Last week we began out new Science topic all about Rocks.

Can you remember how this face appeared in the rocks? What caused it?

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 to remind yourself.

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

Wednesday 27th January

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

Can I name the three different types of rocks and make a poster about them?

Recap on last week's learning about 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?

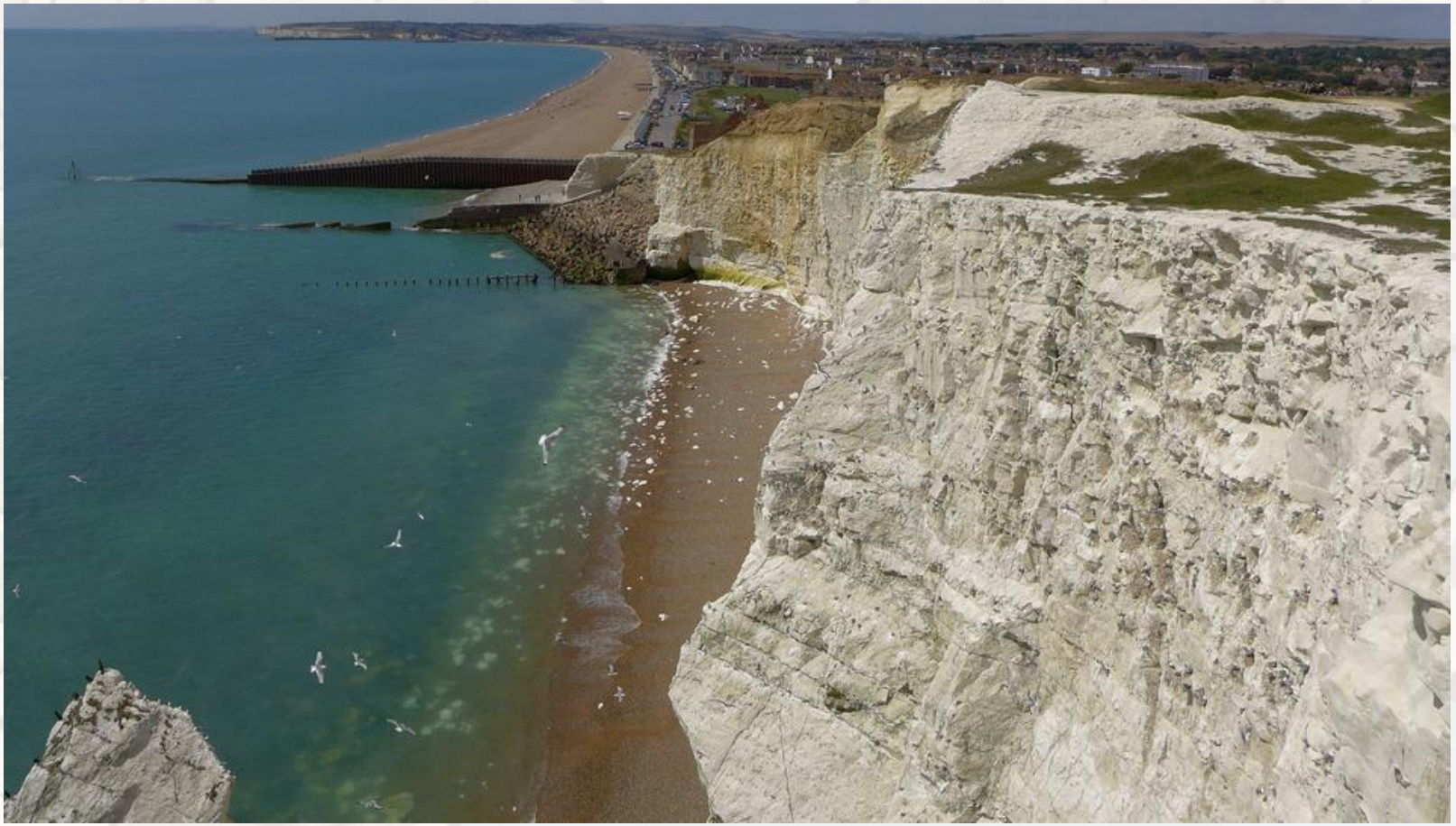
Look carefully at the photograph on following slides and spot the rocks.

