



Teachers Notes

Introduction

Bringing your class to Poole's Cavern and Country Park can be the start of a cross-curricular topic covering many aspects of the National Curriculum. Alternatively you can use it as the basis for a more specific study in Geography or Science. Either way school visits are an opportunity for children to increase their knowledge and to experience new and exciting environments.

The worksheets have been designed to inspire teachers and provide support for those wishing to use the cave as a valuable educational resource. The sheets aim to provide teachers with a fun and educational visit structure for students to follow and focus on during their visit. There are sheets covering different specific topics for teachers who wish to concentrate on particular aspects during their visit, as well as worksheets for more general cross curricular visits.

In addition to the worksheets intended for use during the visit, teachers will also find worksheets designed to use as follow up back in the classroom, there by consolidating the learning carried out at the cavern and complimenting the work already done as well as providing a springboard for further activities.

For more detailed information about Poole's Cavern, please go to our website at www.poolescavern.co.uk

What Topics can be focused on during a visit to Poole's Cavern?

Caves

Rivers

Rocks and soils

Environments

Light

The water cycle

Materials and properties

Habitats

Life processes

Worksheet topic areas and meeting curriculum objectives:

Key Stage one:

Worksheet	Curriculum Objectives
Senses Discovery	<p>Geography:</p> <p>1 b. observe and record.</p> <p>3a. identify and describe what places are like.</p> <p>Science:</p> <p>Sc2 Life processes and living things</p> <p>1 a. the differences between things that are living and things that have never been alive.</p> <p>2 g. about the senses that enable humans and other animals to be aware of the world around them.</p> <p>Sc3 Materials and their properties</p> <p>1 a. use their senses to explore and recognise the similarities and differences between materials.</p> <p>Sc4 Physical processes</p> <p>a. to identify different light sources, including the Sun</p> <p>b. that darkness is the absence of light.</p>
General visit worksheet	<p>Geography :</p> <p>1a. ask geographical questions [for example, 'What is it like to live in this place?'].</p> <p>3 c. recognise how places have become the way they are and how they are changing.</p> <p>3 d. recognise how places compare with other places</p> <p>4a. make observations about where things are located and about other features in the environment.</p>

	<p>Sc2 Life processes and living things</p> <p>5a. find out about the different kinds of plants and animals in the local environment.</p> <p>b. identify similarities and differences between local environments and ways in which these affect animals and plants that are found there.</p> <p>Sc3 Materials and their properties</p> <p>c. recognise and name common types of material [for example, metal, plastic, wood, paper, rock] and recognise that some of them are found naturally.</p> <p>d. find out about the uses of a variety of materials [for example, glass, wood, wool] and how these are chosen for specific uses on the basis of their simple properties.</p> <p>Sc4 Physical processes</p> <p>3a. to identify different light sources, including the Sun.</p> <p>b. that darkness is the absence of light.</p>
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Key Stage two:

Worksheet	Curriculum Objectives
Habitats Visit and follow up worksheets	<p>Science : Sc2 Life processes and living things</p> <p>Life processes</p> <p>1a. that the life processes common to humans and other animals include nutrition, movement, growth and reproduction</p> <p>Living things in their environment</p> <p>5a. about ways in which living things and the environment need protection</p> <p>Adaptation</p> <p>b. about the different plants and animals found in different habitats</p> <p>c. how animals and plants in two different habitats are suited to their environment</p>

	<p>Feeding relationships</p> <p>d. to use food chains to show feeding relationships in a habitat</p> <p>e. about how nearly all food chains start with a green plant</p>
<p>Rocks and water visit and follow up worksheets</p>	<p>Science: Sc3 Materials and their properties</p> <p>Grouping and classifying materials</p> <p>1a. to compare everyday materials and objects on the basis of their material properties, including hardness, strength, flexibility and to relate these properties to everyday uses of the materials.</p> <p>d. to describe and group rocks and soils on the basis of their characteristics, including appearance, texture and permeability.</p> <p>Changing materials</p> <p>e. the part played by evaporation and condensation in the water cycle.</p> <p>Geography</p> <p>Geographical enquiry and skills</p> <p>1a. ask geographical questions [for example, 'What is this landscape like?', 'What do I think about it?']</p> <p>b. collect and record evidence [for example, by carrying out a survey of shop functions and showing them on a graph]</p> <p>2 b. to use appropriate fieldwork techniques [for example, labeled field sketches] and instruments [for example, a rain gauge, a camera].</p> <p>Knowledge and understanding of places</p> <p>3a. to identify and describe what places are like [for example, in terms of weather, jobs].</p> <p>b. the location of places and environments they study and other significant places and environments [for example, places and environments in the news].</p> <p>c. to describe where places are [for example, in which region/country the places are, whether they are near rivers or hills, what the nearest towns or cities are]</p> <p>d. to explain why places are like they are.</p>

Knowledge and understanding of patterns and processes

4b. recognise some physical and human processes [for example, river erosion] and explain how these can cause changes in places and environments.

