'Wonderful wall watchers'

QCA Geography Unit 1 Around our school- the local area.

This is a unit which introduces young children to geography field work.
The children will look at the walls of buildings in their local area.
They will be introduced to some of the purposes and origins of some common building materials.
The unit mirrors the opportunities of those in the QCA unit for links to literacy, mathematics, speaking and listening, design and technology, history, IT and the world of work. It also has links to science, drama and, importantly, education for sustainable development. I.e. this unit helps children acquire the basic knowledge that will help them eventually discriminate between which of the Earth's resources are renewable and which are finite.

Unit 1 – Around our school –the local area
Geography Year 1
Wonderful wall watchers!

Overview Teacher Introduction:

This unit uses a specific task (Looking closely at the outside surface of walls) to introduce children to the idea of investigating their local area.
It covers similar learning objectives as the QCA Geography Year 1 Unit "Around our school – the local area" but, in addition, begins to make children aware of some of the purposes and the origins of common building materials.
The unit mirrors the opportunities of those in the QCA unit for links to literacy, mathematics, speaking and listening, design and technology, history, IT and the world of work. It also has links to science, drama and music
Finally and importantly this unit promotes education for sustainable development. It helps children acquire the basic knowledge so they can discriminate between which walls are made from natural materials and those which are "man made." Eventually children will learn which of the Earth's resources, in terms of a human lifespan, are renewable and which are finite.
The origin of basic building materials
Bricks are made from clay. The clay is mixed with water, moulded, dried and then fired in an oven. The colour of the brick depends on the mineral content of the original clay.
Clay is a sedimentary rock, made up of tiny mineral particles that were originally part of another quite different rock. The original rock may have been changed by the Earth's heat and movement, by chemical action and erosion. The particles were probably deposited in ancient seas and lakes that occupy the space where the UK is today.
Cement is made from either limestone or chalk. Both are rocks that were originally derived from material, produced by organisms such as coral or shellfish, which accumulated as sediment in ancient seas. To manufacture cement, the rock is quarried, crushed, mixed with small amounts of other minerals (such as clay or shale) and then heated to about 1450^{o} Celsius. The material is cooled, powdered and packed in waterproof bags. Builders mix the cement powder with sand and water and use it as an adhesive to hold bricks *(mortar)* or stone *(concrete)* together.
The outside walls of many buildings are covered with a cement render. This can be used as a decorative feature to improve the appearance of damaged brickwork or unattractive concrete blocks. The renders are often coated with a waterproof layer.
Concrete blocks are widely used in the building industry. They are a moulded mixture of sand, cement, gravel or crushed rock plus a combination of other materials which affects the final properties of the product. These other materials can include recycled cinders, ash and slag from other industrial processes e.g. coal fired power stations, iron and steel smelting. Concrete blocks are usually larger than bricks and

the building process can consequently often be completed more quickly. The properties of the blocks can include strength and good insulation.

The sand and gravel that are used both in concrete products and in mortar are also sedimentary rocks. These materials are often quarried in the same location then sieved apart. Their origins are similar to those of clay. However the particle size of sand and gravel is larger than that of clay.

There are large reserves of clay, limestone, chalk and sand and gravel in the UK. These materials are quarried in many locations.

‘Wonderful wall watchers’

Unit 1 Around our school – the local area Geography Yr 1

ABOUT THE UNIT

This is a ‘long’ unit. It uses investigative tasks to introduce children to the idea of looking at their local area.

The local area will be studied frequently during a child’s time in primary school and therefore this unit focuses on aspects of local features, land use and environment. This allows for them to be developed later, perhaps as smaller, more highly focused units, *eg Unit 2 ‘How can we make our local area safer?’ or Unit 14 ‘Should the high street be closed to traffic?’*

The unit may be shortened to a ‘medium’ unit by leaving out the sections marked.

The unit offers links to literacy, mathematics, speaking and listening, design and technology, history, IT, citizenship and the world of work. It also has links to science, drama and education for sustainable development. This unit helps children acquire the basic knowledge that will help them eventually discriminate between which of the Earth’s resources are renewable and which are finite.

PLACES

- School locality
- Physical and human features
- Broader context

SKILLS

- Take part in enquiry process
- Use geographical terms
- Undertake fieldwork
- Follow directions
- Make maps and plans
- Locate home locality
- Follow a route
- Use secondary sources

THEMES

- Land and building use
- Environment: express views

VOCABULARY

In this unit, children are likely to use:

- address, near, far, travel, journey, routes, features, attractive, buildings, offices, church, shop, houses, flats, garage, factory, leisure, playground, park, brick, concrete block, rock, stone, repair, replace, broken, derelict, extension

They may also use:

- parade, library, museum, facilities

RESOURCES

- local maps and plans
- computer software for drawing simple graphs and the V. Quarry
- pictures of the local area (collected by teachers or children and from local guidebooks)
- a camera
- local newspapers
- local shopkeepers and employers
- adults who care for the children

PRIOR LEARNING

It is helpful if the children have:

- experienced some introductory work on their school grounds and local area in reception classes

EXPECTATIONS

at the end of this unit

most children will:	understand the variety of features that form part of their local area; understand the part people play in developing and changing the area
some children will not have made so much progress and will:	have a more limited understanding of the features that make up their local area; be able to annotate a simple map with some of the features
some children will have progressed further and will also:	offer simple and, in some cases, more reasoned explanations for the presence of certain environmental issues, *e.g. derelict or redundant buildings, new civil engineering developments,* in the area

FUTURE LEARNING

Children may build on this unit by learning in more depth about particular issues in their locality, *eg ‘Traffic’ in Unit 2,* and by studying contrasting localities, as in Unit 4, for example.

