Learning @ Root Educational Plan 2012-2015

Root Mission Statement:
A community that loves learning, loves learners, and is a place where everyone works for everyone's success.

Root Vision Statement:
Provide a respectful, high quality learning community where everyone is nurtured and inspired to become a 21st century learner.

Plan Purpose:
To effectively align and coordinate the use of funding, resources, staff development, and personnel support for the purpose of achieving our vision of providing a respectful, high quality learning community where everyone is nurtured and inspired to become a 21st century learner.

Plan Summary:
This 3-year implementation plan, developed by the 21st Century Workgroup Team, includes the following components:

- 21st Century Learning @ Root Statement
- Resources, Equipment & Infrastructure Section
- Staff Development & Training Section
- Support Personnel & Staffing Section

Proposed Plan Usage:
The Root Leadership Team, School Improvement Team, Root Foundation, Technology and Media Committee, Scheduling Committee and other school-based committees will use this implementation plan to guide them in their decision making.

21st Century Workgroup Members:

- Brad Peterson, Technology Facilitator (Co-Chair)
- Nancy Torborg, Media Specialist (Co-Chair)
- Julie Cook, First Grade Teacher
- Tina Glover, Parent
- Kathy Johnson, Fourth Grade Teacher
- Fran Mastropolo, Second Grade Teacher
- Kenya Moore-Kerr, Assistant Principal
- Julie Sullivan, Parent
- Shelley Thacker, Fifth Grade Teacher

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21st Century Learning @ Root Statement

Root Elementary is an innovative 21st Century Learning Community where students and teachers build a deep understanding of essential learning concepts, as identified in the National Core Curriculum and State Standards. By working purposefully together to maximize the educational and personal potential of every student, we recognize and accept the uniqueness and special gifts that each individual brings to our school community and world. Lessons integrate writing, science, technology, engineering, and math (STEM) skills across the curriculum.

- Students explore and investigate relevant real world past, current, and future problems and seek to develop creative solutions.
- Students critically analyze information and choose appropriate tools when researching, organizing, developing, and presenting projects.
- Students collaborate in teams (cooperative groups), take ownership of their own learning, and share accountability**.**
- Students and teachers utilize technology to learn about, communicate with, and virtually visit places in their local communities and around the world, thereby developing greater understanding and appreciation of all nationalities and cultures**.**
- Teachers act as facilitators in the learning process and ask guiding and probing questions of students.

Learning at Root is a constantly vital, dynamic process that embraces collaboration and dedication across the spectrum.

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Resources, Equipment & Infrastructure Section

Current Situation:

- Root Elementary currently has approximately 230 working computers.
- 67 of these computers are laptops. Most of these laptops are utilized by teachers and other staff members and connected to projectors and SmartBoards in the classrooms.
- 168 of these computers are desktop computers. Most classrooms have between 4-5 desktop computers and these are usually lined up in a row along one wall and are designed for use as a center and for individual student use rather than small group use. The remaining desktop computers are located in the primary computer lab (30), the media center (8), and administrative, support personnel offices and rooms. Many of these desktop and laptop computers are five years or older and slow. Students and staff frequently complain about how long it takes to boot up and log in to the computers.
- Root has five sets of students response system units, several "Flip" video cameras, a wireless network, and a LAN server. While teachers know how to use the cameras to take pictures and videos, many need training on how to safely and appropriately save and post them to the Internet.

Ideal Situation:

- Root has up-to-date functioning computers that are regularly replaced every five years.
- Most technology issues are resolved in less than a day to minimize downtime and more difficult issues that require outside support and assistance are resolved in less than a week.
- Classrooms have a teacher laptop connected to a projector and an interactive whiteboard (SmartBoard) and 4-6 laptops or other similar mobile computing devices for student use. These mobile devices are spaced around the room on computer tables or desks where they are plugged in and charging and easily allow for small group as well as individual use. The mobility of the devices allow them to be moved around the room and school for flexible group and student use. In kindergarten and first grade classrooms, technology devices that allow for multiple students users, such as SmartTable, may be utilized instead of or in combination with the mobile devices when deemed appropriate.
- Locations such as the media center, computer lab(s), and science/engineering room(s) are available and open for classroom and student use and manned by qualified personnel to provide instructional assistance and support when necessary.