Poole's Cavern

Key stage 1 Senses Discovery worksheet

1.  Is the cave.....



or

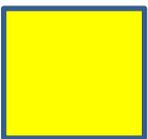


2.  Close your eyes stand **silently** and **still**. What can you hear?





3. Look carefully at the rock. Tick the boxes next to the 3 colours that can be seen in the rocks?



4. Touch the rock on the walls of the cave. What does it feel like?

Wet

Dry

Smooth

Sharp

Hard

Soft

Cold

Warm

Slippery

Rough

Poole's Cavern

Key stage 1 Cave discovery worksheet

1. Draw 3 things that have been found in the caves:



2. What made these caves?



3. Circle the correct answers. The light in the cave is.....



Without electric lights inside the cave it would be....



4. Draw a picture of an animal that would like to live in these caves and a picture of one that would not like to live in here.



5. What type of rock are the caves made from?

Granite

Limestone

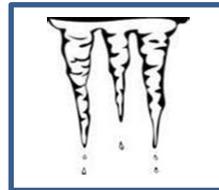
Slate

6. Draw lines to match the boxes of the rock formations to their names:

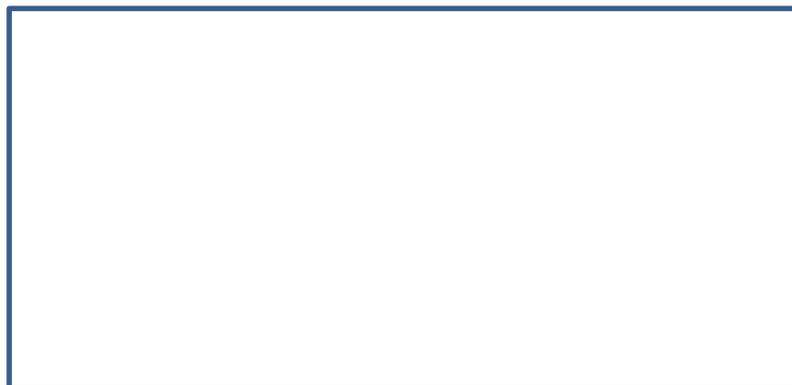
Stalactite



Stalagmite



7. Draw a picture of one of the Fossils found in the rock in the exhibition centre.



Poole's Cavern

Cavern Visit Worksheet: Habitats

1. What is a habitat?

.....

2. Look around you at the cave, think of four words to describe the cave habitat.

a.

c.

b.

d.

3. All living things need certain things to survive, use the pictures and clues to help you fill in what those 4 things are and decide if it can be found in the cave.



a.

A

Does the cave provide this? Yes/No



b.

W

Does the cave provide this? Yes/No



c.

S h

Does the cave provide this? Yes/No



d.

F

Does the cave provide this? Yes/No

If an animal cannot get all of these things from its habitat (for example food may be hard to find in a cave) it may use another habitat to look for its food. Animals often need more than one type of habitat to survive.

4. Can you think of any other habitats near to or in the cave? Here are some clues:



.....

.....

.....

5. What characteristics do bats have that makes them well adapted to living in the cave habitat?



.....

.....

.....

6. Can you find any plants living in the cave? If so where do they live and why do they only grow there?

.....

.....

.....





Visit follow-up sheet: Habitats

Activity 1: Food chain Poster

On your visit to the caves you found out that bats live in the caves. What do you think they eat?

.....

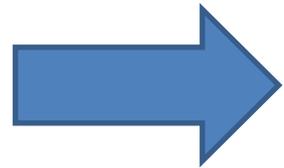
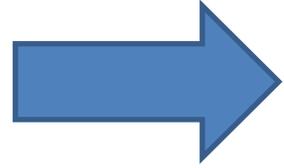
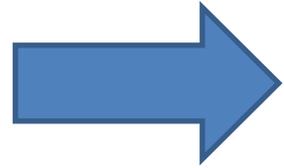
If these can't be found in the cave, where do the bats find their food?

