

# Frost Lake's iPad Purchase Proposal

## **Objective**

Frost Lake Elementary School is developing a plan to improve classroom instruction and increase student learning and engagement through technological innovation. This plan will help teachers and students meet instructional goals while contributing to school wide adoption of the technology and sharing of knowledge and concrete data of its outcomes with the school district. In addition, this project will initiate an intensive study of student learning and technology use with tablet technology providing research and feedback for future initiatives within the district.



## **Goals**

1. To develop and implement a system of mobile learning with the iPad that offers alternative input and application for student learning and achievement of instructional goals.
2. To enhance the implementation of the previous iPod Touch devices to the broader school and create multiple disciplines in which mobile technology can be tested and implemented.

## **Implementation**

Frost Lake plans to pilot an iPad program that will meet the following instructional needs:

**Reading:** Particularly during guided reading, iPads will:

- \* Allow students to interact with text to practice and demonstrate comprehension strategies
- \* Help students track lines of text easily between multiple pages
- \* Allow students to access online media that supports understanding of text (i.e. definitions, images, audio) without cumbersome keystrokes, mouse or textbooks
- \* Support students to move easily between text and illustrations to demonstrate understanding
- \* Allow students to move between text and writing about reading (making connections)
- \* Read text for students when needed

**Math:** Particularly during Tier 2 of Everyday math, iPads will:

- \* Increase instructional time by virtue of their user-friendly start-up
- \* Give students instant access to math manipulative interactive Apps
- \* Allow students to build math basic facts quickly
- \* Illustrate geometry facts and/or figures
- \* Give the class the ability to wirelessly share student work instantly (students work out a problem on the iPad then share it on the projector with the class)

### **Writing:** iPads will:

- \* Allow for students to quickly create presentations (Pages, Keynote)
- \* Pages allows student to publish files as ePub documents that are electronic books, they can be read as books on many mobile devices as well as computers
- \* Dragon Dictation allows students to brainstorm orally so ideas are not lost before they can be written ( ELL and Special Education)
- \* All in one device to quickly support all steps of the writing process in Writers' Workshop; Poetry, Memoir, Genre studies...
- \* Allow for students to build up keyboarding skills

Another unique application of iPads to be incorporated into teacher instruction is viewing of 'screen casts.' Screen Casts preserve lessons for "anytime" future student use. Teachers make short movies of lessons by capturing their movements/actions on a computer screen, along with their voice. These videos are easily downloaded onto the iPad (or a website), so students may review it as needed to understand the concept or skill. Additionally, absent students can watch previous lessons without taking teacher time from the whole class upon their return. Moreover, absent students may view lessons from home *before* they return. Examples include math lessons (adding fractions), how to play Everyday Math Games, or Kindergartners modeling how to enter the classroom.

### **Why iPads vs. other Technology**

Why a mobile technology solution at all? How many times do teachers say "I would love to use X or Y technology, but it just takes too long or it is too difficult to get students into the program." The iPad offers two great qualities to overcome those barriers; **speed and ease**. When every minute in the classroom counts, rather than struggle with technology many teachers often go without.

Other options of mobile solutions include laptops and net books. Frost Lake has laptops available for staff and student use. These devices work great for large projects. Many teachers, however, limit how and when to use them for the following reasons:

- Battery limitations
- Time consuming to get them out and set up
- Boot up time takes too long
- Time it takes students log-in and launch an application takes away instruction time

Teacher experiences with the new Netbooks this year have been frustrating. Netbook performance is very slow, their screen resolution is low, and the failure rate is high.

More importantly, iPads cost half the price of laptops and do almost as much, and just as well. Additionally, iPads have features that don't exist on most laptops, such as an interactive touch screen and thousands of apps to leverage that ability. iPads have a solid state hard-drive (no moving pieces), thus, failure rate is very low. This also makes turning it on almost instant and contributes to a battery life of 10+ hours. Saint Paul Public Schools District's Apple

representative stated the great thing for our IT department, from a support standpoint, is that “if something doesn’t work, turn it off, then back on. If that does not fix it, it is a software bug (the provider must fix) or it needs to be sent to Apple for repair.” For IT support, this cuts problem trouble shooting time to almost nothing. A scan of the internet / blogisphere reports failure rates of iPads to be very low. Additionally, There are many apps that are free or very low cost. Most of which are not available for laptops or netbooks. And more textbooks are producing electronic versions every day.

