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Interdisciplinary Plan Sheet/Check-list
ED 321
The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant.
Plato

Unit Topic: Ancient Greeks

Grade-level: Ninth Grade

Length of time: 2 weeks

Essential Questions:
1. What did the ancient Greeks do that still matters today?
2. How did Greece lay the foundation for modern Western culture?

Standards to Address

Math:
G1.2.3 Know a proof of the Pythagorean Theorem, and use the Pythagorean Theorem and its converse to solve multistep problems.

G1.2.5 Solve multistep problems and construct proofs about the properties of medians, altitudes, perpendicular bisectors to the sides of a triangle, and the angle bisectors of a triangle. Using a straightedge and compass, construct these lines.

G.SRT.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

G2.2.2 Relationships Between Two-dimensional and Three-dimensional Representations: Identify or sketch cross sections of three-dimensional figures. Identify or sketch solids formed by revolving two-dimensional figures around lines.

G2.2.1 Identify or sketch a possible three-dimensional figure, given two-dimensional views. Create a two-dimensional representation of a three-dimensional figure.

G.GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

G.SRT.6 Understand that by similarity, side ratios

in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

G.SRT.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

L1.1.6 Explain the importance of the irrational numbers √2 and √3 in basic right triangle trigonometry, and the importance of π because of its role in circle relationships.

ELA:

CCSS.ELA-Literacy.RL.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

- CCSS.ELA-Literacy.W.9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
    - o CCSS.ELA-Literacy.W.9-10.2a Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
    - o CCSS.ELA-Literacy.W.9-10.2b Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
    - o CCSS.ELA-Literacy.W.9-10.2c Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
    - o CCSS.ELA-Literacy.W.9-10.2d Use precise language and domain-specific vocabulary to manage the complexity of the topic.
    - o CCSS.ELA-Literacy.W.9-10.2e Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
    - o CCSS.ELA-Literacy.W.9-10.2f Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

CCSS.ELA-Literacy.W.9-10.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 9–10 here.)

CCSS.ELA-Literacy.W.9-10.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

History:

CCSS.ELA-Literacy.RH.9-10.2 Determine the central ideas or information of a primary or

secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.

CCSS.ELA-Literacy.RH.9-10.3 Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

CCSS.ELA-Literacy.RH.9-10.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.

CCSS.ELA-Literacy.RH.9-10.6 Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

CCSS.ELA-Literacy.RH.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claims.

CCSS.ELA-Literacy.RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources

Materials List:

ELA:
Collection of Greek Myths
Excerpts from *Conversations of Socrates*
List of quotes from Plato - http://www.brainyquote.com/quotes/authors/p/plato.html
The World of Forms
http://public.wsu.edu/~brians/world_civ/worldcivreader/world_civ_reader_1/plato.html
Laptops (From Media Center)

History:
Creation Story - http://dept.cs.williams.edu/~lindsey/myths/myths_16.html
Short Hoplite Documentary - https://www.youtube.com/watch?v=McwmRQUTfKk
Map of the Ancient Aegean
The Republic by Plato
The Histories of Herodotus - http://www.gutenberg.org/files/2707/2707-h/2707-h.htm
Map of Alexander the Great's Empire -
http://web.mit.edu/course/21/21h.580/www/timesatlas/p22_3.jpg
Mini replica of Archimedes screw

Math:
Different Proofs of Pythagorean Theorem
Dry-Erase Markers
Dry-Erase Board
Geometry Manipulatives

Play-Doh (For Plato Day)

List of Key Terms or Vocabulary:
Mythology
Historiography (broken down into root words)
Irrational

Ratio
Theorem
Proof
Postulate
Democracy
Phalanx

Assessment:
Our collaborative assessment will be a final portfolio created by each student. The portfolio will include a mathematical proof, a timeline of events/important people, and the script for their play. It will also include any other pieces completed in each class. The final piece required in the portfolio will be a research paper on a topic that relates to the Ancient Greek unit. The topic can be anything or anyone from the time period, but the paper must include a brief description of what was taking place in each discipline (Mathematics, History, and Literature) during the time of the topic. The students will also have to include reflections of their work.

Calendar:

January 2012

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
DECEMBER 2011 M T W Th F Sat S 48 1 2 3 4 49 5 6 7 8 9 10 11 50 12 13 14 15 16 17 18 51 19 20 21 22 23 24 25 52 26 27 28 29 30 31						**1**
| | | | | | | Thales (demonstrative mathematics) - Intro to proofs Intro to Greek Mythology Greek Creation Myths - Creation to Bronze Age	**3** Pythagoras - Shift to Geometry Modelling of Expert Reader Bronze Age to Classical Greece	**4** Pythagorean Theorem Expert Groups (Explain a Myth) The Aegean World - Geography	**5** Plato - Platonic Solids Socratic method (Read pieces of both Plato and Socrates) Relationship between Socrates and Plato	**6** PLATO DAY Forms of Platonic Solids Read The World of Forms The Republic - Create an 'Ideal City' and government	**7**	**8**
9 "Mind Blown" Day Euclid - Parallel Postulate (5th Postulate) Greek Words Greek Historiography Herodotus	**10** Geometry Proofs Research Modelling Intro to Alexander the Great	**11** Write/Edit Proofs Editing/Peer Reviewing Archimedes' impact on Alexander the Great	**12** Ratios with Archimedes Play Day Decompression - Review of the Past Unit	**13** Party/Food DAY Present/Partayy Day! Presentation/Party Day Presentation/Party Day	**14**	**15**
16	**17**	**18**	**19**	**20**	**21**	**22**