



# Weathering of Rocks

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

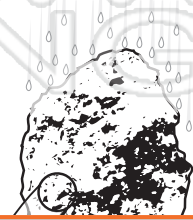
**Weathering** is a collection of natural processes that, over time, break large rock into smaller and smaller pieces.

**Mechanical weathering** is the **physical decomposition** of rocks. There are a number of physical processes that break rock down into smaller and smaller pieces.

**Abrasion**  
The physical grinding of rock fragments is **abrasion**. Wind blows sediment against rocks which slowly sands the rocks down.

**Chemical weathering** is the decomposition of rocks by chemical reactions. The three main chemical reactions that decompose rocks are **acid reactions**, **hydrolysis**, and **oxidation**.

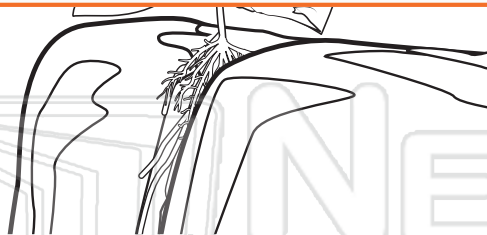
In the presence of water and natural chemicals, feldspar in granite changes to



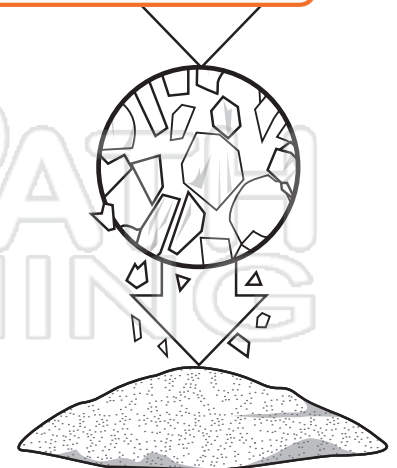
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**Plant Roots** can grow in cracks and pry the rocks apart.



**Freezing & Thawing**  
Repeated expanding and contracting due to temperature changes can cause some rocks to flake apart at the surface. This process is called **exfoliation**.





# Soil Formation

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

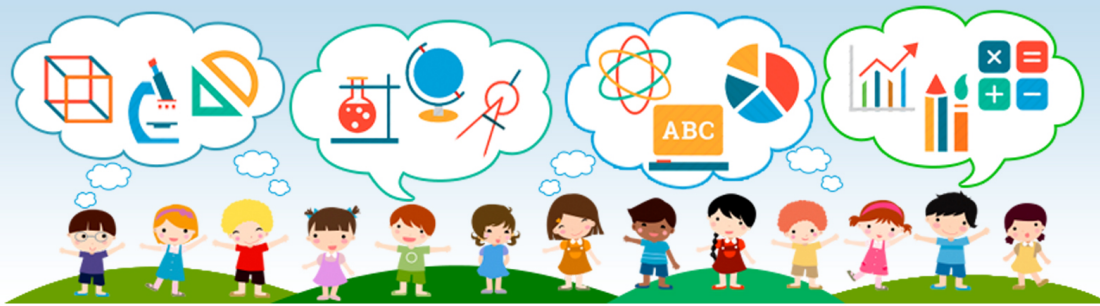
**Soil** is a combination of **decomposed rock** and **organic materials**. There are different types of soil depending on the climate in which they form. Geologists study soil by studying the **soil profile**. The **soil profile** is a cross-section of the soil and is subdivided into **horizons**.

**A horizon** is the uppermost layer and consists primarily of **top soil** - decaying organic material.

**B horizon** is also known as the **subsoil**.

**C horizon** contains partially **decomposed bedrock**.

The **bedrock** is a layer of **solid rock**. All soil begins with this bedrock.



## PREVIEW

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### Step 1

Mechanical and chemical processes **weather** the **bedrock** and turn it into **soil** particles that form the **C horizon**.

### Step 2

The **A horizon** layer forms as plants grow adding **organic material** to the soil and breaking up the rocks further.

### Step 3

The **B horizon** forms as clay and other **soil** particles percolate downward from the **A horizon**.



# Weathering of Rocks

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Describe the different types of weathering that break large rock into smaller and smaller pieces.

Mechanical weathering: \_\_\_\_\_

Chemical weathering: \_\_\_\_\_

Abra

Plant

Exfol

Com



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# Soil Formation

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Fill in the blanks. Describe how soil forms in the spaces below.

**A horizon** is the \_\_\_\_\_ layer and consists primarily of \_\_\_\_\_ - decaying \_\_\_\_\_ material.

**B horizon** is also known as the \_\_\_\_\_.

**C horizon** contains partially decomposed \_\_\_\_\_.

The \_\_\_\_\_ is a layer of solid rock.

**PREVIEW**

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Step 1

Step 2

Step 3

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Weathering of Rocks

## Answer Key

Describe the different types of weathering that break large rock into smaller and smaller pieces.

**Mechanical weathering:** is the physical decomposition of rocks. There are a number of physical processes that break rock down into smaller and smaller pieces.

**Chemical weathering:** is the decomposition of rocks by chemical reactions. The three main chemical reactions that decompose rocks are acid reactions, hydrolysis, and oxidation.

Abra

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Plant

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Exfol

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open-ended





# Soil Formation

## Answer Key

Fill in the blanks. Describe how soil forms in the spaces below.

**A horizon** is the uppermost layer and consists primarily of top soil - decaying organic material.

**B horizon** is also known as the subsoil.

**C horizon** contains partially decomposed bedrock.

The bedrock is a layer of solid rock.

**PREVIEW**

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### Step 1

Mechanical and chemical processes weather the bedrock and turn it into soil particles that form the C horizon.

### Step 2

A horizon layer forms as plants grow adding organic material to the soil and breaking up the rocks further.

### Step 3

B horizon forms as clay and other soil particles percolate downward from the A horizon.