

Salt: White Gold

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| Grade Level | 5-6 |
| Duration | 1-3 class periods |

National Standards

GEOGRAPHY

Element 2: Places and Regions.

4. The physical and human characteristics of places

Element 4: Human Systems

11. The patterns and networks of economic interdependence on earth's surface

12. The processes, patterns, and functions of human settlement

Element 5: Environment and Society

16. The changes that occur in the meaning, use, distribution, and importance of resources

AZ Standards

MATHEMATICS

Geometry

5.G.A.2 Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation
5.MP.4 and 6.MP.4 Model with mathematics

ELA

Writing

5.W.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic and to answer a specific question.

6.W.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

SCIENCE

Physical Science

5.P1U1.2 Plan and carry out investigations to demonstrate that some substances combine to form new substances with different properties and others can be mixed without taking on new properties.

Arizona Social Science Standards

GEOGRAPHY

The use of geographic representations and tools helps individuals understand their world.

6.G1.1 Use and construct maps, graphs, and other representations to explain relationships between locations of places and regions. Key concepts include major landforms and water bodies, countries, cities, ecosystems, climate, languages, religion, economic systems, governmental systems, population patterns, disease, trade routes, and settlement patterns

Global interconnections and spatial patterns are a necessary part of geographic reasoning.

5G4.1 Describe how economic activities, natural phenomena, and human-made events in one place or region are impacted by interactions with nearby and distant places or regions.

Global interconnections and spatial patterns are a necessary part of geographic reasoning.

6.G4.1 Explain why environmental characteristics vary among different world regions. Key concepts include but are not limited to latitude, elevation, landforms, location, and human factors

6.G4.2 Describe how natural and human-made catastrophic events and economic activities in one place affect people living in nearby and distant places. Key concepts include but are not limited to disease, war, items exchanged, ideas spread along trade routes, and natural disasters

Overview

Throughout history people have placed great value on certain natural resources. Understanding what these resources were and their impact will enhance students' understanding of historical events.

Purpose

In this lesson students will gain a better understanding of the lasting impact salt has had on human history. The quest for salt has led to the establishment of trade routes, determined settlement patterns, and affected the movement of people and goods. At times it was considered as valuable as gold.

Materials

- Salt Activity Handouts #1-5 and answer keys
- World Map
- United States Map
- Colored pencils or markers
- Graph paper or computer lab for graphing data electronically
- Atlases
- Shallow containers (petri dishes work well)
- Salt
- Water
- Teaspoons and Measuring Cups

Objectives

The student will be able to:

1. create a graph and thematic map to organize information.
2. produce a coherent writing after conducting research on one salt related question
3. conduct an experiment in solar evaporation and salt mining.
4. acquire new knowledge about salt and its importance.

Procedures

SESSION ONE

1. Distribute Salt Activity #4 and explain to students they are going to use the handout to conduct an experiment in solar evaporation and salt mining. Go over the handout to make sure students understand the procedures and expectations. Then, have students work in groups of 2-4 to set up the experiment and make their first observation.
2. Distribute Salt Activity #1. Explain to students they are to select one question to research as homework. If possible, take them to the library or computer lab to begin their research.

SESSION TWO

1. As a class, discuss the findings of their research done as homework. This will help them to begin understanding the importance of salt. Collect this handout for evaluation.
2. Distribute Salt Activity #2 and the World Map. Working in pairs, have students complete this activity using an atlas.

SESSION THREE

1. Distribute Salt Activity #3 and the United States Map. While reading and discussing the handout, students are to be completing the required activities on the map.
2. Next, have students record their observations on the solar evaporation mining experiment.
3. Distribute Salt Activity #5. Go over the directions to make sure students understand how to complete the activity. Students may use the rest of the class period to complete the assignment using graph paper or by going to the computer lab and using a graphing program to create the image needed.

BEYOND SESSION THREE

1. For the next four class periods, give students time to record their observations for the solar evaporation and salt mining experiment.

Assessment

Salt Activity #1 may be assessed for **ELA** (writing) using the Six Traits for Writing with emphasis on Ideas and Content and Organization. A score of 4 out of 6 would be considered mastery.

The World Map used in Salt Activity #2 may be assessed for **geography**. Labeling and coloring correctly 14 out of 18 place names would be considered mastery.

The United States Map used in Salt Activity #3 may be assessed for **geography**. Labeling and coloring correctly 7 out of 9 place names would be considered mastery.

The recorded observations done in Salt Activity #4 may be assessed for **ELA and science** using the Six Traits for Writing with emphasis on Ideas and Content. A score of 4 out of 6 would be considered mastery.

The graph created in Salt Activity #5 may be assessed for **geography and mathematics** using the scoring guide that is included on the handout. A score of 8 out of 10 would be considered mastery.

Extensions

Students could research and report on other resources that have been highly valued throughout history, i.e. spices, silk.

Students could make a collection of salt sayings and their meanings, i.e. not worth his salt, rub salt into the wound, with a grain of salt, salt of the earth.

Sources

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Kemper, Steve, “Salt of the Earth”, Smithsonian
Magazine, January, 1999

Young, Gordon, “The Essence of Life: Salt”, National
Geographic Magazine, September, 1977