- The wireless network is set up to accommodate the larger number of mobile devices and allows for quick and reliable access to the local area network server and Internet.
- Teachers and staff have readily available access to other technology tools such as student response systems, video and digital cameras, etc. as determined that is needed by the school technology committee and school improvement team. Teachers also have the necessary support and training to utilize these resources and tools effectively.
- Teachers and students have ability to print when necessary in color and black and white using printers/copiers that are located in their classrooms and/or in easily accessible locations near classrooms. Documents, pictures, information, etc. are transmitted and shared electronically whenever feasible to reduce printing costs.
- Teachers and students have access to software, online applications, equipment, supplies, and personnel support to facilitate the integration of subjects, especially science, technology, engineering, and math (STEM), through the use of project-based and problem-based learning.
- Teachers and classrooms have websites or pages that act as student portals to the Internet to facilitate effective and safe student use of electronic resources. Teachers are also given necessary planning time and support to update their web pages and to develop and find online lessons and assessments for students to access through their pages.
- The media center, computer lab, and science (STEM) lab have one or more sets of laptops or similar mobile devices (10-30) that are designed to accommodate small group and/or individual use. Each set also includes a carrying tray/case or mobile cart that can be used to easily and safely transport the laptops or mobile devices from one location to another within the school building.

Key Points:

- Move from desktops to mobile computing devices (laptops, tablets, SMART tables) in 5 years
- Push for ideal ratio of 1:4 devices to students in classrooms
- All teachers will have websites or pages to act as student portals to the Internet
- Necessary personnel support in place to maintain, access, and use available technology hardware and software

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Resources, Equipment & Infrastructure Implementation Steps:

Year	Action Items	Estimated Cost/Time
1	• 25 student laptops or mobile devices (classrooms)	$15,000
	• 15 teacher laptops	$10,000
	• 10 laptop/mobile device cart/tray (media center)	$7,500
	• Software and online applications	$2,500
	• 5 Laser Printers	$2,500
	• Replacement Parts (projectors, document cameras, etc.)	$2,500
		$40,000
2	• 30 student laptops or mobile devices (classrooms)	$20,000
	• 10 teacher laptops	$5,000
	• 10 laptop/mobile device cart/tray (computer lab)	$7,500
	• Software and online applications	$2,500
	• 5 Laser Printers	$2,500
	• Replacement Parts (projectors, document cameras, etc.)	$2,500
		$40,000
3+	• 30 student laptops or mobile devices (classrooms)	$20,000
	• 10 teacher laptops	$5,000
	• 10 laptop/mobile device cart/tray (science/STEM lab)	$7,500
	• Software and online applications	$2,500
	• 5 Laser Printers	$2,500
	• Replacement Parts (projectors, document cameras, etc.)	$2,500
		$40,000

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Staff Development and Training Section

Current Situation:

- Mini training on Web 2.0 tools and other technology topics offered during PTL time on Wednesdays
- Required Race to the Top and Common Core training
- Trainings offered by the county and/or school are often one shot training sessions covering several topics without much follow through or additional trainings
- Training assessment survey of staff has been done at the beginning of the school year but does not always seem to drive staff development and be used effectively throughout the year
- Required training for staff covers a variety of topics that often appear to compete against each other for staff time and focus (ex. Daily Five, Project-Based Learning, Race to the Top, etc.)

Ideal Situation:

- A coordinated staff development and training plan and schedule for the each school year based on the current school improvement plan, statewide and WCPSS initiatives, and identified school personnel needs, with built in flexibility to deal with unforeseen issues, technology, and curriculum changes.
- Flexible staff development and training offered on a variety of topics in different formats (virtually, face-to-face, etc.), at various times, locations, etc., based on individual staff and grade level needs
- Hands-on, interactive, product-based (make-it, take-it) training sessions offered whenever possible
- Focused, mini-training sessions with follow-up sessions provided when needed and with time provided between sessions to practice learned skills
- Video-taped training sessions available for viewing by staff members who were either unable to attend training or any individuals wishing to review/repeat training at a later time.