Adapted unit – Quarry Products Association www.virtualquarry.co.uk

LEARNING OBJECTIVES CHILDREN SHOULD LEARN	POSSIBLE TEACHING ACTIVITIES	LEARNING OUTCOMES CHILDREN	POINTS TO NOTE
Why do we need walls? (Lesson 1) Where do I live? Where do other pupils live?			
• To understand some of the different reasons why walls are built. • To recognise that walls can be built with different materials. • Those walls can be the habitat of different creatures. • That all pupils have a personal address and that they travel to school	• A big book shared reading activity • Ask the children to write out their addresses, with an explanation of each line, and display these around a map of the area. • Discuss with the children who lives the furthest away and who lives the nearest. • With the children's help, design and carry out a survey of how children come to school. Help the children to draw a graph, which could be computer generated, and analyse the findings.	• To understand the reasons why buildings and other structures are built. • To recognise and know some simple building materials. • know their own addresses • understand the significance of each line of the address • represent the various types of travel on a simple graph • draw some conclusions from their findings	Mathematics: when children carry out a survey and record their results, there are opportunities to link with work on classifying, representing and interpreting data. IT: if children generate their graphs on a computer, this work could link to IT (Unit 1E).
Where is the school? How do I get to school? (Wall watching at home. Lesson 3)			
• their sense of place in relation to home and school • to describe a route	• With the aid of the teacher to locate a picture of a wall of their house on a local map of the school catchment area. • Ask the children to explain their route from home to their classroom to their peer group.	• use a map showing their route to school • recognise where places are around the school	Speaking and listening: when children are speaking about their route to school and listening to their partners, encourage them to use questions and words that trigger questions and help the speaker to add detail to their account *eg Where do you cross the road?* With the aid of the teacher and ICT to construct a graph of the main building materials used in the wall of their home.
What can we see in the streets around our school? Wall watching in the streets around our school. (Lesson 2)			

Adapted unit – Quarry Products Association www.virtualquarry.co.uk

• to recognise some of the physical and human features in their locality • to understand some of the ways in which the features are used	• Show the children pictures of walled features in the locality, ask them to and group them into sets, eg far and near, buildings and features, and place them in the sequence they are seen on the route to school. • Help the children to identify from evidence what individual buildings are used for, what material has been used to build the walls. Ask them to annotate correctly the map they have drawn.	• identify a clear sequence of features seen on their route to school • use correct vocabulary to describe features	Literacy: these activities offer children opportunities to use correct vocabulary (see vocabulary section) and to begin distinguishing between nouns and adjectives.

Adapted unit – Quarry Products Association www.virtualquarry.co.uk

LEARNING OBJECTIVES CHILDREN SHOULD LEARN	POSSIBLE TEACHING ACTIVITIES	LEARNING OUTCOMES CHILDREN	POINTS TO NOTE
What are our immediate surroundings like? Waggy wants to know why people keep changing things. (Lesson 4)			
• to describe the features of the local environment • to express views on the features • that changes occur in the locality	• To share a reading activity and understand some of the reasons for changes in the locality. • Walk the children around the local area to identify the main features and changes that are occurring. • Ask the children to complete a simple questionnaire to rate the quality of the features and to present the findings in a suitable way, *eg chart, graph, poster or similar.* • Ask the children to sketch or photograph a range of attractive and unattractive places and locate these on a large-scale map. • Discuss with the children their favourite place seen on the walk and ask them to write about it, explaining what makes a 'nice' or 'nasty' place. • Divide the children into pairs and ask them to identify a route around the area that visitors could follow to give them a good idea of the character of the place.	• use a range of words and pictures to show their views on the quality of the environment • know about changes in their locality	Design and technology: observing houses and homes in the local environment and drawing examples of different types of building (Unit 1D). History: work on homes in the locality (Unit 2).
What jobs do people do in our locality?			
• to identify some of the uses of land and buildings in their locality • to understand that these uses are linked to the work people do	• Walk the children around the local area, asking them to observe, record and take photographs of the different uses of land and types of buildings. • With the children's help, draw a large transect diagram of the route taken, and annotate it with photographs and suitable captions. • Discuss with the children the jobs that might exist in the area visited. • Visit a local place of work, *eg a shop or office*. Find out the number of people working there and the type of jobs carried out.	• recognise that different places in the area support different kinds of work	Literacy: when children are annotating the transect diagram there are opportunities to discuss the function of labels, *eg to remind or to describe*, and how they are composed. The labels could be used as a source for reading in subsequent literacy hours. World of work: discussing types of jobs.

Adapted unit – Quarry Products Association www.virtualquarry.co.uk

LEARNING OBJECTIVES CHILDREN SHOULD LEARN	POSSIBLE TEACHING ACTIVITIES	LEARNING OUTCOMES CHILDREN	POINTS TO NOTE
How do people spend their leisure time?			
• about the need for leisure activities and the types of facilities available	• With the children's help, design and carry out a survey of how they, their parents, other adults and friends spend their leisure time. • With the children's help, use local maps, photographs, including aerial photographs, and leisure advertisements in local newspapers to plot local recreational facilities on a base map.	• know that a local area may have a variety of leisure facilities • know that local leisure facilities depend on people to support them	Citizenship: considering how people use local facilities links to ideas of community.
Are there any changes taking place in our area? Waggy wants to know why people keep changing things. (Lesson 4)			
• how places change for better or worse over time	• Discuss with the children the changes they have noted during their work on the area. With help from the children, make a list of them and mark them on a large map of the area. Take photographs of the changes to form a historical record that future classes can use when looking at how the area has changed.	• realise that the process of change is continuous and happens in most places • develop their understanding of chronology	Literacy: when listing changes children can learn about the purpose of lists and how they are constructed and organised, *eg by using numbers, using a title*. History: the sequence of change in the area links to the idea of chronology.
	Where teachers want to shorten the unit, the sections under italicised questions are those that may be omitted.		**SAFETY –** All off-site visits must be carried out in accordance with LEA and school guidelines.

Ref: QCA/98/253W

Lesson 1: Why do we need walls?

Prior Knowledge / Work:
No specific learning required. This lesson builds on children's acquired experience.

Learning Objectives:

- To understand some of the different reasons why walls are built.
- To recognise that walls can be built with different materials.
- Those walls can be the habitat of different creatures.

Subject Links:

- Literacy – A shared reading activity using the online Big Book *Waggy the wonderful wall watcher*.
- Speaking and listening – developing a vocabulary linked to *walls, insects and the wagtail.*
- Citizenship – to understand that other living things (the wagtail) have needs.

Resources:

- Class access to a computer and a large visual display unit such as a white interactive board.
- On line Big Book *Waggy the wonderful wall watcher*.
- Additional pictures of a wagtail and some of its insect prey downloaded and saved from websites such as:
  www.rspb.org.uk/birds/guide/p/piedwagtail/index.asp
  www.arthurgrosset.com/europebirds/piedwagtail.html **www.butterfly-guide.co.uk** **http://atschool.eduweb.co.uk/jblincow/nmoths/pg5.htm**
  www.nhm.ac.uk/interactive/woodlice/extra_notes.html
  http://atschool.eduweb.co.uk/sirrobhitch.suffolk/invert/jr/img13
- Examples of wall building materials: a brick; concrete block; if possible, a piece of local rock or stone.