## Initiative Structure

Structure of this program will have 4 parts, totaling 65 iPads.

1. Pilot Classroom: A classroom set of 30 (one assigned to the teacher), that would stay in that room for intensive infusion into all parts of the curriculum, through a step-by-step process. This would be implemented with targeted, continuous coaching and collaboration by Frost Lake’s Technology Specialist.
2. Mobile Lab: Another set of 30 iPads, housed in a cart charging/syncing station that would be available for all teachers in the school to check out and use with their classes. Ongoing staff development would be provided to staff by Frost Lake’s Technology Specialist based on lessons learned in the pilot classroom.
3. Trainers: Three iPads would be kept for staff training purposes as well as individual teacher check out. This would provide teachers the option to practice using an iPad before checking out the cart for their students so that they can become familiar with the apps they intend to use in class and/or search for apps that they might use in class. (These three units also would serve as our insurance policy; should an iPad in one of the two class sets become damaged or non-functioning it would be replaced by one of these).
4. Administration: The final two iPads would be assigned to the Principal and Assistant Principal to make sure they are comfortable with the technology as instructional leaders of our school.

## Technical Aspects

The iPads would all be fully managed by Frost Lake’s Technology Specialist. The specialist has the technological expertise gained through experiences with iPod Touches with respect to managing class sets, set up, sync, and troubleshooting. The iPads will be managed in the same since they run on the same operating system. Thus, Frost Lake requires **no support** from the district Information Technology (IT) department during the pilot phase of this initiative. Frost Lake is committed to the research, documentation, and evaluation of the pilot project with the intent of sharing that data with the IT department and the district. Frost Lake Elementary School is open to ongoing dialogue with the IT department on any and all aspects of the project if desired.

## **Assessment:**

Success will be measured in several ways:

1. Specific monthly assessments in Reading and Math specific to the iPad
2. Authentic Assessments in Writing
3. Comparison data from MAP tests (pilot class compared to control class(es))
4. Quarterly anecdotal evidence of level of integration into various disciplines as given by pilot classroom teacher, Technology and Global Studies Specialist, Assistant Principal and Principal points of view

### Outcomes and Assessment Measures

#### **Outcome #1**

The students will be able to interact with the text to practice and demonstrate comprehension strategies.

Outcome Measures:

1. Students will be able to describe, analyze, or evaluate reading in some of its specific and various forms-passages, short stories, poem, and non-fiction
2. A representative sample of students who utilize the iPad will be measured on reading scores from MAP assessment, Mondo Assessment, and running records.

#### **Outcome #2**

Students will be able to apply Mathematic concepts from algebra, geometry, and math basic facts to personal and economical issues and problems involving communities, and the world.

Outcome Measures:

1. Students will use number sentences involving addition, subtraction and unknowns to represent and solve real-world and mathematical problems.
2. Use strategies and algorithms based on knowledge of place value, equality and properties of addition and multiplication to multiply a two- or three-digit number by a one-digit number.
3. A representative sample of students who utilize the iPad will be measured on math scores from MAP assessment.

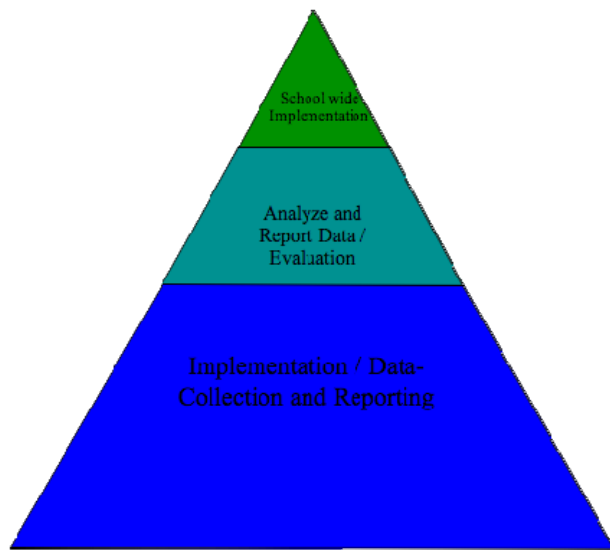
### **Outcome #3**

Students will be able to analyze problems or issues from a historical, contemporary and personal perspectives through writing informative/exploratory texts.