Key Points:

- Coordinated staff development plan based on School Improvement Plan
- Training offered on a variety of topics and at various times to allow staff the flexibility to choose based on individual and grade level needs
- Hands on interactive training sessions
- Focused mini-training sessions with follow-up sessions when necessary
- Video-tape training session whenever possible for later viewing

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Staff Development and Training Implementation Steps

Year	Action Items	Estimated Cost/Time
1-3	• Each year by June 1, the School Improvement Team develops and prioritizes a list of possible training sessions to offer to staff during the next school year based on the current approved school improvement plan, WCPSS and state initiatives, and end of year staff development needs survey.	Varies based on developed training sessions list
	• Each year by June 15, the Leadership Team reviews the developed, prioritized list of staff training for the upcoming year and creates a tentative staff development and training schedule (including any required, recommended, and optional WCPSS training) based on school calendar (workdays, early release days, etc.) Extra days and times are built into staff development schedule whenever possible to provide flexibility in the schedule. Training sessions will be designed based on the developed Staff Development Rubric and be as hands-on, interactive, and focused on the needs of staff.	
	• Each year by September 15, every staff member develops a Professional Development Plan to include the required and selected optional training sessions (as identified in the staff development and training schedule) which they plan to participate in and any they plan to offer to other staff members during the upcoming school year.	

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Support Personnel and Staffing Section

Current Situation:

- There are several staff support personnel that have assisted in the implementation of 21st century learning skills at Root Elementary this school year by providing direct student instruction, staff training, and/or classroom teacher support. They include the IRT (instructional resource teacher), the media specialist, the technology facilitator, counselor, and the AG teacher.
- Full-time IRT provided through state and county funds
    - Has flexible schedule to work with teachers during the school year
- Full-time media specialist provided through state and county funds
    - Has flexible schedule approximately half of time
    - In specials rotation for grades K & 1 and participates in specials schedule for classes in grades 3-5 on Thursdays and Fridays
- Full-time technology facilitator provided through a combination of state and county funds and Root foundation funds
    - Has regular three week rotation schedule for grades 2 through 5
    - In specials rotation for grades K & 1
- Full-time AG teacher provided through state and county funds

Ideal Situation:

- A 21st century support team consisting of the IRT, media specialist, technology facilitator, AG teacher, school counselor, and a science/engineering or STEM facilitator who have time to collaborate and plan together with teachers
- A schedule that allows as much flexibility for the 21st century support team staff to work with individual teachers and grade level to effectively implement 21st century learning (project-based/problem-based, collaborative, integrated, student-driven instruction)
- A science/engineering or STEM facilitator who helps classroom teachers implement the science curriculum, leads in the development/identification and implementation of engineering based lessons, activities, and projects for all grade levels, and works with the 21st century team and classroom teachers to develop project-based and problem-based lessons and activities that integrate science, technology, engineering and math.

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Key Points:

- Need to remove current 21st century support staff (media specialist and technology facilitator) from specials schedule as much as possible to allow for more flexible use of staff time and resources
- Need to provide time for 21st century support staff to collaborate as a team and to meet with grade levels to plan integrated project-based and problem learning lessons.
- Need additional science and engineering staff support for full and successful implementation of 21st Century learning/STEM instruction at Root

<u>Support Personnel and Staffing Implementation Steps</u>

Year	Action Items	Estimated Cost/Time
1-3	• Continue to fund the following 21st century support staff members at current levels: ○ Full-time IRT ○ Full-time Media Specialist ○ Full-time Technology Facilitator ○ Full-time AG teacher ○ Full-time counselor	Cost of five full time teachers
	• Fund a full-time science/engineering facilitator with the following primary responsibilities: ○ Help classroom teachers implement and teach the science curriculum essential standards ○ Lead in the development/identification and implementation of engineering based lessons, activities, and projects ○ Work with the 21st century support team and classroom teachers to develop project-based and problem-based lessons and activities that integrate science, technology, engineering, and math	Cost of full time teacher or TA position depending on available funding and staffing.
	• Build time in the school calendar and schedule for the 21st century support team to meet and plan with grade level teams on at least a quarterly basis to plan project-based and problem-based lessons.	NA