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"Egypt, Gift of Nile"

Abstract: In this lesson we will be introducing the basics of ancient Egypt focusing on the Nile River and the necessity of the river. The students will work in small groups and become "experts" on the given topic. Each group will then present the information that was discussed and learned.

Grade Level: 6th

Utah State Core Curriculum Social Studies Standards:
Standard 1
Students identify the sequence of events that led to the establishment of ancient civilizations.
Students explore the cultures of ancient civilizations.
Standard 7
Students explore the geographical features of ancient civilizations
Objective 1
Examine the scientific processes of studying cultures over time.
Objective 1
Explore the culture of the Fertile Crescent and ancient Egypt.

- Examine the role and characteristics of political and social structures in the Fertile Crescent and their significance to the modern world; e.g., Hammurabi's Code, slave labor, gender roles.
- Explore the importance of religion in ancient Egypt; e.g., governance, art, architecture, everyday life, hieroglyphics.

Objective 1
Examine the major physical and political features of early civilizations.

- Compare the physical features surrounding the Fertile Crescent and ancient Egypt; e.g., water, deserts, mountains.
- Examine the importance of water in the development of civilization.
- Analyze the importance of geographical features and climate in agriculture.
- Compare historical and modern maps of the region.

Instructional Time: One Hour

Materials:

Butcher paper/Poster Board
Markers
Background information on the different Egyptian topics
Web sites
Computers (If available)

Any other research information that you desire or have
Valley of the Golden Mummy By Zahi Hawass

Terminology:

Nile River: the world's longest river (4180 miles); flows northward through eastern Africa into the Mediterranean; the Nile River valley in Egypt was the site of the world's first great civilization

The Delta

In Cairo the Nile river spreads out over what was once a big area that was filled by silt deposits to form a fertile, fan-shaped delta (area) about 250 kilometres wide at the seaward base and about 160 kilometres from north to south.

Silt: A sedimentary material consisting of very fine particles intermediate in size between sand and clay.

Background Information:

http://www.angelfire.com/realm/shades/egypt/mummy.htm

This web site is a brief overview of everything you need to know about anything. It has many other links that go into more detail of the information discussed.

http://www.sis.gov.eg/egyptinf/culture/html/rnile.htm

This site has wonderful information about the Nile in ancient times, and in modern times as well.

http://www.mbarron.net/Nile/fctfl_nf.html

Included in this web site are graphs of the flow rate of the Nile, ancient and modern maps of Egypt and the Nile.

http://www.metmuseum.org/explore/newegypt/htm/re_uplow.htm

Here there are wonderful examples of the different symbols of lower and upper Egypt.

Egypt was ruled by Pharaohs who ruled Upper and Lower Egypt. Two Kingdoms (Upper and Lower Egypt) formed *Kemet* ("the black"), the name for the dark soil deposited by the Nile floodwaters. The desert was called *Deshret* ("the red"), "Egypt is a land of black soil.

Lower Egypt is the northern-most section of Egypt stretching from just south of modern-day Cairo to the Nile Delta at Alexandria. Lower Egypt's landscape is dominated by the Nile delta at Alexandria. The delta region is well watered and marshy, because of the annual flooding. Upper Egypt is a narrow strip of land that extends from the cataract boundaries of modern-day Aswan to the area south of modern-day Cairo.

Invitation to Learn: If you lived during ancient times, what would you want to do and where would you want to live? Why would you want to live there?

Prior Knowledge Assessment: The students will individually do a KWL of what is **known** of Egypt and the Nile and **what** the students want to learn. The Students will turn in this form and after the unit the students will fill out what was **learned.** These papers will be filled out and turned in.

Procedures:

1. Give out the KWL forms to each student and allow 10 minutes to fill out what is know, and questions the students have. Gather up the KWLs and keep to help guide the rest of the lessons.
2. Read parts of the book Valley of the Golden Mummy and discuss what the students learned or what was found interesting.
3. Allow each group to choose a topic about the Nile River, and give any information you have to them about the topic chosen. **The Teacher must approve this topic so that it relates to the Nile ecosystem.**
4. The students will collect information about their topics using, web sites and other information so they become the experts on their topic. The students will also collect data, and notes and about their specific topic.
5. The students will make posters, maps, and mini reports about what they have learned.
6. The students will present the information to the class about their topics.

Adaptations and Modifications for Special Learning Needs: Help students become familiar with where to find information, as to not have it be something they don't know how to do. Pair one student with someone strong so they may help them with the information. Show videos about the Nile and the Delta. Break the research up into different days and parts so that students are responsible for smaller portions at a time.

Assessment: Walk around class and ask students to explain what they are doing. Have students take notes in their journal. Collect journal and assess information to see if it is accurate to what is being taught. Collect sheets on a daily basis to make sure they are progressing in their knowledge and are able to access technology appropriately. When the presentations are given a specific criteria will be given, such as preparedness, on-task, each member participates, and quality of content.

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It's Easy To Be Cheesy

Abstract: In this lesson the students will be discussing mummification from Ancient Egypt and different microorganisms. The students will create a hypothesis about what the students think will happen if cheese is put in sand and left for a week and what will happen if cheese is left on a regular dish. After the students form a hypothesis, the students will do an experiment and take notes of what happens. In a weeks time the students will progress and discover from the experiment what has happened to the cheese. As a class we will discover more about mummies and how the sand preserved the mummies and the concept of preservation.

