

Underlying Assumptions

Summary

Students will use several models to discover what assumptions scientists make concerning sedimentary rock layers.

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- 3 colors of sand
- water
- beakers
- small plastic objects or fossils
- [student sheet](#)
(attached)

Instructional Procedures

- Go over student sheet introduction and directions.
- Allow students time to work on Part I, "toybox" section.
- If students are not already grouped, put them in groups of 3-4.
- Describe where materials are for Part II. Describe where materials to be disposed of when finished. Materials can be resorted after they dry with a sieve or shaker box.
- Discuss student answers to questions on Part II before going to part III. They will need help understanding that there are forces on Earth powerful enough to disrupt rock layers.
- Allow time for students to complete student sheet.

Assessment Plan

Scoring Guide

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1. Students complete toy box and participate in "lake" activity.....4
2. Students answer questions accurately.....4

Answers:

- On the bottom
- The type of toys and size of the clothes shows that you have changed.
- The top layer would contain the most similar clothes and toys.
- You would assume that someone had been in your toy box and disrupted it.
- Sedimentary rocks are layered because they were piled up over time by different events.
- The top layer is oldest.
- The fossil in the top layer.
- Fossils are different in each layer, showing change.
- The Kaibab rock is youngest.
- The assumptions scientists make to determine the relative ages of rock layers are that the

oldest are under the youngest.

Scientists would assume that the layers had been disturbed.

This part of Earth has gone from being a sea to being a high desert plateau.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)