Igneous processes: matching the evidence they leave behind

Picture	Description
1. Pumice.	A. This rock crystallised very quickly (in hours), trapping a lot of gas in bubbles in the lava. This results in a texture like a bubbly Aero™ chocolate bar.
2. Thick basalt, showing joints in columns (Fingal's cave).	D. This lava was erupted quickly, to form a thick sheet. The texture of the rock itself is too fine to see the crystals. As it cooled it contracted to form columns 60 cm or so across.
3. Lava, with some large crystals contained within it.	E. This rock began to crystallise from a molten magma, slowly below ground. Then, the magma, with the crystals in it, rose to the surface and erupted from a volcano.
4. Coarse granite.	B. This rock crystallised slowly below ground, where all the crystals had time to grow to a large size (perhaps taking several million years). The rock has a coarse-grained texture.

This is one of a series JESEI activities. It aims to introduce students to igneous rocks and think about the teach students about the variety of ways in which igneous rocks form and the evidence that is left behind about how they were formed. This activity consists of a simple 'match it' exercise, where students relate a series of photographs to descriptions. Two simple demonstrations are included which can be used before the exercise to start students thinking about some of the processes involved in the formation of different types of rock.

Activity details available at:
https://geohubliverpool.org.uk/jesei/igneous%20processes.htm