Background Information:

This lesson uses the example of a common British Bird, a pied wagtail, to encourage children to look closely at walls. This wagtail is common throughout the U.K. The small black and white bird has a long tail which it wags up and down as it searches for its food. It feeds on insects such as ants, mosquitoes, spiders, moths, woodlice,

beetles and flies. It is particularly common near water but is often seen searching for food on walls and roofs.
The big book focuses on walls that can be seen around homes and schools. In addition, a seawall and farm wall is also included.

Activity:
This is a shared reading and discussion activity.
Introduce the unit to the children by telling them that they are going to be *wonderful wall watchers!* Use the on line big book resource attached to this unit and show the children the opening picture of a wagtail.
Discuss why a wagtail needs to be a *wonderful wall watcher.* (It hunts for insect food. It sometimes finds this insect food living on walls.) Explain that not all birds eat insects. Some, such as sparrows for example, mainly eat seeds.
Show the children pictures of a variety of insects that might be part of a wagtail's diet.
Then discuss each pair of pages in the Big Book. Discuss with the children:
1. Why each wall was built. The reasons will include:
- To keep people and their property safe.
- To keep out cold and rain and keep people inside the walls warm.
- To show the boundary or edge of someone's property. (The space somebody owns or looks after.) Sometimes to keep farm animals safe and secure.
- To support or hold up other parts of a building such as roofs, towers etc.
- To keep water, soil or rocks away from the space we're using.
- To help people feel private and secure.

2. What they think the wall is made from. Answers will include bricks, blocks and stone. Use your examples of wall building materials as a visual aid.

At the end of the session tell the children that they are going to become *wonderful wall watchers* too.

Notes for teachers

To use this Big Book select:

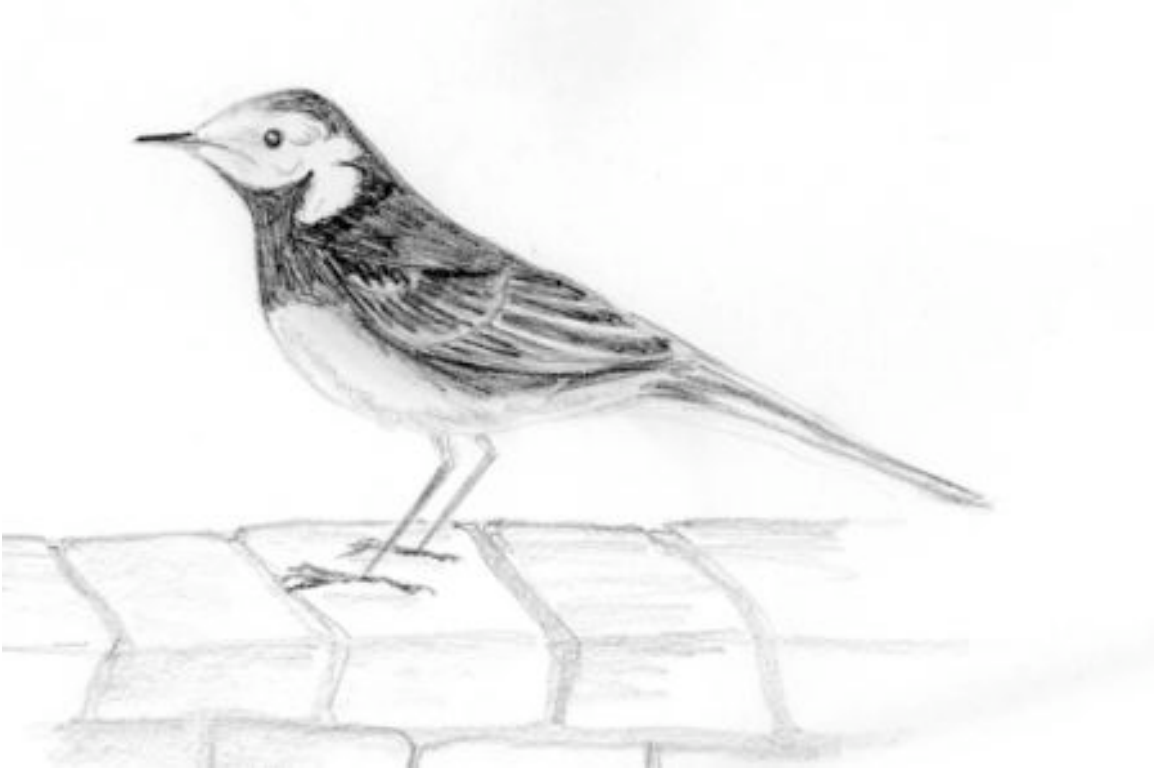
- View – Reading Layout;
- On the toolbar select the multiple page option..

This Big Book has been designed to be viewed on an interactive white board or large visual display unit.

You may prefer to substitute local photographs to make the book even more relevant to your children.

Please delete this text box prior to use.

Waggy.



A Wonderful Wall Watcher.

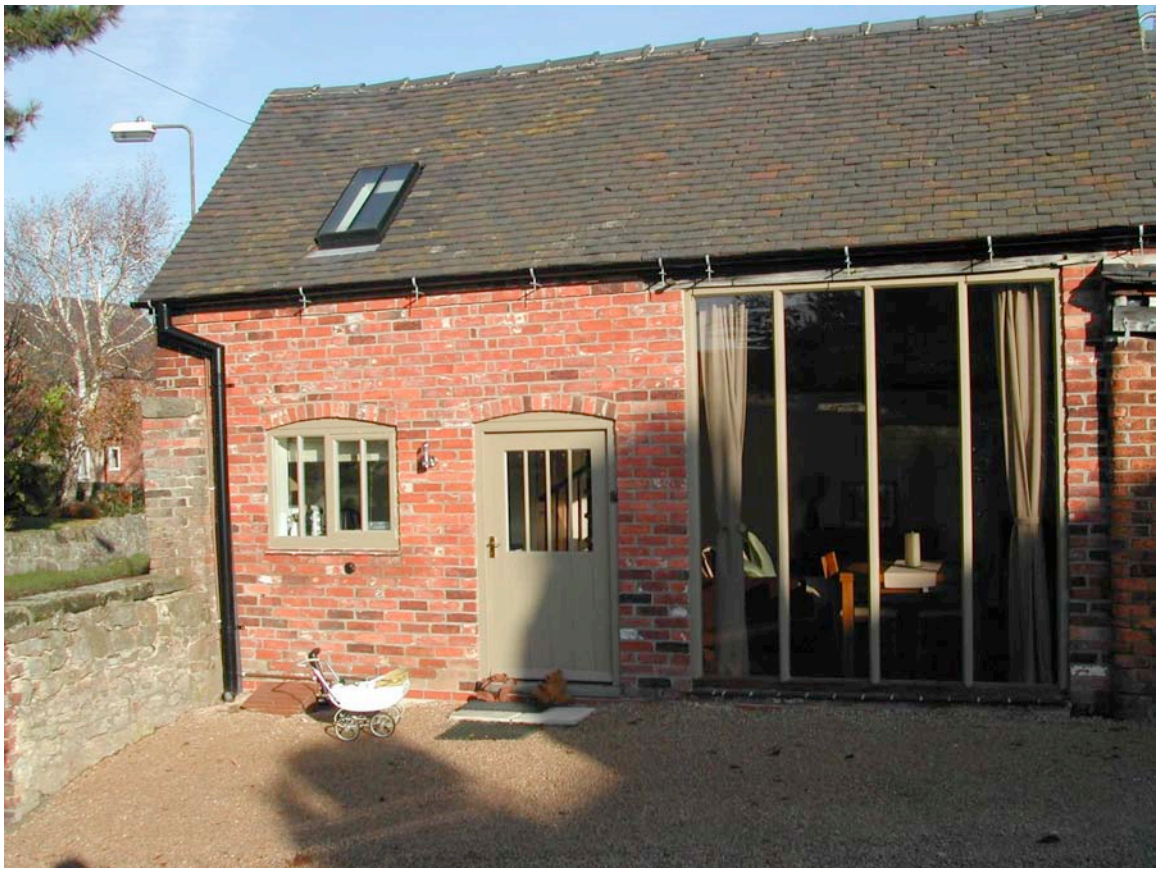
(Photo courtesy of http://www.copyright-free-pictures.org.uk)

