

Project Title: Pompeii Project Integration-3rd Grade Tech Project

Brief Description:

We chose to use the story, Pompeii: Buried Alive, from our Houghton Mifflin Series, as a springboard for our project. It provided a stimulus for student interest in which we could integrate technology as a tool to encourage student learning, exploration, enrichment, and assessment across disciplines. The use of technology allowed students to read authentic historic documents which were introduced in the Houghton Mifflin text, as well as explore original and authentic architecture, art, and artifacts from the time period. They could watch simulations of volcanic eruptions on suggested websites, and make connections between the language arts, math, social studies, and science curricula. We were able to teach and extend many geometry concepts through the project because of the students' high level of curiosity, energy, interest, motivation, and enthusiasm.

Teacher(s):

Debbie Miller, Jean Sambor, Lauren Petruschke, and Penny Glackman

School(s): Merion Elementary School

Grade(s)/Discipline(s): 3rd grade, interdisciplinary

Standards & Benchmarks (for each Discipline):

This project addressed many standards and benchmarks in several disciplines. Therefore, we chose to list a few of the standards from each discipline we felt were most heavily addressed.

Math:

2.9.3 Students can predict how shapes can be changed by combining or dividing them.

- Students will identify shapes and patterns in real life contexts.
- Students will identify lines of symmetry in geometric figures.
- Students will relate two dimensional geometric vocabulary and concepts in lifelike situations.
- Students will develop mathematical processes for finding area and perimeter.

Language Arts:

1.2.3 Students will read and understand essential content of informational texts and documents in all academic areas.

- Students will differentiate fact from opinion.
- Students will use and understand a variety of media and evaluate the quality of material produced.
- Students will use electronic media for research.

1.8.3 Students will locate information using appropriate sources and strategies.

Social Studies:

Identify the impact of physical systems on people.

8.1.3 Understand chronological thinking and distinguishing between past, present, and future.

8.4.3 Compare similarities and differences between earliest civilizations and life today.

Technology:

1.1 Students use input and output devices to successfully operate technology.

1.2 Students use a variety of media and technology resources for directed and independent learning activities.

1.3 Students communicate about technology using developmentally appropriate and accurate terminology.

2.1 Students work cooperatively and collaboratively when using technology.

2.2 Students demonstrate positive social and ethical behaviors when using technology.

- 2.3 Students practice responsible use of technology systems and software.
- 3.2 Students use technology resources for problem solving, communication, illustration of thoughts, etc.
- 4.2 Students use web browsers and hyperlinks under teacher supervision.
- 5.3 Students will determine when technology is useful and select the appropriate tools and resources to address a variety of tasks and problems.
- 6.1 Students will use technology resources for problem solving, self directed learning, and extended learning activities.

Science:

- Students will learn that technology enables others to observe things that are too small or too far away to be seen without it (such as the eruption of Mt. Vesuvius).
- Students will understand how natural forces (volcanoes in this instance) shape the earth.

Enduring Understanding & Essential Question(s):

- How have people chosen to use shapes, such as in mosaic design, over time?
- How have the use of shapes and mosaic design changed, and/or stayed the same over time?
- How does the human use of natural resources, shelter, clothing, art, architecture, forms of government, culture, transportation, and environmental considerations reflect and /or change over time?

Assessment(s) (formative and summative):

- * traditional paper/pencil class work
- * retelling and sharing of student "discoveries"
- * technological construction of symmetrical mosaics through a designated web page
- * technological construction of original mosaics through a paint program with individual objectives and design
- * teacher observation
- * sharing through student led conferences
- * demonstrated appropriate use of technology in class

Instructional Strategies (including Constructivist attributes):

- Students were given choices as to the design and line of symmetry for the first mosaic.
- Students were given the choice of objective and "message" for the paint program mosaic, using a template provided through the server.
- Students were taught how to use a word processing and draw program through discovery, individual student interest and the desire to learn.
- Students were encouraged to build upon prior knowledge to create their own objectives and designs.
- Students were provided with the tools to read authentic documents, research scientific evidence, and view authentic art from Pompeii.
- Lessons and activities incorporated the multiple intelligences.
- Differentiation of instruction is at the core of all planned lessons.

Resources (including Technology hardware/software):

Internet Web Sites (refer to attachments and exhibitions)

Houghton Mifflin Literature Series, Enjoy book

Scott/Foresman-Addison/Wesley Math Program, Chapter 8-Geometry

Template for Mosaic Design (paint program)

Various books on volcanoes and Pompeii

Student Laptops

Presentation System in Classroom

Overhead Projector

TV/VCR (National Geographic video)

Connections, Adaptations/Extensions (to Differentiate Learning):

LA-Nonfiction Genre, reading in the content area, making connections

Math-Geometry Unit: area, perimeter, symmetry, shapes

SS-strand: Changes over Time (mosaic design and communication)

Science-extension of Rocks and Minerals unit (volcanoes)

Art-Barnes Foundation Field Trip-symmetry and shapes in art

Implementation Notes:

It was very exciting to witness the students' growth and motivation as they were actively engaged in their learning through this project. Because this was our first year being networked, and we did not acquire student laptops until December, we were "playing catch up" and learning as we worked. Before we could begin a project we needed to teach the students basic lessons on computer use, internet safety, etc. Therefore, we were continually working on ideas, but several planned implementations could not be tried because of a lack of time, and equipment since we had to share the presentation system and the student laptops. For instance, many students were very interested in learning about Latin and the Roman Empire; but we did not have the time to implement or explore all of their ideas. We tried to develop independent research and/or enrichment opportunities whenever an interest arose. Some of us put the website for mosaic design on our eboards which allowed students to create more designs at home. We are looking forward to pulling the project together in a more cohesive manner for implementation next year.

Attachments/Exhibitions:

<http://www.lmsd.org/staff/elemtech/techmnu3resources/techmnu3pompeimosaics.html>