Spot the Rocks

Countryside

Spot the Rocks

Chalk Cliffs



Spot the Rocks

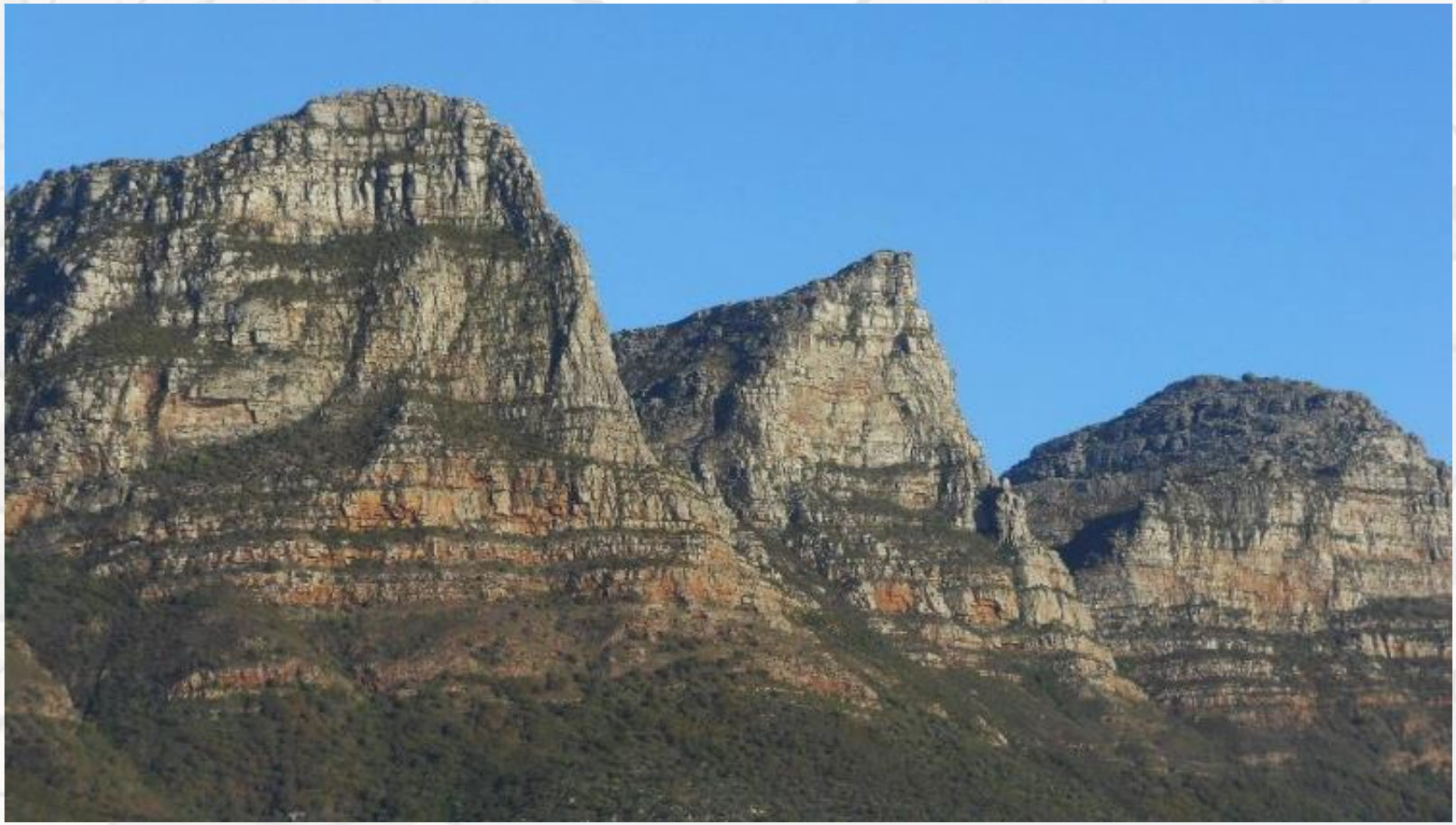
Muddy Fields

Spot the Rocks

Town Centre

Spot the Rocks

Granite Peak



Spot the Rocks

Volcano

Spot the Rocks

Mountain

Spot the Rocks

Pebble Beach

How are rocks formed?

Can you remember the rock cycle?

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 ...

1 Rocks are made deep underground.

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

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.

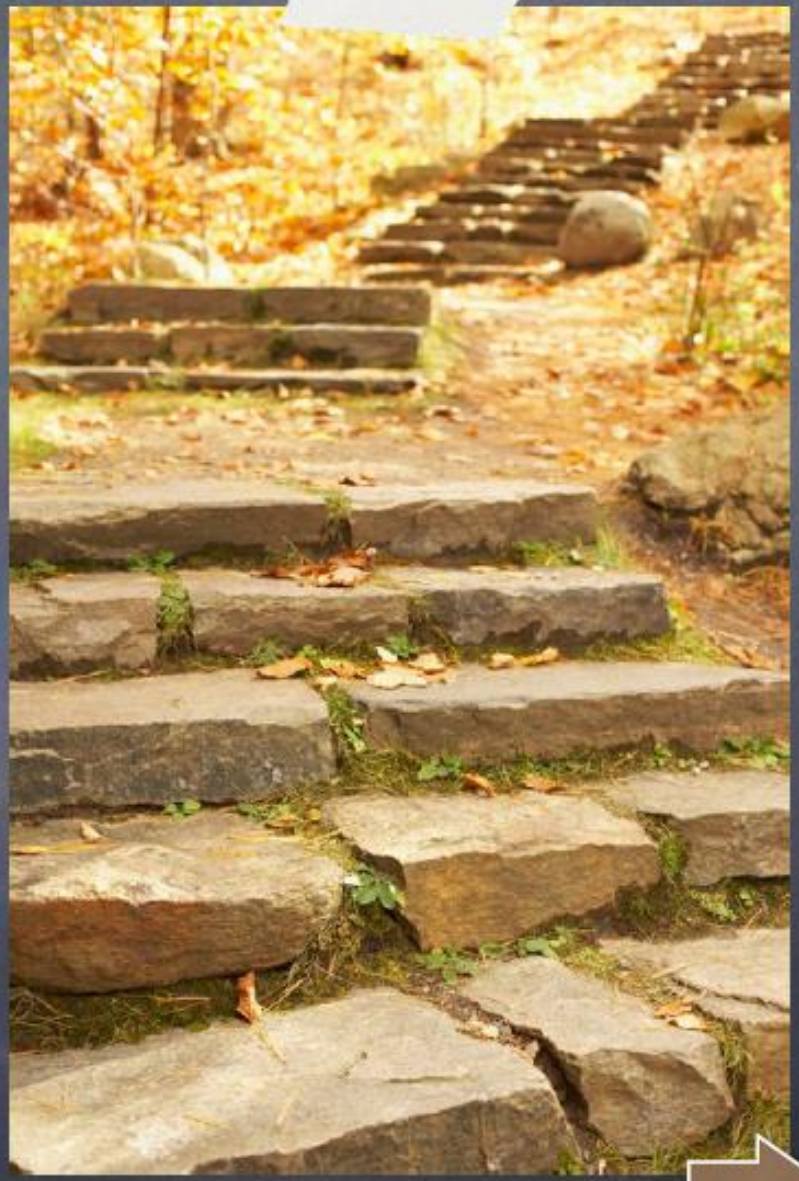
The rock cycle never stops. In fact, it is happening all around you right now.