Grade Level: 6th

Utah State Core Curriculum Standards:

Standard V:

Students will understand that microorganisms range from simple to complex, are found almost everywhere, and are both helpful and harmful.

Science Benchmark

Microorganisms are living things that are visible as individual organisms only with the aid of magnification. Microorganisms are components of every ecosystem on Earth. Microorganisms range in complexity from single to multicellular organisms. Most microorganisms do not cause disease and many are beneficial. Microorganisms require food, water, air, ways to dispose of waste, and an environment in which they can live. Investigation of microorganisms is accomplished by observing organisms using direct observation with the aid of magnification, observation of colonies of these organisms and their waste, and observation of microorganisms' effects on an environment and other organisms.

Objective 3: Identify positive and negative effects of microorganisms and how science has developed positive uses for some microorganisms and overcome the negative effects of others.

Instructional Time: 1 hour for instruction, and about 1 week for observations, notes, and results. After that, whatever time you desire to discuss Egypt and similar activities and information.

Materials:

Cheese (Enough cubes for each group or student)
Celica Sand (Enough for each group to cover the cheese cubes)
Paper bowels (Two for each group or student)
Paper/Poster Board

Pencil/Markers
Information on Mummies, the Egyptian Desert, etc.

Terminology:

Decomposer: An organism, often a bacterium or fungus, which feeds on and breaks down dead plant or animal matter, thus making organic nutrients available to the ecosystem.

Variable: Something that is not controlled in the experiment

Control: The part of the experiment that is set and controlled.

Hypothesis: A tentative explanation for an observation, phenomenon, or scientific problem that can be tested by further investigation. Something taken to be true for the purpose of argument or investigation the antecedent of a conditional statement.

Investigation: A process of discovery

Natron: A mineral of hydrous sodium carbonate, $Na_2CO_3 \cdot 10H_2O$, often found crystallized with other salts.

Desiccation: To preserve (foods) by removing the moisture.

Background Information:

In Egypt most of the land is desert. It covers over two-thirds of Egypt's total country. The way of survival was and is the Nile which was considered the life source of the Egypt or in other words it has been said, Egypt, 'the gift of the Nile.' Ibn Battuta said that it; (the Nile) "surpasses all the rivers in sweetness of taste, in length of course and utility."

The Desert runs along the Nile Valley east to the Red Sea. In the deserts of Egypt are where the great pyramids are and the Valley of the Kings and Queens exist. The desert was for the dead.

Mummification ideally preserved and protected the beauty of the human form. A crucial component of this process was a carbonate salt known as natron, a natural salt found in Egypt. The body would be covered in salt which acted liked the hot desert sand and started the process of desiccation. Mummies were first preserved naturally when the deceased was buried in the hot desert sands. The sand dried out the body and the bodily fluids would seep into the sand; which would cause the drying out of the entire body. The things that remained were; skin, hair, tendons and ligaments, and thus over time these would dry out naturally.

http://www.ancientnile.co.uk/mummy.php this is a wonderful site that describes mummification, the beginning and how it changed over time.

http://www.ancientnile.co.uk/mummy.php

This web site is an excellent and extensive web site for information on mummification. However, it is one that should not be used directly by students. It

should be reviewed by the teacher, because of the wonderful details that you can learn and choose whether to share or not.

http://www.uic.edu/classes/osci/osci590/6_2Mummies%20Mummies%20and%20Disease%20in%20Egypt.htm

Links to microbiology and different standards from the core.

Prior Knowledge Assessment: Group activity web of what is known of the Nile River, the Delta, and the Egyptian Deserts.

Invitation to Learn: How would you preserve something living in the desert? What would you preserve? Why would you need to preserve items?

Procedures:

1. Group activity of what is known of the Egyptian Deserts. Have each group make a web.
2. Propose the invitation question and allow students to discuss at tables and then give answers out loud. Here you will talk about what a variable, control, investigation, and hypothesis are.
3. Have each group form a hypothesis of what will happen to the cheese that is put into celica sand, and what will happen to the cheese that is left out in the air.
4. After each group has written down the hypothesis, begin experiment.
5. Give each group two-paper bowls, two cubes of cheese, and a cup of sand.
6. Have the students place one cube of cheese in a bowl, with the sand covering it. Place another cube of cheese in a bowl with no sand covering it.
7. Have students make a list of questions as to what they think will happen to the cubes of cheese in the differing environments.
8. Allow the cheese to stay in that state for about a week. Make observations as to what has happened to the cheese and why you think it happened.
9. After the students have discovered what happened to the cheese, we as a class will discuss mummification in ancient Egypt. How the Natron affected the mummies through desiccation. We will talk about how the mummies decomposed as compared to a "normal" burial.

Adaptations and Modifications for Special Learning Needs: A modification could be doing a group journal instead of an individual journal and have students take turns writing down the information. Change some of the lesson plan to incorporate the "Make a Fruit Mummy" from http://www.unmuseum.org/exmum.htm

Assessment: Collect their journals to see if they understand the concepts that you have been teaching. Also with journals, look at the observations they are making towards the cheese in both containers. Make sure that the students have written a hypothesis, observations, questions, and any other things that are important to investigation. Also, walk around the classroom and ask questions such as "Can you tell me what you are doing?" Ask students to explain to the class what they are supposed to be doing.