.....
.....

Make a bat food chain poster by cutting out the pictures and arrows on the following page, and then arrange them into the correct food chains. When you have a chain, cut out the labels and add each one to the correct step in the chain.

Fill in the gaps in the sentence:

In our food chain the is the predator and the is the prey.
Everything in the food chain relies upon the for its energy.



Producer

First
Consumer

Second
Consumer

Light
Energy

Activity 2: Habitats

Name 3 living things that you might find in the cave.

1.
2.
3.



Name 3 living things that you might find in the woodland habitat above the caves.

1.
2.
3.



Why are these lists different?

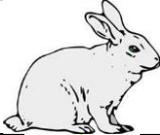
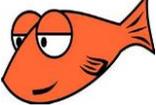
.....

.....

.....

Activity 3: Matching food types

For each of the following types of food put a tick in the box if a carnivore, Herbivore or Omnivore would eat it. There may be more than one correct answer for each food.

Food	Carnivore	Herbivore	Omnivore
			
			
			
			
			
			
			
			

Poole's Cavern

Key Stage 2: Rocks and Water visit worksheet

1. Poole's Cavern is made from a type of rock called

2. Look carefully at the rock, how would you describe its appearance and texture?

Dark

Hard

Smooth

Jagged

Rough

Powdery

Grainy

Dull

Pale

Shiny



3. Use the words below to fill in the gaps:

Permeable

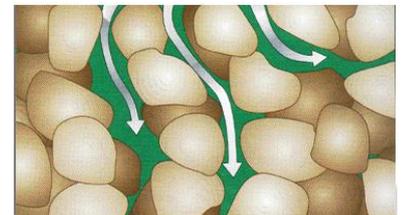
Insoluble

Soluble

Impermeable

Limestone has lots of cracks and gaps in it, this lets water trickle through the rock. The rock is said to be

As water passes through the rock, some of the rock dissolves into the water, this means it is



4. What do we use limestone for?

What properties of limestone make it a good rock to use for this?

.....





5. Water created the caves around you.

Where did the water come from?

The caves are not flooded, so where did the water go?

.....

6. Put the following sentences into the correct order to explain how the caves were formed:

The water dissolves some of the rock as it passes through

As rainwater falls it absorbs Carbon Dioxide and forms a weak acid

The limestone was formed 320mya

The acidic water drops through any cracks in the limestone

The cracks are widened into caves and passages

a. _____

b. _____

c. _____

d. _____

e. _____

7. Match the formations to their names by drawing lines from the diagram to the correct name.

Stalagmite



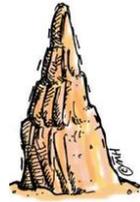
Stalactite



Flowstone



Column



8. a. What mineral are stalagmites and stalactites made from?
- b. What is in the water that makes the stalactites orange?
- c. What is the name of the largest stalactite in the cavern?
- d. How old is this stalactite?

Poole's Cavern

Rocks and water visit follow up sheet

1. Underline the words which correctly describe the properties of rock:

Hard

Flexible

Weak

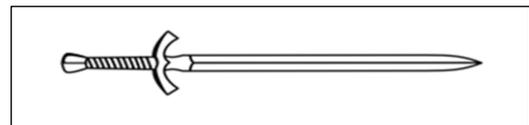
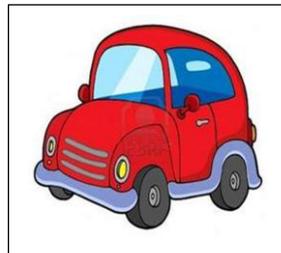
Brittle

Inflexible

Soft

Strong

2. Draw a ring around the boxes which show a sensible use for rock given its properties.



3a. In Derbyshire, caves form in a certain type of rock. What is this rock called?

c. What is this rock made from?

