CONNECTIONS
ACTIVITY/HOMEWORK
BOOK

YEAR 8
GEOGRAPHY
Guidance

a) Before you begin, date your work and underline it.

b) Read each question carefully and then answer each question as instructed.

c) If there is not space on the page to answer the question, write the answer at the back of the booklet on the additional paper provided. If you are required to do this always write the following before you begin:

- The date underlined.
- The section and title of the page underlined.
  e.g. 1.2 What causes weathering?
- The page number and question number
  e.g. page 24, question 3

d) **Always** write in **BLACK** pen.

e) **Always** colour using colouring.

f) **Always** use a ruler to draw lines.
Weathering

Everything around us is slowly falling to pieces. Buildings, monuments, roads, coasts and mountains are all crumbling away. They are being attacked and broken up by the action of rain, sun, frost and even plants and animals. We call this weathering.

1. Read the statements listed below. Use them as labels, drawing arrows to show where they belong in the illustration.

A Water freezes and can crack roof tiles.
B Drainpipes may rust and leak.
C Rainwater contains small amounts of acid.
D Mosses and plants can make holes in roof felt.
E Insects may burrow into roof timbers leading to rotting.
F Sunlight and wind will dry and crack paintwork.
G Rainwater can soak into wooden window frames leading to rotting.
H Wind may blow off roof tiles.
I Rain can get into gaps between bricks and dissolves mortar.
J Tree roots and rotted plant roots may weaken house foundations.
K Warmth speeds up chemical changes.

2. Categorise the labels by colouring them as follows:
   ♦ **Red** for chemical weathering.
   ♦ **Green** for biological weathering.
   ♦ **Blue** for freeze–thaw weathering.

3. How can the building be protected against each type of weathering?

4. Which side of your home do you think suffers the most from weathering? Explain your answer.
What causes weathering?

Weathering is the breakdown of rocks by water, frost and temperature change. The effects of plants and animals can also break rocks down.

Study the table below. For each cause of weathering, tick whether you think it is very likely, possible or unlikely to happen around your school.

<table>
<thead>
<tr>
<th>Causes of weathering</th>
<th>Very likely</th>
<th>Possible</th>
<th>Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeds blow into cracks in walls.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant and tree roots force cracks to widen.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water freezes and can crack roof tiles.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acid in rainwater causes brickwork to rot and crumble.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wind may blow off roof tiles.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warmth speeds up chemical changes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainwater can soak into wooden window frames leading to rotting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stone is worn away or pitted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete is repeatedly heated and cooled.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moist air helps chemical reactions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunlight and wind may dry and crack paintwork.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heated walls expand at different rates.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice crystals expand and help push cracks apart.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotting plants corrode brickwork.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree roots may weaken school foundations.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using a copy of the table above, carry out a brief survey of your school to discover any examples of weathering.

Present your findings in a short written report with the title: ‘Our school is falling to pieces!’ In your report you should use ICT, maps, sketches and (if possible) photos.
Causes of weathering

Look at each of the sketches below. For each sketch, state what type of weathering is most likely to take place and identify the causes.

Type of weathering:

Causes of weathering:

Type of weathering:

Causes of weathering:

Type of weathering:

Causes of weathering:

Type of weathering:

Causes of weathering:
How can erosion help shape the land?

Weathering and erosion work together. Erosion is the wearing away of rock and its removal by streams, ice, waves and wind. Erosion, transportation and deposition help shape the land.

1. In the diagrams below, use arrows to join the three things to do with erosion by:
   - ice in blue
   - rivers in green
   - the wind in red
   - the sea in yellow.

   Water moving in rivers erodes valleys by removing tiny bits of rock from bed and banks.
   - Valley worn away in hills.

   Waves at sea smash into cliffs and break off rock particles, which are broken up into sand.
   - Rocks worn into strange shapes.

   In deserts, the wind carries tiny grains of sand and blasts them into rocks, eroding them into strange shapes.
   - Cliffs worn away.

   In high mountains, ice collects and moves down valleys as glaciers, grinding away the rock as it travels.
   - Deep, straight valley in the mountains.

2. Which kind of erosion do you think has been most important in shaping the land in the UK? Explain your answer.
How does erosion shape the land?

Read the model answer below. It has been written to answer activity 3 on page 9 of the pupil book. Use it to mark either your own answer or the answer of one of your classmates.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivers wear away the bed and banks of the channel constantly.</td>
<td>The material is transported downstream by the water. Material is deposited when the water slows down. Extension: During a flood large boulders can be eroded and transported downstream.</td>
</tr>
<tr>
<td>Waves attack the coast all of the time.</td>
<td>Rock at the coast is weakened by the waves and pieces break off. Currents transport material away and deposit it elsewhere on the coast. Extension: During a storm each wave has a weight of several tonnes.</td>
</tr>
<tr>
<td>A glacier is a tongue of ice which moves down the valley.</td>
<td>Stones and boulders frozen into the ice act like sandpaper on the rock beneath the glacier. As the glacier moves, it transports material down the valley. Extension: Glaciers erode both the sides and bottom of a valley.</td>
</tr>
<tr>
<td>Wind picks up tiny particles of sand.</td>
<td>The wind uses these particles to erode anything that gets in its way. The wind also transports particles of eroded material for many miles. Extension: The wind erodes rock in the desert into strange shapes by sandblasting.</td>
</tr>
</tbody>
</table>
What are the features of erosion and deposition?

Sea waves can wear away the coastline. This **erosion** makes many interesting features. In other places, the sea is calm. **Deposition** happens here and forms beaches.

Below is a list of words to do with coasts.

1. Backwash.
2. Wave.
3. Longshore drift.
5. Beach.
7. Corrasion.
8. Corrosion.
9. Headland.
10. Cave.
11. Bay.
12. Deposition.
13. Wave-cut platform.
15. Cliff.
17. Attrition.
18. Arch.
20. Erosion.
21. Mud.
22. Pebbles.
23. Shingle.
25. Fetch.
26. Tides.
27. Sea defences.

1. Working with a partner, study the sets of numbers below, which match to words in the list above.
2. Cross out the ‘odd one out’ in each set.
3. Add a fourth number to match the other two.
4. Explain what links the three ‘in’ numbers.

<table>
<thead>
<tr>
<th>Set</th>
<th>Numbers</th>
<th>What’s the link?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4 14 8</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1 6 10</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>9 10 20</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>14 5 18</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>16 6 12</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3 9 15</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>2 16 1</td>
<td></td>
</tr>
</tbody>
</table>

 Compile some sets of words to try on your partner. Choose two words that have something in common with each other and one that has nothing to do with the other two. Ask your partner to find the ‘odd one out’ and give reasons for their choice. Then try one of your partner’s sets.
How the sea shapes the coast

Beth was asked to write an explanation of how the sea shapes the land. There are 15 mistakes in Beth’s homework. Each mistake is underlined. For each mistake, write an explanation of why it is incorrect and write the correct answer in the columns alongside.

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Correction</th>
</tr>
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<tbody>
<tr>
<td>The sea is <strong>still</strong>. The movement of the air changes the shape of the coast all of the time.</td>
<td></td>
</tr>
<tr>
<td>Storm waves crash against the coast eroding it away and creating <strong>depositional</strong> landforms along the coast. Waves gather and move material from one place to another, which is a process called <strong>erosion</strong>. Storm waves deposit material creating depositional landforms.</td>
<td></td>
</tr>
<tr>
<td>Erosional landforms are caused by water <strong>alone</strong> that wear away the coast. This bombardment undercuts the cliff causing <strong>caves</strong> to form which expand to make <strong>cracks</strong>. When the caves erode right through a <strong>bay</strong>, an arch is formed. Further erosion causes the arch to collapse leaving a pillar of rock standing out in the sea, which is known as a <strong>pillar</strong>.</td>
<td></td>
</tr>
<tr>
<td><strong>Soft</strong> rock at the coast erodes slowly and can be seen at the coast as a large piece of land jutting out into the sea called a headland. Soft rock at the coast is eroded away very <strong>slowly</strong>. Where this happens a bay is formed.</td>
<td></td>
</tr>
<tr>
<td>Beaches and <strong>stacks</strong> are both types of depositional landform that can be found at the coast. Both are created by waves that transport and <strong>erode</strong> eroded material to create a build-up of sediment at the coast.</td>
<td></td>
</tr>
<tr>
<td>It's the sea's ability to <strong>erode</strong>, <strong>move</strong> and deposit material along the coast that creates the many interesting and changing landforms that you find at the coast.</td>
<td></td>
</tr>
</tbody>
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<td></td>
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</tbody>
</table>
What is the coastal erosion problem?

Erosion is a problem for many of our coastal areas. It causes land loss and may destroy property, transport links and industries. It can also result in job losses.

1. Working with a partner, read the statements below.

| A  | Wild animals are drowned.          | K  | Roads are impassable – people have to be rescued by emergency services. |
| B  | Schools are closed.                | L  | Cars are flooded and engines ruined.                                  |
| C  | Crops are ruined by salt water.    | M  | Flooded roads and railways mean transport is a problem.              |
| D  | Homes are flooded – carpets and furniture are ruined. | N  | Ambulance service takes the injured, cold, wet or shocked to hospital. |
| E  | Shops and offices are closed.      | O  | Food and shelter is provided for the homeless.                       |
| F  | Farm animals are drowned.          | P  | There is the risk of disease spreading.                              |
| G  | Plants in the countryside are killed by salt water. | Q  | People may lose their belongings.                                    |
| H  | Electricity supply is damaged and people may be electrocuted. | R  | Families may be separated.                                           |
| I  | Caravans on coastal caravan sites may be swept away. | S  | Buildings and property damaged.                                      |
| J  | Sewage systems are flooded and drinking water becomes contaminated. | T  | Homes may be destroyed.                                               |

2. Enter the letter for each statement in the appropriate place on the Venn diagram below.

- Social – those factors that affect **people**.
- Environmental – those factors that affect the **countryside** and **wildlife**.
- Economic – those factors that affect **jobs** and **communications**.

