Eycott Hill Nature Reserve: Geology question sheet

Activity

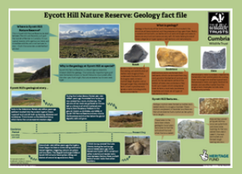
Use the information provided in the geology fact file, the Eycott Hill Nature Reserve geology leaflet, the Eycott Hill Nature Reserve geology film and your own research. Can you answer the following questions?

You will need...

- Access to a computer, laptop, iPad or smartphone with the internet.
- Geology fact file, leaflet and film.
- Paper
- Pen
- Colouring pencils or pens

These questions are aimed at KS3 children, but younger children could be helped to answer them.

Click on the images to watch the geology film, and to read the geology leaflet and fact file:



Questions

The questions are grouped into categories. Once you have answered all the questions you can check them using the answer sheet, click here to view.

Geology & history

1. Can you name each rock and identify which rock category it belongs to? Zoom in to see the rock clearly.

A

B

C

D

E

2. Why is Eycott Hill Nature Reserve nationally important for its geology?
3. Name the rock group found on the western edge of the nature reserve.
4. What happened during the Carboniferous Period at Eycott Hill?
5. Which features at Eycott Hill indicate that there is limestone below the surface? How were these features formed?

Lava

1. What is the difference between lava and magma?
2. What is the temperature range of lava?
3. What is a pyroclastic flow?
4. How many lava flows are there thought to have been at Eycott Hill Nature Reserve?
5. The lava flows in the Borrowdale valley reached 6,000 metres in thickness. How thick were the lava flows in the North of Cumbria?
6. Explain what caused the ridges and hollows in the photographs below.

7. Where are the youngest and oldest lava flows at Eycott Hill Nature Reserve?
8. Where is the unique lava flow located at Eycott Hill? Describe its location—you may wish to draw a map.

Crystals

1. How do crystals form in rocks?
2. Why do crystals in rocks vary in size?
3. What is the name of the crystals found at Eycott Hill Nature Reserve and how large can they be?
4. Take a close look at the photograph on the right. Can you identify what is between the white crystals and why it's there?

Question 4

Volcanoes

1. What activity triggers volcanic eruptions?
2. What are the three main types of volcano?
3. How is magma released from a volcano?
4. What is the name given to a volcano that has not erupted for many years but could still do so?
5. Can you name the rock group which forms the central Lake District?
6. How long ago did volcanic eruptions occur at Eycott Hill Nature Reserve?
7. As molten rock erupted and flowed over the landscape at Eycott Hill Nature Reserve, it solidified to form a hard grey rock. What is the name of this rock?
8. Where is the Eyjafjallajökull volcano and when did it last erupt?

Get creative!

Using colouring pencils, pens and anything else you can find....
Can you create four annotated drawings of what Eycott Hill Nature Reserve used to look like in the different time periods? Can you draw any wildlife that might have been present?
The time periods are:

- The Ordovician Period (480 million years ago)
- During volcanic activity of the Ordovician Period (450—460 million years ago)
- The Carboniferous Period (300—360 million years ago)
- The last ice age (20,000 years ago)

Photography credits S. Woodhead, J. White, A. Burton and BBC Bitesize.