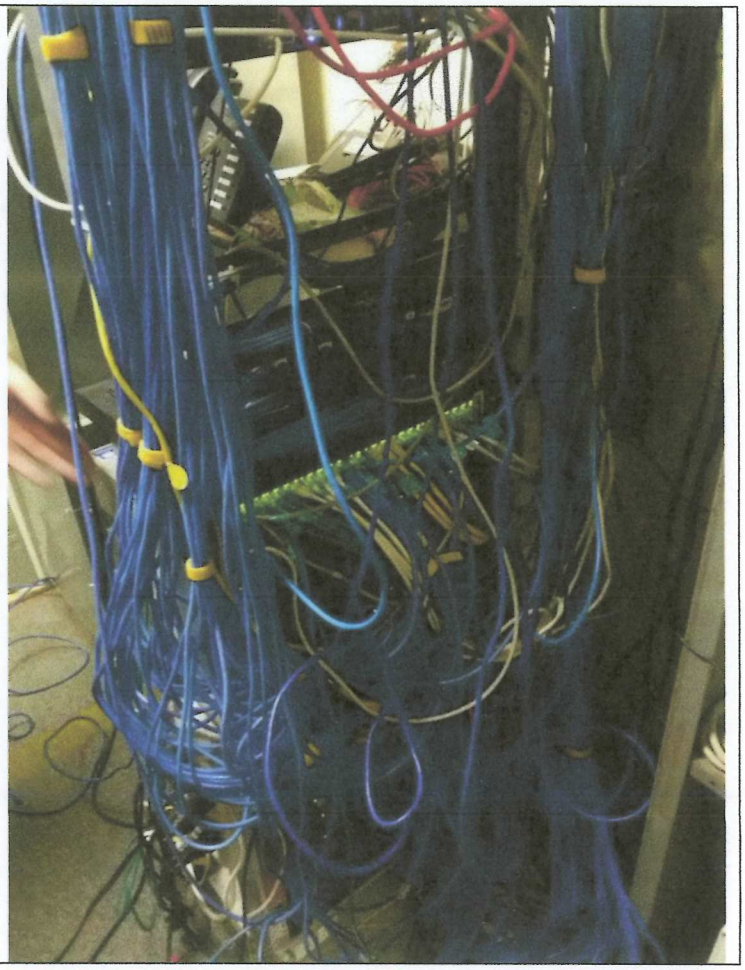
- Storage capacity - Any redundancy in place - Virtualization possibilities	
Main Closet:	Proper UPS and Cooling (Mistubushi) Building is almost all CAT 5 and new runs for APs are Cat 6. All new cabling will be Cat 6.
Main Closet Network Equipment: - Make - Model - Number of Ports used/available - Fiber connectivity	Cisco Small Business switches Phone server Camera server Door lock server
Main Closet Pictures Switches:	