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

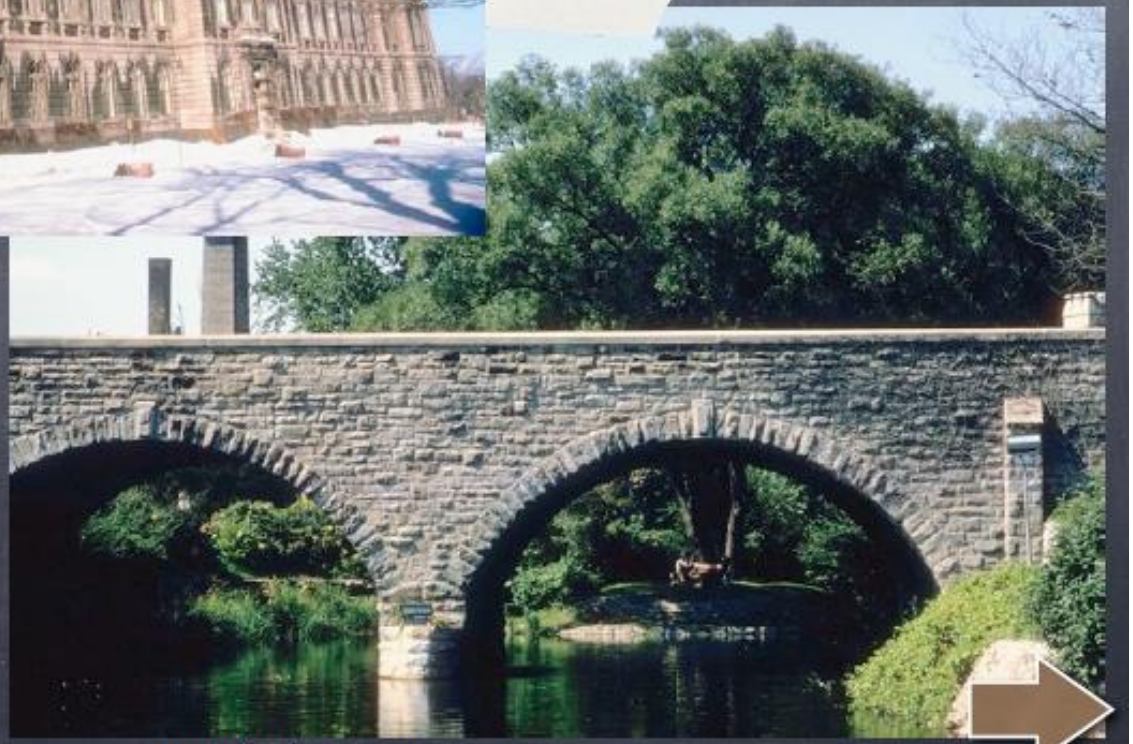
Most of our planet is made of rock. Rock is made up of a mixture of minerals that are pressed tightly together. A mineral is an inorganic material (meaning it is not alive) that is often made of crystals. Sometimes when you look closely at a rock you can see the separate minerals within the rock.

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?



www.planbee.com



www.planbee.com

Naturally occurring rocks

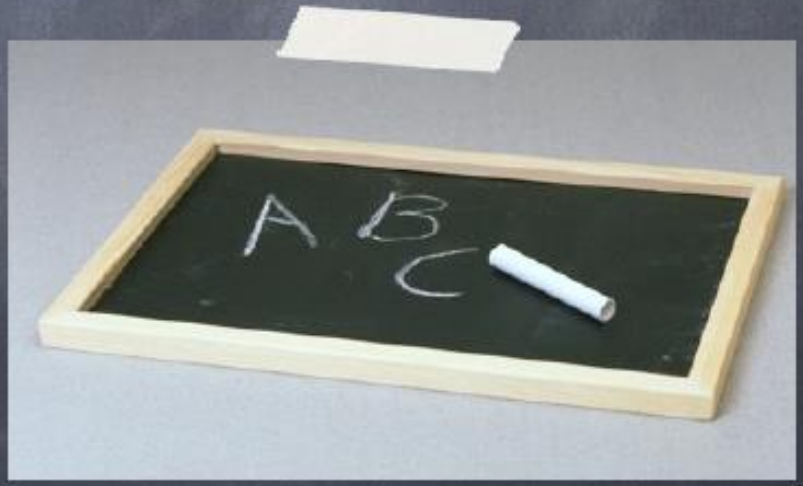
All the rocks and stones used in these pictures use rock that occur naturally but that have been shaped for other purposes.

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 it 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.

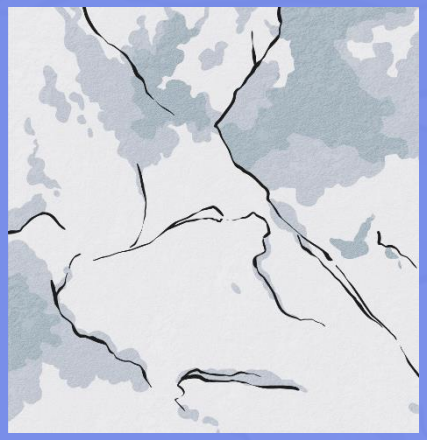
How did you get on with your task last week? Did you identify the correct natural rocks?

