

MODELLING IGNEOUS ROCK FORMATION – CRYSTALS!

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Key Learning Objectives:



SEQ Figure
1* ARABIC 1:
Igneous
Rocks:
Texture

1. Identify, research and construct questions for investigation; propose hypotheses; and predict possible outcomes (ACSES001).
2. Design investigations including the procedure/s to be followed, the information required and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics (ACSES002).
3. Conduct investigations, including using map and field location techniques and rock and soil sampling and identification procedures, safely, competently and methodically for the collection of valid and reliable data (ACSES003).

<https://bit.ly/meriSTEMigneoustexture>

Materials:

Geologists use the visual characteristics of rocks in order to identify the story of how those rocks came to be. In igneous rocks, one of the largest tell-tale signs about their formation is in their crystal size. Igneous rocks are generally categorised as either **extrusive**, a rock that has formed after being *extruded* at the Earth's surface or **intrusive**, a rock that forms without reaching the surface of the Earth.

In this practical, we will investigate what factors causes discrepancies in the size of crystals in igneous rocks and predict what sort of crystals we would expect to see in extrusive and intrusive rocks.



Aim:

Hypothesis:

Risks and Precautions:

Results

Which set of slides created the largest crystals? Which set of slides formed crystals earlier?

Based on the results of your experiment, what size crystals would you expect to be associated with extrusive and intrusive igneous rocks?

Extrusive:

Intrusive:

Based on your reasoning, sort the igneous rock samples provided by your teacher into two sets:

Intrusive

Extrusive



Results

Which set of slides created the largest crystals? Which set of slides formed crystals earlier?

Based on the results of your experiment, what size crystals would you expect to be associated with extrusive and intrusive igneous rocks?

Extrusive:

Intrusive:

Based on your reasoning, sort the igneous rock samples provided by your teacher into two sets:

Intrusive

Extrusive

