NOTE: Rework the science section and product requirements so that most of the science requirements are presented on an interactive timeline from tiki-toki

Driving Question

How did the spirit of inquiry during the Renaissance enhance our understanding of the world around us?

Introduction

The Middle Ages, they were dark. Peasant revolts, roving bands of crusaders, disease, angry nobles, and dramatic climate changes. It probably wasn't the best time to be alive. Gradually, though, things began to change, first in Italy, then throughout the rest of Europe. Artists began exploring new painting techniques. Scientists decided that the Earth wasn't the center of the universe. Physicians were digging up graves to conduct the first autopsies. And the feudal system was in ruins. The Western world was gradually beginning to wake up from a very bad dream. The new reality was bright, vibrant, curious, and innovative. Our world would not be what it is today without the foundations laid by questions asked during the Renaissance.

Eccentric billionaire, Greta L. Stiplesnout, is obsessed with the importance of the Renaissance. Her friends all hate the fact that she is constantly telling anyone who will listen, "That it's impossible to understand the world in 2013 without understanding the Renaissance." Fortunately for you, Ms. Stiplesnout is as rich as she is loud. She's heard, from her gossiping friends of course, that you just flew past the Renaissance while cruising around in the Woozle 3000. So, she's contracting you and your team of museum designers to put together a whole museum proving that the Renaissance is the key to our modern reality. Her considerable fortune is at your disposal and the sky is the limit. Have fun!

Task

You and your team of museum designers are responsible for designing Ms. Stiplesnout's museum and building two displays that will be part of an actual exhibition, titled Foundations of the Future.

Products

Each team is responsible for creating the following products:

- 1. Museum Proposal: Given unlimited resources, design your Foundations of the Future museum. Create a blueprint of the floor plan with all displays indicated. Produce a supporting document that explains each display in detail.
- 2. One built object for the Foundations display. Must be accompanied by a written explanation of the piece.
- 3. One built object for the Future Display.
- 4. 2-4 minute podcast explaining the future object. Podcast must include audio enhancements such as background music, sound effects, or both.

Requirements

Your final project must meet all of the following requirements for each course. Please provide a project guide that indicates which part of your project meets each requirement.

<u>CAMTaC</u>

- 1. Your museum proposal should address the following topics:
 - a. Why the Renaissance began in Italy and how it spread to other areas.
 - b. Renaissance Culture
 - c. Changes in thought and technology during this time period.
 - d. The Protestant Reformation (in Germany and later changes in England) and its aftermath.
 - e. Motives for exploration and its impact on global populations and global trade.

<u>Health</u>

<u>Science</u>

- 1. 3 pieces of evidence to support the claim that a spirit of inquiry during the Renaissance enhanced our understanding of the universe. Include changes to the process of inquiry that occurred during this period.
- 2. Compare and contrast modern ideas regarding the formation of the universe with Renaissance ideas about the formation of the universe. Evidence must be used to support modern ideas.
- 3. An explanation of Kepler's laws of planetary motion with a connection to our understanding of the movement of planets in our solar system.
- 4. Description of changes in our understanding of stars and the sun. Begin with understandings that began to emerge during the Renaissance and show progress towards our modern understanding of the sun as a star.
 - a. Include source of power, lifespan, solar spectra, and changes in activity.
- 5. **INDEPENDENT:** Create a Tiki-Toki timeline describing the life of the sun, beginning with its formation and ending with its death. Be sure to include a description of the source of the sun's power and an explanation of the role of stars in the formation of elements.

	Advanced	Proficient	Beginning
Earth Science			
HS-ESS1-1. Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation. HS-ESS1-3. Communicate scientific ideas about the way stars, over their life cycle, produce elements.	Students are able to explain the five stages of the stellar evolution of a main-sequence star along its path from nebula to protostar to main-sequence star to red giant/supergiant to white dwarf/neutron star/black hole.	Students provide an explanation of stellar evolution that demonstrates a general understanding of the process.	Students provide evidence that stars follow an evolutionary life cycle.

HS-ESS1-2. Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	Students are able to explain the Big Bang Theory, why it is the most widely accepted theory for the formation of our universe, and contrast the theory with Renaissance ideas of the formation of the universe.	Students are able to explain the Big Bang Theory but do not provide evidence as to why it is the most accepted theory of the formation of the universe.	Students provide some scientific explanation of how the universe was formed.
HS-ESS1-4. Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	Students are able to state Kepler's three Laws of Planetary Motion and explain what they mean in regards to orbital shape, speed, and period length.	Students state Kepler's Laws of Planetary Motion but are unable to describe what they mean in regards to how planets orbit the sun.	Students demonstrate some understanding of planetary motion.
	Students explain the scientific achievements of three Renaissance astronomers and how their work changed the understanding of the universe.	Students explain the scientific achievements of two Renaissance astronomers and how their work changed the understanding of the universe.	Students explain the scientific achievements of a Renaissance astronomer.
Public Health - Contributors	Description of at least 4 major contributors to some aspect of medicine and/or medical advances (one being Vesalius)	Description of at least 3 major contributors to some aspect of medicine and/or medical advances (one being Vesalius)	Description of at least 2 major contributors to some aspect of medicine and/or medical advances (Vesalius is not included)
Public Health - Printing Press	Description of the printing press and its importance to medicine	Description of the printing press and its importance to medical advances	An inaccurate description of the printing press and its importance to medical advances
Public Health - Organ Donation	Description of organ transplant (who can be a donor) and description of 2 organs that can be donated and the current need for those organs	Description of organ transplant (who can be a donor) and description of 1 organs that can be donated and the current need for those organs	No description of organ transplant (who can be a donor) and inadequate description of 1 organs that can be donated and the current need for those organs
САМТаС			

WH.H. 4.1 Explains the consequences of the Renaissance.	Uses details in the museum to show viewers the connections between the Renaissance and Exploration.	Connects the Renaissance to Exploration.	Explains basic facts about the Renaissance and Exploration.
WH.H.5 Motivations and impact of Exploration.	Uses the museum design to make the many motivations and impacts of exploration clear to viewers.	Thoroughly analyzes the motivations and impact of exploration as explained in class.	Explains some motivations or some impacts of exploration.
W. 9.2 Writing effective informative/ explanatory texts	Museum proposal clearly explains required content and concepts in a concise, professional way.	Museum explanation is clear, concise, and contains required content.	Museum explanation contains some required content. It may be unclear or confusing in places.
CCSS.ELA-Literacy.SL.9-10.5 - Use of digital technology	Podcast enhances the display and clearly communicates the purpose and intention of the display. There is strong evidence of student learning.	Podcast clearly communicates the purpose and intention of the display and provides strong evidence of student learning.	Podcast is related to the display, but does not clearly communicate purpose or intention. Evidence of student learning is weak.