

Look at the picture.
What can you see?



This is Craggy Cliff . The features of a man, resembling a character from Lord of the Rings appeared near Hope Cove in Devon in October 2014.

How do you think this was made?

The sculptor responsible for the face is none other than **Mother Nature** herself, in the form of coastal erosion caused by the exceptionally stormy weather of the past year.



If you are unsure of what coastal erosion is then watch the link below.

<https://www.bbc.co.uk/bitesize/clips/z8tyr82>

Do you know what this
is a picture of?





Stonehenge is a prehistoric monument in Wiltshire, England, two miles west of Amesbury. It consists of a ring of standing stones, each around 13 feet high, seven feet wide, and weighing around 25 tons. Stonehenge, in many peoples' minds, is the most mysterious place in the world. This set of stones laid out in concentric rings and horseshoe shapes on the empty Salisbury Plain, is, at the age of 4,000 years, one of the oldest, and certainly best preserved, megalithic (ancient stone) structures on Earth.



Uluru, or Ayers Rock, is a massive sandstone monolith in the heart of the Northern Territory's arid "Red Centre". The nearest large town is Alice Springs, 450km away. Uluru is sacred to indigenous Australians and is thought to have started forming around 550 million years ago.



Our next Science topic is all about Rocks. Rocks are fascinating! Rocks are all around us!

Thursday 21st January

Write today's date
and objective
neatly in your
home learning
book.

Can I identify natural and man made
rocks?

Time to think.....Rocks



What are rocks?

What do you already know about rocks?

Are rocks alive? How do you know?

Why are there rocks everywhere?

How do rocks form?

Look carefully at the photograph on following slides and spot the rocks.



Spot the Rocks

Countryside



Photo courtesy of Jimmy Harris (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Chalk Cliffs



Photo courtesy of tsbl2000 (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Muddy Fields



Photo courtesy of Marianne Bevis (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Town Centre



Photo courtesy of joncandy (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Granite Peak



Photo courtesy of mikecogh (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Volcano



Photo courtesy of coolinsights (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Mountain



Photo courtesy of Doug Scortegagna (@flickr.com) - granted under creative commons licence - attribution

Spot the Rocks

Pebble Beach



Photo courtesy of zemistor (@flickr.com) - granted under creative commons licence - attribution

How are rocks formed?

A Never-Ending Cycle

So, where do all these rocks come from? There are three types of rock: **igneous**, **sedimentary** and **metamorphic**. That's it! But there are so many ways they can be different. First, let's check out the rock cycle ...

