

Igneous rocks: completing the 3D picture

Activity

Answer the questions below about igneous activity which refer to the paper model. You may find that it helps to cut out and fold the model into shape (but without gluing it) before you answer question 1.

What you will need

- Scissors
- Glue or paste

Questions

- Q 1. Complete the missing igneous structures on the E, W and N sides of the model by drawing them on the model. Label:
- (a) a batholith - (huge structure, getting bigger with depth)
 - (b) a sill - (a sheet of rock parallel to the layers)
 - (c) a dyke (a sheet of rock cutting across the layers)
 - (d) a sheet lava flow (a sheet of lava on the surface)
 - (e) a volcano feeder pipe
- Q 2. Make the model by cutting it out and gluing the flaps.
- Q 3. Which of the structures would you expect to have:
- (a) the igneous rock with the largest crystals (coarsest) – explain your answer;
 - (b) the rock with the smallest crystals (finest) – explain your answer;
 - (c) rock with medium-sized crystals;
 - (d) ash layers between lava layers?
- Q 4. Which structure might be made of:
- (a) gabbro (coarse-grained);
 - (b) dolerite (medium-grained);
 - (c) basalt (fine-grained)?
- These rocks are chemically the same, but have different crystal sizes.

