

What is GIS? 1. Enhance your knowledge about GIS and how it is used in the real world by viewing the power point presentation on this link: <http://www.slideshare.net/aGISGuy/what-is-gis-16552722>. Use the World Port Source website to locate ports and answer the questions on the World Port Source Activity Worksheet. You will need to click on the port icons to reveal information about each of the ports. Toggle between Map and Satellite images to compare different types of maps. (Resource attachment #1 and #2) Ports from other countries may be viewed by clicking on the country list located on the left side of the page. Use the USGS GIS website activity to explore oil consumption, production and reserves. (Resource attachment #3)

Simulations

Can you do it? Have fun learning to operate a crane and reach stacker as well as observe steps in docking a container ship using the VisPort website in the resource section below.

How "SMART" Are You?

Use the ATE/SMART website listed below to answer the following questions. How "SMART" are you?

- Name _____
- Use the website from the resource below to answer the following questions on the SMART/ATE centers.
- What does the acronym SMART stand for?
 - Who leads the SMART Center on the East Coast?
 - List 3 ways in which the SMART Center bridges students into the maritime industry.
 - How does industry benefit from the SMART program?
 - How could you utilize SMART to further your education and/or training?
 - What does the acronym ATE stand for?
 - ATE centers are broken down by technology. List the seven technological categories.
 - Using the map of the United States, locate the following:
 - Which types of educational centers are on the East coast?
 - Which types of educational centers are on the West coast?
 - How do SMART and the ATE centers infuse STEM into their program?
 - How could you utilize SMART to further your education and/or training for future careers in the maritime industry?

Tasks

What Maritime Career is best for you, and which pathway will get you there? Begin your journey by exploring the maritime careers.

Maritime Task

Presentation on Maritime Career

Investigate several Maritime careers based on your particular interests and abilities. Choose one that best suits you personally. Make sure it is something that you could possibly see yourself doing in the future. Research the pathway that enables you to land this position. Use the websites below to explore the Maritime career you have chosen. Answer the following questions. Present your information in the form of a power point presentation. Your power point should have between 6 and 9 slides. The slides should include but are not limited to the answers to the following questions. It is up to you to choose which order to put them in.

Questions to consider for power point presentation:

- Career choice with information on specified path including pictures.
- Education and training for the career path.

- 3. How to establish certification.
 - 4. What is the projected job growth for your career choice.
- Additional activities on this webquest will help you to better understand the maritime industry.

Fun Page

Enjoy learning more about the Maritime industry through the interactive resources listed below!

Evaluation

Maritime: HAS YOUR SHIP COME IN????

Rubric for power point presentation

Name

ELEMENT

Exemplary
4

Proficient
3

Partially Proficient
2

Unsatisfactory
1

Points

Power-Point
Graphics and Multimedia

Presents Information to enhance and clarify the content. Excellent use of graphics.

Presents information to clarify the content, uses occasional graphics

Incomplete structure of content with little graphics

Presents information in an unpolished style; no use of graphics audience is unable to follow.

____/4

Text Layout

Makes frequent and effective use of headings, fonts, bullets and space to enhance the content's visual appeal and readability.

Makes occasional use of headings, fonts, bullets and space to enhance the content's appeal and readability.

Makes minimal use of headings, fonts, bullets and space to enhance the content's visual appeal and readability.

Makes no use of headings, fonts, bullets and space to enhance visual appeal and readability.

_____/4

Writing Mechanics

Edits the text with no errors in grammar, punctuation, and spelling.

Edits the text with minor editing required. Few errors in grammar, punctuation, and spelling.

Edits the text, but errors in grammar, punctuation and spelling. Slightly distracts readers.

Edits the text, but numerous errors in grammar, punctuation and spelling. Very distracting to readers.

-----/4

Category and Score					Score
				Total Score	

Conclusion

Congratulations! You have successfully researched a career in the maritime industry. During your journey, you have learned what it takes to successfully land this job. Keeping this in mind...could this be a career for you and do you know how to navigate your way to achieve it?

Teacher Page

This webquest is designed to introduce the Maritime industry and the importance of Maritime industry to the world through education and career path choices. Through STEM curriculum and project based learning, students will be exposed to the various facets of the Maritime industry using math, science, technology and engineering principles. Students will be building on prior knowledge of reading graphs, tables and charts, location of continents and their use of gaming technology through various applications. Students will utilize these skills and apply them to knowledge of Maritime education and a career pathway. Related Virginia Standards of Learning for middle school and high school are listed below.

