Ancient Greece: Pythagoras and Grecian Architecture During Late 6th century BC

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Unit Overview

- Math, Literature, Writing
- 10th Grade

Main Unit Objective(s):
- Exploring the mind and history of Pythagoras
- Researching the impact the Pythagorean theorem had on ancient Grecian structures
- Understanding how the Pythagorean theorem works
- Creating individual newspapers that explore/emphasize/reiterate these objectives.
Math

- 111.34
  - (a.3)
    - Geometric figures and their properties. Geometry consists of the study of geometric figures of zero, one, two, and three dimensions and the relationships among them. Students study properties and relationships having to do with size, shape, location, direction, and orientation of these figures.
  - (b.5D)
    - identify and apply patterns from right triangles to solve meaningful problems, including special right triangles (45-45-90 and 30-60-90) and triangles whose sides are Pythagorean triples
  - (b.8C)
    - derive, extend, and use the Pythagorean Theorem;
TEKS: 110.31. (B) (9)
- Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding.

(A) Summarize text and distinguish between a summary that captures the main ideas and elements of a text

SWBAT: make inferences and draw complex conclusions about the ideas in text through context clues and supporting details.

: Learn to identify relevant information by using text elements as “signs” (includes: section headings, chapter titles, illustrations, photographs, math examples, repeated words, captions, boldface terms or concepts)

CCRS (2) Reading: Use text features and graphics to form an overview of informational texts and to determine where to locate information.

ELPS (4) Cross-curricular second language acquisition/reading:

(F) use visual and contextual support and support from peers and teachers to read grade appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;
Writing

- 15(D): produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience.

- 18(A): use conventions of capitalization; and

- 18(B): use correct punctuation marks including:
  (i) comma placement in nonrestrictive phrases, clauses, and contrasting expressions;
  (ii) quotation marks to indicate sarcasm or irony; and
  (iii) dashes to emphasize parenthetical information.
Resource Bank: Math

- Pythagorean Theorem
  - http://www.mathsisfun.com/pythagoras.html
- History of Pythagorean Theorem
  - http://ualr.edu/lasmoller/pythag.html
- Greek History and Geometry
  - http://jwilson.coe.uga.edu/emat6680/greene/emat6000/greek%20geom/greekgeom.html
- Origami Triangular box
- Famous Greek Structures
  - http://greece.greekreporter.com/2014/07/14/10-must-see-ancient-greek-temples/
Resource Bank: Reading

- A brief history on Pythagoras and his theorem: [https://www.youtube.com/watch?v=FdMXjJunb1o](https://www.youtube.com/watch?v=FdMXjJunb1o)
- Ancient Greek Architecture: [http://www.ancient.eu/Greek_Architecture/](http://www.ancient.eu/Greek_Architecture/)
- Strategies for developing reading skills: [http://www.nclrc.org/essentials/reading/stratread.htm](http://www.nclrc.org/essentials/reading/stratread.htm)
Resource Bank: Writing

- A hard copy of the San Antonio Express (or any other Newspaper)
- Database of Thesauruses, Encyclopedias, Atlases, Dictionaries, Etc.: http://www.infoplease.com/
Using Resource Banks to Accomplish Objectives

- Will allow students to understand the importance of angles and measurement when building structures.
- Will aid students in creating class projects and presentations
- Will aid students in gathering quality information
Interdisciplinary Connectedness

- Math (Pythagorean Theorem) and Ancient Greek Literature and Writing
Benefits of Interdisciplinary Units

- Connecting English Literature and terminology of Ancient Greece with Math a concept derived from ancient Greek mathematicians/philosophers.
- Chance for students to understand a given topic (The Pythagorean Theorem) by learning not only how to use it but how it came about.
- Lets students know subjects do intertwine with one another.
Technology’s Role

- The use of technology throughout our unit plan is meant to enhance and extend student learning.
- Technology will be used for research and creation of the student’s individual newspapers.