2 They get pushed to the surface by movement inside the Earth.

1 Rocks are made deep underground.

3 Wind, water, heat and cold break them into smaller pieces.

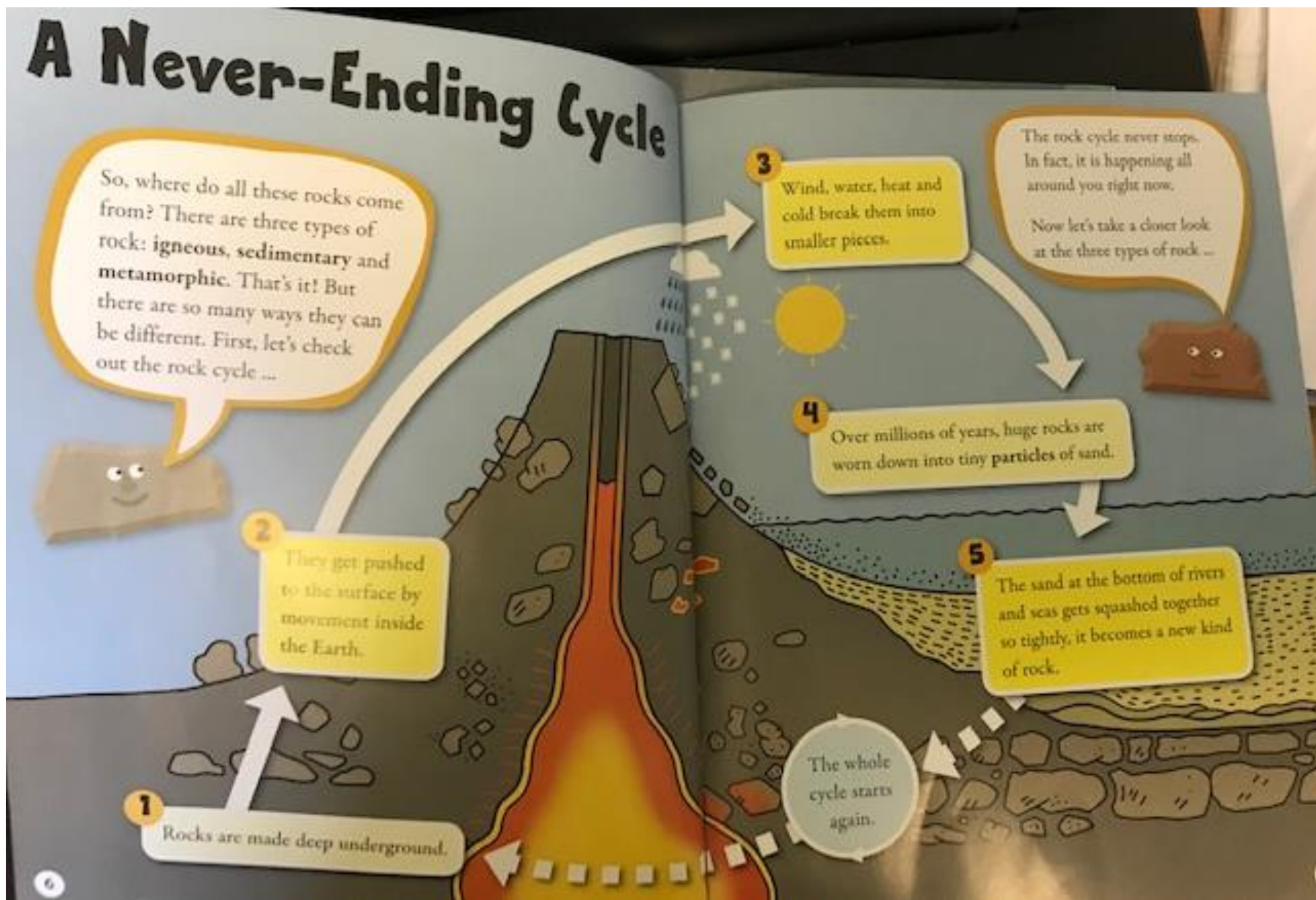
4 Over millions of years, huge rocks are worn down into tiny particles of sand.

5 The sand at the bottom of rivers and seas gets squashed together so tightly, it becomes a new kind of rock.

The whole cycle starts again.

The rock cycle never stops. In fact, it is happening all around you right now.

Now let's take a closer look at the three types of rock ...



Most of our planet is made of rock. Rock is made up of a mixture of minerals that are pressed tightly together. A mineral is an inorganic material (meaning it is not alive) that is often made of crystals. Sometimes when you look closely at a rock you can see the separate minerals within the rock.



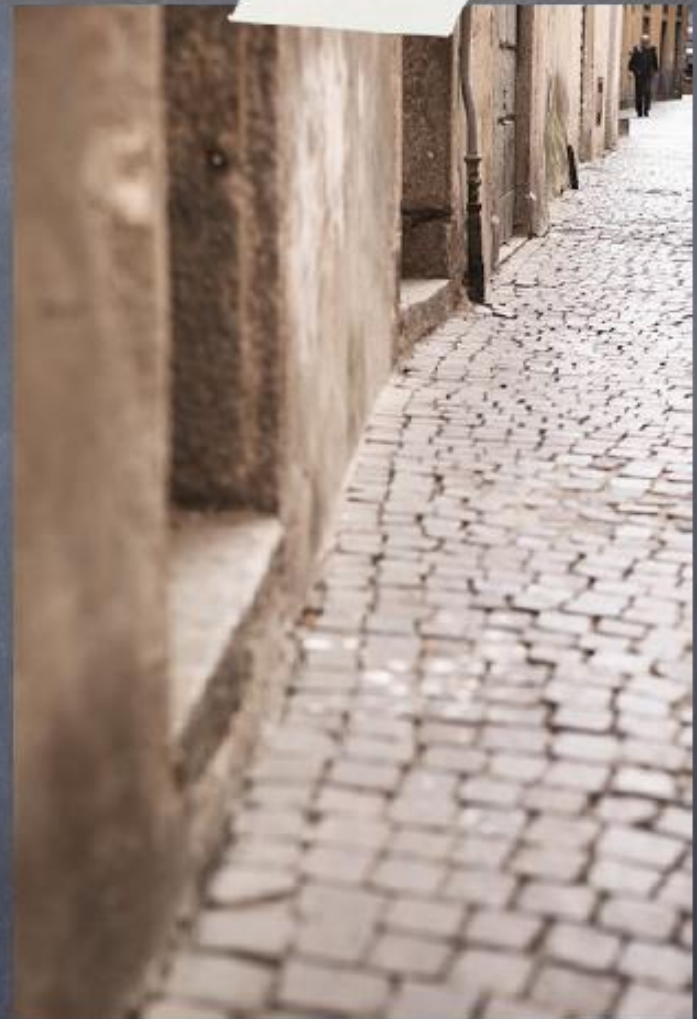
There are lots of different types of rocks which can be used for lots of different purposes. Lots of naturally occurring rocks can be used as they are, once they have been shaped. Other materials that look like rocks (such as bricks or concrete slabs) are actually man-made.