Middle School Standards

Science Standards of Learning Scientific Investigation, Reasoning, and Logic 6.1 The student will plan and conduct investigations in which c) precise and approximate measurements are recorded;d) scale models are used to estimate distance, volume, and quantity; i) data are organized and communicated through graphical representation (graphs, charts, and diagrams); j) models are designed to explain a sequence; and k) an understanding of the nature of science is developed and reinforced.6.5 The student will investigate and understand the unique properties and characteristics of water and its roles in the natural and human-made environment. Key concepts include c) the action of water in physical and chemical weathering; d) the ability of large bodies of water to store heat and moderate climate; f) the importance of water for agriculture, power generation, and public health; and g) the importance of protecting and maintaining water resources.6.6 The student will investigate and understand the properties of air and the structure and dynamics of the Earth's atmosphere. Key concepts include

a) air as a mixture of gaseous elements and compounds; b) air pressure, temperature, and humidity; c) how the atmosphere changes with altitude; d) natural and human-caused changes to the atmosphere; e) the relationship of atmospheric measures and weather conditions; f) basic information from weather maps including fronts, systems, and basic measurements; and g) the importance of protecting and maintaining air quality. 6.9 The student will investigate and understand public policy decisions relating to the environment. Key concepts include a) management of renewable resources (water, air, soil, plant life, animal life); b) management of nonrenewable resources (coal, oil, natural gas, nuclear power, mineral resources); c) the mitigation of land-use and environmental hazards through preventive measures; and d) cost/benefit tradeoffs in conservation policies. Math Standards of Learning 7.1 The student will a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; d) determine square roots; and e) identify and describe absolute value for rational numbers. 7.4 The student will solve single-step and multistep practical problems, using proportional reasoning. 7.12 The student will represent relationships with tables, graphs, rules, and words. 7.14 The student will a) solve one- and two-step linear equations in one variable; and b) solve practical problems requiring the solution of one- and two-step linear equations. 8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship. Civics/Economics Standards of Learning CE.1 The student will develop the social studies skills responsible citizenship requires, including the ability to a) examine and interpret primary and secondary source documents; b) create and explain maps, diagrams, tables, charts, graphs, and spreadsheets; c) analyze political cartoons, political advertisements, pictures, and other graphic media; d) distinguish between relevant and irrelevant information; e) review information for accuracy, separating fact from opinion; f) identify a problem, weigh the expected costs and benefits and possible consequences of proposed solutions, and recommend solutions, using a decision-making model; g) formulate an informed, carefully reasoned position on a community issue; h) select and defend positions in writing, discussion, and debate. CE.3 The student will demonstrate knowledge of citizenship and the rights, duties, and responsibilities of citizens by a) describing the processes by which an individual becomes a citizen of the United States. U S History Standards of Learning USII.1 The student will demonstrate skills for historical and geographical analysis and responsible citizenship, including the ability to a) analyze and interpret primary and secondary source documents to increase understanding of events and life in United States history from 1865 to the present; b) make connections between the past and the present; c) sequence events in United States history from 1865 to the present; d) interpret ideas and events from different historical perspectives; e) evaluate and debate issues orally and in writing; f) analyze and interpret maps that include major physical features; g) use parallels of latitude and meridians of longitude to describe hemispheric location; h) interpret patriotic slogans and excerpts from notable speeches and documents; i) identify the costs and benefits of specific choices made, including the consequences, both intended and unintended, of the decisions and how people and nations responded to positive and negative incentives.

High School Standards

Computer/Technology Standards of Learning Basic Operations and Concepts C/T 9-12.1 The student will demonstrate knowledge of the nature and operation of technology systems. C/T 9-12.2 The student will demonstrate proficiency in the use of technology. Social and Ethical Issues C/T 9-12.3 The student will demonstrate knowledge of ethical, cultural, and societal issues related to technology. C/T 9-12.4 The student will practice responsible use of technology systems, information, and software. C/T 9-12.5 The student will demonstrate knowledge of technologies that support collaboration, personal pursuits, and productivity. Computer/Technology Standards of Learning Technology Research Tools C/T 9-12.6 The student will use technology to locate, evaluate, and collect information from a variety of sources.

Standards

Credits

Other