Outcome Measures:

1. Students will be able to utilize the iPad to write informative/explanation texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section
2. Students will be able to use iPad apps such Dragon Dictation to record facts and opinions for writing opinion, informative/explanatory or narrative writing.

### **Implementation/Assessment Framework:**



## Support and Testimony

D. Keenan:

Overall I am a believer in innovation, and I know that the iPad is only one more step in a constant evolution between society and technology. While I don't think that it is the last tool we will ever need in education, it is a wonderful new stepping stop on the road to explore. **(D. Keenan, teacher from Airdrie, Alberta, Canada, <http://www.mrkeenan.com/?p=457P>).**

1. **removal of walls** – I have read about this one in a few reviews, that the iPad can take away the 'wall' of the laptop screen. The truth is, I have noticed the difference this makes with the iPads I use in class now, but I had never been able to formalize it until it was brought up in the reviews. I have never liked having the screen between me and a student, even less in a lab where it is a full-size computer. When the device is on a table, it is an open and public, collaborative device, instead of a closed and individual one.
2. **student collaboration** - With more screen real-estate, students can actually share information on the screen of the device. It is far easier to ask a quick question, engage in a discussion, or even project student work via the available video output connection. This is a tangible improvement that again will open the classroom considerably for collaboration and sharing.
3. **personalizing education** – The personal interaction between students and devices is a key reason for this initiative. They love them. They will choose the iPod Touch or an iPad over paper and pen. They feel connected to the 'feel' and use of the device in a way that is hard to articulate. I truly believe that the iPad will bring this ownership of student work and connection to tasks to a whole new level. As with point #1, it involves connections in the room, connections that we in older generations just may not quite understand yet because we are outsiders to student connections to technology. We can see it though, and provide students the opportunity to use those connections for learning.
4. **formalizing applications** – The iPad is going to take many of the educational apps that are in early development stages and force them to update, creating far more useable and graphically complete programs. It doesn't hurt that the price point for iPad apps seems to be \$9.99. The new profit margins will be higher for those succeeding with development of iPad apps, hopefully this means more attention will be paid to the 'details' of some apps, such as file movement and sharing.
5. **a 'cloud computer'** – I love the idea of a tablet that students can use to interact with their online content. Whether you use a blog, Google Docs, or a CMS, all will be accessible in a very interactive way on the iPad. I look forward to seeing the new possibilities this platform will open up, and how some companies will start to integrate the iPad into their structures.

A. Theissen:

"Today's students are born into a digital world. We, as teachers, need to move this way. The open source instructional services and products available online are only to the students' benefit and will, without a doubt, entice them into learning and enhance my lessons as a teacher. Students should have technology at their fingertips. This is the way they will, and do, live their lives. Through the use of technology, including iPads and iPads, this information is readily available and is immediate. Even walking to the computer lab can be wasting instructional time if there is a quick app that highlights key concepts in your lesson." **(A. Theissen, 6th Grade Teacher, SPSS).**

## **Apps to be Purchased:**

(Apps purchased in quantities of 20 or more receive a 50% discount.)

- GoDocs for iPad/iPhone (Google Docs™ full support) 4.99 (\$2.50)
- Pages \$9.99 (\$5.00)
- Keynote \$9.99 (\$5.00)
- Dragon Dictation Free

## **Budget and Finances**

	<b>Item</b>	<b>Qty</b>	<b>Unit Price</b>	<b>Tot. Cost</b>
1	iPad Wi-Fi 16 GB - 10 Pack	6	\$4,790.00	\$28,740.00
2	iPad Wi-Fi 16 GB	5	\$499.00	\$2,495.00
3	aftermarket skin/cover	65	\$10.00	\$650.00
4	iPad keyboard dock	15	\$69.00	\$1,035.00
5	Apple Dock connector to VGA	3	\$29.00	\$87.00
6	iPad Camera Connection	3	\$29.00	\$87.00
7	Bretford Pwersync Cart for iPad	2	\$2,599.95	\$5,199.90
8	Go Docs (Google Docs App)	65	\$2.50	\$162.50
9	Pages	65	\$5.00	\$325.00
10	Keynote	65	\$5.00	\$325.00
				\$39,106.40

\*\* This budget is provided by Apple.

Funds to be used are from Title1 with the exception of the two for administration. Those funds will come from the Frost Lake General Ed. fund.

## **Respectfully submitted by:**

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