Assignment 5
Integrating Emerging Technology (TIM) into the Curriculum – ASSURE Lesson Plan

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Abstract

This lesson plan is designed to follow the ASSURE model. It was designed for a third grade mathematics class. The students in this class were learning about money. The teacher wants to ensure that the students know (a) how to add and subtract money, (b) how to identify bills and coins, (c) that money is different in other countries, (d) that their money is created through a printing process, and (e) that artists work to design money. This lesson plan was designed to help close the gap between the writer's status of Collaborative Adaptation (B3) to Collective Infusion (D2) as measured by the University of South Florida's Technology Integration Matrix (TIM). The lesson plan follows each phase of the ASSURE model, and steps in the lesson plan are named the same as in the model and include standards (by number and name) the lesson plan achieves.

Integrating Emerging Technology (TIM) into the Curriculum: Third Grade Currency

This lesson follows the ASSURE model for incorporating technology into the classroom (Smaldino, Lowther, & Russell, 2012). The ASSURE model stands for Analyze learners; State standards and objectives; Select strategies, technology, media, and materials; Utilize technology, media, and materials; Require learner participation and Evaluate and revise (2012).

Analyze Learners

The learners at the target site are 8 to 9 years of age. Their understanding and comprehension levels range from below level to above level. Approximately 20% of the class is below level, 50% are on level, and 30% are above level. These levels are based on student achievement on tests. These students are expected to activate prior knowledge and critically analyze money in a manner beyond recognizing it. Students currently can recognize pennies, nickels, dimes, quarters, dollar coins, and bills. They are expected to be able to categorize money into dollars and coins and put coins in value order, and they should be able to count coins to find the value of a given amount. As demonstrated by the learning styles inventory taken at the beginning of the year, the learning styles of the students vary. While all students learn through auditory, kinesthetic, and visual manners, some learn better using one more than the others. About 20% of the class is mostly auditory, about 20% are mostly kinesthetic, and about 60% are visual learners.

State Standards and Objectives

The target site has adopted the Common Core State Standards. Informational texts are the main components of literature, social studies, and science for the Common Core State Standards. It was important to the teacher to ensure that students had opportunities to explore informational text in regards to money. In addition to the online resources, the students would be taken to the

library to find books on international currency, printing and design techniques, and the history of currency.

The learning objectives for this unit are targeted to an audience of third-grade students with previous exposure to the concept of currency. After their instruction, the students will be able to (a) add and subtract money, (b) identify bills and coins, (c) understand that money is different in other countries, (d) that their money is created through a printing process, and (e) that artists work to design money. The students will be evaluated on the activities based on the rubric (see Appendix A).

Common Core State Standards

CCSS.ELA-Literacy.RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.ELA-Literacy.RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.

CCSS.ELA-Literacy.RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

CCSS.ELA-Literacy.RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSS.ELA-Literacy.RI.3.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).

CCSS.ELA-Literacy.RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic.

CCSS.Math.Content.3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Select strategies, technology, media, and materials

This is a two-week long unit. In the classroom students will have opportunities to access the interactive white board (IWB) to demonstrate knowledge of various money amounts. The usage of technology allows for the modification of understanding while collaborating with others (Technology Integration Matrix, 2007). Also, as students are working on the IWB, the rest of the students can work on their individual whiteboards as they follow along. This will give students opportunities to discuss with their group what they did and why, as well as follow along with students at the IWB. The teacher will need to review place value, how to add numbers that require carrying, how to subtract numbers that require borrowing, and how to subtract across zeroes. Students will have access to IXL.com to practice (a) adding, (b) subtracting, and (c) comparing money amounts. IXL.com is an interactive online resource that the students can access to solve various math problems. The target site purchased a license for each elementary aged student at the school for this website. All elementary teachers can access their class and monitor each student's progress and review the grades they earned from IXL.com where they are rated from Mastered to Needs Improvement. They will also be given opportunities to access ABCya.com for money counting activities in the computer lab at least twice a week (see Appendix B). ABCya.com is a free online resource with activities on which students can practice money-related skills. Teacher monitoring must occur during the computer sessions. Students will record information in their notebooks and will have opportunities to write about their experiences using Microsoft Word. During all activities the teacher will use a tracking chart to monitor how well the students are doing on each assignment (see Appendix A).

All students need to be engaged in all activities in order to ensure that all types of learners' needs are being met. In order to ensure that students are engaged, the teacher will have

students use whiteboard activities to visually check to see which students are showing progress during the review activities.

