# **Sluice Sorting**

SUBJECT: Science

**GRADES: K-1** 



**ACTIVITY SUMMARY:** Students will use their findings from their bags of mining rough to group the rocks based on their properties and characteristics.

**DURATION:** approximately 30 minutes for sluicing; additional 30 minutes for sorting

#### OBJECTIVES:

Students will be able to:

- 1. Sort the sluice rocks into groups based on their properties and characteristics.
- 2. Explain the basis for the formation of the groups.
- 3. Describe the differences in rock samples.

## **TEKS ADDRESSED:**

#### Kindergarten

1A-identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately.

2C-collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools.

4B-use senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment.

7A-observe, describe, compare, and sort rocks by size, shape, color, and texture. 7C-give examples of ways rocks, soil, and water are useful.

## 1st grade

1A-identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately.

2C-collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools.

5A-classify objects by observable properties of the materials from which they are made such as larger and smaller, heavier and lighter, shape, color, and texture.
7A-observe, compare, describe, and sort components of soil by size, texture, and

 $7 \mbox{C-gather}$  evidence of how rocks, soil, and water help to make useful products.

#### 2<sup>nd</sup> grade

1A-identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately.

2C-collect data from observations using simple equipment such as hand lenses, primary balances, thermometers, and non-standard measurement tools.
7A-observe and describe rocks by size, texture, and color.

### **NATIONAL SCIENCE STANDARDS:**

Content Standard D: Earth and Space Science

#### **Grades K-4**

Properties of Earth Materials

· Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, or for growing the plants we use as food. Earth materials provide many of the resources that humans use.

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## **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.

## **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.