Sluice Sorting

SUBJECT: Science
GRADES: K-1
DURATION: approximately 30 minutes for sluicing; additional 30 minutes for sorting
ACTIVITY SUMMARY: Students will use their findings from their bags of mining rough to group the rocks based on their properties and characteristics.

Different rocks found from sluicing at Natural Bridge Caverns.

OBJECTIVES:
Students will be able to:

1. Observe, describe, compare, and sort rocks based on their characteristics such as size, texture, and color.

MATERIALS REQUIRED:
Bag of mining rough

Pencil & paper

PROCEDURE:

1. Obtain a bag of mining rough.
2. Pour small amounts of the rough into a tray and gently shake the tray while holding it in the water.
3. Gather the minerals that are left behind and place them in the collection bag.
4. Continue steps 2-3 until the bag of rough is empty.
5. Once all rocks and minerals are collected, use the identification card to sort them into groups of the same type.
6. Have students brainstorm different ways the rocks and minerals could be sorted into groups.
7. Have students group their rocks based on these different ideas.

Children discovering different rocks while sluicing at Natural Bridge Caverns.

EVALUATION:
Teachers should monitor as students sort their findings to be sure they are putting the samples into the appropriate groups according to the decided on criteria.

Natural Bridge Caverns, Inc.
26495 Natural Bridge Caverns Rd
San Antonio, TX 78266
210-651-6101
www.naturalbridgecaverns.com

TEKS ADDRESSED:

Science

Kindergarten

1(C) identify, describe, and demonstrate safe practices during classroom and field investigations as outlined in Texas Education Agency-approved safety standards

1(E) collect observations and measurements as evidence

2(B) analyze data by identifying significant features and patterns

10(A) describe and classify rocks by the observable properties of size, shape, color, and texture

(11) The student knows that earth materials are important to everyday life. The student is expected to observe and generate examples of practical uses for rocks, soil, and water

1st Grade

1(C) identify, describe, and demonstrate safe practices during classroom and field investigations as outlined in Texas Education Agency-approved safety standards

1(E) collect observations and measurements as evidence

6(A) classify objects by observable physical properties, including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter

10(A) investigate and document the properties of particle size, shape, texture, and color and the components of different types of soils such as topsoil, clay, and sand

2nd Grade

1(B) create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things

1(C) identify, describe, and demonstrate safe practices during classroom and field investigations as outlined in Texas Education Agency-approved safety standards

1(D) use tools, including hand lenses, goggles, heat resistant gloves, trays, cups, bowls, beakers, notebooks, stream tables, soil, sand, gravel, flowering plants, student thermometer, demonstration thermometer, rain gauge, flashlights, ramps, balls, spinning tops, drums, tuning forks, sandpaper, wax paper, items that are flexible, non-flexible items, magnets, hot plate, aluminum foil, Sun-Moon-Earth model, and frog and butterfly life cycle models to observe, measure, test, and compare

1(G) develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem

1(E) collect observations and measurements as evidence