



Rocks and Minerals

Note to the reader

This activity pack will help you explore the topic of rocks and minerals all from the comfort of your own home! We have adapted the activities from an interactive session that the GeoBus usually delivers in schools. This activity pack is aimed at pupils in key-stage 2 (Y3-Y6) but younger children could have a go with the help of someone older.

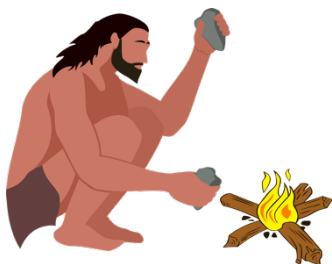
Follow these instructions and use the activity sheets when prompted: everything can be found on our website. You will need a pen and paper as well as some additional materials that are detailed in each activity. Access to a computer to look things up on the internet might also be useful if you get stuck! Although it isn't essential to print out the sheets, it might make them easier to use.

Introduction

The study of rocks (also known as geology) is fundamental to the study of Earth Sciences, and whilst you may have not given much thought to their importance, by the end of this workshop you will have a new appreciation for rocks!

Activity one: What do we use rocks for?

1. Make a list of everything you can think of that we use rocks for. The pictures below might help you! How many things can you think of in 1 minute?



GeoBus: Rocks and Minerals Activity Pack

2. Now have a look at the space you are in – are you in a kitchen, living room or bedroom? Look at the different objects or furniture in the room – can you think about what materials they are made of?
- Using post-it notes or scrap pieces of paper, label all the different materials you can see around the room. Try and think about if an object or piece of furniture is made of more than one material: for example, a table might have a top made of wood and legs made of metal. How many different materials can you find?
- Take this further by labelling more than objects – think about the door, windows, walls and floor!
- Now we are going to think about where these materials come from or how they are made. Use Activity One Worksheet.

Activity two: Different types of rock

There are three types of rock:

Igneous



Metamorphic



Sedimentary



1. Find and download the Rock Cycle Poster and print off (if you can) to find out more about each type of rock and how they link. Use information you can find online or in books to fill in the gaps. Alternatively, if you can't print this out, make your own poster about the three different types of rock above, using our poster to help you.
- Here is a link to BBC bitesize you can use to find out more about the types of rock: <https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/zsgkdmn>

Activity three: Rock descriptions

Geologists (people who study rocks) make rock descriptions to describe and identify rocks they find. Have a go at being a geologist with this activity!



1. Try and find a rock at home. Maybe you or a someone in your family has a rock they have collected that you could borrow? You could also try looking in the garden, balcony or driveway. If you get it from outside you might want to give it a quick wash!
2. Once you have your rock, you need to investigate. What does it look like, feel like or even smell like? Pay close attention to the colours in the rock and small details you can notice, you could try describing it out loud to someone at home and see what they think – do they agree with your description?
 - Use Activity Three Worksheet to create your own rock description!
 - You can also use the Geoguide to help you identify your rock.

→ Take this further by describing as many rocks as you can find! Compare the different rocks and see how they are different or similar. How could you categorise or group the rocks?

Activity Four: Make a sedimentary rock

You would have found out in Activity Two that sedimentary rocks are made out of broken up bits of other rocks and sometimes the remains of animals or plants (fossils) that have been squashed together over a very long period of time to form a rock.

1. Use Activity Four Worksheet to make your very own edible sedimentary rock!

Summary

We hope you enjoyed this activity pack and now know all about rocks! If you like, why not display everything you have made and present it to your family to tell them what you have learned. Show us how you got along with the activities by sharing on social media and tagging us!

Instagram: geobus_ucl

Twitter: @GeoBus_UCL

Rocks and Minerals: Activity One Worksheet

In this activity we are going to think about where some common materials come from. You might be surprised to find out that most materials can be linked back to rocks!

Cut out all the cards below - if you can't print this sheet off then write out the words on pieces of paper. Starting with a material card, think about which cards link in the sequence to get to the final card... Rocks! Use the arrow cards to link the word cards. You should use all the cards and have five complete chains when you have finished.

Material cards

Wood	Plastic	Fabric
Metal	Glass	

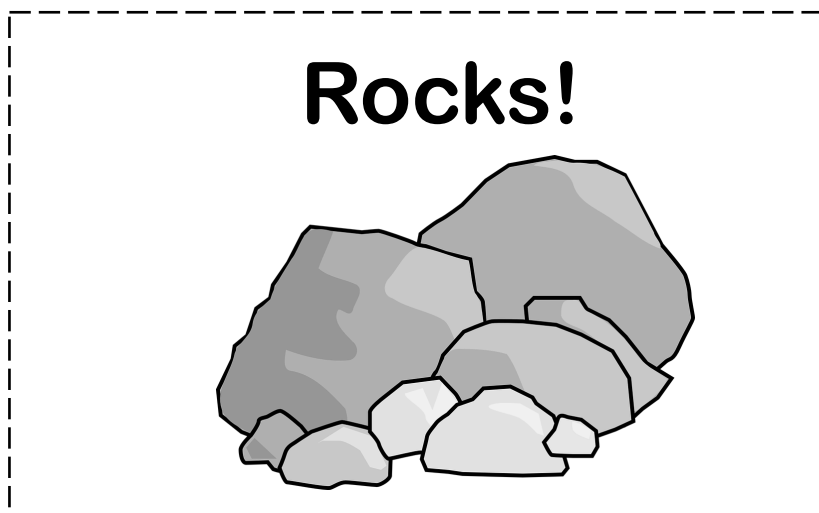
Linking word cards

Grass	Trees	Soil	Sand
Cotton	Wool	Oil	Ore
Plants	Sheep	Soil	Soil

Arrow cards

Comes from	Comes from	Comes from
Comes from	Is made of	Is made of
Is made of	Is made of	Is made of
Is made of	Is made of	Is made of
Grows in	Grows in	Grows in
Is found in	Is found in	Which eat

Final Card (everything links to this!)