Have a look at the pictures on the next slides. Are the rocks naturally occurring or not?











Naturally
occurring
rocks



All the rocks
and stones
used in these
pictures use
rock that
occur naturally
but that have
been shaped
for other
purposes.

Man- made
rocks



Although these materials might look like natural rocks, they are not. Concrete, bricks, tarmac and modern roof tiles are all man-made materials.



MARBLE is used by artists for creating sculptures. It is also used in construction because it is hard-wearing.





SLATE is often used for roofs because it is easy to split into thin sheets. In the past it was used for blackboards and writing slates.





CHALK is used for writing on blackboards as well as other things. Tailors use chalk when they are marking material for clothes. Gymnasts sometimes use chalk on their hands to stop them from being sweaty.



LIMESTONE is used a lot in architecture to make buildings. The Great Pyramid of Giza in Egypt is made of limestone. It is also ground up as the basis for making roads.





Cement Block



Marble Statue



Brick



Gravel



Stone Bridge



Cobbled Path



Brick Path



Chalk



Limestone Building



Slate Roof



Tarmac



Stone Steps

Task

Now that you have looked at the difference between man-made and natural rocks, draw a table in your book (like the one below) Print off the pictures and stick them in your home learning book under the correct headings.

If you can't print them off, draw a picture and label it.

Natural Rocks	Man-made rocks

Now use the internet and search to see if you can find 5 uses for naturally occurring rocks.

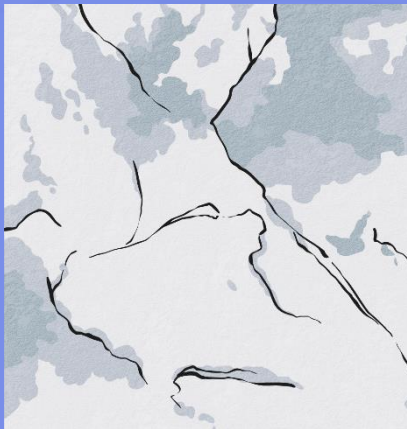
Can you name five uses for naturally occurring rocks?	
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

Natural Rocks

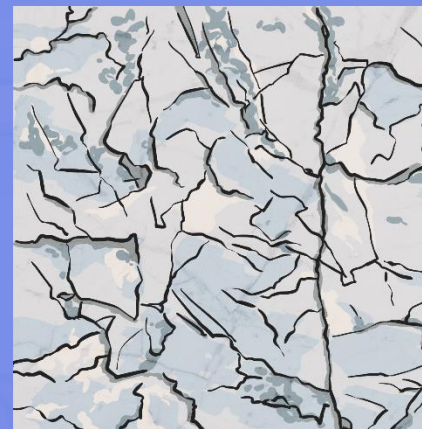
There are three types of naturally occurring rocks.



Igneous



Sedimentary



Metamorphic

Watch this short video on the 3 different types of naturally occurring rocks.

<https://www.bbc.co.uk/bitesize/topics/z9bbkqt/articles/zsgkdmn>

We will be learning more about the three different types of natural rocks next week. Write their names down in your home learning book.