I am called a wagtail!

Do you know why?

I look at walls very carefully.

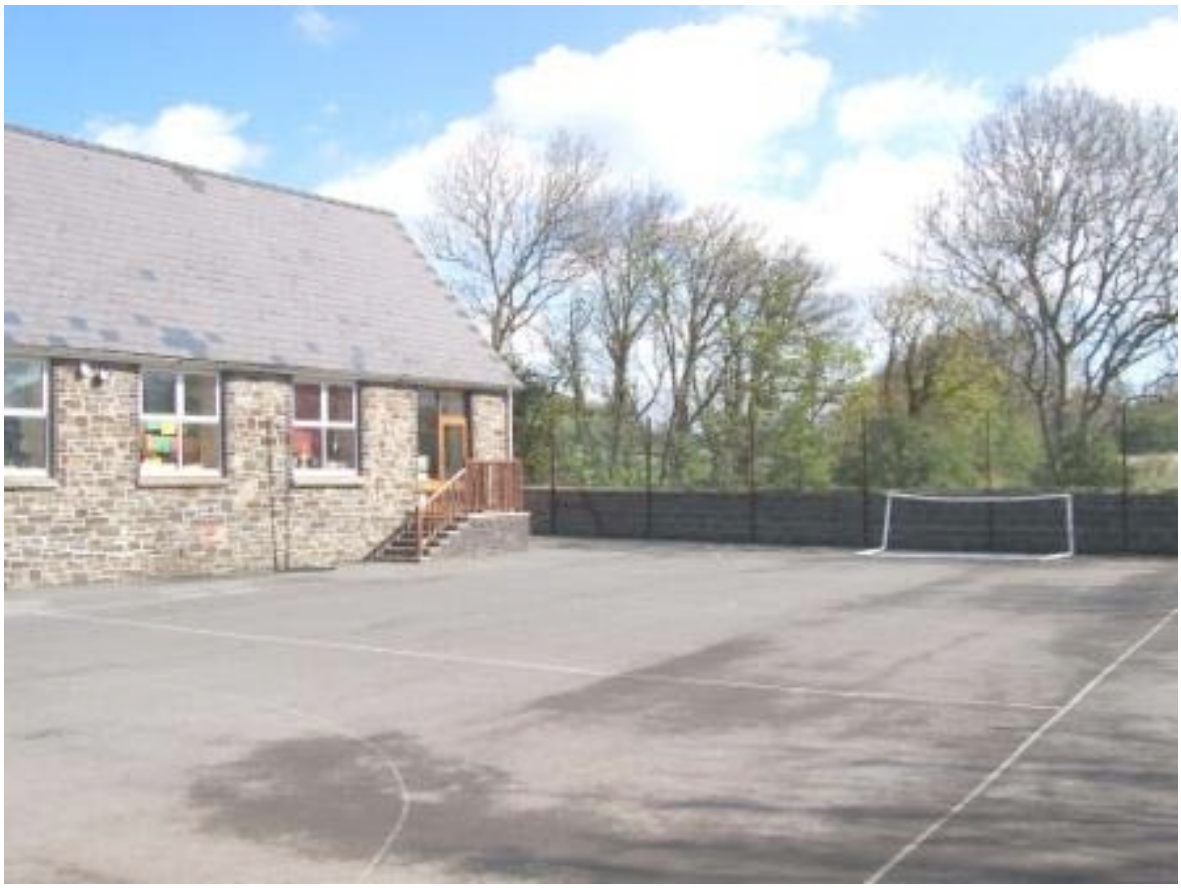
What do you think I am looking for?



Look at these walls.

Why do you think these walls were built?

