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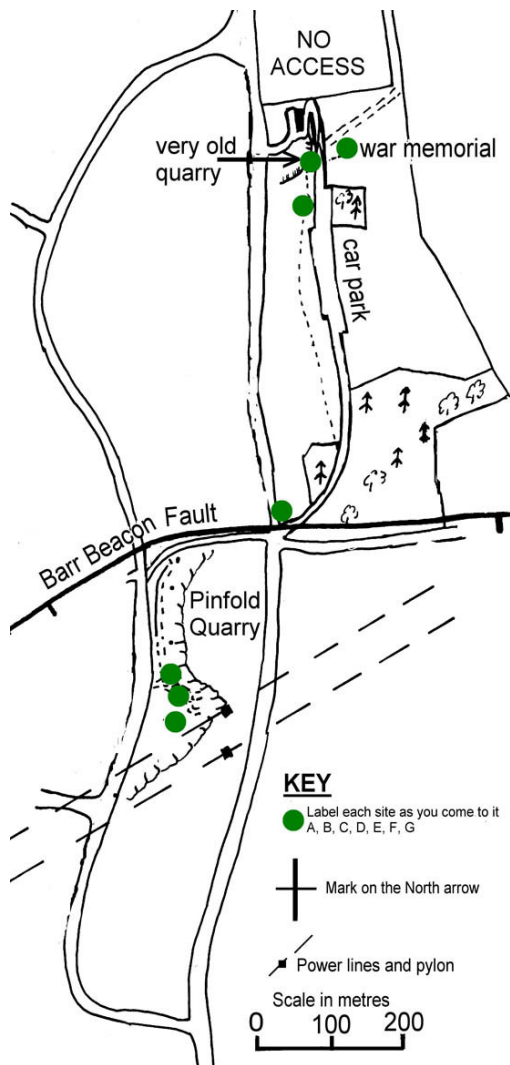
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PUPIL ACTIVITY SHEET 1

Pupil Name.....

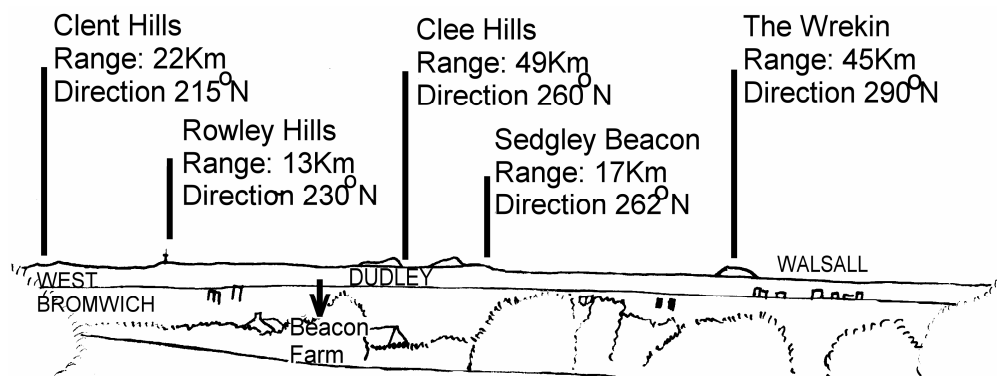
### Map of Barr Beacon and Pinfold Quarry



Use your compasses to line up your map, so that you know where you are and where you are going.

**1. Now mark North on the direction arrow on your map.**

**2. You will visit each of the sites marked with a dot. Label each one as you come to it. Start with Site "A"**



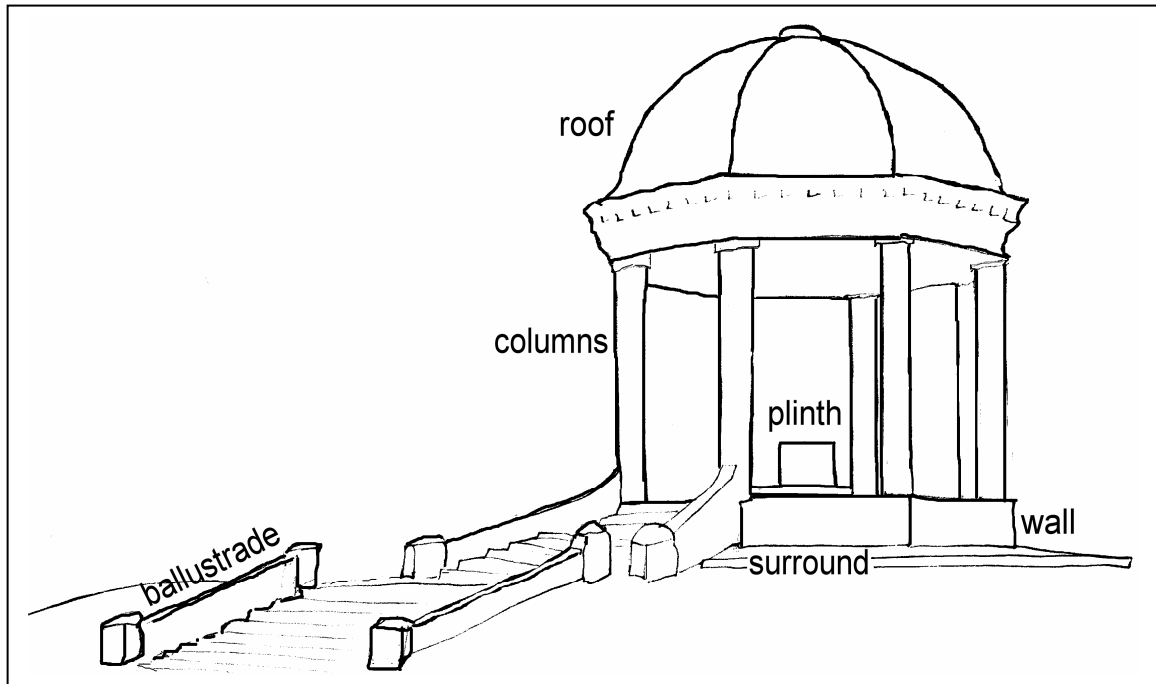
**Site A. View from Barr Beacon car park**



