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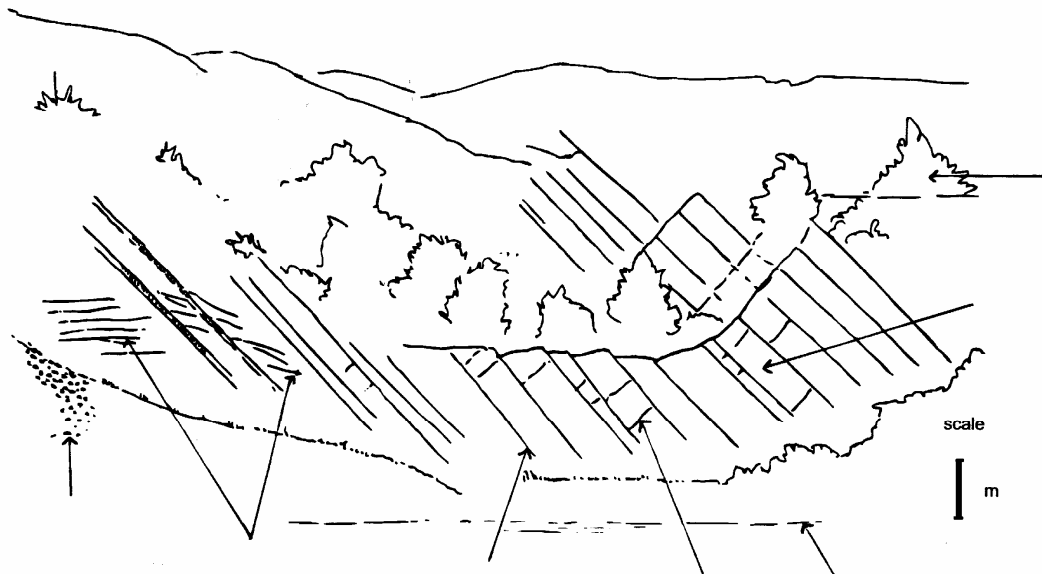
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### Pupil Worksheet for Locality "B"

This field sketch shows the view looking towards the north east in quarry 2

1. Complete the scale on this field sketch by estimating the heights.
2. Label the following on the field sketch:
  - Scree
  - Ripple marks
  - Bedding plane
  - Floor of quarry
  - Vegetation
  - Bed dipping 45° to the SE
  - Joint



**Pupil Work sheet for Localities "C" & "E"**

**Reading the clues in the sedimentary rocks**

1. Carry out all of the tasks at locality C and then complete the information for the **sandstone** by ticking the correct boxes in the table.
2. Carry out all of the tasks for Activity 1 at locality "E" and then complete the information for the **conglomerate** by ticking the correct boxes in the table.

The completed table will give you a summary of some of the things you have found out about the sandstone and conglomerate and how they may have formed.

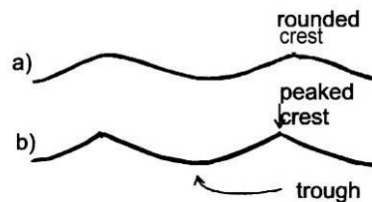
	<b>Sandstone</b>	<b>Conglomerate</b>
The rock shows layers so it was probably deposited in water		
The rock is made up of medium sized grains (0.5 to 2mm across) so it was laid down in low to medium energy conditions		
The rock is made up of coarse grains (more than 2mm in size) so it was laid down in higher energy conditions		
The particles are rounded so they were transported for a long period of time. (But not necessarily over a long distance, if they were moved up and down the same beach)		
Most of the particles are made of quartz and /or quartzite		
The particles are made of a mixture of different rock types		

Pupil Worksheet for site "D"

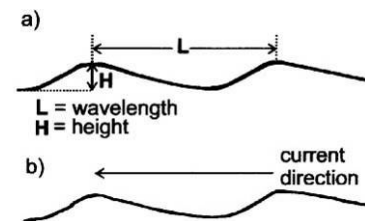
- Use diagrams 1 and 2 to help you choose the words that describe the shape of the ripple marks. Record your descriptions in the table.
- Measure the **wavelength (L)** and **height (H)** of the ripple marks. (Clue: If you are not sure what these terms mean look at drawing 2). Record your measurements in the table.
- Use your measurements to calculate the **ripple index (R.I.)**. Show your working in the table.