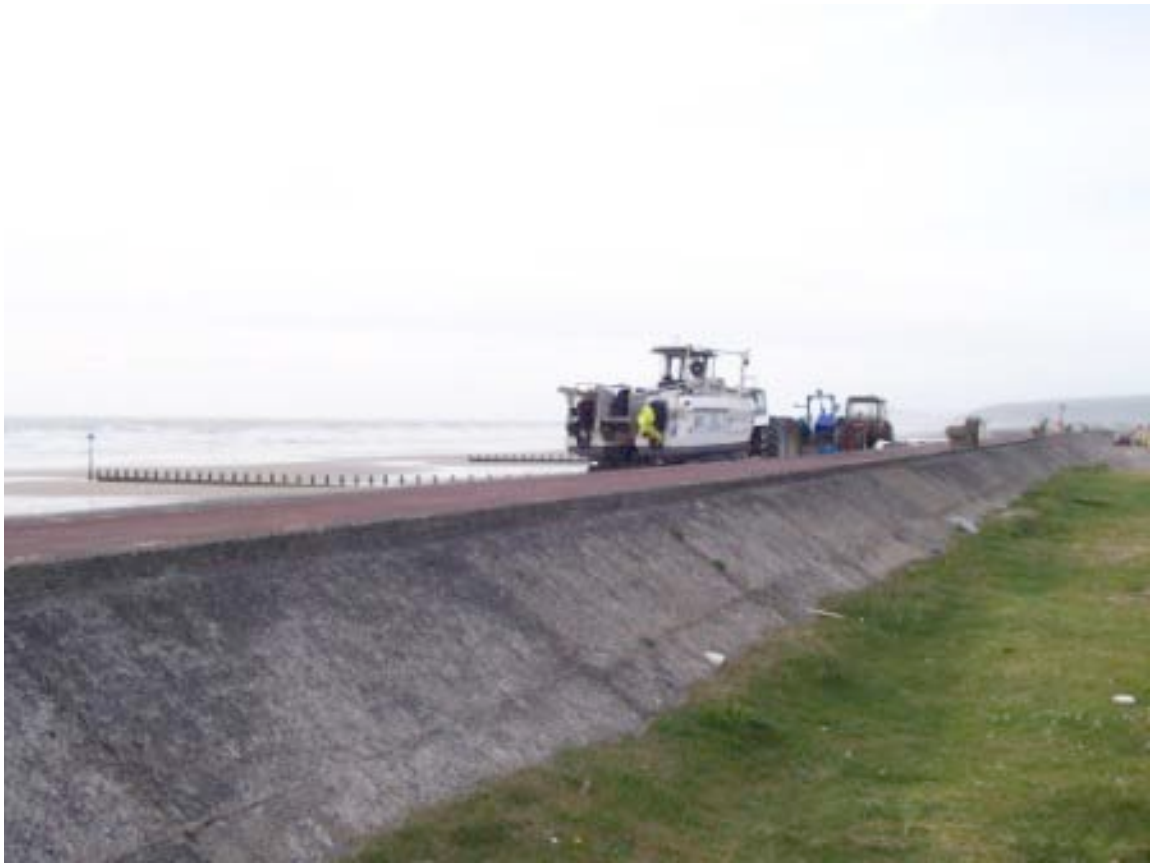
What do you think the walls are made of?



Look at these walls!

What do you think is going on here?

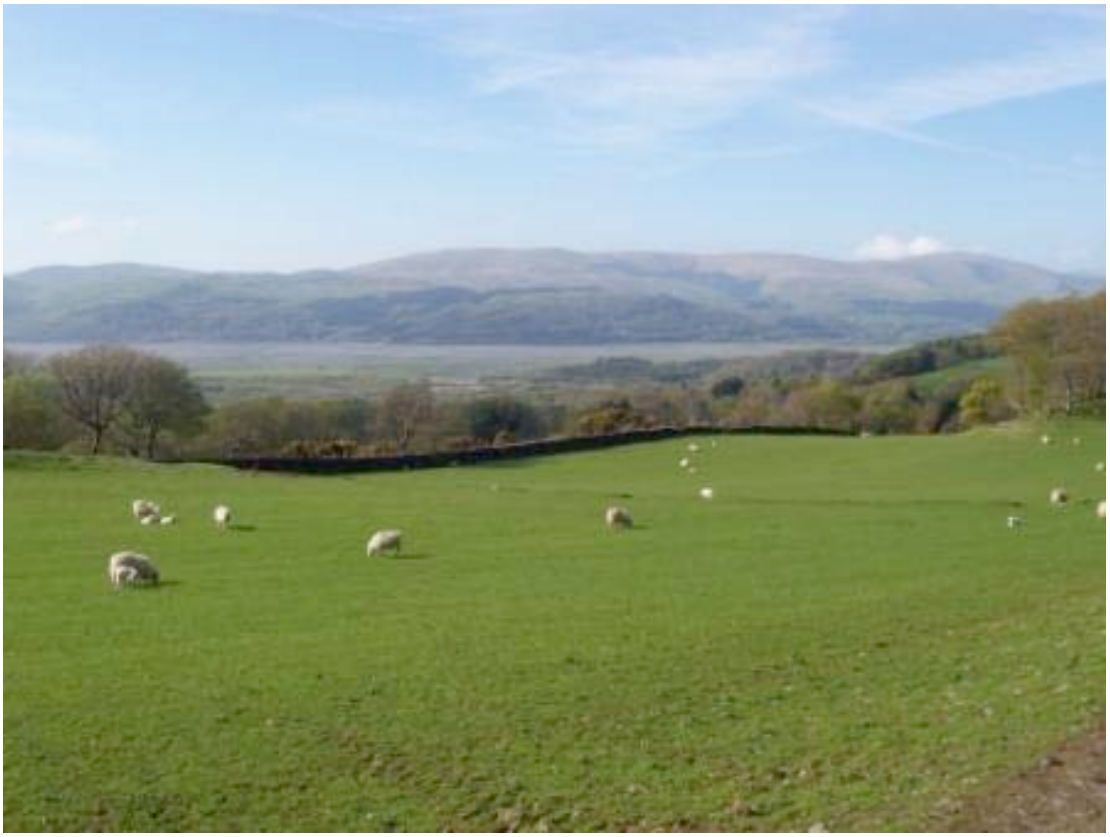
Why were these walls built?



Here is another wall.

Where do you think this wall is?

Why do you think it was built?



Here is another wall. Wagtails like this wall.

Where do you think you would find a wall like this?

Why do you think wagtails like this wall?

Lesson 2: Wall watching in the streets around our school

Prior Knowledge / Work:
The children need to have shared the online big book in Lesson 1.
Learning Objectives:

- To look closely at walled features near the school.
- To identify from evidence what the walled features are and why they were built.
- To locate the features on a large scale map or plan of the school vicinity.

Subject Links:

- Literacy - the activity provides good opportunities for developing the children's vocabulary.
- Design and Technology - looking closely at the patterns in wall construction.
- Science – an introduction to commonly used materials.

Resources:

- A copy of a large scale map or plan of the vicinity around the school on which pictures, photographs and rubbings can be mounted.
- As appropriate: Digital camera, wall rubbing materials (Broad wax crayons and manageable A4 sized pieces of newsprint paper), clipboards and pencils.
- A copy of the photograph of each of the different walls if you are using method 2 below.
- Examples from lesson 1 of wall building materials: a brick; concrete block; if possible, a piece of local rock or stone.