Natural Rocks	Man-Made Rocks
Marble statue	Cement block
Gravel	Brick
Stone bridge	Brick path
Cobbled path	Tarmac
Chalk	
Limestone building	
Slate roof	
Stone steps	

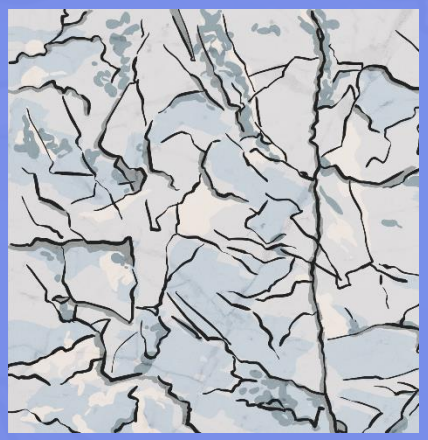
Natural Rocks

There are **three** types of naturally occurring rocks.

Igneous



Sedimentary



Metamorphic

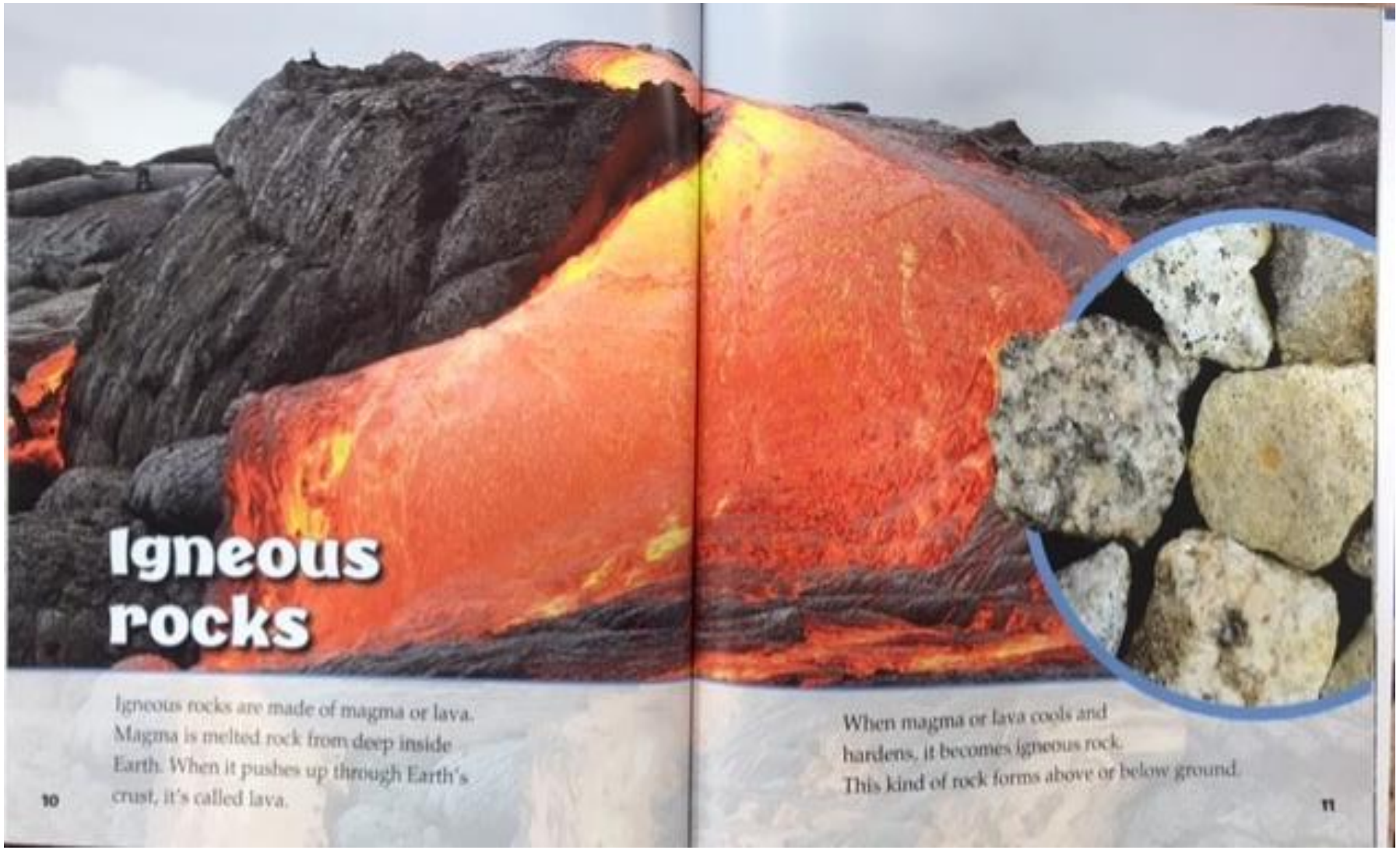
Watch this short video on the 3 different types of naturally occurring rocks. Make a few notes about each type.

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

https://www.youtube.com/watch?v=ty2Za-O9h6w&safe=active

This video is slightly longer!

Let's find out about Igneous rocks first.



Natural Rocks

Igneous Rock

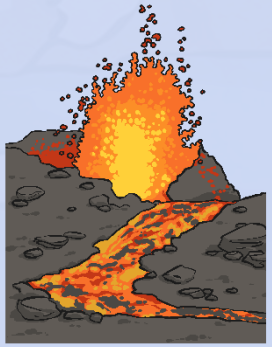
Far under the ground, the temperature is hot enough to melt the rock into a liquid. This is called molten rock. Igneous rocks are formed from this molten rock in two ways.

Intrusive Igneous Rocks:

Molten rock that remains underground is called magma. When magma cools and hardens it becomes a type of intrusive igneous rock.

(Intrusive = internal = inside)

Extrusive Igneous Rocks:



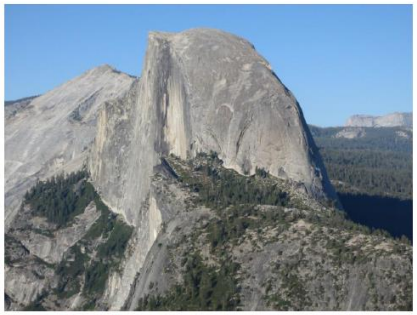
Molten rock that comes out of the ground is called lava. When lava cools and hardens it becomes a type of extrusive igneous rock.

