



Sample assessment task

Year level	8
Learning area	Science
Subject	Earth and Space Sciences
Title of task	Soil activity and rock formation

Task details

Description of task	Students will do a short practical activity and then answer questions about different types of rocks and their formation.
Type of assessment	Group activity and test
Suggested time	1 hour

Content description

Content from the Western Australian Curriculum	Science understanding Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales Science inquiry skills Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions
---	--

Task preparation

Prior learning	Students have looked at different types of rocks and understand the difference between sedimentary, igneous and metamorphic rocks.
Assessment differentiation	Teachers should differentiate their teaching and assessment to meet the specific learning needs of their students, based on their level of readiness to learn and their need to be challenged. Where appropriate, teachers may either scaffold or extend the scope of the assessment tasks.

Assessment task

Assessment conditions	The activity is done in pairs or a small group. The questions are answered under test conditions.
------------------------------	--

Part 1: Soil activity: conduct this activity in your group

Equipment

screw top jar

soil sample (sample should have a variety of grain sizes: clay, sand, pebbles and some organic matter)

water

tablespoon or scoop

Procedure

1. Add 4 spoonfuls of soil to the jar.
2. Fill the jar 2/3 full with water.
3. Tightly close the jar.
4. Shake the jar for 30 seconds, then leave it to settle.
5. Tidy up your work area.

Results: answer the following questions by yourself

1. Draw a diagram of the jar and its contents after it has been allowed to settle for 3 minutes.
Observe the contents of the jar carefully and label the layers in your diagram.

(6 marks)

2. Describe what you observe in the jar and explain why it settles like this.

(2 marks)

Sample marking key	
Description	Marks
Part 1: Activity on sediments	
1. Diagram is comprehensive with each layer labelled	1–6
2. Explains that heaviest particles are on bottom Because they settle before lighter particles.	1–2
Subtotal	8
Description	Marks
Question 3	
a. Comprehensively describes the formation of the rock. Describes the environment of deposition, the components, and cementation process.	1–3
b. sedimentary	1
c. was originally under the sea	1
area has been lifted up	1
by earth movements	1
Subtotal	7
Description	Marks
Question 4	
a. Names an igneous rock	1
Comprehensively describes how this rock can be formed including where it solidifies	1–3
b. Fills out table correctly	1–6
Subtotal	10
Total	25