Background Information:
This lesson focuses on walls of buildings and other civil engineering structures (bridges, tunnels etc.) in the local area. It can be completed in one of two ways:

1. Taking the children out of school and using basic field work;
2. Using pictures of local structures in the classroom

If you are using basic field work plan a local safe walking route for children, in accordance with your school's "out of school safety policy." The route should pass a variety of walls constructed for different purposes and made of different materials.
If you use field work, the children will need to collect some sort of physical evidence of the observed walls to use for the activity in the classroom. This can be photographs, drawings or wall rubbings. If the children are going to collect evidence by wall rubbing, work out a manageable technique that does not leave wax crayon

defacing the wall! You probably need to practice with the children on a school wall before using your neighbour's property! Help the children to work in pairs, one holding a modest A4 sized piece of paper tightly against the wall while the other rubs on the centre of the paper with the side of a crayon.

Activity:

Remind children of *Waggy the wonderful wall watcher* in lesson 1. Tell the children that they are going to be wonderful wall watchers too.

Then follow one of the following options:

1. Using simple field work. The children are taken out of the classroom and look at different walls in the immediate vicinity of the school. On location, discuss what the features are, why they were built, and, in simple terms what material has been used in their construction. Collect some visual evidence of the wall to bring back into the classroom. This could be in the form of a rubbing, a child's picture or a digital photograph of a section of each wall.
2. Show the children digital pictures of familiar local walled features.

In the classroom, now show the children a copy of a large scale map or plan of the vicinity around the school. Using the pictures, photographs or rubbings of walls together identify:

- What the features are;
- Why they have been built;
- Where these are located on the map or plan.

During the activity try and help the children identify some of the materials used to make the wall. E.g. brick, concrete blocks or pieces of rock *("stone").*

Together, fasten the pictures, photographs or rubbings of walls in the correct location on the map or plan. Add annotation if necessary.

Finally, in a "game playing mode", using the plan as a visual aid, ask children to describe the features they would pass if they journeyed from one location to another.

Lesson 3: Wall watching at home

Prior Knowledge / Work:
This activity could be used in addition or as an alternative to "*Where do I live? Where do other pupils live?*" in the QCA unit. Here the children are asked to write their address, with an explanation of each line, and display these on a map of the area.

Learning Objectives:

- For pupils to look closely at the outside walls of their own home.
- To locate their home on a large scale map of the area.
- To take part in a graph drawing activity.

Subject Links:

- Numeracy – creating a graph of the material used to build the walls of pupil's homes.

Resources:

- Large scale map of the catchment area of the school to which you can add drawings or pictures.
- Children's drawings, photographs or wall rubbings of the exterior wall, facing the street, of their own home.

Background Information:
This is an activity which will work particularly well if you enlist the help of the adults who look after the children. Ask the adults if they can help the pupils collect evidence about the exterior wall of their home which faces the street by either helping the child:

- Draw a picture;
- Take a digital photograph;
- Make a wall rubbing.

Ask the adults to help the children identify the main material that the children can see in the wall e.g. brick, stone, concrete block and cement render.
Tell the adults when you plan to use the children's material.

Activity:
Ask the children to bring in to school their picture or rubbing of a wall of their home. (See background information above)
Show the children the large scale map of the school catchment area.

As an orientation exercise, together, try and identify key well known local features. Then in turn, ask each child to show the class their pictures or rubbings of the wall of their house. Praise their efforts and help them locate their house on the map. Mount the child's work on the map, using annotation if necessary.

Then, collect the information on the material used to make the children's house walls. Help the children draw a graph, perhaps using ICT and an interactive white board, and discuss the findings.

Lesson 4: Waggy wants to know why people keep changing things?

Prior Knowledge / Work:

This lesson can be used as an alternative to *What are our immediate surroundings like?* and *Are there any changes taking place in our area?* in the QCA unit. Although the initial focus of this unit was on walls, this lesson expands that focus and can include:

- Any new building or civil engineering projects in the locality. E.g. House building, extensions, road improvements, commercial and industrial developments etc.
- Structures requiring repair, renewal or redevelopment.

Learning Objectives:

- To understand some of the reasons why changes may need to occur in a locality.
- For the children to recognise what features they like and dislike in a locality and those that might need changing.
- To identify the location of places in the locality where changes are taking place or are needed.

Subject Links:

- Literacy – A shared reading activity using the online Big Book *Waggy wants to know why people keep changing things.*
- Speaking and listening – developing a vocabulary linked to the chronology of time (*along time ago, in the past, in years to come, in the future etc.)* and the reasons for changes in buildings (*Repair, replace, broken, derelict, extension etc.)*
- History – understanding that both space and existing structures have been used differently in the past.
- Design and Technology – to look at some of the techniques and tools used in the building of structures.
- Citizenship – children to recognise what they like and dislike and what needs changing.

Resources:

- Class access to a computer and a large visual display unit such as a white interactive board.
- The on line Big Book *Waggy wants to know why people keep changing things.*
- Large scale map of the catchment area of the school to which you can add drawings or pictures as used in lesson 3.

- Pictures of structures around the school that are in the process of change or may need changing. These could be pictures of new local buildings, house extensions or civil engineering projects and derelict or damaged or redundant structures where repair or replacement is needed.

Background Information:
This is a lesson which can be completed in the classroom using photographs. However as part of the activity, providing it is safe, children could visit places near the school where:

- Building or civil engineering projects are taking place;
- And, or, locations that are suitable for redevelopment.

Activity:
This is a shared reading and discussion activity which also gives children practice at both using the vocabulary acquired from this unit and reinterpreting the map used in the previous lessons.
Introduce the activity to the children by telling them that they are going to answer some questions that Waggy the Wagtail has asked in a big book. Use the on line big book resource attached to this unit *Waggy wants to know why people keep changing things.*
By sharing each picture and text discuss:

- What is happening in this picture now?
- What might happen here in a few years time?
- What might have happened here long ago?
- What materials are being used or have been used in the features in the pictures?

The activity can now progress in one of two ways. In each case, at each location you should ask similar questions to those used when sharing the big book above.

1. First hand observation, using simple observational work. The children are taken out of the classroom to a local place where changes, similar to those in the big book, are taking place or may be needed. Photographs can be taken for use in the classroom.
2. In the classroom, show children pictures of places in the school locality places where changes, similar to those in the big book are taking place or may be needed.

Finally, in the classroom, together locate and mount the pictures (from 1 or 2 above) on the large scale map, annotating if necessary.