(Extrusive = external = outside)

Igneous Rocks

- Formed by melted rock that has cooled and solidified.
- Can be created by the magma in volcanoes cooling inside the Earth.
- Often appear shiny.

granite
(intrusive)



Half Dome, Yosemite N.P.

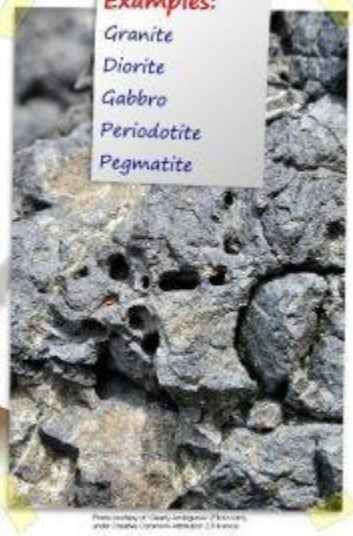
basalt
(extrusive)

Lava flow, Hawaii Volcanoes N.P.

Igneous Rock

Igneous rock is formed from the cooling and solidification of magma or lava from volcanoes.

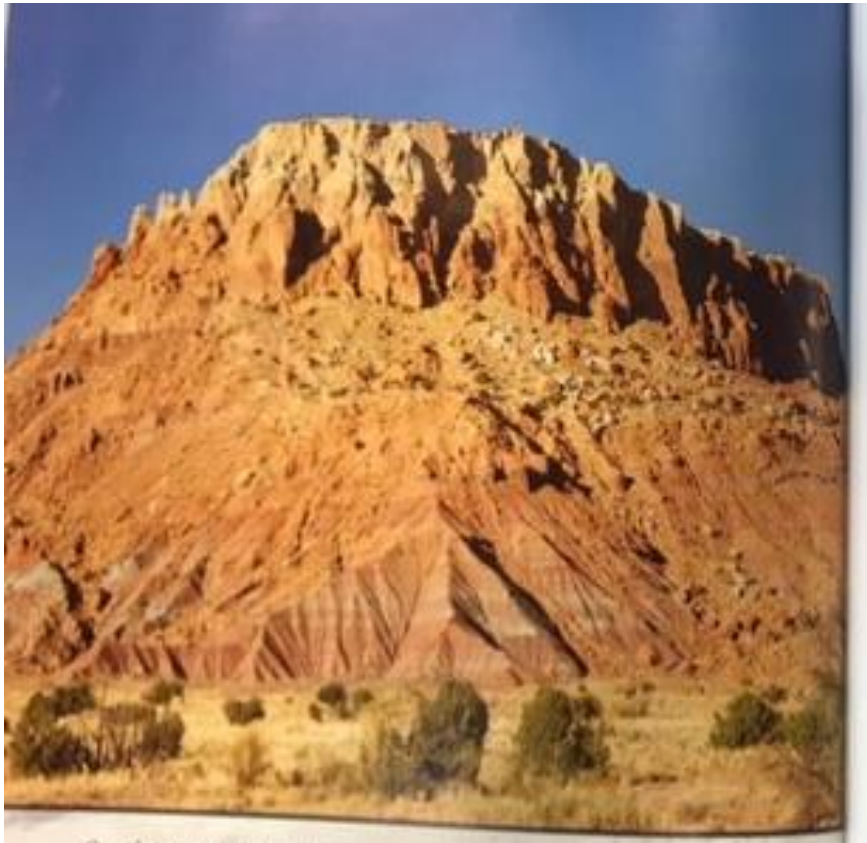
Examples:
- Granite
- Diorite
- Gabbro
- Periodotite
- Pegmatite



Igneous Rock

Igneous rock is formed when the lava (the hot, molten rock from inside the Earth's mantle) from a volcano cools down. It can also happen when the magma underground cools. Igneous rocks have large grains and are very hard.

Now, let's look at sedimentary rocks



Sandstone and limestone are sedimentary rocks. Sandstone is made of crumbly sand. It can be red, brown, green or yellow.

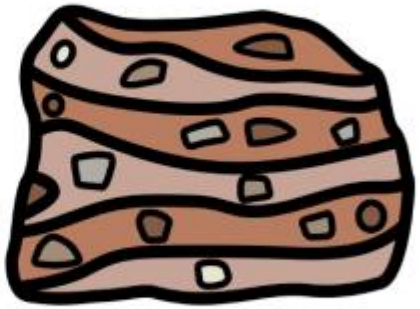
Limestone has squiggles and bumps in it. The bumps come from the shells and bones of ocean animals.

Sedimentary rocks take millions of years to form. These rocks help scientists learn about places and creatures from the past.

Fossils are made from plants and animals that died long ago. The plants and animals became buried in sediment and turned into rock.

Sedimentary Rocks

- Formed by layers of sediment pressing together.
- Form where lakes, oceans, and other bodies of water once existed.
- Layered and may contain fossils

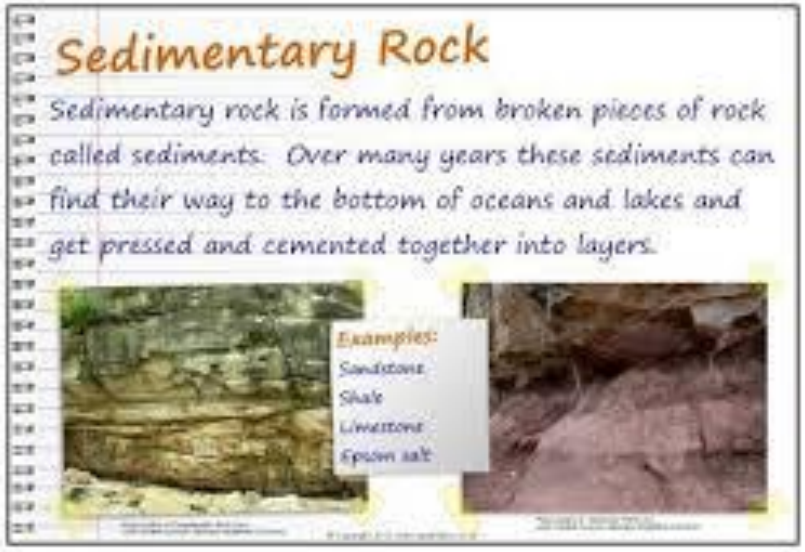


sandstone
(clastic)

Sedona, AZ.

rock salt
(chemical)

Bonneville Salt Flats, UT.