3. Who, or what, does coastal erosion and flooding affect the most? Explain your answer.
Destroyed by dredging: how the Devon village of Hallsands was lost to the sea

Read and cut out the boxes below, which tell the story of how a small village was lost to the sea. Rearrange them into an order that makes sense to you.

When you are confident you have found the correct order, stick the boxes in your book or file.

A strip of rock and shingle sandwiched between steep cliffs and a fierce sea does not seem an ideal place to found a village. But somehow, Hallsands, just around the south Devon coast from Salcombe, clung onto existence, its inhabitants scraping a living from crab fishing.

Sir John Jackson Ltd, the company that had won the dockyard contract, argued that the sea would replace the shingle. He agreed to pay £125 a year to the community anyway, but carried on dredging.

But although the inspector called for dredging to be halted, it was only when the villagers took direct action that work stopped. And by then it was too late.

By 1891, there were 37 houses there, and the population of 159 had everything they needed, including a pub and a chapel. Most important of all, they had a great offshore deposit of shingle that protected their beach from the ocean waves so they could leave their boats out on the sand all year round.

However, the relative calm of Hallsands was about to be shattered, for the Admiralty was intent on expanding its Plymouth dockyard. The first the villagers knew of the plan was in 1897, when dredgers appeared and began removing shingle to make concrete. With the help of their MP, they managed to get a public enquiry. But the upshot was less than satisfactory.

By 1901, some 600,000 tonnes of material had been removed, with just the consequences that the villagers had feared. That year, a second inquiry heard that the beach had fallen by as much as 12 feet. It concluded that: ‘...in the event of a heavy gale from the East... few houses will not be flooded, if not seriously damaged.’

With the beach eroded, hauling boats in and out of the sea became almost impossible. And although protective walls were built, Hallsands now found itself increasingly vulnerable to storm damage. In 1917, disaster struck. On the night of 26 January, a combination of gales and high tides wrecked all but one property, leaving Hallsands the ghost village that tourists see today.
How can coastal erosion be reduced?

Protecting coasts is not easy. There are arguments for and against trying to protect the coastline from erosion.

Attempts to protect the coastline involve engineering. Read this list of coastal protection schemes and complete a copy of the table below. It has been started for you.

- **Groynes**: A long, low wall built out into the sea at right angles to the beach. Many of them have to be built on one beach several hundred metres apart. The aim is to prevent the loss of precious beach sands through longshore drift. Concrete groynes can cost £200,000 each. They help widen beaches and protect cliffs. Wooden groynes are much cheaper, but they rot and may be damaged by storms.

- **Rock armour**: A collection of large interlocking boulders sometimes fixed into position to protect the coast by disrupting the waves. It costs £3,000 per metre to build.

- **Revetment**: Gently sloping concrete wall that allows waves to run up it, therefore reducing their energy. It costs £2,000 per metre to build.

- **Offshore breakwater**: A concrete wall or interlocking boulders built a little way out from the shore protects the coastline by disrupting wave energy and creating an area of calm water inshore. It is ugly, can disrupt the marine ecosystem and costs over £3 million per km.

- **Sea wall**: Made with stone or concrete. May be curved at the top to divert the force of the waves back out to sea, but can be undermined by waves. Usual design life is 50–75 years. It costs £5,000 per metre to build.

- **Beach rebuilding**: Sand removed by longshore drift is replaced artificially every year. This gives a more natural appearance, but is expensive – £300,000 per km per year.

- **Stone gabions**: Strong steel cages filled with rocks and some sand allowing grasses to grow. The cost to build is £200 per metre, but they are ugly constructions.

- **Wooden revetments**: Slatted frame that decreases wave energy. The cost to build is £500 per metre, but that does not include repairs.

Some people think that one policy for coastal protection is to do nothing! They believe that nature will take its course despite coastal defences. Do you agree with this policy? Would you agree with the policy if you lived in a coastal home? Explain your answer.
Choosing how to protect our coasts from erosion

Using Figure B on pages 20 and 21 of the pupil book, complete the table below.

- You need to match the group of people to an appropriate sea defence that you have learned about. There are five types of defence in total and each type of defence should be used only once.

- After you have matched the group of people to the sea defence, you need to be able to justify your choice.

<table>
<thead>
<tr>
<th>Types of sea defence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea walls.</td>
</tr>
<tr>
<td>Beach rebuilding.</td>
</tr>
<tr>
<td>Groynes.</td>
</tr>
<tr>
<td>Do nothing.</td>
</tr>
<tr>
<td>Rip-rap.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group of people</th>
<th>Most likely choice of sea defence</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner of a donkey riding business.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident on the sea front.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers along the coast.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Council member.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisherman.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Think about your learning!

Before you submit your final enquiry, spend some time thinking about the learning that you have carried out.

1. Look carefully at this list of skills. Geographers are skilled people! **Tick** the skills you are developing during your time working on this enquiry.

2. Describe **one** thing that enabled you to be successful in this task:

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

3. Describe **one** problem you had, or thought you had, that stopped you from achieving your potential:

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

4. In these boxes write **two** actions that you will carry out to help you be more successful and reach your target in the future.

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
What is the environment problem?

We often misuse the environment and its resources. To prevent this, there must be **conservation** and **protection**. To achieve this, there must be careful planning and management, working towards sustainable development of the environment.

Read the newspaper headlines below. Colour them as follows:
- Those that **improve** the environment in **green**.
- Those that **harm** the environment in **red**.

<table>
<thead>
<tr>
<th>Environmental problem</th>
<th>How to repair the damage</th>
<th>How to prevent it happening again</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in town centre traffic fumes</td>
<td>Restrict the traffic in town</td>
<td>Fit catalytic converters to cars; build a by-pass</td>
</tr>
<tr>
<td>Litter in school playground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beaches cleaned up</td>
<td>Petrol put up to £5 per litre to discourage motorists</td>
<td></td>
</tr>
<tr>
<td>Bird sanctuary established</td>
<td>Smoke from power stations causes acid rain</td>
<td></td>
</tr>
<tr>
<td>Reclamation scheme introduced</td>
<td>Site of Special Scientific Interest set up</td>
<td></td>
</tr>
<tr>
<td>Increase in town centre traffic fumes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strict laws on air pollution introduced</td>
<td>Poisonous factory waste leaks into river</td>
<td></td>
</tr>
<tr>
<td>National Park set up</td>
<td>Locals lose battle for new by-pass</td>
<td></td>
</tr>
<tr>
<td>Meters introduced. Water supplies protected</td>
<td>Mountain footpath worn away by tourists</td>
<td></td>
</tr>
<tr>
<td>Opencast mining to go</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil tanker spill onto beaches</td>
<td>Recycled paper scheme saves woodland</td>
<td></td>
</tr>
<tr>
<td>Litter in school playground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slurry from farm kills fish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest fire destroys thousands of animals and trees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Docklands scheme floods bird feeding grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw sewage escapes into the sea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landfill site nearly full</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000s of homes not energy efficient</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table below shows one environmental problem taken from the above headlines. Complete a copy of the table using **five** more headlines.
Why are we concerned about the environment?

If resources are misused, they can be used up or they may harm the environment. It is important that resources are used sensibly and the environment is protected for the future. This needs careful planning and management.

Add the following labels to the diagram below to show how environmental concerns can be categorised.

- Chemicals used in food production
- Ozone layer
- Global warming
- Pollution of rivers and seas
- Litter
- Deforestation
- Threat to green areas
- Pollution from car emissions
- Inner-city decay
- Poisonous, factory waste
- Landfill sites nearly full
- Car parking in town centres
- Oil tanker spills
- Smoke from power stations
- Farm slurry
- Raw sewage pumped into sea
- Smoke from chimneys
- Household waste
- Coastline erosion
- Over-fishing
- Endangered species
- Pollution of the countryside
- Finite resources
- Nuclear power
- Acid rain
- CFCs

Explain how human activity can damage the physical environment.

What do you think the phrase: ‘Act local, think global’ means?

Working in small groups, and using ICT where you can, produce a leaflet about an environmental group. Either use information obtained via the Connections section of the New Key Geography website: www.nelsonthornes.com/secondary/geography/key_geography/html/index.htm or send an e-mail or letter to the organisation asking for some information.
Why does wildlife need protecting?

Many species of wildlife have become rare and are threatened with extinction. They need careful protection if they are to survive.

Elephants are an endangered species. The long tusks of elephants are made from ivory. Ivory is taken from dead elephants and many have been killed for their tusks. As the world’s trade and the price of ivory increased, more and more elephants were killed. Even when the Kenyan government created the country’s first national park in 1948, it did not stop many poachers from killing elephants.

Kenya needs elephants. They, and other animals, are important sources of wealth to the country because they attract tourists. Many people come from overseas to go on safari. By the mid 1990s, the number of elephants, especially in southern Africa, had begun to increase.

1. Create a design for the T-shirt to suggest to people why it is important to protect elephants.
   You could use a computer software package like Paint to do this.

   Any useful information could be saved on a disk and later used to design a poster suggesting why it is important to protect elephants.
Does wildlife need protecting? Have your say!

You need to produce a protest speech explaining why wildlife needs protecting. The aim is to create the most convincing speech in your group. Each group winner will go forward into the class final!
How can industry pollute the environment?

Industry contributes towards air, water, noise, visual and smell pollution but it is not the only culprit.

Read the poem below to get a general impression. Then read it again more slowly and carefully.

‘Mummy, Oh Mummy’

‘Mummy, Oh Mummy, what’s this pollution
That everyone’s talking about?’
‘Pollution’s the mess that the country is in,
That we’d all be far better without.
It’s factories belching their fumes in the air,
And the beaches all covered with tar,
Now throw all those sweet papers into the bushes
Before we get back into the car.’

‘Mummy, Oh Mummy, who makes this pollution,
and why don’t they stop if it’s bad?’
“Cos people like that just don’t think about others,
they don’t think at all, I might add.
They spray all the crops and they poison the flowers,
And wipe out the birds and the bees,
Now there’s a good place we could dump that old mattress
Right out of sight in the trees.’

‘Mummy, Oh Mummy, what’s going to happen
If all the pollution goes on?’
‘Well the world will end up like a second-hand junkyard,
With all of its treasures quite gone.
The fields will be littered with plastics and tins,
The streams will be covered with foam,
Now throw those two pop bottles over the hedge,
Save us from carting them home.’