Notes for teachers

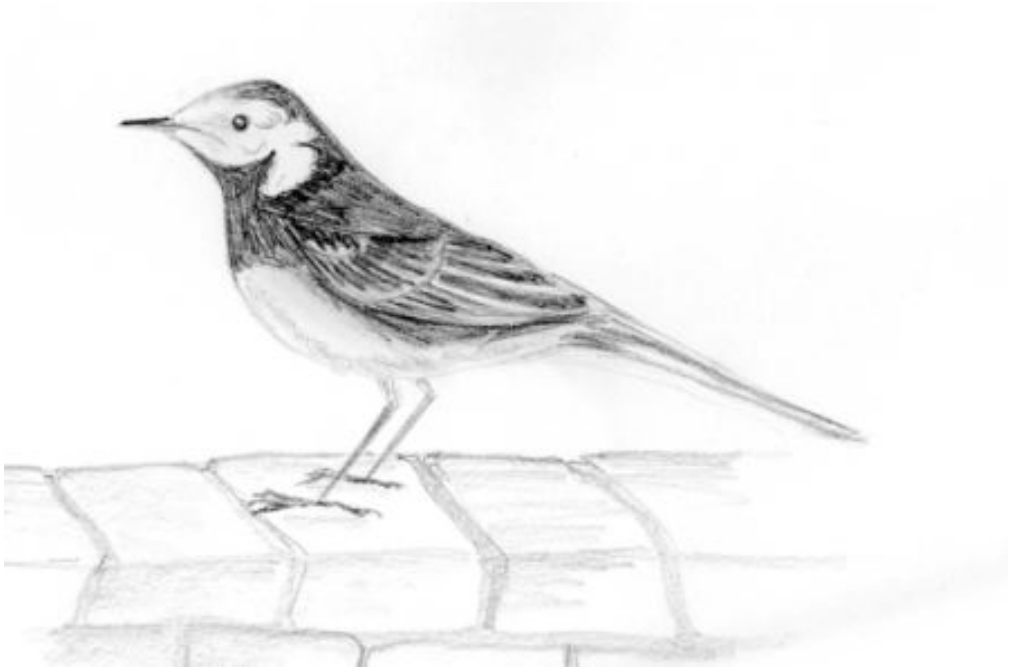
To use this Big Book select:

- View – Reading Layout;
- On the toolbar select the multiple page option..

This Big Book has been designed to be viewed on an interactive white board or large visual display unit.

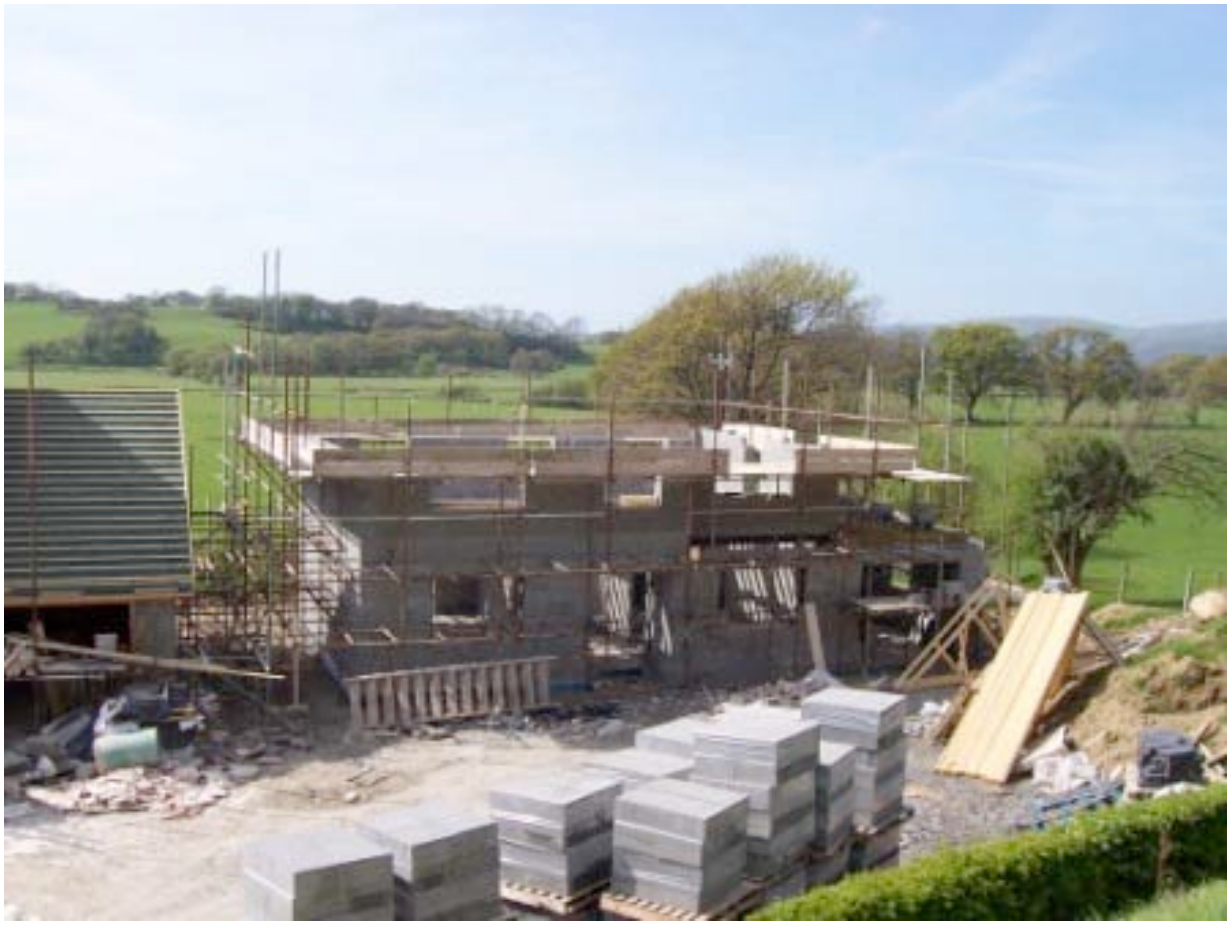
You may prefer to substitute local photographs to make the book even more relevant to your children.

Please delete this text box prior to use.



Waggy wants to know why people keep changing things.