Diagrams

1. Symmetrical ripples



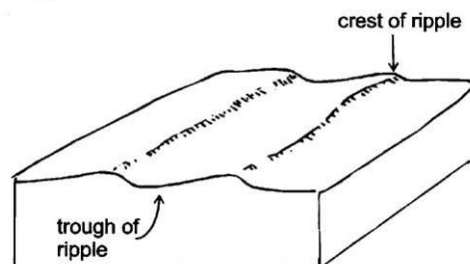
2. Asymmetrical ripples



Descriptions	Put a tick against the word(s) that describe the ripples
<b>Shape of ripples in cross section:</b> symmetrical? asymmetrical?	
<b>Shape of ripples over the crest:</b> peaked? rounded?	
<b>Shape along the crest:</b> roughly straight/ parallel? roughly straight/ parallel but splitting? curved/ sinuous?	
<b>Ripple measurements</b>	<b>Write your measurement here (in mm)</b>
wavelength (L)	
height (H)	
<b>Calculation of the ripple index (R.I.)</b>	<b>Write your working here</b>
R.I. = $\frac{\text{wavelength (L)}}{\text{height (H)}}$ RI > 17 suggests wind formed ripples RI < 15 suggests water formed ripples	

- On diagram 3 draw in an arrow to show the current direction that may have produced these ripple marks.

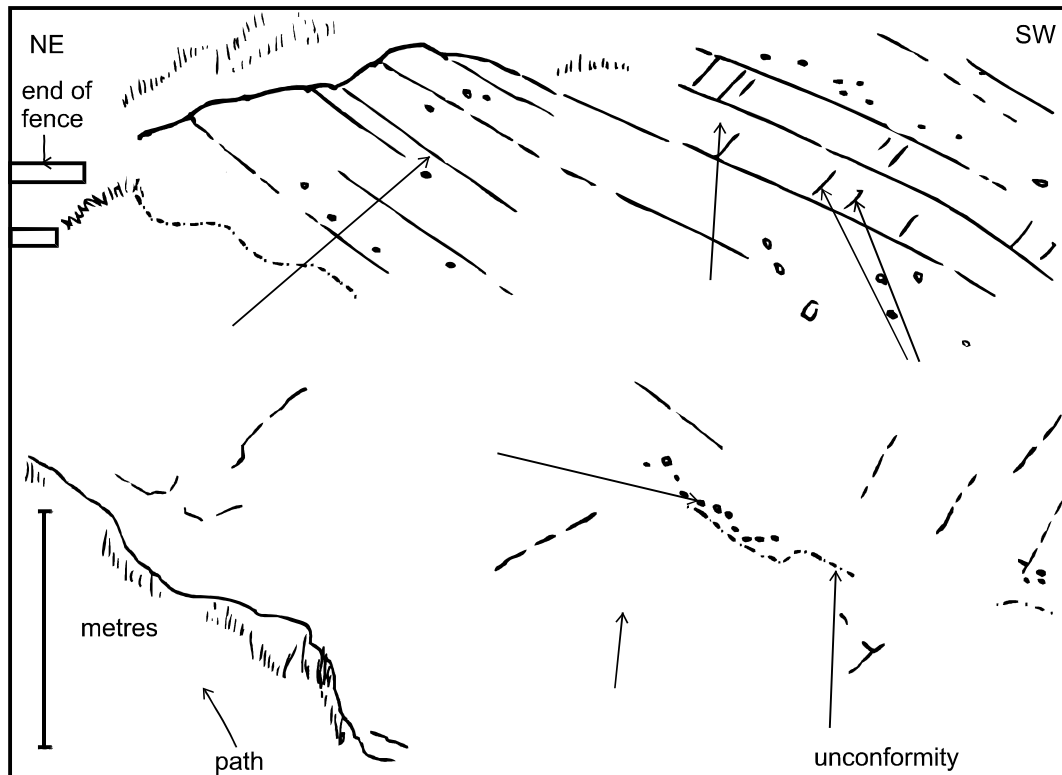
3.



