



**2011-2012 ATOMIM GIFT GRANT
AWARDED AT 2012 SPRING CONFERENCE**

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Project Title
Using an iPad as Part of the RTI Process to Support Students who Struggle in Math

Grade level/courses affected:
5th and 6th grade math students at the Tier 2 Level of the RTI process

Project Abstract: a short summary giving an overview of the proposed project
The goal of the project is to address specific issues that are common to students who struggle in math: number sense, basic facts, and fractions. This project will include the use of an iPad and math apps as an additional way to support students who are receiving math RTI Tier 2 support.

Project Description: include the purpose of the project, the target audience of the project, the materials needed, and the evaluation plan

Purpose

The iPad will be an engaging, tactile resource for students to use to solidify math concepts. The students receiving math support at the Tier 2 level of the RTI process need more opportunities to engage in math activities and discussions. I want to use math apps for the iPad as a way to encourage students to practice their basic facts as well as reinforce math concepts from previous grade levels. The apps that I will purchase will allow the students to use the touch screen of the iPad to interact with the mathematics. One of the apps (Number Line) that I've been exploring for this project requires the student to learn about relationships between fractions, decimals, and percents. Several of the apps have a game environment that increases

the interest level for the students. One student responded, when prompted about the app, "It keeps me engaged and watching for the next problem, I like it."

I will provide guided support to the students while they use the apps. I would incorporate handouts that help students record their work from specific math apps. I will be using the iPad during the RTI work time with students.

Target Audience

Selected fifth and sixth grade students whom I currently service as part of the RTI Tier Two process.

Materials Needed

I will purchase one iPad to use when working with an individual student or as center for a small group of students. In addition, a small budget to purchase math apps for the iPad, as well as enough money to purchase a protective cover for the iPad.

Evaluation Plan

We are using fact fluency for progress monitoring for our RTI students and they will also take the NWEA MAP math assessment in May. I will be looking for growth from the students by comparing their May 2011 score to their May 2012 score. I will also keep anecdotal notes based on observations of students when they are using the iPad. Students would also complete a survey regarding their reaction to the iPad and how they feel it supports their learning.

Project Budget: indicate areas of expense and amounts

Item	Cost
iPad	\$499.99
iPad apps	\$60.00
iPad case	\$40.00
Total	\$599.99

I have already received an anonymous \$100 promised donation to put toward this project if it is approved. The donation will be used to cover the cost of the apps (including the apps I've been exploring as well as new apps that are appropriate for RTI math support) and the cover that will sufficiently protect the iPad.

Rationale

Purchase of one iPad - \$499.99 The iPad is the purpose of the grant as a way to provide support to students receiving RTI in the area of mathematics.

Math apps - \$60 (this would purchase a minimum of 15 math apps)

The apps will be selected based on my previewing them (which I have been doing for several weeks) with students. I have been using the iPad from the technology lab as there are no iPads available to students at this time.

iPad cover - \$40.00 In order to protect the iPad a cover will be purchased.

Project Dissemination: an indication how you intend to share the results of the project with other teachers in Maine. An article suitable for the ATOMIM newsletter is a requirement.

I will share the project results with other math teachers and special education teachers in my building and in the district with the goal of encouraging the use of iPads with students. At the moment we do not have iPads for student use and therefore I would be using the data from this project as justification to our technology team to include iPads in our next budget cycle. I will also write an article for the ATOMIM newsletter indicating my findings from the project as well as include a review of the various math apps that I used with the students. I have started a blog (<http://jennyjorgensen.posterous.com/>) where I provide the app name, describe how it works, and whether I would recommend it for math support. The blog is a work in progress and will continue to grow as I explore more math apps.

Project State/National Standards: Which Maine or National Standards does your project address? Cite the specific standard(s).

Common Core State Standards for Grade 5 (5.NF#1): One critical area of focus for students is to “develop fluency with addition and subtraction of fractions.” Specific math apps (ie. Number Sense and Fraction Math) for the iPad will be purchased to provide students with practice in this area.

Another fifth grade standard in the CCSS (5.NBT#3) requires students to be able to “read, write, and compare decimals to thousandths.” For the students receiving RTI support they also need opportunities to reinforce their understanding of place value, especially with decimal numbers less than one. There are several apps for the iPad that provide this practice for students.

In sixth grade a standard in the CCSS (6.NS#4) requires students to work with greatest common factors and least common multiples. For students who struggle in math, this concept needs reinforcement and often a variety of experiences. One method of reinforcement would be through math apps on the iPad. Another standard (6NS#5) deals with positive and negative numbers and how they are used to in the real-world. There are several math apps that I will explore to see if they can be used to provide support for this concept.

The Mathematical Practices of the CCSS will also be addressed through the use of the math apps on the iPad. Guided discussions by the teacher will be incorporated during the lessons when students are using the iPad. The iPad can be used to model mathematics in a variety of ways, depending on the app.