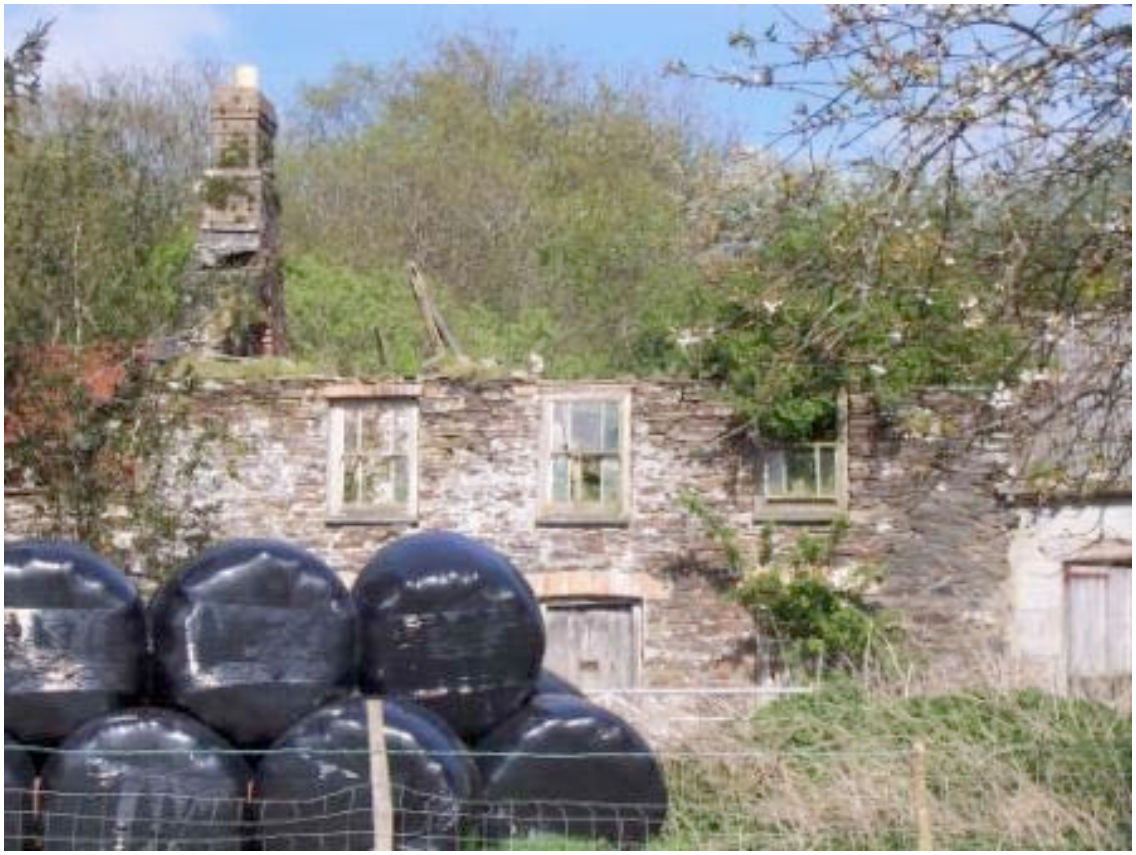
What is happening here?



What do you think was here a long time ago?

What do you think it will look like next year?

Now look at this!



What do you think was here a long time ago?

What has happened?

Could you make some changes?

Photo by Adrian Shawcross courtesy of www.cbrd.co.uk

What do you think is happening here?

Why are they changing this place?

What do you think it will be like next year?

Now look at this!

What was here a long time ago?

What has happened?

Would you make any changes here?

What do you think is happening here?

What do you think they are digging out of the ground?

What will it be like in a few years time?

I'd like it to be like this!

Do you know why?

Lesson 5: Quarry dance/drama

Prior Knowledge / Work:
It would help if the children had some experience of presenting stories through drama and movement. However this lesson could be an interesting introduction.

Learning Objectives:

- To understand that most of the materials used in building walls are quarried out of the ground.
- To remember and sequence some of the quarrying procedures in the form of dance/drama and, perhaps, music.

Subject Links:

- Dance, drama – creating and performing movements that communicate the idea of quarrying activity.
- Music – use untuned percussion instruments to replicate the sounds of quarrying activity.
- Science – beginning to understand the sources and properties of some materials.

Resources:

- Class access to a computer and the *Virtual Quarry* downloaded from this website.
- Seven printed pictures, taken from the *Virtual Quarry* website, as a reminder of the quarrying activities.
- Subsequently, space for drama/ dance activity.
- Possibly untuned percussion instruments.

Background Information:
The *Virtual Quarry* on this website is a cartoon sequence that replicates some of the activities in a "hard rock" quarry. These quarried materials are used in the foundations of roads and buildings and in both cement and concrete.
Many other materials used in the construction of walls (e.g. bricks) are derived from "soft rock", clay or sand quarries.
For young children, the sequence of activities in a "hard rock" quarry, with its additional drilling, explosion and crushing is more dramatic and has been chosen for this lesson.
The quarrying sequence used in this lesson is as follows:

1. Drilling. Holes are drilled in area of rock face. The holes are filled with explosives.

2. Explosion. Following a sequence of warning sirens the explosive is detonated.
3. Excavation. When the detonation is safely complete a huge mechanical excavator lifts the pieces of broken rock into a dumper truck.
4. Transportation. The huge dumper truck carries a massive weight of rock and tips it into the crushing machinery.
5. Crushing. The rocks are crushed between revolving metal rollers and carried on mechanical conveyors to sieves.
6. Sieving. The rock is sieved into different sizes and taken to a store.
7. Transportation. The rock is transported away from the quarry by road and rail to the builder.

Avoiding misconceptions.

There are several misconceptions that you should be careful to avoid.

1. Some children will think that the rock that is quarried occurs everywhere. Obviously, because of the diverse geology of the UK particular rocks are only found in specific locations.
2. Some children will think that objects such as "bricks" are quarried. You will need to explain that often the quarried rock has to be cooked or mixed with other quarried materials before it can be used to make buildings.
3. Not all quarries are "hard rock" quarries. Some materials come from other quarries. There are video clips of sand and clay quarries on this website which you could show children if necessary.

Activity:

Tell the children that you are going to find out where the materials that are use to build walls come from.

Show the children the *Virtual Quarry.*

Discuss the sequence of activities in the quarry trying to make sure children avoid misconceptions such as those listed above.

Now show the children all the pictures of the quarrying process in a random order. Together sequence the pictures to reflect the quarrying process.

Take the children and the pictures to an area that is suitable for dance/drama.

Show the children the first picture of the quarrying process i.e. *Drilling. Holes are drilled in area of rock face. The holes are filled with explosives.*

Ask the children to suggest ways they could move to represent the quarry worker or the drill. Select a range of individual interpretations as exemplars.

Using the pictures as visual aids, repeat with each the other activities in the quarrying sequence.

You could then select groups of children to perform in turn one activity in the whole sequence as a class performance.

The lesson can be developed. The pupils could compose a sound picture to accompany their dance/drama. The pictures from the virtual quarry can be used in sequence to help the pupils create a sound picture, using both voices (as the warning siren) and untuned percussion instruments. The sounds could be used alongside the dance /drama as a class performance.