PUPIL ACTIVITY SHEET 2

Pupil Name.....

**Site B. Investigating the materials used to build the Memorial**



Questions	Answers
What rock is used to build the columns and walls?	
What are the white "bits" you can see inside this rock?	
What are the steps made from?	
What has happened to the copper since the memorial was built 100 years ago?	
What has happened to the limestone in that time?	
What other rock types can you find?	



PUPIL ACTIVITY SHEET 3

Pupil Name.....

**Site C. The Very Old Quarry**

Questions	Answers
How has the soil at the top of the quarry formed?	
Why can't we see the rocks in this old quarry?....	

**Site D. Car Park Entrance**

**Check the map to see where you are and label the site "D"**

Questions	Answers
Can you see any fossils in the blocks?	
What type of rock is it?	
What has been used between the stones to hold them together.	
What would happen to the soil behind the wall if the wall wasn't there?	

**As you walk through the overgrown part of these old quarries look out for different kinds of plants and animals.**



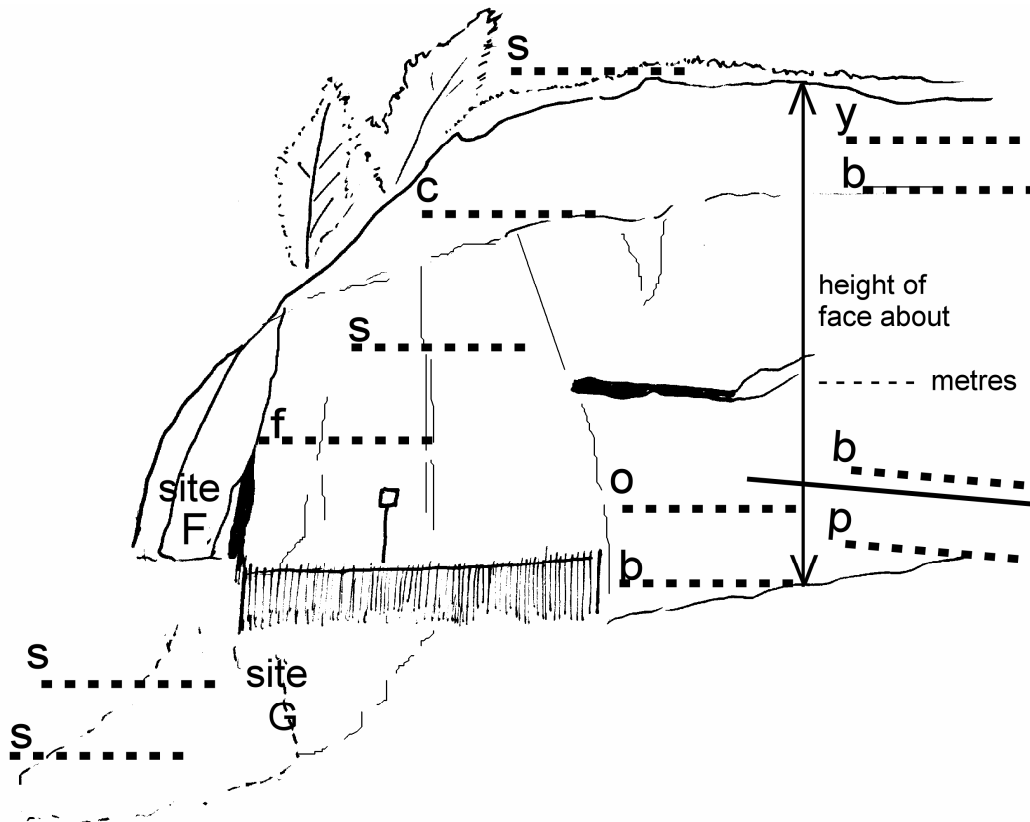


PUPIL ACTIVITY SHEET 4

Pupil Name.....

**Site E. Field Sketch of Pinfold Lane Quarry.**

1. Check the map to see where you are and label the site "E".



2. On the sketch label the following features which can be seen in this quarry. The first letters have been done for you.

1. sandstone
2. conglomerate [pebble bed]
3. oldest bed
4. youngest bed
5. soil layer
6. scree slope
7. fault
8. the height of the face [in metres]

**We can now take a closer look at the sandstones and pebbles.**

**KS2 PUPIL ACTIVITY SHEETS**

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PUPIL ACTIVITY SHEET 5

Pupil Name.....

**Site F - A close look at Triassic Sandstones**

First check the map to see where you are and label the site "F".

What colour is the rock here?	
What is the rock here made up made of?	
What happens when you rub the sandstone with your fingers?	
Using a lens describe the size and shape of the sand grains.	
Are the main layers in these rocks flat or sloping? (look carefully)	
What does layering tell us about how these rocks were formed?	
Are there any fossils in these rocks?	
Is the sandstone porous? (use a water dropper bottle)	
Why might porous rocks be useful?	

**What is the evidence in the rocks telling us about Britain in Triassic times, about 250 Million years ago? (Circle your answers.)**

The temperature was ...	<b>Hot / Cold</b>
and mostly ...	<b>Wet / Dry.</b>
Sometimes there were sudden ...	<b>Rain Storms / Ice Ages</b>
that caused ...	<b>Flash floods / Dry spells</b>
and deposited ...	<b>Sand / pebbles / limestones</b>



**KS2 PUPIL ACTIVITY SHEETS**

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**PUPIL ACTIVITY SHEET 6**

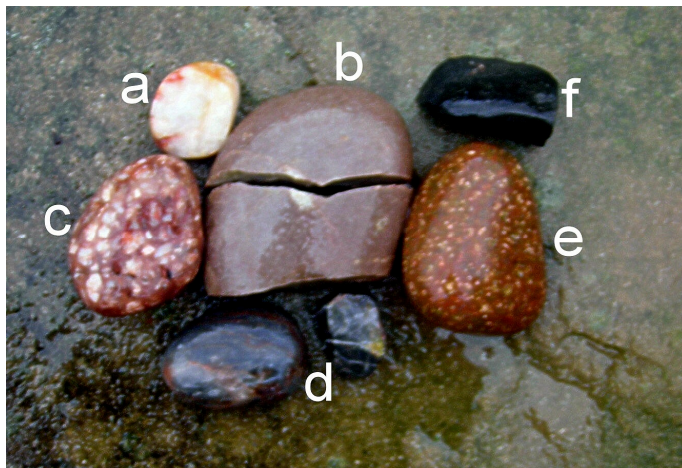
Pupil Name.....

**Site F: Investigating A Fault.**

A **fault** is a break in the rocks where one side has slipped downwards a little way. You can see a fault where the bedding planes are broken and moved up or down.

Find a thin pale layer, or bed in the rock face. Is it horizontal or sloping?	
Can you see other pale beds on the other side of the cave?	
Do they line up, or do they step upwards?	
Look upwards and describe what is filling the spaces caused by the faulting.	
What caused the fault to happen?	

**Site G - Triassic Pebble Hunt (Tick off the ones you find)**



<b>When you recognise one of these pebbles ...</b>	<b>... put a tick in the next box.</b>
a) white quartz pebble	
b) grey quartzite pebble	
c) conglomerate pebble	
d) dark chert pebble	
e) igneous pebble (porphyry)	
f) igneous pebble (basalt)	



PUPIL ACTIVITY SHEET 7

Pupil Name.....

<b>Questions</b>	<b>Answers</b>
Describe the shape of most of the pebbles.	
What clue does the shape tell us about how they were transported to here?	
What does the large size of many of the pebbles tell us about the current strength?	
What are the two most common types of pebble made of? Suggest why they are the most common.	
Why does hardness improve a pebble's chances of survival?	
From the information on the pebble identity sheets, in which direction were the pebbles coming from?	
Look out for contact points on many of the pebbles. Some of the pebbles have been broken through these contact points. What do you think might have caused this?	

In the space below draw one of the pebbles you have identified. Show as much detail as you can see and give a cm scale.







PUPIL ACTIVITY SHEET 7

Pupil Name.....

**Summary Sheet:**

**Sandstone and Pebbles at Pinfold Lane Quarry**

Fill in the spaces with details of what you have found out.

The oldest rocks are \_\_\_\_\_ which are made of grains of \_\_\_\_\_ with some \_\_\_\_\_ .

They are \_\_\_\_\_ in colour and form layers called \_\_\_\_\_.

The layering tells us that they formed under \_\_\_\_\_.

The \_\_\_\_\_ rocks lie on top of the sandstones and contain many \_\_\_\_\_. The pebbles are \_\_\_\_\_ in shape. They are made of rocks that came from a \_\_\_\_\_ direction. This all happened about 250 million years ago in the \_\_\_\_\_ Period of geological time.

The \_\_\_\_\_ is useful for supplying underground water and also in the \_\_\_\_\_ industry.

The \_\_\_\_\_ are useful for making roads and concrete in the building industry.

**Well done. Did you enjoy your day?**