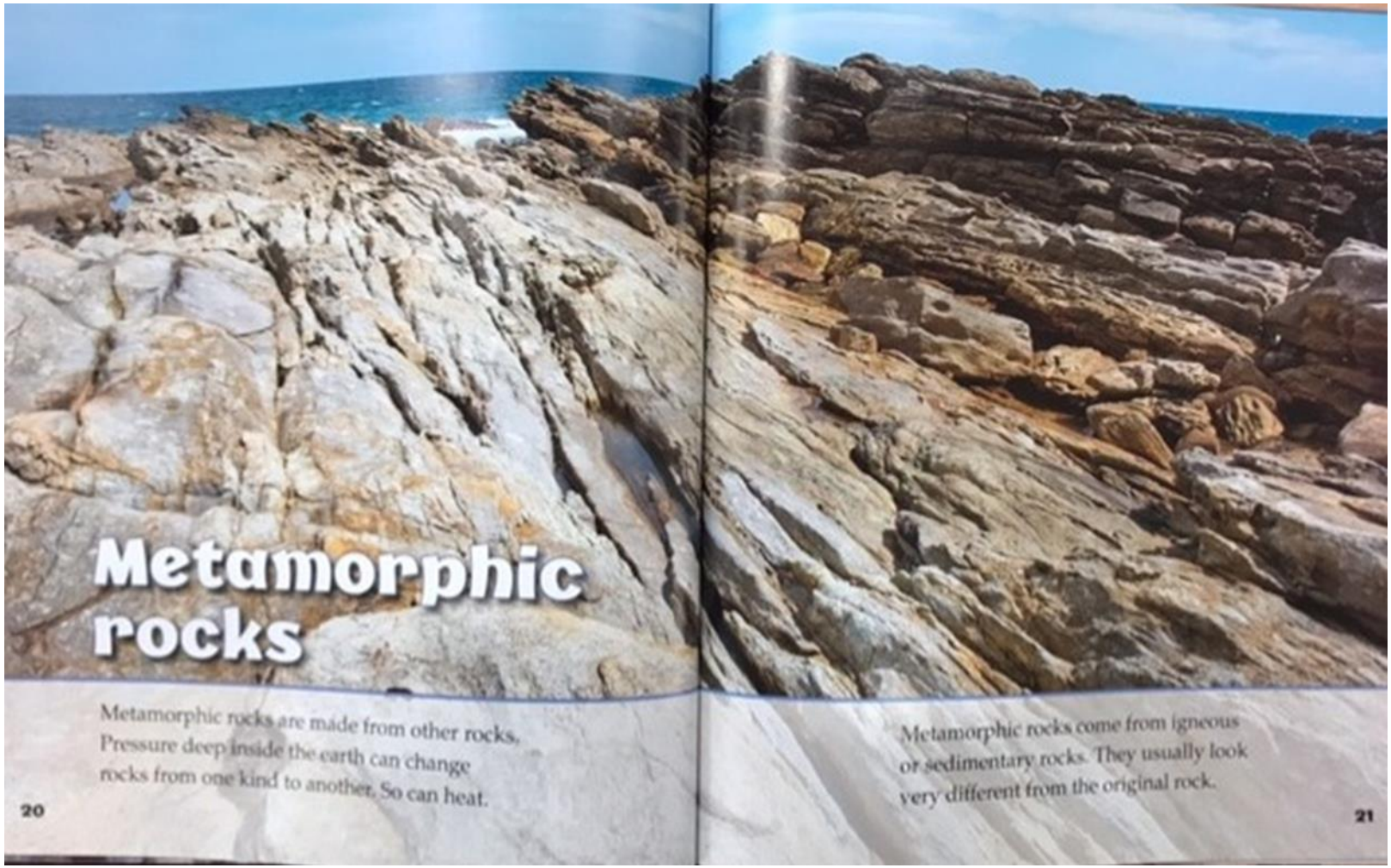


Sandstone

These are the only rocks in which fossils can be found

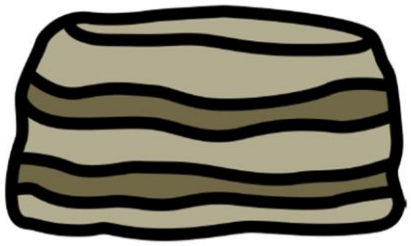
Conglomerate

Finally, let's look at metamorphic rocks



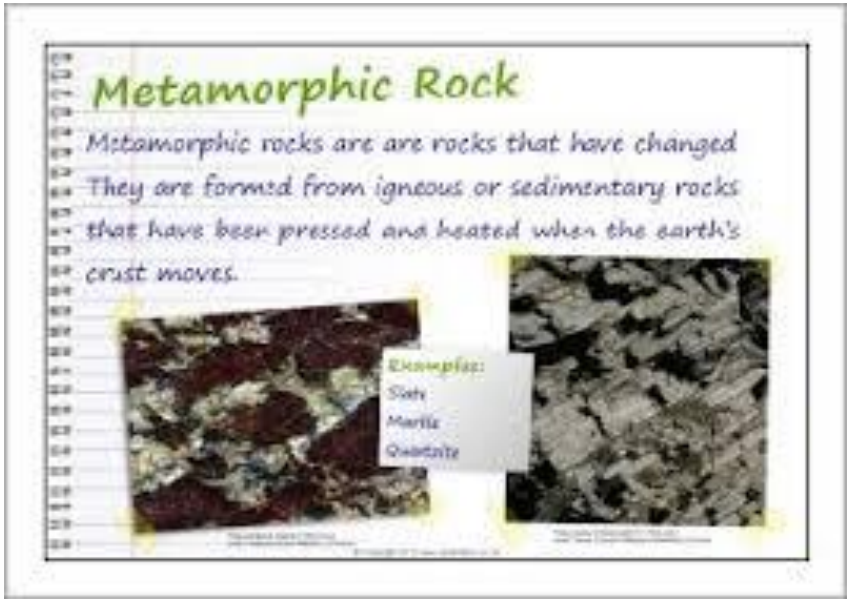
Metamorphic Rocks

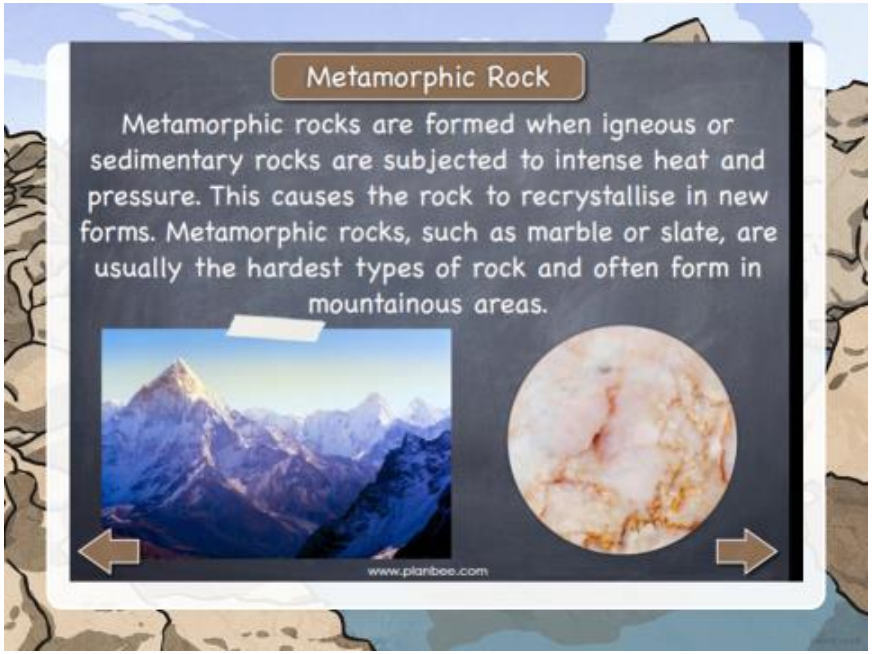
- Formed deep within the Earth
- Transforms rocks into new kinds by the use of extreme heat and pressure
- Hard and may contain crystals



Marble

Slate





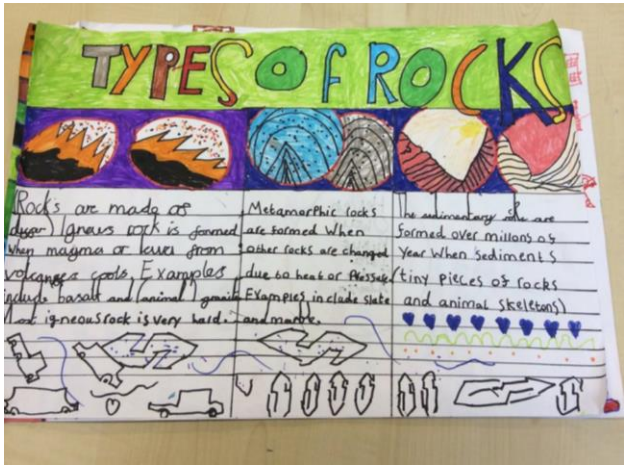
Task

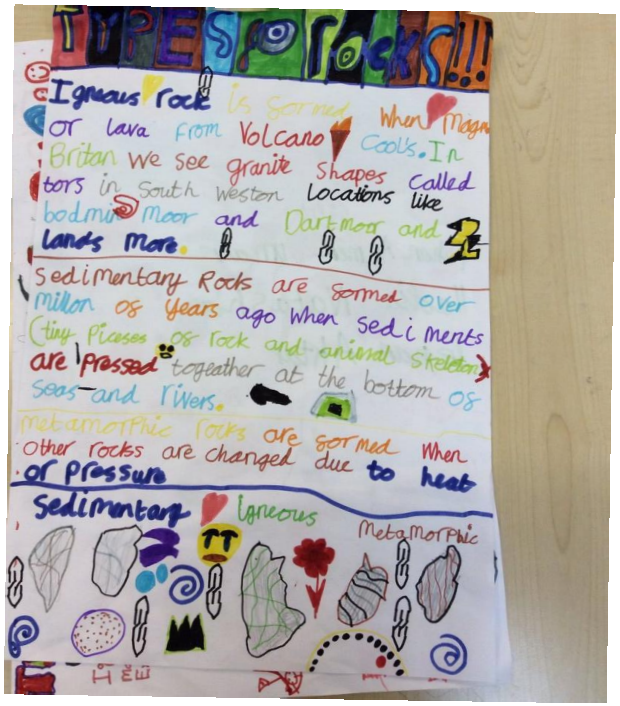
Using a page (or double page) of your home learning book, design an information poster about the three different types of rocks.

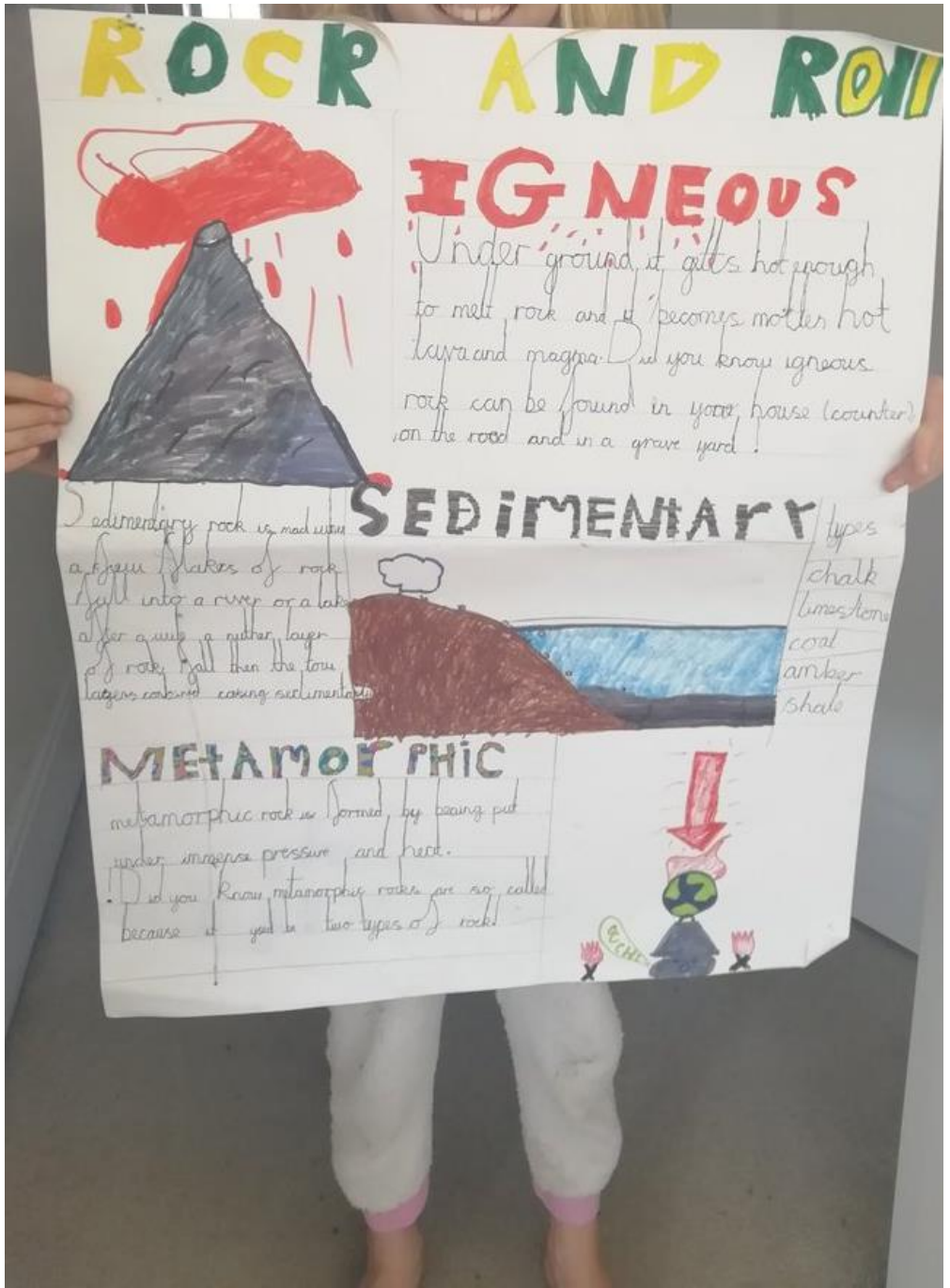
Your poster must include:

- A clear title – Types of Rocks
- A section on each type of rock – Igneous, sedimentary, metamorphic (spelt correctly!) Give each one a clear, colourful heading.
- Information about how these types of rocks are formed
- An example of three types of these rocks e.g Igneous - granite, basalt, pumice
- Lots of colour and pictures
- Vocabulary all spelt correctly.

If you are struggling, look at the examples on the next slide to inspire you!


TYPES OF ROCKS
Rocks are made of
Igneous rock is formed
when magma or lava from
volcanoes cools. Examples
include basalt and granite
and igneous rock is very hard.
Metamorphic rocks
are formed when
other rocks are changed
due to heat or Pressure
Examples include slate
and marble.
The sedimentary ones are
formed over millions of
year when sediments
(tiny pieces of rocks
and animal skeletons)


TYPES of rocks!!!
Igneous rock is formed when Magma
or lava from Volcano cools. In
Britan we see granite shapes called
tors in South Weston locations like
bodmin Moor and Dartmoor and
lands more.
Sedimentary Rocks are formed over
millon of years ago when sedi ments
(tiny Pieces of rock and animal skeleton)
are pressed togeather at the bottom of
seas and rivers.
Metamorphic rocks are formed when
other rocks are changed due to heat
of pressure
Sedimentary
Igneous
Metamorphic


ROCK AND ROLL
IGNEOUS
Under ground it gets hot enough
to melt rock and it becomes molten hot
lava and magma. Did you know igneous
rock can be found in your house (counter)
on the road and in a grave yard!
SEDIMENTARY
Sedimentary rock is made when
a few flakes of rock
fall into a river or a lake
after a while a nother layer
of rock fall then the tow
layers cemented caking sedimentary
Types
chalk
limestone
coal
amber
shale
METAMORPHIC
metamorphic rock is formed by being put
under immense pressure and heat.
Did you Know metamorphic rocks are so called
because it used to two types of rock!