3. Below is a diagram showing the water cycle. Use the following labels to complete the diagram:

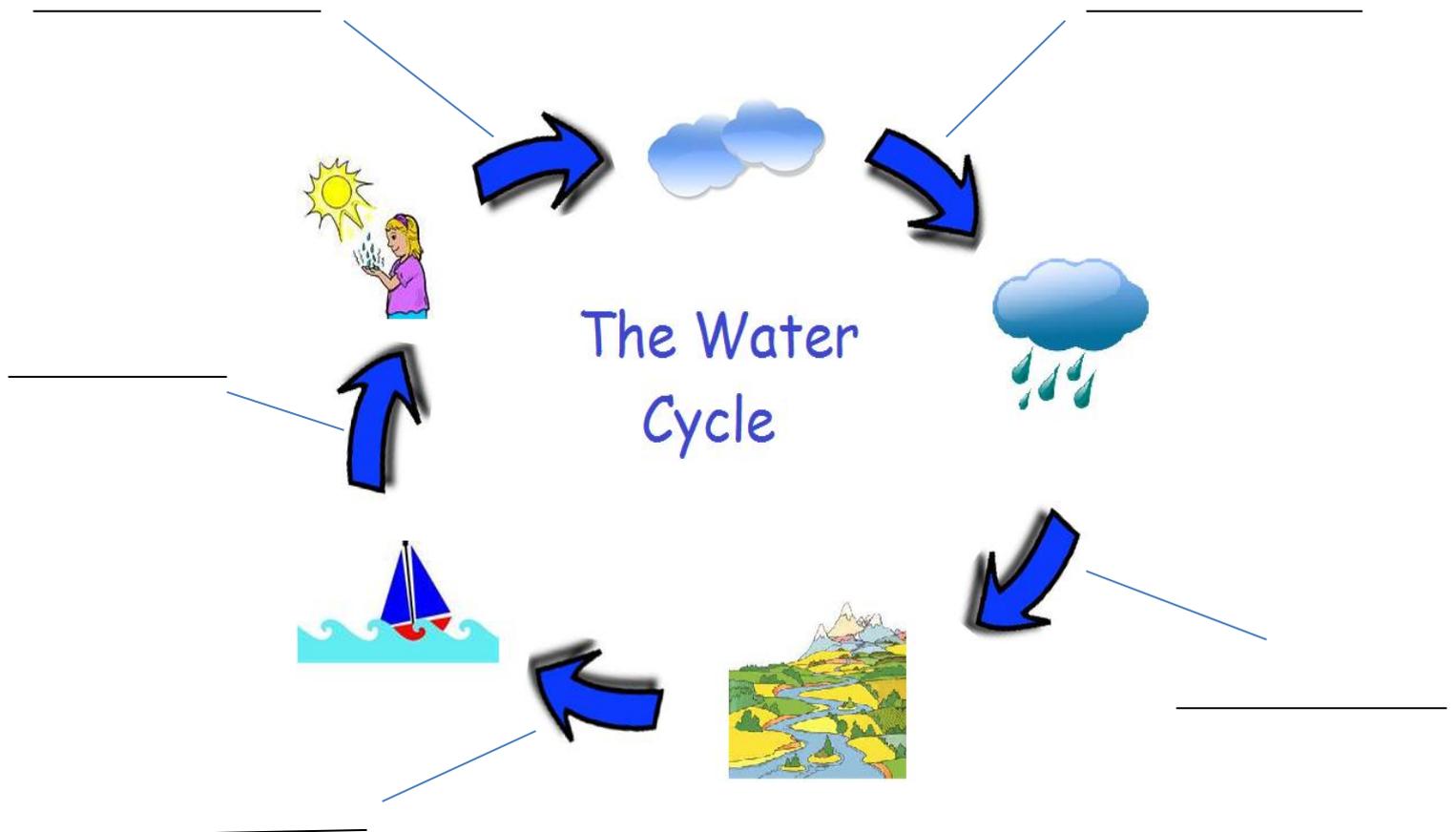
Evaporation

Transportation in rivers and streams

Condensation

Precipitation

Storage in the sea



4. Choose the best word from the box below to fill in the gaps and complete the passage.

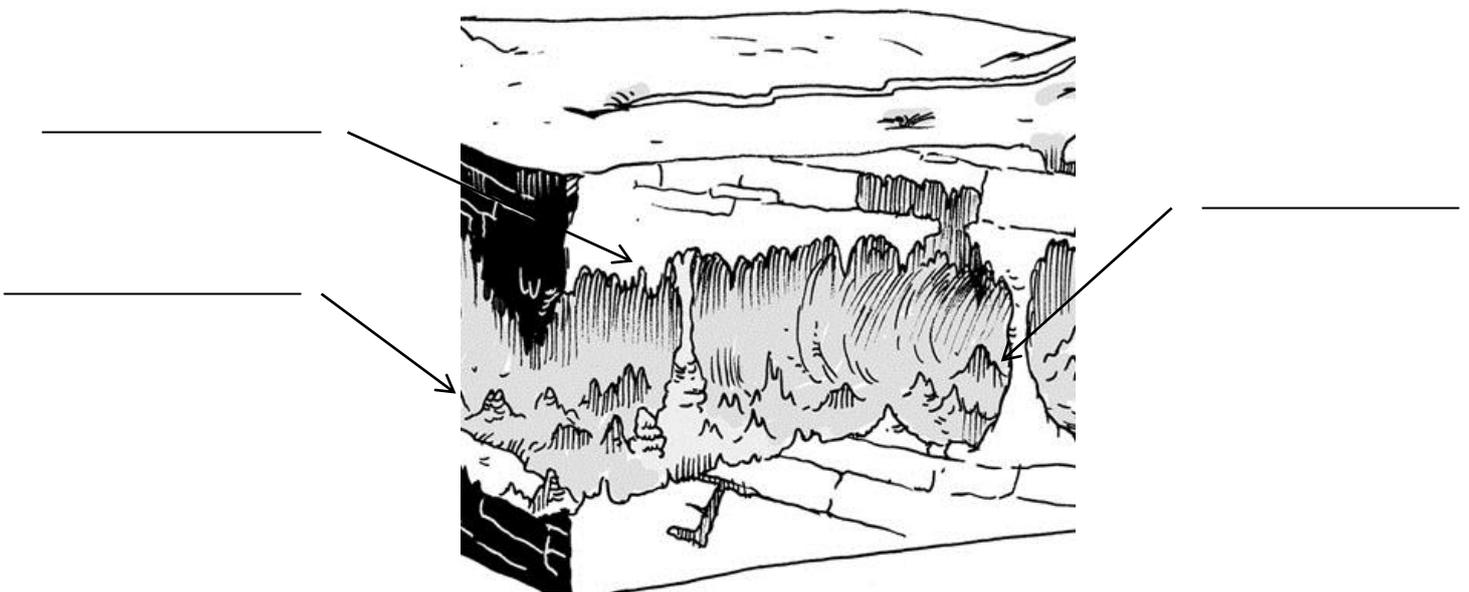
<i>Transports</i>	<i>Stalactite</i>	<i>Column</i>	<i>Deposits</i>
<i>Eroding</i>	<i>Cracks</i>	<i>Calcite</i>	
	<i>Soluble</i>	<i>Stalagmite</i>	

When rain falls on the ground, some of the water seeps through the soil and into the rock beneath. As the water drops trickle through the in the limestone, the rock dissolves because limestone is The water is the rock.

The water then carries (.....) the mineral and only leaves it behind as it drips from the roof of the cave. The calcite very slowly builds up to make an icicle-like formation called a

Where water drips onto the floor it calcite and this forms a Sometimes when a stalagmite and a stalactite grow towards each other they join in the middle to form a

