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PUPIL WORKSHEET 1

Pupil Name

BUSQUIZ: from Forest Glen to Presthoke.

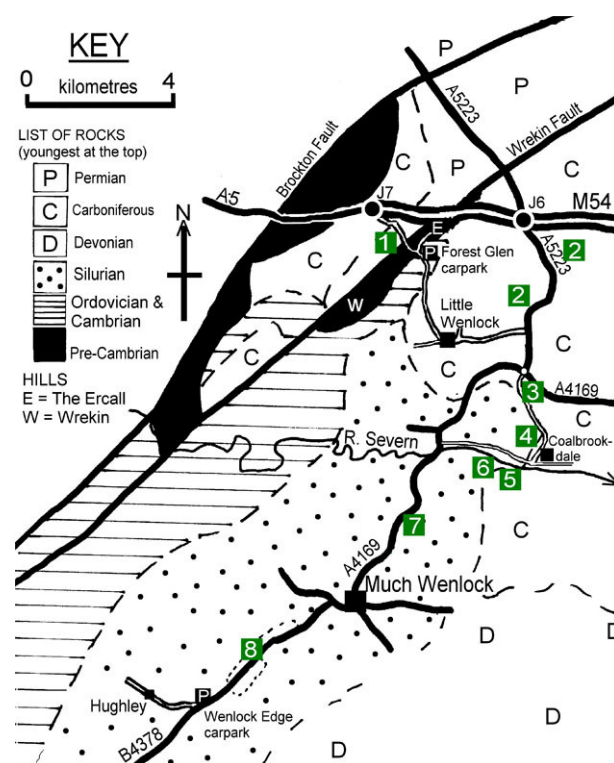
The answers are on the map, or outside of the bus window at the sites, numbered to match the question.

Q1: What is the name of the rounded hill behind and to the left, and what age rock underlies it?

A: The hill is THE WREKIN and the rock is PRECAMBRIAN in age.

Q2: Areas here have been open-cast for which mineral? What sport is now played on them?

A: The mineral is COAL and the sport is GOLF.



Q3: On the left the road is cut into sandstone. What age is it?

A: CARBONIFEROUS

Q4: From the places named outside of the window, what two minerals have been mined in this area?

A: IRON and COAL

Q5: On the left is a power station. Why do you think it was built here?

A FLAT AREA OF LAND

CLOSE TO WATER FOR COOLING

CLOSE TO COAL SUPPLY (in the past!)

CLOSE TO URBAN AREA (but it was built before Telford!)

Q6: The steep valley was cut by glacial meltwater 10, 000 years ago. What river now flows through it?

A: RIVER SEVERN

Q7: Circle the words below which best describe the rocks you can see in the road cutting on the left.

A: bedded / unbedded; horizontal / dipping; igneous; metamorphic; sedimentary.

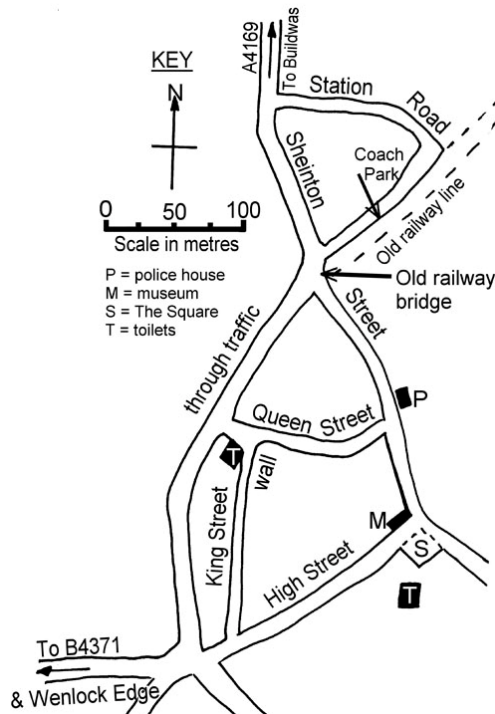
Q8: What kind of industry is to be found at this point?

A: QUARRYING (limestone)

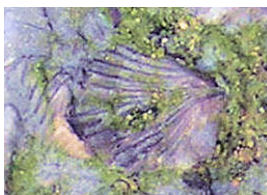
PUPIL WORKSHEET 2

Pupil Name

Much Wenlock Building Stones.



Colonial Coral



Brachiopod (shell fish)



Crinoid (broken pieces)

THE BRIDGE ABUTMENT.

Walk along Station Road and turn left into Sheinton Street. On the left is the bridge abutment.