Utilize Technology, Media, and Materials

The third grade students are comfortable using the IWB, individual dry erase boards, IXL.com, and ABCya.com. The teacher may have to bring the usernames and passwords for IXL to the computer lab in case a student has forgotten their username. The integration of technology with teaching is a manner in which the students can have instantaneous feedback to their work, and this allows them to make changes in their learning as needed. With the use of technology based on standards students can demonstrate what they already know, and then apply that to what they are learning in order to be successful (Marcoux, 2012)

The teacher needs to set up any lessons on the IWB before presenting or displaying the screen to the class. The software is available on teacher laptops and therefore should be prepped before hooking up to the IWB. Students should be made aware of what they are going to be doing and what the objectives are for the unit.

Students are grouped in the classroom by abilities and behavior. The teacher has the students arranged in three groups of four and one group of five. The students are given numbers and letters within their group to ensure that the teacher can effectively have students work together without having to name off each student and who they are working with. The students are numbered one to four in each group. The fifth person in the five-person group can be placed in any spot if there is a person absent, or be grouped with a pair to ensure that all students have an opportunity to work together.

As the students are working through the unit their learning responses should be directed at the teacher about their own learning. The students will also reflect on the effectiveness of the

lessons and will provide feedback for what needs to be evaluated. This will allow the teacher to reflect on what worked and what can be improved upon.

Require Learner Participation

The students will all be able to access their IXL.com accounts. Their scores and how long they worked are automatically generated into a report for the teacher (see Appendix C). The teacher can also log in and determine which students are struggling with what material and plan remediation accordingly. The students will be required to keep a learning log on a Word document that can be emailed or printed for the teacher. This report and log can then be used to formally assess student progress and provide the necessary feedback. As the students work on various tasks, they will be able to work and help each other throughout the activities in order to ensure meaningful learning is taking place.

Evaluate and Revise

The teacher will be able to use the ASSURE model to facilitate the learning of the students. Throughout the activities the teacher will keep a log of which students were able to finish the tasks and record data from IXL.com and end of unit test to ensure that students demonstrate proficiency. The students will have instantaneous feedback. IXL.com and ABCya.com give the students hints and strategies to use to solve problems as the students are working on them. This instant feedback is one of the benefits of this technologic integration in instruction.

References

ABCya.com. (n.d.). Kids educational computer games & activities. Retrieved from http://www.abcya.com/

IXL.com (n.d.). IXL Math and English. Retrieved http://www.ixl.com/

Marcoux, E. (2012). Use technology wisely. *Teacher Librarian.* 39(6). 61-62.

Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2012). *Instructional technology and media for learning* (10th ed.). Boston, MA: Pearson.

Technology Integration Matrix. (2007). *Levels of technology integration into the curriculum.* Retrieved from http://www.fcit.usf.edu/matrix/

Appendix A

Category	Try Again	Needs Practice	Proficient	Excellent
Student was able to identify dollar bills, quarters, dimes, nickels, and pennies	Student was unable to differentiate currency	Student was able to differentiate between bills and coins, but did not understand individual currency value	Student was able to identify bills and coins and understood individual value	Student was able to identify, differentiate, compare, and rank the relative value of each unit of currency
Student was able to add, subtract, and compare money amounts on IXL.com	Student was unable to complete activities on IXL.com	Student was able to either add or subtract money amounts, but could not do both. Rated as Good or below on IXL.com	Student was able to add, subtract, and compare money amounts. Rated as Excellent on IXL.com	Rated as Mastered on IXL.com on all activities
Student was able to complete the counting money activity on ABCya.com	Student was unable to complete activities on ABCya.com	Student was able to complete level 1 in the counting money activity	Student was able to complete level 2 in the counting money activity	Student was able to complete level 4 in the counting money activity
Student was able to write about their online learning experience on a Word document	Student was able to write about 1 or more of the learning experiences with little understanding of their own learning	Student was able to write about 1-2 of the learning activities that showed some understanding of their own learning	Student was able to write thoughtfully about their learning in 2 of the 3 activities	Student was able to thoughtfully write about their own learning in each activity, metacognition

Appendix B


Counting Money
Practice counting money and collect fish for the aquarium!
Level 1
Count to 99 cents
Level 2
Count to 10 dollars
Level 3
Count to 100 dollars
Click on a level and press GO.
GO
Beginner
GO
Expert
Exit

Appendix C

Grade 3 Category All

View skills all practiced only

Update report

Performance summary

Time spent	19 hr 53 min
Problems attempted	2,579
Skills practiced	83
Cumulative score as of November 17 (out of 23,000)	9,610

Performance on all skills