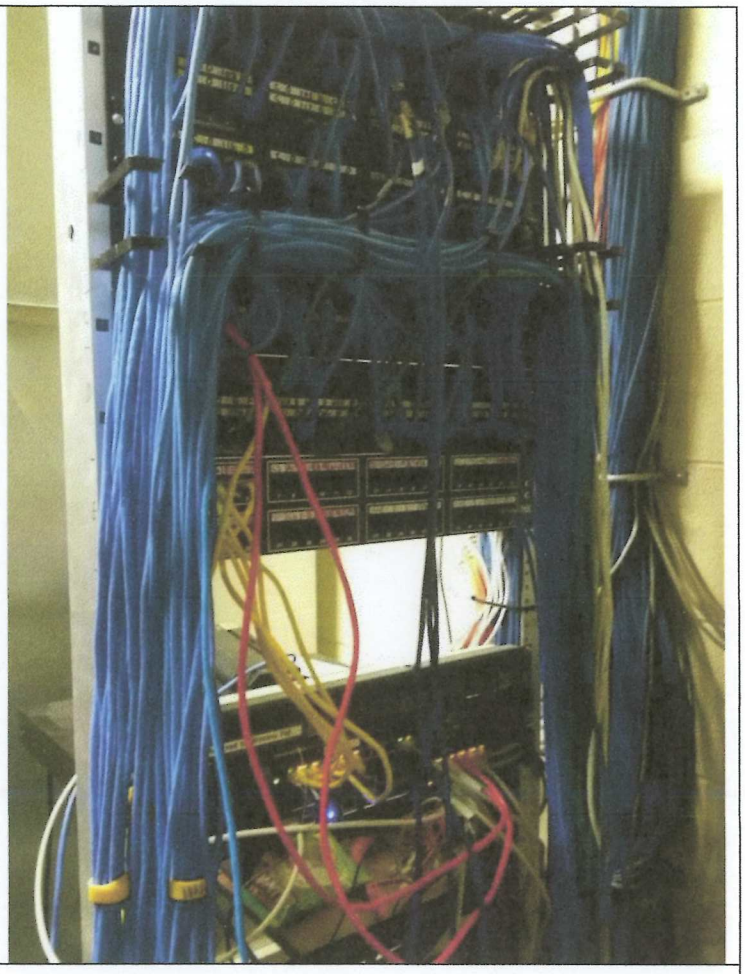


Closet 2 :	Located in boiler room Overheats Not an ideal location Unlocked and open door do to heat issues (security and integrity risk)
Closet 2 Network Equipment:	Head-end Modems Cisco SB switches Sonicwall

Closet 2 Pictures:

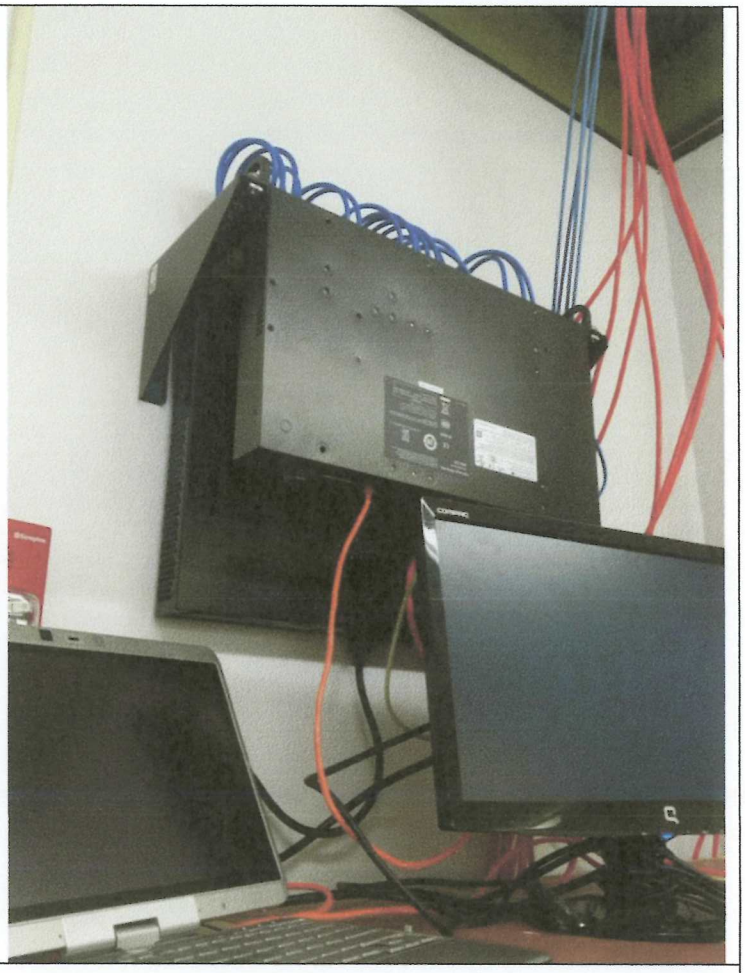




	
Closet 3 :	Not built out yet Goal is to build out a closet and move all servers and main switching/routing into the new closet. -Re-cable new runs -Move AC unit to new location -Recommend new UPSs
Closet 3 Network Equipment:	Currently just the Enterasys(Extreme Networks) wireless controller and patch panel

Closet 3 Pictures:	

pinecove CONSULTING		Title: Jefferson High School IT Assessment	**Location: JHS – Boulder, MT**	
			Creation Date:	**1-20-2015**
			Revision Date:	

	
Notes and Observations:	See below

I was very impressed with the new design of the network. Alan has gone to great lengths to segment the network in a logical manner which should help with traffic flow as well as troubleshooting. Alan has made the best use of the equipment that he has to work with. I found Alan to be extremely knowledgeable and very capable of managing the school network and network infrastructure components. His skills are current and relevant to the emerging technologies being used in education and I agree with his vision for changes to the network to increase speed, reduce the risk of issues, enhance network administration, and centralize the IT infrastructure. He has excellent documentation of the network which reduces risk for the district.

