

Rock Layers & Relative Dating

Name: _____ **Date:** _____

LEARNING OBJECTIVE

Students will apply the law of superposition to determine the relative age of rock layers.

MATERIALS NEEDED

- clear plastic cup or jar
- different colored sand, dirt, or dry rice/beans (at least 4 colors/types)
- spoon
- paper
- pen or pencil

HANDS-ON ACTIVITY

1. Layer 4 different colors of sand, dirt, rice, or beans into a clear cup one at a time, without mixing, to create a model of sedimentary rock layers.
2. On paper, draw your cup and label each layer with the order you added it (Layer 1 on the bottom, Layer 4 on top).
3. Using the law of superposition (older layers are on the bottom, younger on top), label your drawing with which layer is oldest and which is youngest.
4. Push a pencil or straw straight down through all the layers to represent an 'intrusion' or disturbance, then draw and describe what this would tell a scientist about the timeline of events.

QUESTIONS

1. **State the law of superposition in your own words.**

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2. **In your cup model, which layer is the oldest? How do you know?**

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3. **What does the pencil/straw pushed through your layers represent, and what would it tell a geologist about timing?**
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4. Why might rock layers NOT always follow a simple oldest-on-bottom pattern in real life?