5. Add labels to the diagram of the cave below to name the features.



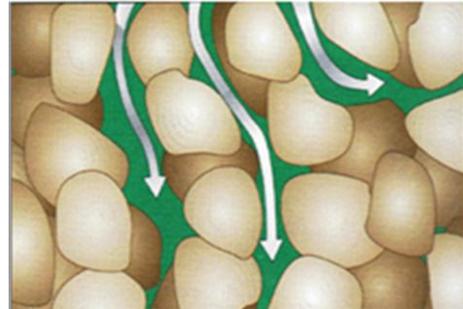
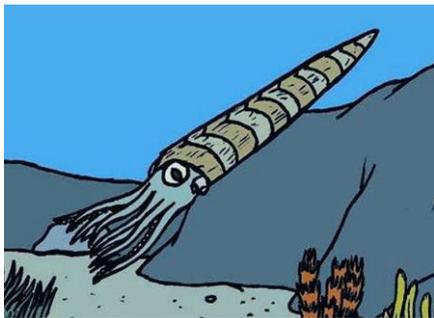
Poole's Cavern

How the cave was formed

320 million years ago, Derbyshire was beneath a shallow tropical sea.

When shell creatures living in the sea died, they sank to the bottom of the water and their shells became part of the sea bed.

In time the shells were crushed into tiny pieces and became limestone rock. We can find lots of fossils in limestone.



Limestone is special because it is **Permeable** and **Soluble**.

Permeable means it has small cracks in it through which rain drops can trickle.

Soluble means that the rain drops dissolve the rock as they pass through. This wears away the rock, making the cracks wider.

Over time, with lots of water dripping through the rock, the small cracks get wider and wider. Eventually caves like Poole's Cavern form underground.

