# ROCKS AND RESOURCES

## STUDENT WORKBOOK



# **SHAKING THE SOIL**

Soil can be found around Earth's surface, under the grass, and even under the ocean. Have you ever thought about what's underneath your feet?

## WHAT'S IN THE TUBE?

#### WHAT YOU NEED:

FROM THE KIT:

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- 2 bottles with caps
- 2 foam trays
- Clay powder
- Funnel
- Magnifying glass
- Marker
- Pebbles
- Ruler
- Sand

#### OTHER:

- Soil from local area
- Spoon
- N Water

WARNING! CHOKING HAZARD - Small parts. Not for children under 3 years.



#### **STEP I**

Use the ruler and marker to label both bottles with markings every 2 centimeters (cm) up the side of the bottle, starting from the bottom.



#### STEP 2

Label one tube "KIT" for adding materials from the kit. Label other tube "SOIL" for your own soil sample.



#### STEP 3

Insert the funnel in the "KIT" bottle to add soils.



#### STEP 4

To the "KIT" bottle, add pebbles up to the 4-cm mark on the bottle. Using the funnel and a spoon, add 2 cm of sand, and 4 cm of clay.



#### **STEP 5**

Insert the funnel into the "SOIL" bottle, then add soil from around your house up to the 10-cm mark.



#### STEP 6

Before you begin the experiment, observe the soils up close with the magnifying lens. Pour a sample of each of the soils out onto the foam trays to feel the texture.

### GLOSSARY

**Aquifer** – an underground layer of rock and soil that is able to store groundwater.

**Crust** – the rocky outer layer of Earth.

**Erosion** – the movement of sediment from broken rocks.

**Geology** – the study of Earth's processes and what it's made of.

**Groundwater** – water found beneath Earth's surface.

Human impact – how the actions of people change the environment.

**Igneous rock** – a type of rock formed when magma reaches the Earth's surface and cools into a hardened form.

**Inner core** – the layer of the earth that is in the center of the earth, is made of solid metal and is responsible for heating the mantle and causing Earth's magnetic field.

Magma – melted rock beneath Earth's surface.

**Mantle** – the layer of the earth that is below the crust and above the outer core and is made of melted rock.

**Metamorphic rock** – a type of rock formed under high heat or intense pressure changes.

Mineral – a pure solid formed within the earth.

**Natural resource** – materials found in nature that can be used to make money.

**Nonrenewable resource** – natural resources that are not unlimited or will not restore at the speed in which they are used.

**Ore** – a naturally occurring metal or mineral that can be dug out of the earth.

**Outer core** – the layer of the earth that is between the mantle and inner core and is made of hot liquid metal.

**Pressure** – the force of something pressing against something else.

**Renewable resource** – natural resources that are unlimited or restore at the speed in which they are used.

**Rock** – a solid object made of one or more minerals.

**Rock cycle** – the processes on Earth that change rocks over time.

**Sediment** – material that is broken down by natural processes and moved by water or wind.

**Sedimentary rock** – a type of rock formed from broken down and eroded rocks.

**Soil** – the upper layer of earth that contains minerals, nutrients, and organic materials.

**Weathering** – the geological process of breaking down rocks into smaller pieces.

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Kit	SU-ROCKRE
Instructions	IN-ROCKRES
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