

Rainforest Soils

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Purpose: A simple activity to help students understand various soil types (consistency/texture).

Grade Level(s): -appropriate for all grades
-A good introduction/refresher about soils to begin discussing human and environmental interactions in Standard 9 of the “Geography and History of the World” course.

Objective: After this activity, students will be able to observe two differences and similarities between soils in tropical rainforest versus Indiana soil.

Materials list

- Wooden balls painted various colors to match clay, topsoil, and leaf litter.
- Totes for each table.
- Clay pot
- Examples of different types of soils for each group of 4 students
- Piece of clay
- Recipe cards for soil profiles
- Student handouts- a world map of tropical rainforest locations.
- Colored pencils

Procedures:

1. Gather the materials prior to the activity.
2. Engage the students in the following questions.
3. Create the soil recipes.
4. Students draw a profile of their soil recipes and answer question related to their soil profiles.
5. Discuss. Relate to Indiana soil.

Assessment/Evaluation:

- Classroom participation.
- Clear profile drawings and answers that depict comprehension of the topic.

Adaptations/Extensions:

1. Begin a “soil exchange program” with classroom from other parts of the state/country.
2. For high school students in World Geography or Geography and History of the World, take the lesson into deforestation and water pollution in the Amazon and other tropical climates.

Preliminary Questions:

What is soil? _____

What is soil made of? _____

What is leaf litter? _____

Clay? Topsoil? _____, _____

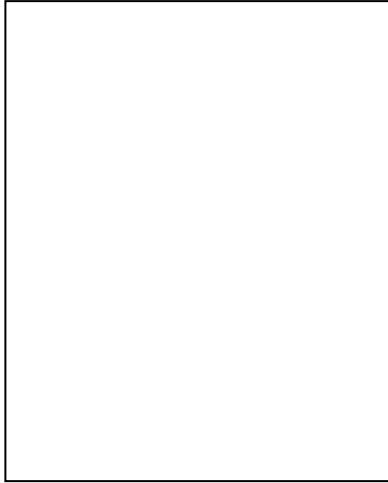
Do the soil particles stick together or fall apart easily? If they stick together, the soil is more likely to have _____ in it.

Observe examples of different soil profiles using the display. List two observations below:

Tropical Rainforest Soil Recipe:

Add 20 light brown wooden balls to the container. These represent clay.
Add 31 dark brown wooden balls to the container. These represent topsoil.
Add 4 green wooden balls to the container. These represent leaf litter.

Draw a picture of your soil profile



Indiana Soil Recipe:

Add 10 light brown wooden balls to your container. These represent clay.
Add 34 dark brown wooden balls to your container. These represent topsoil.
Add 16 green wooden balls to your container. These represent leaf litter.

Draw a picture of your soil profile



Questions to consider:

Compare the two soil profile drawings. How are they the same? How are they different?