1. In what year did the bridge building start ?

1860

2. What stone was used to build the bridge?

LIMESTONE

3. What kind of weathering has affected the stone?

CHEMICAL

THE HOUSES ON SHIENTON STREET

(Circle your answers)

1. What has been used to make the roofs of these houses?

tiles, slates

2. Circle the kinds of stones you can see in the walls of these houses.

limestone, sandstone, gritstone.

3. Circle the stones used for the roof and walls of the **police station**.

Tiles, slates, limestone, sandstone,

gritstone, blue bricks, red bricks.

STONE WALL, KING STREET

Use the photographs on the left to help you identify the fossils you can see in the **stone walls** (e.g. on King Street)

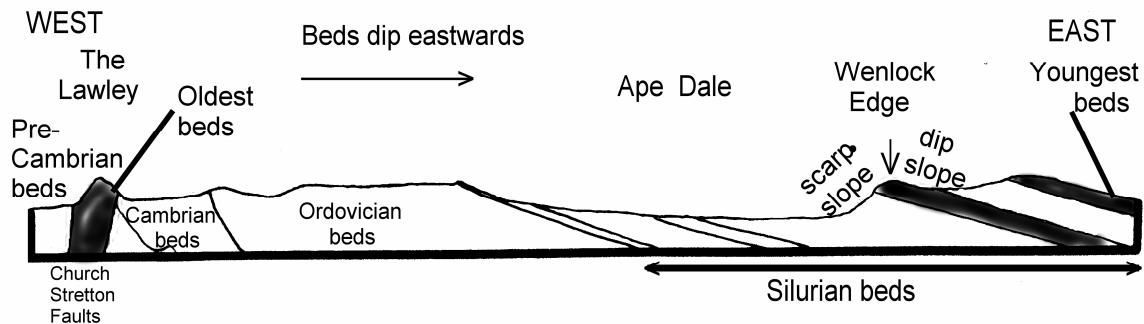
Tick off the ones you find

Colonial coral	
Crinoid pieces	
brachiopods	

PUPIL WORKSHEET 3

Pupil Name

Wenlock Edge: Landscape and Geology.



1. Mark with a vertical arrow, your position on the section and draw an arrow above the section to show the direction in which the beds dip.
2. Mark on the section above the following features:

**West,
Oldest bed,**

**East,
Scarp slope**

**Youngest bed,
Dip slope**

3. Shade in the most resistant rocks on the section.

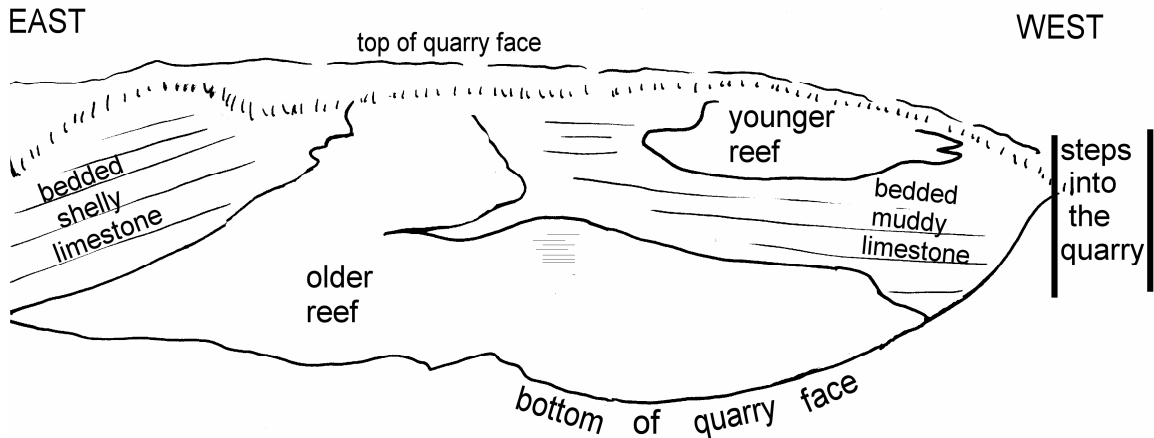
4. Explain why some beds form scarps and others form valleys.

Some beds of rock, like limestones, are more resistant to weathering and erosion. These beds take longer to be worn away and form hills. If these beds are dipping they have a gently sloping "dip" side and a steep "scarp" side where they protect the soft beds below. Other beds, like shales, are less resistant to weathering and erosion and are worn away more quickly to form valleys.

PUPIL WORKSHEET 4

Pupil Name

Knowle Quarry (south).



