



«[Science Lesson Plans](#)

Captivating Caves-GPS review

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Description

This lesson is intended to be way to review of the information on cave formation and fauna to use prior to a unit test. The clues require math skills of multiplication, subtraction and/or addition of three digit numbers. Prior to this lesson the student will need to already have some knowledge and practice using the GPS handheld unit.

Grade Level

4th, 5th

Lesson Objective

- * Successfully answer questions based on prior learning of cave formation and fauna.
 - * Solve math problems of multiplication, division, addition, and subtraction.
 - * Operate a handheld GPS Unit.
 - * Record their expedition in their science journal

GLEs

Science GLE's :

Strand 3: Characteristics and Interactions of Living Organisms

1. There is a fundamental unity underlying the diversity of all living organisms
 - D. Plants and animals have different structures that serve similar functions necessary for the survival of the organism
 - d. Classify vertebrate animals into classes (amphibians, birds, reptiles, mammals, and fish) based on their characteristics

Strand 4: Changes in Ecosystems and Interactions of Organisms with their Environments,

1. Organisms are interdependent with one another and with their environment Science understanding is developed through the use of science process skills and scientific knowledge in combination with scientific investigation, reasoning, and critical thinking.
 - A. All populations living together within a community interact with one another and with their environment in order to survive and maintain a balanced ecosystem
 - a. Identify the ways a specific organism may interact with other organisms or with the environment (e.g., pollination, shelter, seed dispersal, camouflage, migration, hibernation, defensive mechanism)
 - b. Identify and describe different environments (i.e. pond, forest, prairie) support the life of different types of plants and animals
 - D. The diversity of species within an ecosystem is affected by changes in the environment, which can be caused by other organisms or outside processes.
 - a. Identify examples in Missouri where human activity has had a beneficial or harmful effect on other organisms (e.g., feeding birds, littering vs. picking up trash, hunting/conservation of species, paving/restoring green space)

Strand 5: Processes and Interactions of the Earth's Systems (Geosphere, Atmosphere, and Hydrosphere)

1. Earth's systems (geosphere, atmosphere, and hydrosphere) have common components and unique structures
 - A. The Earth's crust is composed of various materials, including soil, minerals, and rocks, with characteristic properties
 - b. Compare the physical properties (i.e., size, shape, color, texture, layering, and presence of fossils) of rocks (mixtures of different Earth materials, each with observable physical properties)
 2. Earth's systems (geosphere, atmosphere, and hydrosphere) interact with one another as they undergo change by common processes
 - A. The Earth's materials and surface features are changed through a variety of external processes
 - b. Identify the major landforms/bodies of water on Earth (i.e., mountains, plains, river valleys, coastlines, canyons)
 - c. Describe how weathering agents (e.g., water, chemicals, temperature, wind, plants) cause surface changes that create and/or change Earth's surface materials and/or landforms/ bodies of water
 - d. Describe how erosion processes (i.e., action of gravity, waves, wind, rivers, glaciers) cause surface changes that create and/or change Earth's surface materials and/or landforms/ bodies of water
 - e. Relate the type of landform/water body to the process by which it was formed

Math GLE's
MA1 1.6

Depth of Knowledge

Level 1

Instructional Strategies

Direct instruction on use of GPS and decoding clues
Group work on GPS location of waypoints.

Time Needed

2 sessions

Materials

4 GPS units
Clues
Answer recording sheets-one for each student
Student journals

Academic Vocabulary

See Attachment

Lesson Plan

Day One:

Introduce/review GPS unit using smartboard. Put students into groups and then give each group a sample clue using the letter/number code sheet and have each group solve their clue. As a class have each group discuss and show how they got the answer to their clue. Make sure that each group was able to understand the clues and able to successfully decode the clue. Practice recording answer on the recording sheet. Practice finding the waypoints on the GPS unit. Repeat clue and GPS practice as necessary until each group understands.

Day Two:

Groups will do activity outside on playground. Students will be told not to share information. Students will record their information on the student sheet provided in addition to recording any problems in their science journal.

Resources

 [Student Pages](#)

 [List of Questions](#)

 [Academic Vocab](#)

Literature links

N/A

Text book link(s)

N/A

Key concepts: [GPS cave](#)

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