

Your Name.....

The Lime Kiln and Railway Bridge – Site A

Look closely at the blocks of stone used to build the wall between the railway bridge and lime kiln. You should be able to spot two different rock types. Feel them.

1. Name the rock that is made of grit
2. Name the rock that is made of broken shells and lime mud. It also reacts with acid.
3. At the lime kiln what was "burnt" to make quicklime?
4. Name one use for quicklime.
5. Look at the railway bridge. What has been used in building the arch of the bridge that was not used in building the wall?
.....
6. Why do you think this was used?
7. What do you think was the main reason for building this railway?
.....

The Lead Mine Shaft – Site B

If you have been shown samples of minerals you should be able to answer this question:

1. What is the name of the heavy mineral which contains lead.
.....
2. The shaft has been almost filled in, but it is now.....metres deep.

First Exposure – Site C

Look carefully at this first exposure of the local rock and you should be able to see that it is made of broken shells and lime mud. It fizzes when tested with acid.

1. What rock type is it?
2. The broken shells are the remains of creatures which lived millions of years ago.
What are these remains called?
3. Try to find the remains of three different groups of animals. Use the identification sheet. Name two of them: and
4. Use three of these words to describe where these groups of animals live today: warm/cold, shallow/deep, land/sea.
.....
5. The rocks and fossils tell us what this area was like 300 Million years ago in Lower Carboniferous times. Use three words to describe it: warm/cold, shallow/deep, land/sea, and
6. What is the clay layer on top of the limestone called?
.....
7. This clay layer contains pebbles. What are these pebbles made of?
.....
8. Use a water dropper to test the limestone and see if it is porous or not.
.....

North East Quarry – Site D

From the viewpoint, look around you.

1. How can you tell that this was a quarry?

.....

2. Where was the original land surface before quarrying began?

.....

3. What was the limestone used for?

4. You have just walked across an ancient sea floor, treading on fossil shells. What do think the whole floor of the quarry once was?

.....

5. Notice that the quarry face is made of layers or beds of limestone. What does this layering tell us about how the limestone formed?

.....

6. Where is the oldest bed?

7. Where is the youngest bed?

8. These rocks are now over 200 metres above sea level. They are gently tilted to the north-east and are broken by cracks, called joints. How do you think all this happened?

.....

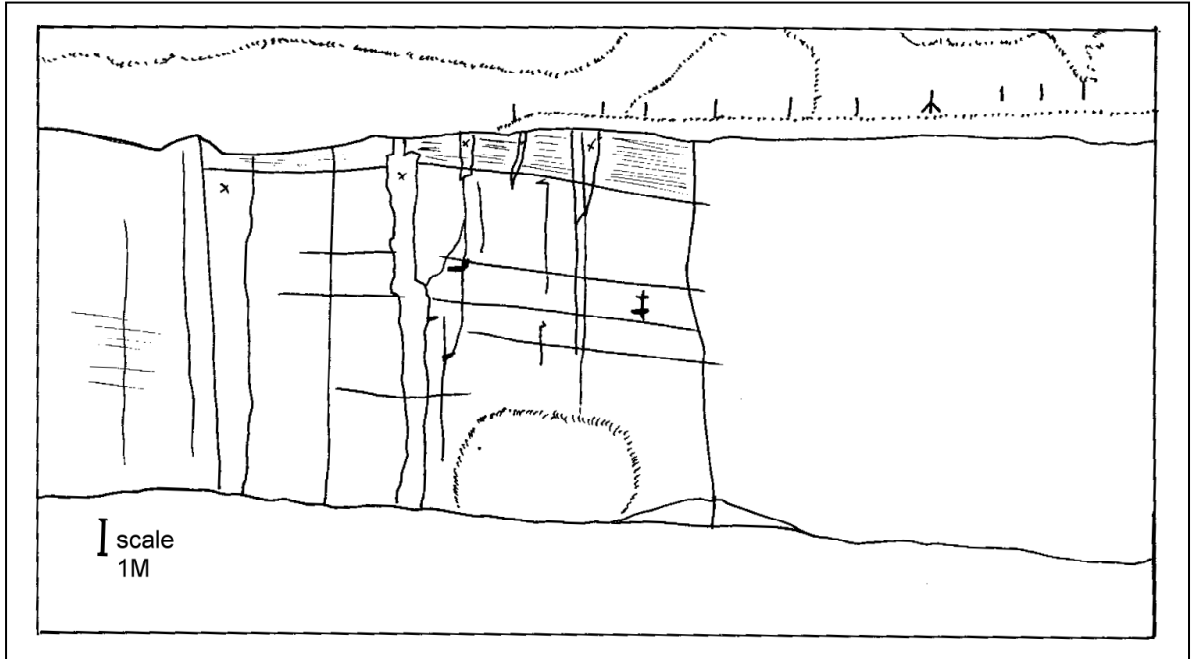
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Now label the sketch of the quarry on the next page with the labels:

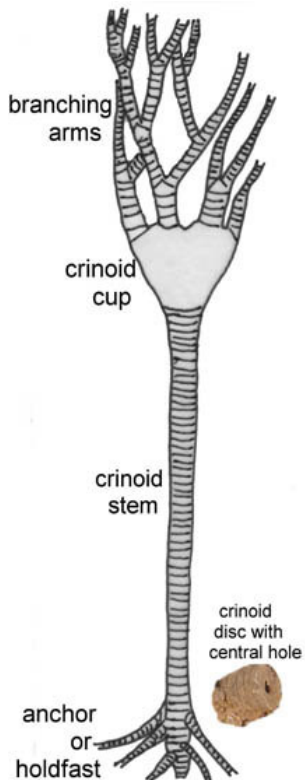
**Original land surface, Youngest bed and oldest bed,
Quarry face, Quarry floor is ancient sea floor.**

Then use the scale to estimate height of face.

SKETCH OF NORTH EAST QUARRY



CRINOID IDENTIFICATION SHEET



Use this space to make sketches of the fossils you see.

The Crinoid Bed – Site E

Look at the blackened surface of limestone. See if you can spot the crinoid fossils.

1. Use the crinoid identification sheet to make a list of the crinoid parts you can see:

....., and

2. When they die, crinoids usually get broken up by waves and currents, especially on reefs. Why do you think these were not broken up much?

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3. Why do you think that this area is fenced off?

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