‘But Mummy, Oh Mummy, if I throw the bottles,
Won’t that be polluting the wood?’
‘Nonsense! That isn’t the same thing at all,
You just shut up and be good.
If you’re going to start getting silly ideas
I’m taking you home right away,
‘Cos pollution is something that other folk do,
We’re just enjoying our day.’

Anon
How can environments be damaged?

The North Sea has always been very important to people, and yet it is one of the dirtiest and most polluted of all the seas in the world.

Waste water and sewage from cities and towns containing detergents and chemicals, fertilisers, crop sprays and farmyard waste drain into rivers and, in turn, this flows into the North Sea.

1. Study the list below which shows the sources of pollutants that pollute the North Sea.

<table>
<thead>
<tr>
<th>Source of pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ships burn waste at sea.</td>
</tr>
<tr>
<td>Pollution from spoil tips and landfill sites.</td>
</tr>
<tr>
<td>Waste material dumped from other ships.</td>
</tr>
<tr>
<td>Pesticides.</td>
</tr>
<tr>
<td>Salt used to clear ice from roads.</td>
</tr>
<tr>
<td>Litter and rubbish left on beaches.</td>
</tr>
<tr>
<td>Contaminated soil.</td>
</tr>
<tr>
<td>Shipwrecks.</td>
</tr>
<tr>
<td>Factory cooling towers located on the coast.</td>
</tr>
<tr>
<td>Domestic waste fed through sewers into the sea.</td>
</tr>
<tr>
<td>Pollution from ship-to-ship transfer at sea.</td>
</tr>
<tr>
<td>Toxic waste dumped at sea.</td>
</tr>
<tr>
<td>Liquid seeping from disused mines.</td>
</tr>
<tr>
<td>Untreated sewage.</td>
</tr>
<tr>
<td>Abandoned oil and gas rigs.</td>
</tr>
<tr>
<td>Debris carried by floods.</td>
</tr>
<tr>
<td>Sewage from animal rearing.</td>
</tr>
<tr>
<td>Waste from mines and quarries.</td>
</tr>
<tr>
<td>Wrecked oil tankers.</td>
</tr>
<tr>
<td>Farm slurry.</td>
</tr>
<tr>
<td>Factory effluent.</td>
</tr>
<tr>
<td>Fertiliser from farms.</td>
</tr>
</tbody>
</table>

2. Complete the following table by writing the sources from the list in the correct boxes. Be careful! You can write a source in more than one place.

<table>
<thead>
<tr>
<th>Sea pollutants and their sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
</tr>
<tr>
<td>Dirty sediment</td>
</tr>
<tr>
<td>Oil</td>
</tr>
</tbody>
</table>

3. In your completed table, underline the sources from which pollutants are carried into the North Sea by rivers.

4. Should we care about the pollution that we leave future generations to live with? Give reasons for your answer.
What energy resources are there?

Natural resources can be divided into non-renewable and renewable resources. Non-renewable resources, which can only be used once, are usually cheaper to use but cause more pollution.

1. Working with a partner, read and cut out the cards below so that you can use them to make a concept map.

2. Write this statement in the centre of a page: ‘What energy resources are there?’ Arrange the cards above on the sheet of paper in an order that makes sense to you.

3. Discuss the possible links between the words. Those with many links can be kept close together, but allow space between all the cards because more cards may be added later. When you are satisfied, stick the cards on the piece of paper.

4. Draw lines between the words that seem to be connected. Along each line, write a short explanation of the link between the words. Use arrows to show which way each link connects the words. There can be a link in both directions for any pair of words and can be more than one link in any direction. There does not have to be a link between all the words.

5. Working with a partner, think of any more related words or phrases that you think are important. Write them on paper and cut them out as cards so that you can move them around on the concept map. Decide on the best arrangement and stick them in place. Draw the connecting lines and arrows and add your explanations as before.
Green energy!

The wind has been used for thousands of years as a power source for sailing ships and windmills. Nowadays, huge wind turbines can generate electricity from the power of the wind. A wind farm is an area with lots of wind turbines in it.

Read about the advantages and disadvantages of wind power below.

- **Advantages** of wind power in green:
  - Fast-moving blades kill migrating birds.
  - Electricity generated during storms cannot be stored for use during calm weather.
  - No fuel to transport or to store.
  - 7,000 turbines are needed to produce the same amount of electricity as one nuclear power station.
  - Generating electricity using wind power is still expensive.
  - Onshore wind power is very ineffective in comparison with offshore power.
  - Wind does not blow all the time.
  - Running costs are very low.
  - Wind is free.

- **Disadvantages** of wind power in red:
  - Often sited in areas of outstanding natural beauty or National Parks.
  - Can be ideal for isolated islands where it is difficult to get electricity.
  - Are cheaper than nuclear power and safer.
  - Can be removed with no permanent scarring of the landscape.
  - No carbon dioxide or greenhouse gases are given off because nothing gets burnt.
  - Does not contribute to global warming.
  - Does not cause air pollution or give off any gases that can lead to acid rain.
  - Can generate electricity close to people who need it.
  - To be exposed to the greatest wind, wind farms have to be located on high land, making them visible for a great distance.
  - The UK is one of the windiest countries in the world.
  - The UK has many suitable sites for wind farms, both on land and offshore.
  - Wind is unreliable, so turbines cannot be turned on when demand for power is highest.
  - A large wind farm is expensive to build.
  - Visitors can be put off popular tourist areas where wind farms are located.
  - Coldest weather is often during calm weather.
  - Winds are strongest in winter when demand for electricity is highest.
Green energy! Wind farm development

For this activity you will have to ‘think’ yourself into the situation of people facing a planning application for a wind farm development near Keyville, a rural community in the south west of England.

- Developers propose to erect six 1.3 MW turbines, each with an overall height of 100 m.
- The site they want to build on is hilly grazing land and part of Butler’s Farm.
- It will take six months to build the wind farm.
- Underground cables will be laid to connect the turbines to the National Grid, supplying electricity for the UK.
Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent the people of Keyville. Use the information below and on Activity Sheet 4.12a, together with 4.12h, to help you state your views.

**Memo: PUBLIC INQUIRY**

A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

**RESIDENTS OF KEYVILLE**

**Who you are:**
- You are residents of Keyville.
- You are a very close-knit community.
- You work away from Keyville during the day, but spend much of the rest of your time at home.

**What you must decide:**
- Should there be a wind farm at all?
- Would a wind farm be a good thing or a bad thing for you as residents of Keyville?
- Do you oppose all wind farms in principle, or are they a necessary part of modern life?
- Tourists bring a lot of money into your area. Many tourists come to enjoy the peaceful countryside and rugged coastline. Some tourists may think the wind farm is ugly and noisy and stop coming to the area. Other tourists may come especially to see the wind farm.
- What action will you take if it is decided to build the wind farm near where you live?

**Points to consider:**

**Advantages**
- The wind turbine company claims that over 50 people will be needed to help build the wind farm. When built, 15 people will be needed to run it. Jobs are very hard to find in your community.
- The wind farm would make a contribution to the environment. Can you think of any more?

**Disadvantages**
- Each wind turbine is nearly six times the height of the church tower, which the turbines would overlook and dwarf. (There are only just over 20 buildings in London taller than 100 m.)
- There would be many homes within 1,000 m; some fewer than 700 m and almost the whole of Keyville would be within one mile of the turbines.
- A wind farm is noisy. People living near other wind farms have found the constant noise annoying. Noise is a particular concern where there are houses within one mile downwind of the site, and in a quiet valley.
- Wind farms can disrupt TV and radio receptions. People living near other wind farms have had reception problems.
- The developers will be using huge cranes and other vehicles while the wind farm is being built. The route for traffic will be through Keyville. Can you think of any more?
Green energy! Wind farm development

Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent the Local District Council. Use the information below and on Activity Sheet 4.12a, together with Activity Sheet 4.12h, to help you state your views.

**Memo: PUBLIC INQUIRY**
A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

**LOCAL DISTRICT COUNCIL**
Who you are:
• You represent the Local District Council.
• Keyville is a town in your district.
• You have heard that there is to be a public inquiry about the proposed wind farm and you can attend to put forward your views.

What you must decide:
• Should there be a wind farm at all?
• Would a wind farm be good for the area under your responsibility or not?
• Would a screen of trees to block all noise be a compromise?
• How far would you be prepared to support a wind farm, even if some other people in the area are against the idea?

Points to consider:
**Advantages**
• The wind turbine company claims that over 50 people will be needed to help build the wind farm. When built, 15 people will be needed to run it. Jobs are very hard to find in your community.
• We need more sustainable ways to obtain energy.
• The wind farm would make a contribution to the environment.
Can you think of any more?

**Disadvantages**
• The turbines are out of scale with the landscape and local buildings.
• When working, they are noisy and have other disruptive effects.
• The carbon dioxide saving produced is very small and very expensive.
• The wind farm might lower the value of the properties in Keyville.
• While the wind farm is being built, there will be problems such as traffic bottlenecks and long queues.
• The effect on the quality of life in the area and the wider effects of their visual intrusion, on rural tourism for example, is a concern.
Can you think of any more?
Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent Keyville’s business people. Use the information below and on Activity Sheet 4.12a, together with Activity Sheet 4.12h, to help you state your views.

**Memo: PUBLIC INQUIRY**
A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

**KEYVILLE BUSINESS PEOPLE**

**Who you are:**
- You are shopkeepers and bed and breakfast owners of Keyville. Some of you have lived here most of your lives, and some have moved here only in the last five years.
- You all live and work in Keyville.
- Business has been good in Keyville over the last ten years.
  In the summer, lots of holidaymakers visit Keyville.
  Some people, who have travelled a long way, stop the night at bed and breakfast places in Keyville before going on again in the morning.
- You have heard that there is to be a public inquiry about the proposed wind farm and you can attend to put forward your views.

**What you must decide:**
- Should there be a wind farm at all?
- Would a wind farm be a good thing or a bad thing for your businesses?
- What action will you take if it is decided to build the wind farm in an area where you live?

**Points to consider:**

**Advantages**
- Building the wind farm might bring more people into the area, especially to the hotels.
- The route for traffic will be through Keyville.
- Afterwards, there will be increased traffic from the cars of the people who will work there. Can you think of any more?

**Disadvantages**
- The roads near the proposed site are narrow, minor roads. The developers will be using huge cranes and other vehicles while the wind farm is being built.
- The wind farm could adversely affect living conditions in the area.
- Some people think that wind farms spoil the look of the countryside. Can you think of any more?
Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent the farming family who owns the farmland that the developer wants to build the wind farm on. Use the information below and on Activity Sheet 4.12a, together with Activity Sheet 4.12h, to help you state your views.

Memo: PUBLIC INQUIRY
A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

FARMERS
Who you are:
• You are a farming family who lives in the vicinity of Keyville.
• Your family has farmed in the area for more than 100 years.
• You like the country life very much and do not like the growing town of Keyville. However, you are not old-fashioned and you have modernised your farm.
• You are concerned about the livelihoods of your family and fellow-farmers.
• You have heard that there is to be a public inquiry about the proposed wind farm and you can attend to put forward your views.

What you must decide:
• Should there be a wind farm at all?
• Would a wind farm be a good thing or a bad thing for your farm?
• How far would you be prepared to support a wind farm, even if some other people in the area are against the idea?

Points to consider:
Advantages
• You own the farmland on which the developer wants to build a wind farm. You could make money by leasing some of your land to the developer. This could be £1,500–£2,000 per year, per turbine.
• We need more sustainable ways to obtain energy.
• The wind farm would make a contribution to the environment; as a farmer this is important to you.
  Can you think of any more?

Disadvantages
• Wind turbines make a humming noise when they spin. The continuous noise might upset you and your livestock.
• Pollution from road traffic might affect the air and water in the area. This could affect both the health of your livestock and the quality of your own lives.
• The roads near the proposed site are narrow, minor roads. You already have problems using farm machinery on these roads. The developers will be using huge cranes and other vehicles while the wind farm is being built.
• There are listed buildings, century-old hedges and woodland on your property. Vibration from traffic might weaken the foundations of old farm buildings.
  Can you think of any more?
Green energy! Wind farm development

Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent conservationists. Use the information below and on Activity Sheet 4.12a, together with Activity Sheet 4.12h, to help you state your views.

Memo: PUBLIC INQUIRY
A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

CONSERVATIONISTS
Who you are:
• You are people who live and work in Keyville.
• You are a voluntary group of people who are concerned with protecting the environment.
• You are alarmed that the wind farm may affect attractive countryside, wildlife habitats and parkland.
• You have heard that there is to be a public inquiry about the proposed wind farm and you can attend to put forward your views.

What you must decide:
• Should there be a wind farm at all?
• The wind farm would make a contribution to the environment; as a conservationist this is important to you.
• How can the protection of special places for both local people and visitors be guaranteed?
• You believe that wind power should be almost entirely offshore, where the wind streams are stronger and more constant.

Points to consider:
Advantages
• Wind farms do not contribute to global warming – no carbon dioxide or greenhouse gases are given off.
• At present, only 2% of the UK’s energy needs is produced from renewable energy sources. The government wants to increase this to 10%.
• The wind farm would make a contribution to the environment; as conservationists this is important to you.
  Can you think of any more?

Disadvantages
• The proposed site is near an unspoilt area of outstanding natural beauty.
• The blade circle of the proposed turbines is 62 m, which is larger than the wingspan of a 747 jumbo jet. These structures are very large.
• Every 30 seconds a blade tip will have travelled a mile – bird and bat kills are possible.
• The wind farm might cause some noise pollution. This could affect the quality of your own lives.
• An onshore wind farm will destroy confidence in the rural green initiative.
  Can you think of any more?
Green energy! Wind farm development

Whenever a planning application is made for a big project, there is a public meeting where people can give their views. After this, it is decided if the development will go ahead.

During a class debate, your group will represent the developer. Use the information below and on Activity Sheet 4.12a, together with Activity Sheet 4.12h, to help you state your views.

Memo: PUBLIC INQUIRY
A public inquiry will be held in Keyville Hall to discuss the proposed building of a wind farm. All interested parties should attend to put forward any objections or suggestions they might have.

WIND ENERGY DEVELOPER
Who you are:
• You represent the developer who would be responsible for building the wind farm.
• It is also your job to tell local people why a wind farm is necessary. Planning means making decisions where there is a conflict of interest. Naturally, a lot of people are against this wind farm, especially when their homes are threatened, so you have to be very diplomatic when dealing with them.
• You are prepared to work with local conservationists and listen to the opinions of local people. Try to listen to their point of view and understand why they are so upset. At the same time, you have to put across your view.
• The wind farm would make a contribution to the environment. At present, only 2% of the UK’s energy needs is produced from renewable energy sources. The government wants to increase this to 10%.
• A wind farm is necessary to modern life and we cannot live in the past.
• A wind farm will bring new people into the area, which can be good for business.

Details of the wind farm:
• Most scientists agree that using fossil fuels is causing global warming.
• Wind farms do not contribute to global warming – no carbon dioxide or greenhouse gases are given off.
• No carbon dioxide or greenhouse gases are given off because nothing gets burnt.
• We need more sustainable methods to obtain energy. Following extensive investigations, the Department of the Environment is satisfied that a wind farm is the most energy-efficient of all the electricity-generating technologies.
• The government has signed treaties to reduce greenhouse gas emissions and acid rain. They want people to use renewable sources of energy like wind, solar, tidal and wave power. Over its lifetime, you estimate that the wind farm will save 6,000 tonnes of coal and make enough electricity to supply 1,300 houses.
• The scheme being put forward is estimated to cost in the order of £5 million. This substantial investment has been considered against the Department of the Environment’s normal economic criteria and represents very good value for money.
• 50 people will be needed to help build the wind farm. When built, 15 people will be needed to run it. Jobs are very hard to find in this community.
• Modern wind turbines can’t be heard more than 350 m away. At other wind farms in the UK, the noise has not disturbed farm animals.
• Wind farms can disrupt TV and radio receptions. Your modern turbines will be made from carbon fibre and designed to cut down on any interference.
Can you think of any more?
Green energy! Presenting your views

The writing frame below will help you to develop your argument for the public inquiry. Good presentation of your work is important so, if possible, use ICT to make your work look more professional.

**Introduction:**
Give a clear statement of what you believe. There is a lot of discussion about wind farms.

I am for/against the development because...

You could even argue against a point of view you do not agree with. Convince your audience using a series of relevant points:

I would argue that...

What is more...

Save your best points until the end:

In addition to this...

That is not all...

**Conclusion:**
Sum up all that you have said:

Make clear your own point of view:

You could create a PowerPoint presentation to present your argument, and a poster using ICT to support this.
One of the great challenges facing humankind is the increasing temperature of the planet. Human activity appears to be an important cause in recent warming. If we don’t reduce our CO₂ emissions (coal, oil, petrol, diesel and gas), climate change will accelerate and become difficult to deal with.

1. Study the map on Activity Sheet 4.15b. It is a proportional map showing world energy consumption. It helps to show how the rich 20% of the world consumes about 80% of its resources.

2. Describe the unequal consumption of energy shown on the map. Why do you think that this type of map is a good way to show the differences between the ‘richer’ north and the ‘poorer’ south?

   The table shows the five richest and the five poorest countries in the world.

<table>
<thead>
<tr>
<th>Richest</th>
<th>Poorest</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>Chad</td>
</tr>
<tr>
<td>Germany</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>Japan</td>
<td>Niger</td>
</tr>
<tr>
<td>France</td>
<td>Guinea-Bissau</td>
</tr>
<tr>
<td>UK</td>
<td>Burundi</td>
</tr>
</tbody>
</table>

3. Using an atlas, locate and colour in these countries on the map. Describe their location.

4. The sketch below shows two Americans talking about energy use in the USA.
   - a Which person is talking about sustainable development?
   - b Which person’s opinion do you agree with?
   - c Explain your answers.

   The USA is running out of oil. When our oil reserves are exhausted, they’ve gone forever. We need to do everything to use our oil as carefully as we can.

5. How can we conserve non-renewable resources and develop alternatives? Give some examples.
How can resources be conserved?
Conserving classroom resources

The diagram below shows how sustainable methods can help conserve resources and save energy in the classroom.

Choose five actions and explain how each one actually reduces the use of a resource.

1. **Low-energy lights with automatic timers**
   - Uses less electricity.

2. **Glass-fibre insulation in the ceiling**
   - Reduces heat loss.

3. **Double-glazed windows**
   - Increases energy efficiency.

4. **Wall cavities filled with foam**
   - Enhances insulation properties.

5. **Thermostats on radiators to control temperatures**
   - Precise temperature control.

6. **Paper used sparingly**
   - Reduces paper consumption.

7. **Carpet on floor**
   - Prevents heat loss.

8. **Books, equipment and furniture handled with care**
   - Minimizes waste.

9. **Clothing recycled**
   - Reduces fabric waste.

10. **Draught-proofing on door**
    - Reduces heat loss.

11. **Door closed during lessons**
    - Conserves energy.

12. **Electrical equipment switched off when not in use**
    - Saves electricity.

13. **Waste material like paper, cans and plastics re-used or recycled**
    - Reduces waste.

14. **Clothes**
    - Recycling is environmentally friendly.

15. **Electrical equipment switched off when not in use**
    - Saves electricity.

16. **Thermostats on radiators to control temperatures**
    - Precise temperature control.

17. **Paper used sparingly**
    - Reduces paper consumption.

18. **Carpet on floor**
    - Prevents heat loss.

19. **Books, equipment and furniture handled with care**
    - Minimizes waste.

20. **Clothing recycled**
    - Reduces fabric waste.

21. **Draught-proofing on door**
    - Reduces heat loss.

22. **Door closed during lessons**
    - Conserves energy.

23. **Electrical equipment switched off when not in use**
    - Saves electricity.

24. **Waste material like paper, cans and plastics re-used or recycled**
    - Reduces waste.
Think about your learning!

Before you submit your final enquiry, spend some time thinking about the learning that you have carried out.

1. Look carefully at this list of skills. Geographers are skilled people! **Tick** the skills you are developing during your time working on this enquiry.

2. Describe one thing that enabled you to be successful in this task:

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

3. Describe one problem you had, or thought you had, that stopped you from achieving your potential:

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. In these boxes write two actions that you will carry out to help you be more successful and reach your target in the future.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
People in the world

Birth rate, death rate and life expectancy all affect the population structure of a country.

Working with a partner, read each statement in the table below and decide which family (A or B) might have said it. If you decide either family might have said the statement, be prepared to give reasons for your decision.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>We need to have children to help us work on the land and to carry wood and water.</td>
<td>A</td>
</tr>
<tr>
<td>Family planning is becoming more widely accepted.</td>
<td>B</td>
</tr>
<tr>
<td>Birth control limits the size of our family.</td>
<td></td>
</tr>
<tr>
<td>We have a good quality of life.</td>
<td></td>
</tr>
<tr>
<td>Having a big family makes me important.</td>
<td></td>
</tr>
<tr>
<td>One child might get a job in the city and send us money.</td>
<td></td>
</tr>
<tr>
<td>We expect the children to have a long life, free from disease.</td>
<td></td>
</tr>
<tr>
<td>Our modern home has central heating.</td>
<td></td>
</tr>
<tr>
<td>Our children will care for us when we are too old or ill to work.</td>
<td></td>
</tr>
<tr>
<td>Having a small family leaves us more spare money.</td>
<td></td>
</tr>
<tr>
<td>We have so many children because so many die from disease.</td>
<td></td>
</tr>
<tr>
<td>We have a pension for when we are old.</td>
<td></td>
</tr>
<tr>
<td>My career involved a lot of training.</td>
<td></td>
</tr>
<tr>
<td>My father caught cholera from dirty water.</td>
<td></td>
</tr>
<tr>
<td>Both my parents died when they were quite young.</td>
<td></td>
</tr>
<tr>
<td>My mother died during a famine.</td>
<td></td>
</tr>
<tr>
<td>My religion forbids birth control.</td>
<td></td>
</tr>
<tr>
<td>Our children give us great pleasure.</td>
<td></td>
</tr>
<tr>
<td>We have enough to eat and a good diet.</td>
<td></td>
</tr>
<tr>
<td>We have lots of children to continue the family name.</td>
<td></td>
</tr>
<tr>
<td>There is enough money for a car, holidays and entertainment.</td>
<td></td>
</tr>
<tr>
<td>There is only just enough to eat; sometimes we have to go without food.</td>
<td></td>
</tr>
<tr>
<td>There is good advice on the best forms of contraception in our country.</td>
<td></td>
</tr>
<tr>
<td>Our home is overcrowded with poor hygiene and sanitation.</td>
<td></td>
</tr>
<tr>
<td>Both my parents are still alive and they live in a residential home.</td>
<td></td>
</tr>
<tr>
<td>Family planning is part of our culture.</td>
<td></td>
</tr>
</tbody>
</table>

Poverty is sometimes a misunderstood term. You may understand it better once you compare the expectations of the poor in Britain with those of the poor in India. Write a letter to a person in a different country explaining why you have the family size that you do. You may wish to use some of the statements above.
Are we evenly spread?

People are not evenly spread over the world. Population trends can show if a country is a more economically developed country (MEDC) or a less economically developed country (LEDC).

Colour the news headlines below as follows:
- Those that suggest a country is an MEDC in red.
- Those that suggest a country is an LEDC in green.

Be careful – some statements may refer to both MEDCs and LEDCs and some may be irrelevant.

For any five statements, give reasons for your colour choices.
People in the world

Where do people live in the United Kingdom?

1. Complete the map below by labelling the place names in the box in the correct locations on the map.

2. Choose two of the places above and make a list in the table below of the reasons why many people live there.

<table>
<thead>
<tr>
<th>Name of settlement</th>
<th>Why is there a high population density?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
What affects where we live?

Some places attract people and have become crowded. Other places are less attractive and have fewer people living there. Many different things affect the way people are spread across the world. These include relief, climate, vegetation, water supply, raw materials and employment opportunities.

The sketches on Activity Sheet 5.4b show one area of high density population and one area of sparse population. Below are some factors in population distribution.

<table>
<thead>
<tr>
<th>Physical Factors</th>
<th>Social Factors</th>
<th>Economic Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasant climate.</td>
<td>Lack of investment.</td>
<td>Open grassland for animals.</td>
</tr>
<tr>
<td>Too hot or too cold.</td>
<td>Too wet or too dry.</td>
<td>Poor water supply.</td>
</tr>
<tr>
<td>Dense forest.</td>
<td>Good soil for growing crops.</td>
<td>Good food supply.</td>
</tr>
<tr>
<td>Good water supply.</td>
<td>Government invests money.</td>
<td>Flat or gently sloping land.</td>
</tr>
<tr>
<td>Industrial place.</td>
<td>Poor TV reception.</td>
<td>River valley.</td>
</tr>
<tr>
<td>Poor transport links.</td>
<td>Little industry and few jobs.</td>
<td>Few natural resources.</td>
</tr>
<tr>
<td>Poor soils for farming.</td>
<td>Wars and fighting.</td>
<td>Money available for investment.</td>
</tr>
<tr>
<td>Industry and jobs.</td>
<td>Good education system.</td>
<td>Good roads, railways, ports, etc.</td>
</tr>
<tr>
<td>Earthquake zone.</td>
<td>Rainforest.</td>
<td>Natural resources for industry.</td>
</tr>
<tr>
<td>Volcanic area.</td>
<td>Likely to flood.</td>
<td>Established medical facilities.</td>
</tr>
<tr>
<td>Cheap labour costs.</td>
<td>Coastal area.</td>
<td>Desert.</td>
</tr>
<tr>
<td>Inaccessible.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Using the above factors, write labels around the sketch of the Himalayan Mountains on Activity Sheet 5.4b to show all the reasons why you think very few people live in this area. Be careful! You will not need to include all of the factors.

2. Write a similar set of labels around the sketch of Western Europe on Activity Sheet 5.4b to explain why it has a high population density.

3. For each sketch, underline the:
   - physical factors in green
   - social factors in red.

4. Underline those social factors that are also economic in blue.
What affects where we live?

Why are the Himalayan Mountains sparsely populated?

Why does Western Europe have a high population density?
Why does population density vary?

There are reasons why an area has a sparse or dense population. The reasons why so many people live in densely populated places are called positive factors. There are negative factors that have made other places sparsely populated.

Below are factors in population distribution. Colour the:

- positive factors in green
- negative factors in red.

<table>
<thead>
<tr>
<th>Positive Factor</th>
<th>Negative Factor</th>
<th>Positive Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasant climate.</td>
<td>Lack of investment.</td>
<td>Open grassland for animals.</td>
</tr>
<tr>
<td>Too hot or too cold.</td>
<td>Too wet or too dry.</td>
<td>Poor water supply.</td>
</tr>
<tr>
<td>Dense forest.</td>
<td>Good soil for growing crops.</td>
<td>Good food supply.</td>
</tr>
<tr>
<td>Good water supply.</td>
<td>Government invests money.</td>
<td>Flat or gently sloping land.</td>
</tr>
<tr>
<td>Poor transport links.</td>
<td>Little industry and few jobs.</td>
<td>Few natural resources.</td>
</tr>
<tr>
<td>Poor soils for farming.</td>
<td>Wars and fighting.</td>
<td>Money available for investment.</td>
</tr>
<tr>
<td>Industry and jobs.</td>
<td>Good education system.</td>
<td>Good roads, railways, ports, etc.</td>
</tr>
<tr>
<td>Steep slopes.</td>
<td>Fertile soil for growing crops.</td>
<td>Natural resources for industry.</td>
</tr>
<tr>
<td>Established medical facilities.</td>
<td>A government that doesn’t listen to its people.</td>
<td></td>
</tr>
</tbody>
</table>

Using an atlas, choose one area in the UK that is sparsely populated and one that is densely populated. Complete a copy of the table below by adding information from your chosen areas.

<table>
<thead>
<tr>
<th>Name of area</th>
<th>Sparsely populated</th>
<th>Densely populated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relief</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Some of the factors listed above are opposites. For example, ‘Lack of investment’ is a negative factor and ‘Money available for investment’ is a positive factor. Find five other pairs of opposites.
Where do we live?

People are not spread evenly over the world. Some of the most crowded places are in China, India, parts of Western Europe, and some areas of Africa and the USA. More and more people in the world are living in cities.

The population distribution map below shows how unevenly people are spread around the world.

### Location
- **Amazon Rainforest**
- **Sahara Desert**
- **Himalayan Mountains**
- **Bangladesh**

### Factor
- **Climate**
- **Terrain**

### Sparse population
- Too hot and wet for people.
- Too dry and too little soil for crops to grow.
- Too cold for people.
- Low-lying and flat.

### Dense population
- Dense forest makes settlement and communication difficult.
- Ideal farming conditions.

### Copy and complete
- the table to compare the reasons for dense and sparse populations in the areas shown on the map. One example has been given to help you.

### Use the internet to locate websites to do with population distribution. See:


You could record data researched from the internet in a spreadsheet to compare the population characteristics of LEDCs and MEDCs, and import your findings into a word processing file to analyse the results.

Working in small groups, make a presentation to the rest of the class showing how world population differs. A PowerPoint presentation would be really impressive!
How does population change?

The world's population is increasing at a very rapid rate. In the past, it took 3,000 years for the world's population to double five times. In the future, the population may double in just 250 years.

Read the statements below. Write each statement's letter in the most appropriate place on the graph below.

A  Fewer children share a bedroom.
B  There are more golden weddings.
C  Parents begin to think more about family planning.
D  Doug Spade loses his job as a gravedigger.
E  Children are warmer in bed at night as they have many more brothers and sisters.
F  A mother sobs over the grave of the last of her five children who died in a typhoid epidemic.
G  A public health inspector smiles as the building of another new sewer is finished.
H  Grandparents are very rare.
I  Many more houses are being built.
J  People are encouraged to emigrate to the colonies.

Explain where and why you placed any five statements.
What are the effects of population change?

Death rates have been falling in most parts of the world over the last hundred years. There are a number of reasons for this.

1. Study the following ten factors to do with falling death rates and think about their relative importance.
   - Illnesses have been prevented because more:
     - people have access to clean water
     - people enjoy a varied diet, which means better health
     - children are inoculated against killer diseases such as polio
     - babies are born in hospital, where expert help is available, rather than at home, especially in richer countries
   - More ill people can be cured because of better:
     - knowledge of disease
     - health facilities, such as clinics and hospitals
   - Education and changes to our surroundings have helped as well, including:
     - better health education
     - improved design for new housing and strict building regulations in MEDCs
     - more women in LEDCs receiving education
     - better living conditions for some people

2. Cut out the ten factors above and sort them into groups in order of their importance. Try arranging them in a pyramid shape so that you have:
   - One most important factor at the top.
   - Two very important factors.
   - Three quite important factors.
   - Four remaining factors that should be considered.

3. You can do your first arrangement quickly, but then think carefully about your order and rearrange your statements if necessary. Keep moving the statements around until you are happy with the order.

4. Compare your arrangement with those of others in your class.
   After making comparisons, you may decide to change your own arrangement slightly. Do not feel you have to make changes, but you must be able to justify your arrangement.

5. Why have death rates been falling in most parts of the world over the last hundred years? Now try to answer this question dealing with the factors in order of their importance.
Understanding population change

For each statement in the table below, tick which of the countries it is most likely to relate to. Add a sentence to explain your decision.

<table>
<thead>
<tr>
<th>Statement</th>
<th>United Kingdom</th>
<th>India</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling death rates and low birth rates.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enough food and better diets.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor education.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Many people live in poverty.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New medicines and adequate hospitals.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls marry young.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both parents are working.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Few old age pensioners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of raising children rising.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children needed to work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contagious diseases.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government has a programme to provide housing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits are provided by the government.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No national health service.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Few jobs in rural areas.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What is migration?

Migration is the movement of people from one place to another to live or to work. Migrants usually move from poor places to the nearest rich place. People move to get away from the things they do not like, which are called push factors. They move to be nearer to the things they do like or the pull factors.

Below is a list of words to do with migration.

1. Rural areas.
2. Disease.
3. Age of marriage.
4. Religion.
5. Clean water.
6. Overcrowding.
7. Urban areas.
8. Cholera.
9. Farm work.
11. Shortage of jobs.
12. Low food production.
13. Less developed countries.
15. Natural disasters.
16. Life expectancy.
17. Healthy diet.
18. People per doctor.
20. Ageing population.
22. Death rate.
23. Birth rate.
24. More developed countries.
26. Family planning.
27. Better housing.
29. Undernourished.
30. Heart disease.
31. Obesity.
32. Education.
33. Migration.
34. Push factor.
35. Poor wages.
36. Industry.
37. Careers.
39. Widespread poverty.
40. Inoculation.
41. Health care.
42. Starvation.
43. Overcrowding.
44. Few opportunities.
45. Better services.
46. Low standard of living.
47. Vaccination.
48. Contraception.
49. Natural increase.
50. Electricity.
What is migration?

- Working with a partner, study the sets of numbers below, which match to words in the list on Activity Sheet 5.13a.
- Cross out the ‘odd one out’ in each set.
- Add a fourth number to match the other two.
- Explain what links the three ‘in’ numbers.

<table>
<thead>
<tr>
<th>Set A</th>
<th>1</th>
<th>9</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set B</td>
<td>14</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Set C</td>
<td>8</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Set D</td>
<td>4</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Set E</td>
<td>6</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Set F</td>
<td>11</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Set G</td>
<td>10</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Set H</td>
<td>24</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Set I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set J</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set K</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compile some sets of words to try on your partner. Choose two words that have something in common with each other and one that has nothing to do with the other two. Ask your partner to find the ‘odd one out’ and give reasons for their choice. Then try one of your partner’s sets.
What are the effects of migration?

Many immigrants settle happily in their new surroundings but for some there can be difficulties. Migrants can be a great help to the economy. They provide much needed skills and add variety and interest to society in the UK.

Read the statements below.

Migrants' children will need school places in their new country.

Many immigrants settle happily in their new surroundings but for some there can be difficulties. Migrants can be a great help to the economy. They provide much needed skills and add variety and interest to society in the UK.

Migrants are often well educated.

Migrants are mainly young, fit adults. They do not need much health care.

Local people may think that migrants have taken their jobs and housing.

Migrants send money back to their own country.

Skilled and educated people leave. No one is left to solve the problems, and make a new future.

Migrants are mainly aged 20–45 (of working age) and are hard workers.

When many young people leave their home country, only the old are left behind. Communities could die out.

If many young men leave their home country, too many young women will not marry. Communities could die out.

Migrants may be skilled workers. They pay a lot of tax. They do not claim benefits.

Migrants are often self-employed. These may be ‘new’ jobs.

Migrants are often prepared to move around to find jobs.

When many young people leave their home country, only the old are left behind. Communities could die out.

Skilled and educated people leave. No one is left to solve the problems, and make a new future.

Migrants are mainly young, fit adults. They do not need much health care.

Local people may think that migrants have taken their jobs and housing.

Migrants send money back to their own country.

Migrants are often well educated.

Migrants may be skilled workers. They pay a lot of tax. They do not claim benefits.

Migrants are often self-employed. These may be ‘new’ jobs.

Migrants are mainly aged 20–45 (of working age) and are hard workers.

In your book or file, make a list of the statements that are:

a good for the country that migrants move to
b bad for the country that migrants move to
c good for the country that migrants move from
d bad for the country that migrants move from.

Which of your lists is the longest?

Some people in the UK may be worried that there are many migrants. Use the statements to find as many reasons as you can to show that migrants can be good for the UK.

The country that has lost the migrants may have problems in the future. What are these?

Suggest what the UK could do to help people left behind in the old country.
Telephone conversation

Migrants move in the hope of finding employment and a better chance in life. This kind of migration can bring benefits, but can also cause problems. 

Read through the poem below to get a general impression. Then read it again more slowly and carefully.

**Telephone Conversation**

The price seemed reasonable, location
Indifferent. The landlady swore she lived
Off premises. Nothing remained
But self-confession. ‘Madam,’ I warned,
‘I hate a wasted journey – I am African.’
Silence. Silenced transmission of
Pressurised good-breeding. Voice, when it came,
Lipstick coated, long gold-rolled
Cigarette-holder piped. Caught I was, foully
‘HOW DARK?’... I had not misheard...
‘ARE YOU LIGHT
OR VERY DARK?’ Button B. Button A. Stench
Of rancid breath of public hide-and-speak.
Red booth. Red pillar box. Red double-tiered
Omnibus squelching tar. It was real! Shamed
By ill-mannered silence, surrender
Pushed dumbfounded to beg simplification.
Considerate she was, varying the emphasis –
‘ARE YOU DARK? OR VERY LIGHT?’
Revelation came.

‘You mean – like plain or milk chocolate?’
Her assent was clinical, crushing in its light
Impersonality. Rapidly, wave-length adjusted,
I chose. ‘West African sepia’ – and as afterthought,
‘Down in my passport.’ Silence for spectroscopic
Flight of fancy, till truthfulness changed her accent
Hard on the mouthpiece. ‘WHAT’S THAT?’ conceding
‘DON’T KNOW WHAT THAT IS.’ ‘Like brunette.’
‘THAT’S DARK, ISN’T IT?’ ‘Not altogether.
Facially, I am brunette, but madam, you should see
The rest of me. Palm of my hand, soles of my feet
Are a peroxide blond. Friction, caused –
Foolishly, madam – by sitting down, has turned
My bottom raven black – One moment, madam!’
– sensing
Her receiver rearing on the thunderclap
About my ears – ‘Madam,’ I pleaded, ‘wouldn’t
you rather
See for yourself?’

Wole Soyinka

---

2. Answer the following questions as briefly and as clearly as you can:
   - Who is speaking in the poem?
   - Is the poet speaking to anyone? If so, to whom?
   - What, in a sentence, is the poem about?
   - What is the mood of the poem – happy, sad, frightening, sinister, exciting?

3. Make a list of the images or word-pictures in the poem.

4. In your own words, describe at least two of these images as fully as you can. You may illustrate your work if you wish.

5. Make a list of the words you do not understand. Look up their meanings. Try them in the poem. Do they help?

6. Select a line or phrase you do not fully understand, or a line that may mean more than it seems at first reading. Write it out – try one or two explanations – look for clues in the poem. Why, if you think it is a significant line, were your suspicions aroused?

7. Think about the following questions:
   - Is there a message in the poem? If so, what do you think it is?
   - Does the poem remind you of anything you have seen or experienced?
   - Is the poem trying to make you think?
   - Is the poem making a point? If so, what?
   - Does the point go beyond the poem itself?
   - What, if anything, did you like about the poem? Explain why and quote from the poem in your explanation.
Examining the effects of migration

Complete the graphic organiser below to show the effects of migration on four UK residents.

For immigration

Immigrants

Disadvantages of immigration

Advantages of immigration

UK residents

Examining the effects of migration

For immigration

Against immigration

1
2
3
4

1
2
3
4
Think about your learning!

Before you submit your final enquiry, spend some time thinking about the learning that you have carried out.

1. Look carefully at this list of skills. Geographers are skilled people! **Tick** the skills you are developing during your time working on this enquiry.

2. Describe **one** thing that enabled you to be successful in this task:

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

3. Describe **one** problem you had, or thought you had, that stopped you from achieving your potential:

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

4. In these boxes write **two** actions that you will carry out to help you be more successful and reach your target in the future.

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

Teamwork □
Reading □
Listening □
Discussion □
Problem solving □
Decision making □
Map interpretation □
Graphing □
Data analysis □
Questioning □
Debating □
Time management □
Presenting □
Empathy □
Annotation □
Evaluation □
Research □
Using ICT □
Comparing □
Prediction □
Creating ideas □
What is Kenya like?

Landscape, weather and wealth have an effect on the lives of people living in Kenya.

1. Study the photos on pages 106 and 107 in the pupil book.
2. Read the following questions about the photos.

- What is going on in this photo?
- What time of day is this?
- What is the purpose of this development?
- What might happen in the future?
- How is it changing?
- Where is this place?
- How do they feel about it?
- Why is it like this?
- Are there positives and negatives in the photo?
- Who is affected by the changes?
- How do I feel about it?
- Does this photo tell the whole story about this place?
- What images or messages does the photo suggest?
- What happened after the photo was taken?
- Who are the people in the photo?
- What was happening before the photo was taken?
- Who took this photo and why?
- What else do you need to know to make sense of the photo?
- What is happening in this photo?
- How did this place get to be like this?

3. With a partner, discuss what you see in each photo and answer any five questions about each one.
4. Try to ask your partner at least two more questions about what you see in each photo.
5. Study the list below of where we get our images. Make a list of the types of image you get of Kenya from:

- TV
- Books
- Comics
- Videos/films
- Newspapers
- Charities
- School subjects
- Advertisements
- Comic Relief
- Sports Relief
- Other people you know

What are Kenya’s main features?

In Kenya, land use, jobs, settlement patterns and population distribution are related to the country’s environment and location.

1. Write the questions below in one of the 16 spaces around the development compass.

<table>
<thead>
<tr>
<th>Nature and the environment</th>
<th>Economic and trade issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Questions about the land, soil, vegetation, climate, wildlife…)</td>
<td>(Questions about making money, employment, poverty…)</td>
</tr>
<tr>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

2. Use these questions to ask about the different pictures in this unit. Try to answer the questions for the places in each image.
What are Kenya’s main physical features?

Many of Kenya’s most attractive landforms can be seen either in the Central Highlands or along the coast. Most of Kenya is hot all year but a lack of rain can be a problem.

1. Imagine that you are planning a beach holiday on the long, sandy beaches near Mombasa. What is the best time of the year to go?

2. You must decide:
   - whether there will be too much rain to be able to enjoy a beach holiday
   - when temperatures will be too high to be able to enjoy yourself.

3. Use the climate data below to help you draw the climate graph for Mombasa.

<table>
<thead>
<tr>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp. (°C)</td>
<td>27</td>
<td>2</td>
<td>28</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>24</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Rainfall (mm)</td>
<td>25</td>
<td>18</td>
<td>64</td>
<td>196</td>
<td>320</td>
<td>119</td>
<td>89</td>
<td>64</td>
<td>64</td>
<td>86</td>
<td>97</td>
</tr>
</tbody>
</table>

4. Annotate the graph to describe the climate and any implications for the tourist.

5. When do you think is the best time of year to go on a beach holiday in Kenya? Use evidence from the graph to justify your answer.
Informing tourists about Kenya

You have been asked by Kenya Airways to devise a leaflet that will be given to tourists flying to the country.

The aim is that the tourist will be better informed about the main features of the country when they step off the plane. Complete the table below, using the information in the pupil book and the word boxes to help you.

<table>
<thead>
<tr>
<th>An introduction to Kenya</th>
<th>A map of Kenya</th>
<th>Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing country.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Popular.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard of living.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uganda.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethiopia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somali Republic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nairobi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kisumu.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mombasa.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>River Tana.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equator.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudan.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanzania.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Victoria.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nakuru.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mt Kenya.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mombasa.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Present-day movements of population

The distribution of population in Kenya is mainly affected by physical factors such as climate, water supply, relief and soil. Most people live in or near the capital city of Nairobi.

Working with a partner, read and cut out the statements below which help to explain some reasons why so many people are migrating to Nairobi.

<table>
<thead>
<tr>
<th>Maria grows food to support her family and tries to sell any extra produce for cash.</th>
<th>Maria is a pregnant 26-year-old woman who has a very important decision to make.</th>
<th>The government offers the people living in Kibera the chance to improve their lives.</th>
<th>Maria had very little education and no training.</th>
<th>There are too many of the Kikuyu looking for jobs on the farms and plantations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria’s husband Julius now lives in Kibera, a shanty town on the outskirts of Nairobi.</td>
<td>Maria and Julius belong to the Kikuyu people.</td>
<td>It is not far to Nairobi so Julius can work there and still visit his village.</td>
<td>Maria’s husband sends the extra money he earns home to Maria and his children.</td>
<td>Poorly paid, unskilled work can be found in Nairobi.</td>
</tr>
<tr>
<td>Nairobi is a city with big, modern buildings that include hospitals, shops and cinemas.</td>
<td>Maria would earn more money if she moved to Nairobi and got a job.</td>
<td>Maria’s eldest son works in a hotel in Nairobi rather than on a plantation.</td>
<td>Maria’s husband moved to Nairobi to find a better job with more money.</td>
<td>Kibera is overcrowded and lacks electricity, a water supply and sewage disposal.</td>
</tr>
<tr>
<td>The government is beginning to provide land where electricity, a water supply and sewage disposal are available.</td>
<td>The Kikuyu people have adapted to Western culture.</td>
<td>Maria is unsure whether she would like the hustle and bustle of city life.</td>
<td>Many Kenyan shanty-towns are illegal and settlers face the risk of eviction.</td>
<td>Maria lives with her grandparents, parents and four daughters near Mt Kenya.</td>
</tr>
<tr>
<td>Maria’s husband has begun to build a home for his family in Kibera. He hopes that one day soon they will come and live with him.</td>
<td>Well-off people in Nairobi live and work in good conditions near to the city centre.</td>
<td>Maria’s house and garden is too small to grow enough food in and support her growing family.</td>
<td>Maria learned some skills at school but cannot use them in her local village.</td>
<td></td>
</tr>
</tbody>
</table>

Sort the cards into three categories:

- Reasons for Maria to stay.
- Reasons for Maria to move.
- Other information.

Should Maria stay in her village or move to Nairobi? Give reasons for your answer.

What problems might be caused if many more people from the rural areas of Kenya decided to move to Nairobi? How would this affect both the city and villages and the rural areas that people are moving from?
City life in an LEDC

Cities in developing countries have two sides. Well-off people live and work in good conditions near to the city centre. Poor people often live and work in less pleasant shanty settlements on land that does not belong to them and a long way from the city centre.

🤝 Working with a partner, read the statements about Nairobi below.

Decide which statements are most likely to be about the lives of well-off people and which are most likely to be about the very poor. Copy the Venn diagram below and enter each statement's letter in the appropriate sector of the diagram. Some statements may apply to both areas. Enter the letters of those statements that apply to both types of people in the overlapping sector.

| A | Professionals with full time, well-paid jobs. |
| B | Private schools. |
| C | Homes are large and modern. |
| D | Few possessions. |
| E | Uneducated and illiterate. |
| F | No well-paid jobs. |
| G | Unemployment is very high. |
| H | Cannot find work. |
| I | Live in slums and squatting settlements. |
| J | Under employed. |
| K | No one collects the rubbish. |
| L | High death rates. |
| M | No running water or electricity. |
| N | Infant mortality is very high. |
| O | Life is very difficult and unhealthy. |
| P | Most homes have no toilet. |
| Q | A very low standard of living. |
| R | Social problems, such as street crime. |
| S | Many children suffer from a poor diet. |
| T | Families live, eat and sleep in one room. |
| U | Cholera, typhoid, malaria and dysentery. |
| V | Homes are small houses packed tightly together. |
| W | Electricity from illegal hook-ups to power lines. |
| X | In the dry season, mosquitoes plague the place. |
| Y | One of the highest birth rates in the developing world. |
| Z | Cannot afford to pay for health care and medicine. |

The rich... ...and the poor

🤝 How does your life compare? In your book or file, write a paragraph on your own life using the headings below:

- House
- Jobs
- School
- Shops
- Standard of living
- Use of water
- Use of energy
### Living in a shanty settlement

1. **Read some of the factors that tell of life in a shanty settlement.**

2. **Write the following statement in the centre of a large sheet of paper: 'What is life like in a shanty town?'**

3. **Working in pairs, cut out the statements and arrange them on the paper in a way that makes sense to you.**

4. **Discuss the possible links between the events. Those with many links can be kept close together, but allow space between all the statements. When you are satisfied, stick them to the paper.**

5. **Draw lines between the statements that seem to be connected. Along each line, write a short explanation of the link. Use arrows to show the direction of each link. There can be a link in both directions for any pair of statements and more than one link in any direction. There does not have to be a link between all the statements.**

<table>
<thead>
<tr>
<th>Sense of community.</th>
<th>Rubbish is often burnt.</th>
<th>No open spaces except where a building has fallen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal tap/water.</td>
<td>Cannot find work.</td>
<td>Vigilante groups as people try to protect themselves.</td>
</tr>
<tr>
<td>Social problems, such as street crime.</td>
<td>Many children suffer from a poor diet.</td>
<td>Scraps of plywood or hardboard, mud and straw for walls.</td>
</tr>
<tr>
<td>Unemployment and under employment.</td>
<td>People develop building skills.</td>
<td>Families eat and sleep in one room.</td>
</tr>
</tbody>
</table>

| Life is very difficult and unhealthy. | Uneducated, illiterate and unskilled migrants. | No running water. | Toilet is a ditch that everyone else uses. | High death rates and infant mortality rates. |
| Newcomers have to make own shacks on very poor building land. | Sealed cesspits, emptied regularly. | Dump where rubbish is left to pile up. | Drug gangs. | Electric companies try to help. |
| ‘Free’ building land. | Infant mortality is very high. | Noise and litter everywhere. | Neighbours see each other often and offer support. | Few possessions. |
| Clutter of shabby huts leaning crazily against each other. | Here and there, fires have been lit. | Illegal hook-ups to a wild jumble of electric power lines providing a feeble current. | Hand-to-mouth lives, doing odd jobs, small-time trade and raising chickens or pigs. | Cannot afford to pay for health care and medicine. |
| Clutter of shacks packed tightly together. | Shelter made out of scraps of corrugated iron, tin cans hammered flat, beaten-out petrol cans or biscuit tins, planks of wood and torn sheets of polythene. | | | |
Learning to live sustainably in Kenya

The rapid growth in Kenya’s urban population is putting pressure on the land and on people who live in rural areas.

Read what some Maasai people say about learning to live sustainably in Kenya.

I build terraces on slopes where rain collects to keep the soil moist and to stop soil being washed away by the rain. I plant crops like millet, maize and beans. Sometimes the rains fail and my land suffers from drought, but it does less harm now.

I use manure as a cooking fuel.

The wet season can bring heavy rain. I place rocks along the contours of the terraces to keep the soil in place.

I planted many different trees. These trees protect the soil and are for timber, fruit and firewood. Instead of cooking on open fires, I've started to use a new kind of wood-burning stove that saves on firewood.

I am careful with firewood. I cut down branches and not the whole tree. This helps the trees to stay alive.

I use cows to pull the ploughs – I cannot afford a tractor. It's easier to use cows on the terraces because there is not so much space.

I use cows to pull the ploughs – I cannot afford a tractor. It’s easier to use cows on the terraces because there is not so much space.

I work with other farmers to try and find better ways of farming our land. We work together and help each other.

I put manure from my cows, sheep and goats back into the soil and, together with compost made from dead plants and food scraps, this puts the goodness back and the roots help to keep the soil together. I cannot afford to buy fertiliser.

I planted many different trees. These trees protect the soil and are for timber, fruit and firewood. Instead of cooking on open fires, I've started to use a new kind of wood-burning stove that saves on firewood.

Sometimes the rains fail. I plant hedges around my field. This has helped to stop the strong wind blowing away the soil, and the roots help to keep the soil together.

The following statement is a Maasai belief: ‘It takes one day to destroy a house but to build a new one will take months, perhaps years. If we destroy our way of life to construct a new one, it will take thousands of years.’

To help explain the statement, research the way of life of the Maasai by using the internet. See: www.nelsonthornes.com/secondary/geography/key_geography/html/index.htm

Use different colours to highlight those statements to do with:
- planting hedges
- building terraces
- using manure and compost
- planting trees
- cutting branches
- working together and using new stoves.
The Maasai way of life

Complete the graphic organiser below to show the main points of the Maasai way of life.

1.
2.
3.
4.

Way of life

House

Dress

Some of the oldest known human bones have been found in Kenya.
Can development in Kenya be sustainable?

Sustainable development should lead to an improvement in people’s quality of life and standard of living without wasting natural resources or spoiling the environment.

Instead of cooking on open fires, Kenyan women are starting to use a new kind of stove. This ‘Upesi’ stove is part of the plan for sustainable development.

The picture below shows an example of sustainable development.

Making a Upesi stove:
- uses local clay and renewable natural resources
- uses local skills
- does not spoil the environment
- costs very little
- provides a useful source of income and the local community benefits from the employment provided by making stoves.

Using a Upesi stove:
- uses less than half the fuelwood of an open fire
- saves fuel because fewer trees need to be cut down
- improves people’s health because there is less smoke
- saves time on collecting wood and cooking
- saves money for those who usually buy their fuelwood at market as it is more efficient.

Many more Kenyan women want to benefit from using the Upesi stoves. Use the information above to design a simple leaflet to promote the Upesi stove to rural Kenyan women and to advise these women about how to live more sustainably. There is a problem: most Kenyan women cannot read and so images are more important than words! You could use ICT and incorporate Word or Paint into your leaflet.
Can tourism in Kenya be sustainable?

Developing countries want to grow and make progress now and in the future. Many people believe that sustainable development, which is growth that can go on year after year, can help these countries to progress.

Ecotourism is an example of sustainable development in action. It is a way of encouraging tourism in the future so that it benefits Kenya but does not harm the people or the environment.

Working with a partner, read the statements below that explain how coral reefs have become an endangered ecosystem. Some reefs are damaged by nature, but the main problem is human activity. People are destroying coral.

A Storm waves can destroy fragile coral.
B As the sea gets warmer, some coral dies.
C The sea is polluted by coastal tourism development.
D Divers can damage the delicate coral reef ecosystems if they take pieces as souvenirs.
E Water movement caused by boats travelling too fast or too close damages coral reefs.
F Solid waste is disposed of from cruise ships in the sea.
G As sea levels rise, the coral gets deeper. Slow-growing coral needs shallow water to survive.
H Cruises taking tourists out to the reefs are often careless where they drop anchor.
I Boats taking visitors on tours of the reefs cause damage with their propellers.
J The reefs are being over-fished to feed the increasing number of tourists.
K Hurricanes are getting more common as global warming increases.
L Fishing with large mesh nets damages the reefs.
M Inexperienced snorkellers and scuba divers can trample coral with their flippers.
N Sea levels have risen by 25 cm during the last 100 years, and will continue to rise in the future.
O Local people looking for work in the tourist industry set up squatter camps on the coast.
P Tourists in hired boats do not know the local waters and can run aground on a reef.
Q Dynamite used to catch fish destroys coral.
R Beaches and lagoons are being polluted by waste from the hotels.
S Solid waste is disposed of from cruise ships in the sea.

Decide which statements are most likely to be about the direct impact of tourism and which are most likely to be about the indirect impact of tourism. Enter each statement’s letter in the appropriate place on a copy of the Venn diagram below. The statements that apply to the natural threats to coral reefs can be written in the overlapping sector.

What, or who, is causing most damage to the coral reefs?

Write a set of guidelines for holiday companies and tourists on how to behave when going on holiday to explore the coral reefs of Kenya.
Developing for the future

Using the statements on Activity Sheet 6.15b, complete the flow diagram below to show what has been done to make Baobab Farm sustainable.
6.15b  Kenya, a developing country  NEW KEY GEOGRAPHY  Connections pages 118–119

Developing for the future

To restore the area the quarry owners planted casuarinas trees.

to break down the fallen leaves into humus.

Baobab Farm is 10 km north of Mombasa. The area was once a huge quarry.

and within 20 years enough soil had formed

Grasses were added  Earthworms were added  More trees were added

They also introduced thousands of red millipedes

Today, hippopotamuses, elephants, giraffes, giant tortoise, wildebeest and zebra live on the farm.

to allow a tropical rainforest environment to develop.
Kenya – a developing country?

A low GNP, the small amount of imports and exports, high birth, death and infant mortality rates, a low level of literacy, and very few doctors per 1,000 people – all these features may identify developing countries.

Capital city: Nairobi – population of approximately 1.5 million people.
Wealth: Kenya is classed as the 17th poorest nation in the world (1996) – average income £180 per person per year (UK = £17,000).
Age structure: 0–14: 42% (male 6,524,776; female 6,381,192).
15–64: 55% (male 8,529,842; female 8,471,609).
65 and over: 3% (male 376,151; female 482,346).
Birth rate: 29 births / 1,000 population.
Death rate: 14 deaths / 1,000 population.
Life expectancy at birth: Total population: 47 years (UK = 79).
Male: 46 years.
Female: 48 years.
HIV/AIDS: 14%
Literacy: 69% (male 76%; female 63%).
Tribal influence: 42 tribes living in Kenya, as well as some non-African people groups.
Language: English is the official language; Swahili is the national language.

1 There are 16 key facts about Kenya in the Fact File above. Working with a partner, make a list of at least ten facts.
2 Which of these facts make Kenya appear to be a less economically developed country?
3 In what other ways could this information be shown in order to give a different impression of Kenya?
4 Present the level of development for Kenya using ICT. For more information access the United Nations CyberSchoolBus which includes the InfoNation database in the Resource section of the website. See: www.nelsonthorpes.com/secondary/geography/key_geography/html/index.htm
5 You could record data researched from the internet in a spreadsheet and import your findings into a word processing file to analyse the results.
How can we measure the level of a country’s development?

Apart from wealth, there are many other ways of trying to measure the level of a country’s development. Some of these are called social indicators and they categorise people, how they live, what they do and their quality of life.

Read what some people say about development.

Some people think that development is simply about how much money people have. Others think it is not that easy and other factors are more important. Copy and complete the table below, putting each statement’s letter in the correct column.

Which statements do you agree and disagree with the most? Explain your choices. Write your own definition of a developing country: ‘I think a developing country is...’

<table>
<thead>
<tr>
<th>Development is simply about money</th>
<th>Development is about other factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>People are most happy when they have money to do what they want.</td>
<td></td>
</tr>
<tr>
<td>Developed countries are simply the richest countries of the world.</td>
<td></td>
</tr>
<tr>
<td>A developed country is a country made up of mainly cheerful and friendly people.</td>
<td></td>
</tr>
<tr>
<td>How can a country be developed if it is in debt and imports more than it exports?</td>
<td></td>
</tr>
<tr>
<td>I don't think the UK is a very developed country. There is great inequality with the gap between the rich and the poor getting bigger.</td>
<td></td>
</tr>
<tr>
<td>I think that the Maasai people are among the most developed in the world. It is cattle, not money, which means wealth to the Maasai.</td>
<td></td>
</tr>
<tr>
<td>Developed countries meet the basic needs of all their people, like having enough food, access to clean water and good housing.</td>
<td></td>
</tr>
<tr>
<td>A developed country is one where there is a good education system, good hospitals and a fair government.</td>
<td></td>
</tr>
<tr>
<td>Family values are important to us and we are always willing to help others.</td>
<td></td>
</tr>
<tr>
<td>Development is easy to measure. In developed countries like the UK and the USA, people have a high income. In the poor, developing countries like Kenya, most people have a low income.</td>
<td></td>
</tr>
<tr>
<td>I don't think the UK is a very developed country. There is great inequality with the gap between the rich and the poor getting bigger.</td>
<td></td>
</tr>
<tr>
<td>Some people think that development is simply about how much money people have. Others think it is not that easy and other factors are more important. Copy and complete the table below, putting each statement’s letter in the correct column.</td>
<td></td>
</tr>
<tr>
<td>Which statements do you agree and disagree with the most? Explain your choices. Write your own definition of a developing country: ‘I think a developing country is...’</td>
<td></td>
</tr>
</tbody>
</table>
**What is a developing country?**

All countries are different. Some are rich and have high standards of living, while some are poor and have lower standards of living. Development is a measure of how rich or how poor a country is.

1. Nairobi.
2. Cattle.
4. Infant mortality rate.
5. Mombasa.
7. Export.
8. Rural–urban migration.
10. