# Technology Plan
# Kalkaska Public Schools

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County:             Kalkaska
District Code:      40040
ISD:                TBA ISD

**URL:**         www.kpschools.com/pages/uploaded_files/techplan2.pdf

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## 2. INTRODUCTION

### 2.1. District Mission Statement

The Kalkaska Public School District, in cooperative partnership with students, staff, family and community, believes all students can learn.  We will provide a caring environment that promotes academic achievement and social responsibility.  This partnership will help all students develop their maximum potential; and adapt and contribute to a changing world.

### 2.2. Demographics

- Number of students:          1565
- Number of teachers:          95
- Number of administrators:          7
- Number of non-certified staff:          120
- Buildings:
  - Kalkaska High School          9-12
  - Kalkaska Middle School          6-8
  - Northside Alternative          9-12
  - Cherry Street Elementary    4-5
  - Birch Street Elementary      K-3
  - Rapid City Elementary        K-5
- Free and Reduced Lunch Percentage:          60%
- Growth status:          Steady
- Total General Fund Budget:          $14,239,023  (2010-2011)

## 3. VISION AND GOALS

### 3.1. Vision Statements

- We believe all students can learn.
- We believe all students learn better in a technology rich environment.
- We believe that technology should be available as close as practical to the student workstation.
- We believe that access to technology resources is the key to success.

### 3.2. Goals

- Improve access to technology for all students and staff
- Seamlessly integrate technology into teaching and learning
- Improve the use of technology rich lessons in all classrooms
- Work toward full integration of this technology plan into the School Improvement Process
- Show yearly progress toward the goals in this plan

### 3.3. Integration with Other Plans
This Tech Plan will align with existing School Improvement Plans and district curriculum.  The following plans will be completed and aligned to this plan:
- Professional Development Plan
- Technical support Plan
- School Improvement Plan
- Curriculum Planning Cycle


## 4. CURRICULUM INTEGRATION

### 4.1. Instructional Technology Standards
Within the context of the Curriculum Process, steady progress will be expected toward the adoption and meeting of the following standards:
- Michigan Benchmarks and Standards (MiCLIMB)
- NETS standards for students (www.iste.org)
- NETS standards for teachers
- TSSA standards for administrators

### 4.2. Technology Use
Technology tools will be used across all levels in support of the curriculum. Examples:
- Language Arts: writing and peer review
- Science: probeware and data analysis
- Math: graphing calculators, graphic manipulation of geometric forms
- Art:  graphics, image editing
- Social Science: Internet exploration of other cultures (keypals)
- Music: music editing, composing

### 4.3. Curriculum and Teaching Strategies
The Technology Committee will identify current research and best practice models for the curriculum committees.  Resources used for this will include:
- MiCLIMB
- Michigan Curriculum Frameworks
- Best Practices CD series
- Instructional Technology Across the Curriculum (ITAC) activities
- Other resources as listed in the addendum.

## 5. STUDENT ACHIEVEMENT

Instructional strategies involving the use of technology will be firmly rooted in current research, directly aligned to curriculum, and aimed specifically at improving student achievement.

### 5.1. Strategies

This plan will be implemented through the existing curriculum process using the following strategies:

- Each curriculum committee will have, as a regular member, at least one representative from the Technology Committee.
- Annual review of subject area curriculum will include addition of technology rich lessons and modification of existing units to incorporate technical tools.
- Specific curricular examples are included in Appendix C at the end of this document.

### 5.2. Timeline

Yearly curriculum review of specific subject areas will include the addition of technology rich lessons and specific goals related to the Instructional Technology Standards.  This cycle will be repeated throughout the life of this plan.

## 6. TECHNOLOGY DELIVERY

### 6.1. Distance Learning Technologies

#### 6.1.1. Currently Being Used

- Project Interconnect: Virtual Field Trips
- NovaNet
- MVHS
- NWEA Testing
- Study Island MEAP prep
- Streaming Video (through REMC)
- PLATO

#### 6.1.2. To Be Explored

The following delivery technologies will be explored and adopted where there is direct curricular alignment and sufficient budget resources.

- ITV Calculus class (Project Interconnect)
- eBooks
- On-line coursework (e.g. MiVHS, MiVU)
- ITV options from ISD and REMC
- Internet curriculum resources such as:
  - o Intel Teach for the Future
  - o Teach for Tomorrow
  - o Ameritech Teaching Academy
  - o Other Internet based instructional opportunities

## 7. PARENT AND COMMUNITY RELATIONS

The main connection between this plan and parent and community relations will be the district presence on the Internet.

### 7.1. Publication of Technology Plan

This plan will be published on the district web site in its final draft. All intermediate drafts during the review and assessment process will also be posted.

### 7.2. Parent and Community Communications

- Parent and community input will be sought during the review and assessment phases of this plan through email and on-line surveys, and input forms on the district web site.
- The schedule for School Board meetings will be posted on the district web site.
- Minutes of School Board meetings will be posted on the district web site.

### 7.3. Technology Committee Membership

The district Technology Committee is charged with the responsibility for the authoring, review, and assessment of this plan. Membership in the committee will include:

- Teachers: at least one representative from each level (lower elementary, upper elementary, middle school, high school) and from each major curriculum area.
- Administrators: both building and central administration.
- Students: a student representative appointed by the student government or High School principal.
- Parent: at least one parent representative.
- Community: at least one local community or business representative.

## 8. COLLABORATION

District owned technology resources are recognized as public resources. Whenever practical, district owned technology resources will be made available for public educational use.

### 8.1. Computer Labs

- Existing district computer labs will be made available for community education, adult education, and training opportunities whenever practical.
- Unfilled seats in professional development classes offered in district computer labs will be made available to interested parents and community members.
- Guidelines will be developed to allow progress toward these goals while maintaining the security and integrity of the district's technical systems.

### 8.2. Web Resources

Space for public electronic "bulletin boards" for posting community events will be made available on the district web site at the request of local municipalities and organizations.

## 9. PROFESSIONAL DEVELOPMENT

Professional development is recognized as an ongoing need for all district personnel.

### 9.1. Professional Development Plan

#### 9.1.1. Instructional Staff

All professional development investment will be based on a demonstrable curricular need.

- Skills Based PD:  Skills based training will be offered only in support of other PD and not as the focus of any classes.
- Standards Based PD:  Professional development classes that focus on technically rich curricular lessons will be the preferred mode of training.  Examples are:
    o Teach for Tomorrow
    o Ameritech Technology Academy
    o Intel Teach for the Future
    o Other MDE sponsored training opportunities

  PD will be grade level appropriate and subject area specific.
- Certifications/Standards:  There is a recognized long-term goal of certification of all staff in meeting standards and benchmarks for the integration of technology, such as:
    o Completion of Teach for Tomorrow modules
    o COATT certification
    o NETS for teachers

#### 9.1.2. Administrative Staff

A combination of application specific and standards based professional development opportunities will be sought for both building and central administration staff.   Examples include:

- MSBO sponsored trainings and certification paths
- TSSA based training opportunities
- LEADing the Future for principals and superintendents
- Association sponsored trainings and conferences (e.g. MSBO, MASA, MASSP, MEMSPA)

#### 9.1.3. Technical Staff

An on-going need is recognized to keep the technical support personnel up to date on ever changing technical systems.

- Industry and manufacturer certifications are encouraged for systems and software that the district currently uses, or intends to migrate toward.
- Funding for training opportunities and conferences will be considered as part of the overall technology budget.

### 9.2. Professional Development Focus

The overall goal of professional development is to change and support the way teachers teach and students learn. Research suggests that skills-based training (e.g. Intermediate Word, Beginning PowerPoint, etc.) has little impact on the use of technology in teaching and learning.

True integration of technology will be achieved only with curriculum and standards based professional development that helps teachers and administrators in the development of a technology rich curriculum. The expected outcomes for this type of professional development are technology rich classroom lessons and resources.

### 9.3. Professional Development Timeline

A yearly PD calendar will be developed and maintained that lists all PD opportunities available to district staff. Both internal and external opportunities will be listed.

### 9.4. Resources and Standards

Both internal and external resources will be encouraged for professional development including:

#### 9.4.1. Resources

- Internal district staff, both instructional and technical
- ISD sponsored professional development opportunities
- MiVU/NETg on-line courses
- MDE sponsored professional development opportunities
- Professional association sponsored opportunities
- Instructional: MACUL, MIEM, MAME, etc.
- Administrative: MSBO, MASA, MASSP
- Technical: WMU Tech Coords Conference, MAEDS

#### 9.4.2. Standards and Certifications

- Instructional
  - o NETS for students
  - o NETS for Teachers
  - o COATT
  - o Teach for Tomorrow
  - o ATA Scholar
- Administrative
  - o MSBO certifications
  - o LEADing the Future Scholar
  - o TSSA Standards for Administrators
- Technical
  - o Industry Certifications: CNE, MCSE, etc.
  - o Manufacturer Certifications: Cisco, Compaq, Apple, etc.
  - o MSBO certifications

## 10. SUPPORTING RESOURCES

True integration of technology involves more than curriculum. Technology must be viewed as an integral part of most functions of the district from business through instruction. The following resources will be pursued and maintained within budget limitations.

### 10.1. Internal Resources

- District Policy and Guidelines as they relate to technology will be reviewed annually to maintain consistency with this plan as well as state and federal requirements.
- Documentation of technical systems will be maintained on an on-going basis and will be reviewed as part of the annual review of this Plan.
- A web presence will be maintained to support district instructional, administrative, informational and marketing priorities.
- Software licensing will be strictly documented and maintained.

### 10.2. External Resources

- REMC materials: video lending, video streaming, and other materials and resources
- ISD and/or RESA resources for professional development, tech support, and other district needs
- Online subscription services for technology rich instructional materials
- Outsourcing of less-than-full time needs for professional development, tech support, consulting services, etc

## 11. TECHNICAL INFRASTRUCTURE

The technical infrastructure from desktop through to the Internet will be reviewed annually. A priority list of needs will be developed as part of the annual budget process.

### 11.1. Current Status

#### 11.1.1. Computer Workstations

- High School:              150
- Middle School:             90
- Birch Street Elementary    75
- Cherry Street Elementary   55
- Rapid City Elementary      40
- Northside Alternative      40
- Admin                       5

### 11.1.2. Cabling Infrastructure
- All buildings (except Rapid City) are interconnected with fiber.
- All MDF/IDF are connected with fiber.
- All classrooms are connected to MDF/IDF with CAT 5e or CAT 6 UTP copper data cable.

### 11.1.3. Network Hardware
- All MDF/IDF are installed with HP ProCurve network electronics
- Some PoE switches are installed in the HS.
- PoE switches need to be added to each rack to support wireless and a new phone system.

### 11.1.4. Network Operating System and Servers
- All servers are running Windows Server OS.
- All computer workstations are running Windows XP Pro.

### 11.1.5. Connectivity and Internet
The primary Internet connection for the district is through Project Interconnect.   Please refer to the following resources for more info:
- Project Interconnect:
    - http://www.nmc.edu/its/project_interconnect.html
- Addendum A contains a network diagram

### 11.1.6. Software Applications
- Instructional: The following is a list of major applications loaded on a significant number of computers.
    - Inspiration, Kidspiration, Microtype Pro, Touchdown Math, Google Earth, Cabri Geometry, NovaNet, Grammar Coach, NIH Image, Accelerated Reader
- Productivity Suites:
    - MS Office is loaded on most computers in the district.
    - Open Office
    - AppleWorks
- Administrative and student software
    - AS/400 applications are used for Student, Finance, and Personnel

### 11.1.7. Telephones
Telephones are installed in all classrooms. The High School telephone system and phones need to be upgraded or replaced during this planning cycle.

## 11.2. Current and Future Needs
The following is a list of projected technology needs over the life of this plan.
- Additional computer purchases and upgrades needed in all buildings
- Library Catalog and Circulation software is needed in all buildings
- Student Administration Software Reporting

- Continued growth of Intranet and Extranet services on the District web presence
- Campus wide managed wireless
- Mobile netbook labs in all buildings
- Expand the use of Moodle as an instructional resource
- Board Policy related to technology needs yearly review.
- Upgrade telephone system

### 11.3. Technical Standards
Technical standards for district assessment of donations, new purchases, and retirement of technical resources will be reviewed on an annual basis and published.  The following standards will be developed and maintained.
- Minimum technical standards for donations
- Technical standards for new purchase compatibility with current network

### 11.4. Technical Support
The current technology support model is described below.   This plan recognizes that these levels will have to be maintained in order to support the current level of technology implementation.
- Full time:
  - 1 - Technology Coordinator
- Part time:
  - 1 – Lab Aide
- Consultant:
  - 1 – Trimble Consulting
- Network Engineer
  - Part Time, contract


## 12.  ACCESS TO TECHNOLOGY
Access to technology will be assessed as part of the annual review of this plan to track progress toward the goal of continual improvement in access to technology for all district students, staff, and community.

### 12.1. Access to Resources
- Computer labs will be actively scheduled to ensure access to all students.
- Access to computer labs by parents and community will be allowed when not needed by students.  Public use will only be scheduled when security and technical integrity can be assured.
- Wireless technologies will be explored as a way to make computer resources more available to classroom teachers and students.
- ISD resources will be explored for adaptive special needs.

## 13. FUNDING AND BUDGET
The budget items covered by this Technology Plan are projected to remain constant, or increase slightly, as a percentage of the total district budget.  The actual amounts available will be determined on a yearly basis.

### 13.1. Variables

- The single largest variable is the State of Michigan's School Aid Budget. The actual amounts available to the district are unknown. Without this information from the State, it is impossible to predict the amount of budget money that will be available for the implementation of this plan.
- The only projections possible are as a percentage of the general fund budget. The following projections are based on current spending, as a percentage of the total general fund budget

### 13.2. Baseline Amounts: 2010-2011

The following amounts have been budgeted for technology related items during the fiscal year 2009-2010.

| | | |
|---|---|---|
| Hardware and networking costs: | $ | 22,500.00 |
| Maintenance and service costs: | $ | 43,000.00 |
| License agreements: | $ | 23,000.00 |
| Software and curriculum support: | $ | 2,500.00 |
| Professional development and training: | $ | 4,000.00 |
| Technical support: | $ | 45,000.00 |
| Computer workstations: | $ | 5,000.00 |
| Computer Supplies | $ | 20,000.00 |
| Total technology expenditures: | $ | 165,000.00 |
| Percentage of General Fund budge: | | 1.16% |
| General Fund Budget: | | $14,239,023.00 |

### 13.3. Projections for 2011-2012

| | | |
|---|---|---|
| Hardware and networking costs: | $ | 20,000.00 |
| Maintenance and service costs: | $ | 40,000.00 |
| License agreements: | $ | 20,000.00 |
| Software and curriculum support: | $ | 2,500.00 |
| Professional development and training: | $ | 4,000.00 |
| Technical support: | $ | 45,000.00 |
| Computer workstations: | $ | 10,000.00 |
| Computer Supplies | $ | 18,000.00 |
| Total technology expenditures: | $ | 159,500.00 |

## 13.4. Projections for 2012-2013

| | | |
|---|---|---:|
| Hardware and networking costs: | $ | 18,000.00 |
| Maintenance and service costs: | $ | 38,000.00 |
| License agreements: | $ | 18,000.00 |
| Software and curriculum support: | $ | 2,500.00 |
| Professional development and training: | $ | 4,000.00 |
| Technical support: | $ | 48,000.00 |
| Computer workstations: | $ | 8,000.00 |
| Computer Supplies | $ | 16,000.00 |
| Total technology expenditures: | $ | 152,500.00 |

## 13.5. Projections for 2013-2014

| | | |
|---|---|---:|
| Hardware and networking costs: | $ | 18,000.00 |
| Maintenance and service costs: | $ | 38,000.00 |
| License agreements: | $ | 18,000.00 |
| Software and curriculum support: | $ | 2,500.00 |
| Professional development and training: | $ | 4,000.00 |
| Technical support: | $ | 48,000.00 |
| Computer workstations: | $ | 8,000.00 |
| Computer Supplies | $ | 16,000.00 |
| Total technology expenditures: | $ | 152,500.00 |

## 14. COORDINATION OF RESOURCES

As technology based solutions become more common, the amount of money needed to support these technical systems increases.  To meet this increasing need, the following sources of funding resources will be explored.

### 14.1. Funding Option Possibilities

- Educational Foundation
- General Fund
- Bonds and sinking funds
- Building funds (consumables)
- USF (E-Rate)
- Grants (local, state and federal)

## 15. MONITORING AND EVALUATION

### 15.1. Evaluation Process

- This plan will be evaluated on an annual basis as part of the School Improvement Process.
- Annual staff and student surveys will be conducted to assess the change, if any, in the way technology is used in teaching and learning.

- A priority list of technology expenditures will be developed each year as part of the budget process.

### 15.2. Indicators of Success
- Progress on the technology priority list will be assessed yearly with the results becoming the basis for the following year's list.
- An increase in the use of technology in teaching and learning, as measured by the annual surveys, will determine the level of success.

### 15.3. Monitoring and Evaluation Responsibility
Responsibility for the monitoring of progress and evaluation will rest with the Technology Committee which will prepare a report of progress to be delivered to the superintendent on an annual basis.
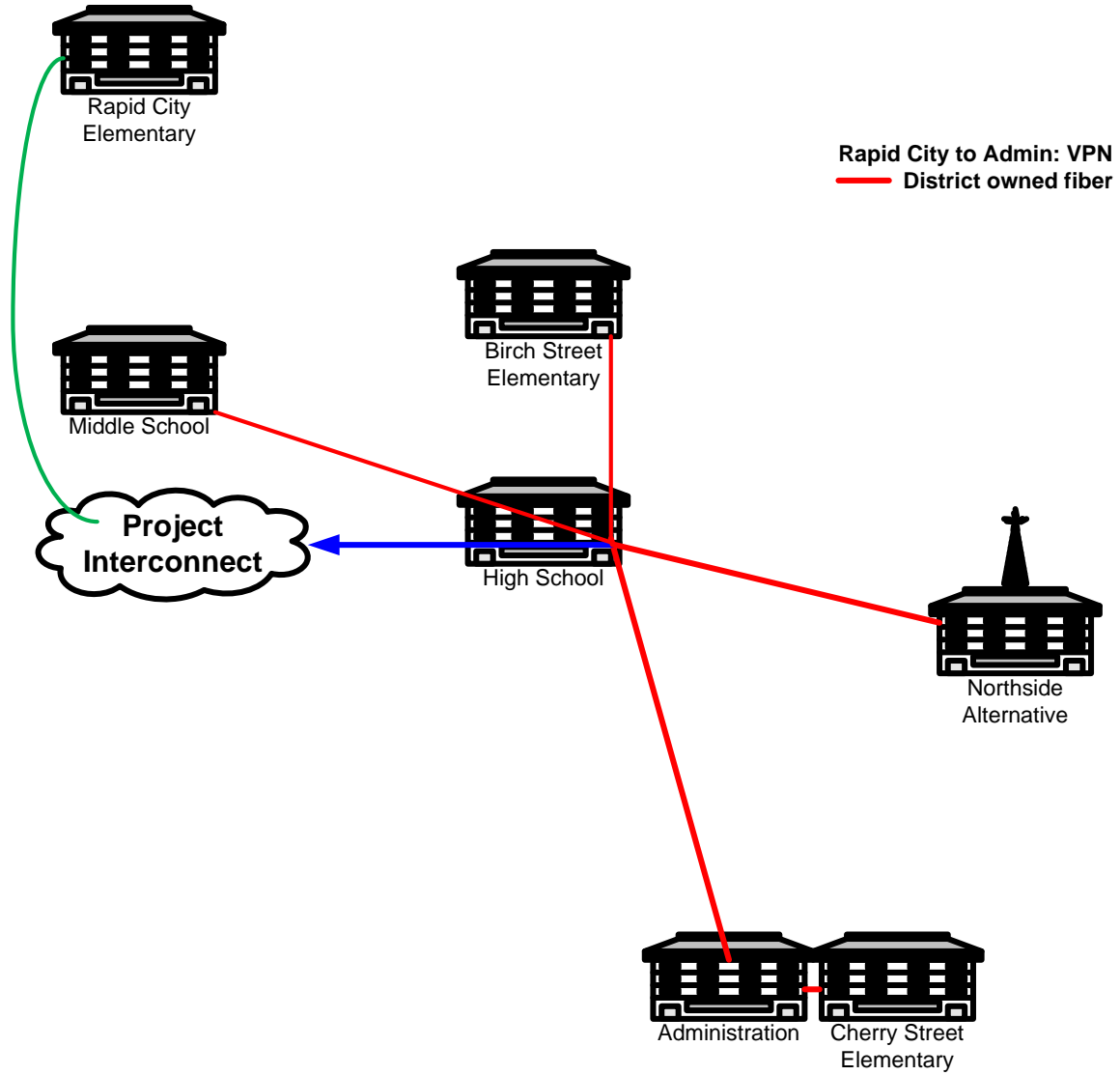
## 16. ACCEPTABLE USE POLICY
The current and proposed Acceptable Use Policies are attached.  The current policy is under review and will be updated during the first year of this Plan.
- The current policy is located in Appendix B
- Text in red is additional language currently under consideration

### 16.1. Internet Filtering
- Internet filtering for all users is provided by TBA ISD.

## 17. APPENDIX A: NETWORK DIAGRAM

**Rapid City to Admin: VPN**
**District owned fiber**

Rapid City
Elementary

Middle School

Birch Street
Elementary

**Project
Interconnect**

High School

Northside
Alternative

Administration    Cherry Street
Elementary

**Kalkaska Public Schools
Wide Area Network Plan
2010-2013**

## 18. APPENDIX B:  ACCEPTABLE USE POLICY
New text currently under review for addition is in red.

4510-R  Computer Network                                                4510-R-4

### School District Rules on Acceptable Use of Computer Network Resources (AUP)

Use of the computer network is a privilege, not a right.  The fundamental rule for the use of district computer network resources is that all use must be consistent with the district's educational goals and behavior expectations. In general, then: Uses of technical resources which support the curricular goals of the district are usually acceptable.  Uses which are not instructionally relevant are usually unacceptable.  Because electronic communications are so varied and diverse, these rules do not attempt to enumerate all required or proscribed behavior by system users.  Users are expected to use common sense and adhere to the norms of behavior in the school community.

This Policy recognizes the requirements for privacy and Internet safety as codified in federal and state requirements.  e.g.  CIPA, COPPA

### In particular, users should:
- Be polite and courteous in all communications and language.
- Assist others in the use of the system, and help others who are looking for ideas or information.
- Post and share information which is interesting and helpful to other users.
- Always use the network as a resource to further their own education and that of others.
- Be mindful of network security, and immediately report any bugs, errors, or security problems to the system administrator.
- Follow the acceptable use guidelines of this network and any other network accessed using district technical resources.  (e.g. Project Interconnect, Merit, etc.)

### Users may not:
- Use the district equipment for anything contrary to law, or to solicit others to break any law.
- Illegally copy, send, or distribute any copyrighted software, work, music, or other material.
- Send, publish, download, access, or retrieve any communication or material which may be defamatory, abusive, obscene, profane, sexually explicit, threatening, racially or ethnically offensive, harassing, or illegal, or anything which violates or infringes on the rights of any person.
- Use the network for any commercial purpose or financial gain.
- Use the network for any advertisement of solicitation without approval from the superintendent.
- Access, attempt to access, modify, or delete any record or file without permission or authorization.
- Make any attempt to harm or destroy the data of any other user or any system on the network, including creating or sending computer viruses, Trojan Horses, or similar computer code.

- Use electronic mail to send unsolicited, bulk, chain, harassing, anonymous, or other messages which are commonly considered an annoyance to recipients or degrade system performances.
- Use vulgarity, obscenity, or swearing in messages or electronic postings, or send email/message "flames" or other attacks.
- Attempt to access material or sites which are blocked by the district, or attempt to use the network while access privileges are suspended.
- Attempt to circumvent, disable, or reconfigure any security systems on the district network or any network accessed using district technical resources.

## 19. APPENDIX C:  CURRICULUM EXAMPLE


## Travel Brochures For Cells Lesson

*Your assignment is to design a brochure to attract visitors to visit an animal or plant cell. You can think of your cell as a huge amusement park or,  even better, as a small roadside attraction.*

You must have at least 8 "attractions" (organelles or cell processes) that will "delight and amaze" your potential customers. Humor and creativity are encouraged.

Your grade will be evaluated by accuracy of organelle descriptions, design, and creativity. **Organelle descriptions-** 40 points (5 points each organelle) **Design**
  1. rough draft-20pts
  2. final copy on Microsoft publisher-3 Opts. **Creativity-** 10
points

 **This assignment is worth 100 points. This is a very large grade you need to take it seriously!**

For Example: Visitors might want to visit the ribosomes, located just outside the nucleus, and watch as proteins are synthesized right before your very eyes

Be sure to visit the Golgi center inside the gift shop, and have your purchases gift wrapped for you before you leave.

Sample Student Work:

## 20. APPENDIX D: USF

We intend to supplement our school funding each year by applying to the Universal Service Fund for discounts.  These services provide us with day to day essential operations.

### 2011-2012
Telecommunications:
- local telephone services
- long distance services
- cellular service

Internet Access
- Student email service
- Web Hosting
- Internet Access
- Broadband connectivity

Internal Connections
- Firewall
- Servers
- Network Electronics
- Backup
- Wireless Infrastructure
- Campus Wireless
- Data/voice cabling
- Replacement VoIP Phone System
- Fiber connectivity: within and between buildings

Basic Maintenance of eligible equipment
- Maintenance of eligible equipment
- Install of eligible equipment

### 2012-2013
Telecommunications:
- local telephone services
- long distance services
- cellular service
- PRI line(s) for new phone system

Internet Access
- email service
- Web Hosting
- Internet Access
- Broadband Connectivity

Internal Connections
- Managed Firewall Services
- Servers
- Network Electronics
- Data/voice cabling
- Phone system
- Fiber connectivity: within and between buildings

Basic Maintenance of eligible equipment
- Maintenance of eligible equipment

**2013-2014**

Telecommunications:
- local telephone services
- long distance services
- cellular service
- PRI line services

Internet Access
- email service
- Web Hosting
- Internet Access
- Broadband connectivity

Internal Connections
- Managed Firewall Services
- Network Electronics
- Servers
- Fiber connectivity: within and between buildings

Basic Maintenance of eligible equipment
- Maintenance of eligible equipment