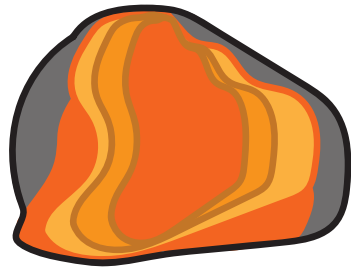


Name:

The Rock Cycle

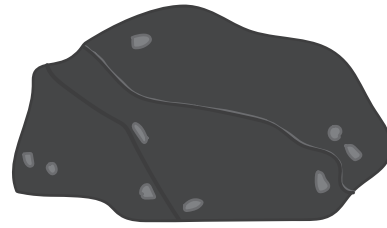


Use the keywords to fill in the gaps in the rock cycle



Magma

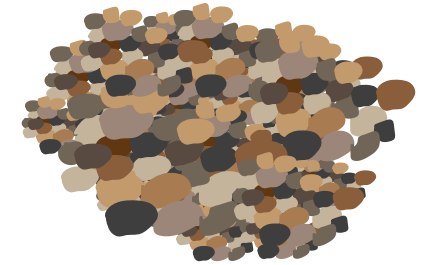
Hot molten rock that can found inside volcanoes.



I _____ Rock

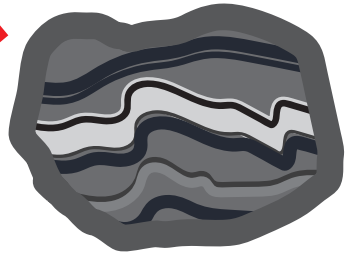
How would you describe this rock?

.....



Sediment

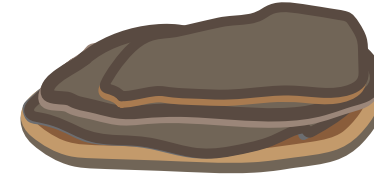
Lots of small pieces of rock like sand on the beach or small pebbles.



M _____ Rock

How would you describe this rock?

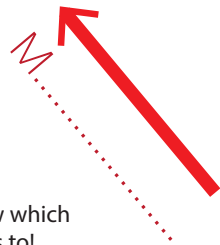
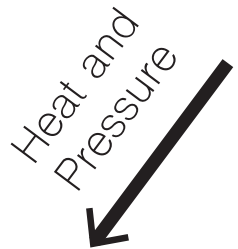
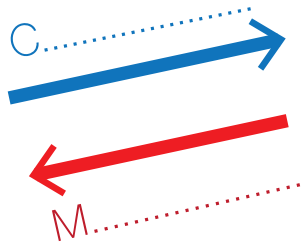
.....



S _____ Rock

How would you describe this rock?

.....



What type of rock is this?

Colour in each word to show which group of rocks it belongs to!

Chalk Gneiss Basalt

Obsidian Sandstone

Flint Pumice Limestone

Marble Andesite Granite

Metamorphic Igneous Sedimentary

Keywords

Melting Cooling Sedimentary Metamorphic
 Igneous Weathering Erosion



Name:

Rocks and Minerals: Activity 3 Worksheet

Describing Rocks

Geologists often make rock descriptions to identify rocks they find, use this worksheet to describe a rock you have found!

Drawing: (Add measurements of size and labels to make it clear)

Where did you find the rock?
(The playground? The garden?)

Colour: (Is your rock all one colour or made up of different colours?)

Texture: (How does your rock feel? Is it sharp, smooth, rough, rounded...?)

Luster: (How does it look under light? Is it shiny, glittery, dull, metallic...?)

Other features: (Is it made up of smaller rocks, large crystals, have stripes of colour?)

Rocks and Minerals: Activity Four Worksheet

Making an edible sedimentary rock

Sedimentary rocks are made from pieces of other rocks like pebbles, rock fragments and sediment/sand. Some sedimentary rocks also contain fossils which range from small pieces of shell to the remains of a dinosaur! They also usually form in layers.

This activity visualises how a sedimentary rock is made, and also makes a delicious treat you can eat afterwards!



This is a sedimentary rock called limestone. It's made of lots of small pieces of shell that have been sedimented together.

Ingredients:

- Melted chocolate – white, milk or dark (or all three!)
- Biscuits (Oreos and digestives work well)
- Round/smooth sweets like smarties to represent pebbles and stones
- Raisins/ dried fruit/ nuts to represent fossils

Method:

1. Line a small tin with baking paper. The tin represents part of the ocean as this is where most sedimentary rocks form.
2. Rock fragments are carried into the ocean by rivers and streams. To represent this, crush your biscuits up into little pieces (not too small) and crumble them into the tin.
3. Some rock fragments will be rounded over time into smooth pebbles by rivers or waves on a beach before being deposited in the ocean. Add round sweets like smarties to the tin to represent rocks that have been smoothed over time.
4. Your tin (or the ocean) now contains rock fragments and smooth pebbles that have settled on the ocean floor. Through a process called sedimentation, the rock pieces in the ocean will be squeezed together to form solid rock. To stick the biscuit and sweets together we are going to add melted chocolate.
5. Pour the melted chocolate over the biscuits and sweets and give it a little stir so that everything is covered.
6. When creatures living in the ocean died, their shells and bones settle on the ocean floor and will eventually form fossils. Sprinkle over the dried fruit and nuts over the melted chocolate to represent fossils.
7. Put your sedimentary rock into the fridge to set and enjoy!

Share what you've made with us on social media!:
Instagram: [geobus_ucl](#)
Twitter: [@GeoBus_UCL](#)