Switches, Closets, and Wireless

My recommendations are to build out the new IT closet and move all of the main equipment to one location with proper power management, environmental monitoring, and dedicated cooling. The current switches will not be able to handle much more traffic and are probably the cause of some of the intermittent issue with speed of internet traffic, server access, and logins throughout the network. The current Cisco switches are designed for small business environments. School districts have some of the largest and most complex networks in our region of the country. We recommend moving to enterprise-class switches that are covered under a manufacturer warranty. The wireless system is pretty new and has a lot of the latest technologies and speeds. It would be even faster if the switch network was new as well.

Servers and Disaster Recovery

The servers that the district currently use are old and were built by the last IT person. They are not covered under warranty. They are virtualized which helps reduce some risk, but we recommend replacing them with new servers that are covered under a manufacturer warranty. We estimate that less servers will be needed moving forward as they are way more powerful than what the school currently has. We also recommend a new mac server as long as Apple products are going to be used in the district.

Alan does backups using a software that I am not familiar with. My understanding is that the data is backed up onto the same hardware as the main data set. That means if the server crashes you not only lose the main data, but you also lose the backups. The goal is to replicate that backup data to the elementary which will greatly reduce the risk of a total data loss. My recommendations are to have a separate server dedicated to backups and also make sure that the software used for backups includes disaster recovery capabilities. Backing up the data is just one part of the equation. You need to be able to restore the data fast in the event of a crash or data issue. (ex. Corruption, virus, etc…) We can show the district what we provide if you are interested.

Workstations

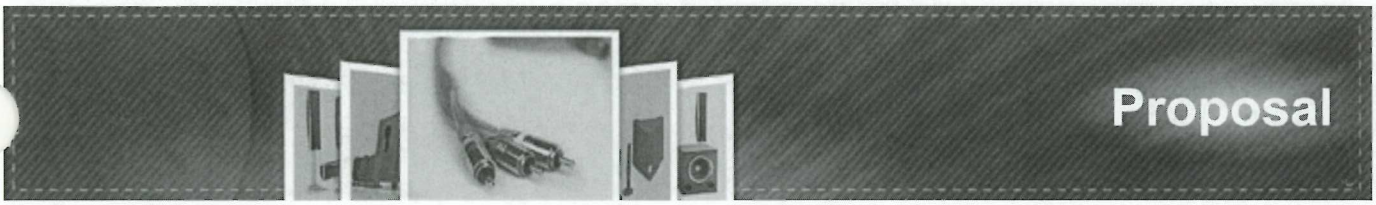
The district has older Dell laptops which should be on a rotation schedule and replaced soon. The district also has old Macbooks which cannot handle the demands of the latest software and apps. They should be replaced as well.

The district is using Chromebooks which is the direction that a lot of districts are going. It should be noted that they require access to the web to work so upgrading the switches will help in their performance.

The model being used in the lab of virtual PCs is recommended and can save costs in the long

run. We recommend investigating using Virtual desktops through Microsoft for better performance.

As a summary I recommend addressing the switches, servers, and backup solution as soon as possible. Pine Cove will provide a proposal for what we recommend and can also provide names of cabling companies if you want a price for moving everything into the proposed new data closet. I feel that Alan is fully capable of managing and administering whatever solution is put in place. We would love to work with your district in whatever capacity you need. Thanks for allowing me to come and do this assessment. I will schedule some time to go over our findings in detail and present a proposal for the new equipment.



Cabling Update

Jefferson High School

312 S Main
PO Box 838
Boulder, MT 59632
406-225-3317

Presented By:

Advanced Integrated Solutions
100 24th St West #1-104
Billings, MT 59102 US
(800) 609-9334
www.ais-mt.com

Modified: 2/2/2015
Revision: 0

Project Summary

Equipment:	**$11,719.90**
Misc. Parts Adjustment:	**$1,406.17**
Labor:	**$33,282.66**
Grand Total:	**$46,408.73**

Client: **Alan Smith** **Date**

Contractor: **Advanced Integrated Solutions** **Date**