**Pupil Worksheet for Locality "E", Activity 2**

This field sketch shows the view looking towards the north east at M.R. SJ 644096

3. Complete the scale on this field sketch.
4. Label the following on the field sketch:  
 Granophyre  
 Joints  
 Bedding plane  
 Sandstone layer (in Wrekin Quartzite)  
 Pebbles in conglomerate layer (in Wrekin Quartzite)
5. Part of the unconformity between the granophyre and the Wrekin Quartzite is shown. Complete the sketch to show the rest of the unconformity.



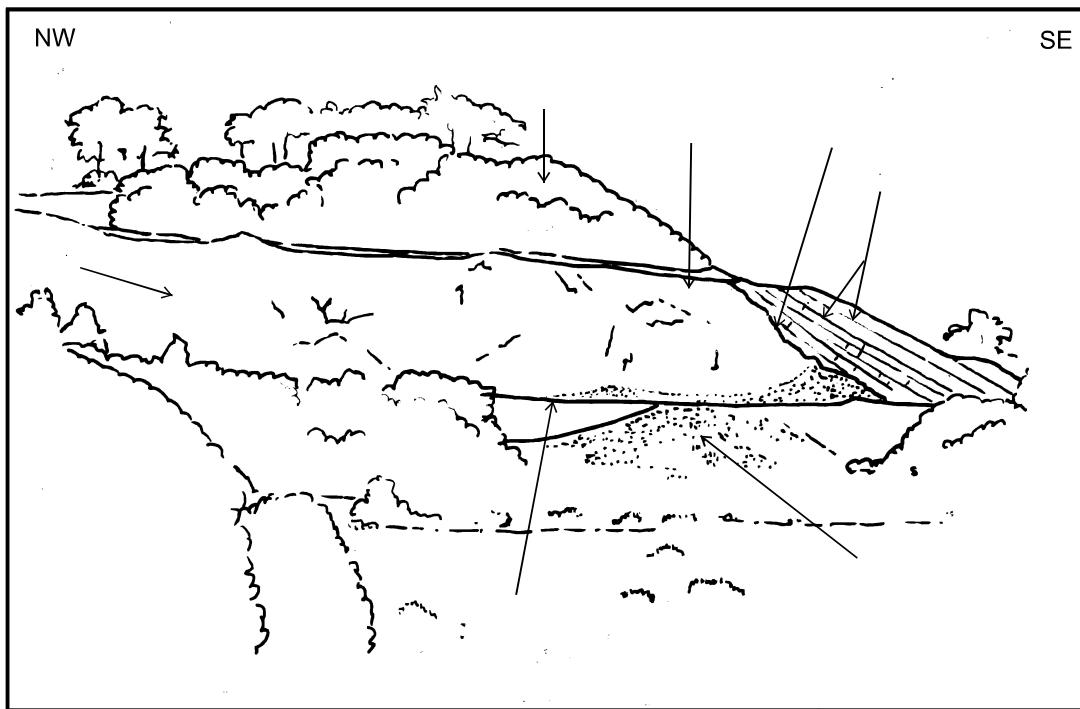
**Pupil Worksheet for Locality "F"**

This field sketch shows the view looking towards the north east at M.R. SJ 643 095

1. Label the following on the field sketch:

- Ercall summit
- Wrekin Quartzite (sandstone)
- Bedding planes
- Granophyre
- Scree
- Soil layer
- Unconformity
- Bench (quarry level)
- Oldest rock

Look at the Ercall Local Nature Reserve poster (no 2) on the information board. Complete the table below the field sketch.



Rock	When it was formed	How it was formed
Wrekin Quartzite (Sandstone)		
Granophyre		