1. Label the following features on the section.

West

East

Oldest reef

Youngest reef

2. Sketch in the bedding planes at points "a" and "b".

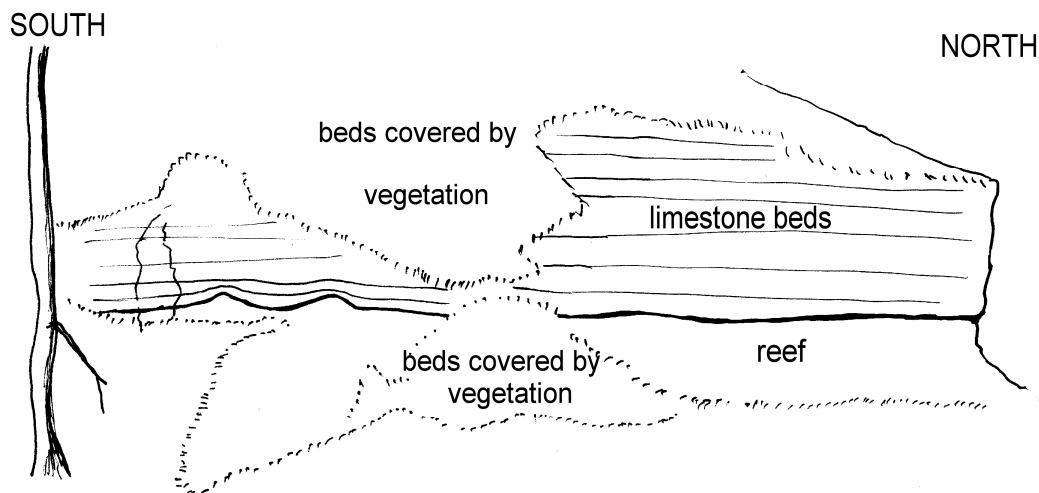
3. Describe the beds at points "a" and "b" in the table below.

At point "a"	Bed thickness: 1cm – 2cm
	Horizontal / Dipping: DIPPPING TO THE EAST
	Grain size: 1mm – 2mm
	Fossil content: SHELLS (mostly broken crinoids)
At point "b"	Bed thickness: 1cm – 2cm
	Horizontal / Dipping: DIPPING TO THE WEST
	Grain size: VERY FINE GRAINED
	Fossil content: HARD TO SEE ANY

PUPIL WORKSHEET 5

Pupil Name

Knowle Quarry (west).



1. On the sketch above, draw in the bedding planes and label the following features:

North **South** **scree** **reef**
soil and vegetation **bedding planes** **joint plane**

Rock Cycle For Limestones.

2. Write the following letters on the diagram below to describe the rock cycle.

A, B and C are labels for the boxes. **D and E** are labels for the arrows.

A. Ions in solution

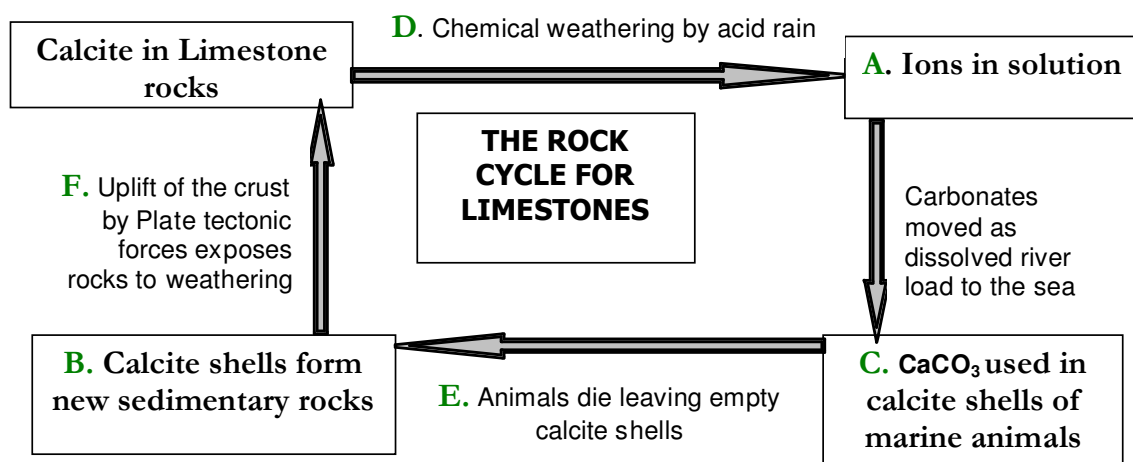
B. Calcite shells form new sedimentary rocks

C. CaCO_3 used in calcite shells of marine animals

D. Chemical weathering by acid rain

E. Animals dies leaving empty calcite shells.

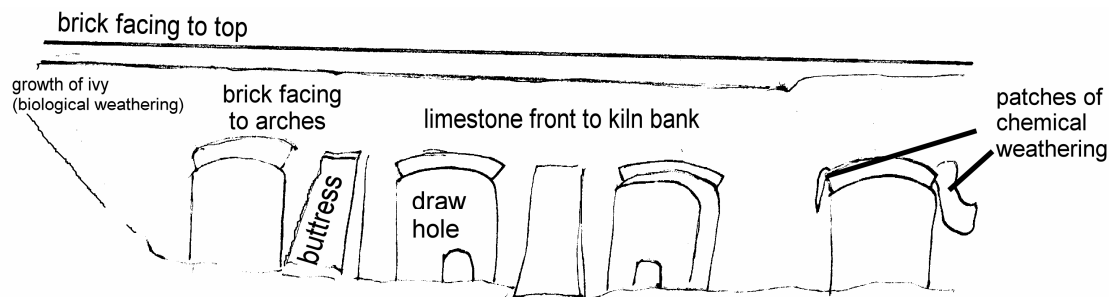
F. Uplift of the crust exposes rocks to weathering.



PUPIL WORKSHEET 6

Pupil Name

Knowle Quarry Lime Kilns.



1. Complete the field sketch above by drawing in the missing kiln arch.
2. Draw in all of the areas which are made of red brick.
3. Explain why limestone blocks have not been used in these places.

THEY ARE NOT STRONG ENOUGH, NOT REGULAR ENOUGH IN SHAPE

4. On your sketch label the following 5 features

kiln arch **draw hole** **buttress**
areas of chemical weathering **areas of biological weathering**

5. When in use the kiln was loaded with alternate layers of

 LIMESTONE BLOCKS and **COAL / CHARCOAL (fuel)**

6. When limestone is "burnt" in a kiln it breaks down into a gas and a solid. Write the equation to show this.

CaCO₃ + heat energy = CaO (solid) + CO₂ (gas)

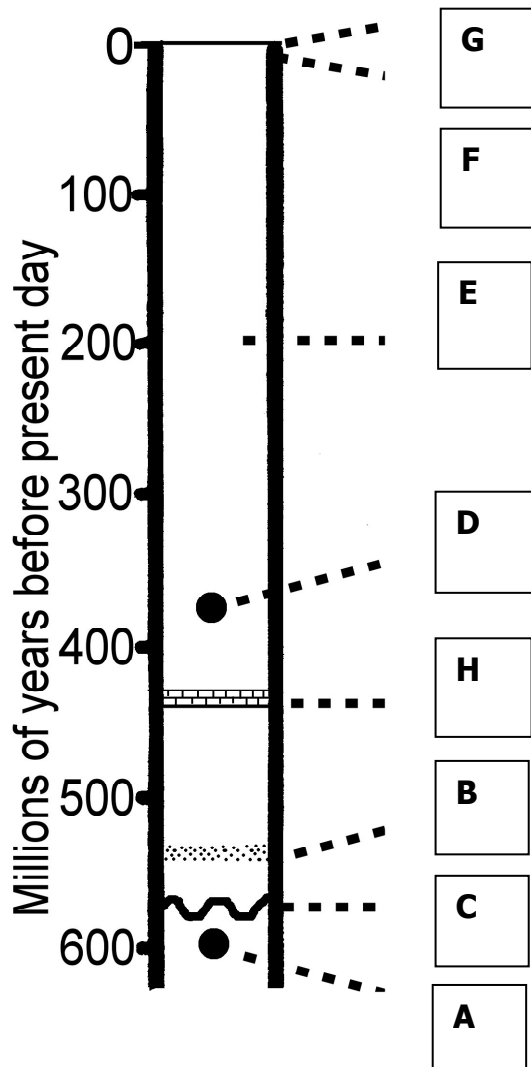
7. List as many uses of limestone as you can in the table below

Building stone	Road ballast
Agricultural lime for fields	Lime wash
Flux in steel / iron works	Reducing the acidity of lakes
Mortar	Concrete (limestone + aggregate)
Cement (limestone + clay etc.)	Plus many others !

PUPIL WORKSHEET 7

Pupil Name

Summary Column Of Geological Events (For The Ercall and Knowle Quarry)



Write the letter for each of the following statements in the correct box on the geological event column above.

- A. Formation of volcanic rocks now exposed at The Ercall;
- B. Deposition of sandstones with ripple marks at The Ercall;
- C. Erosion of volcanic rocks now exposed at The Ercall;
- D. Period of uplift, and tilting 10° to the SE;
- E. Very long period of weathering when any younger rocks were eroded away;
- F. Present day weathering forming dip and scarp landscape;
- G. Quarrying of limestone begins more than 500 years ago;
- H. Deposition of reef limestones now exposed at Wenlock.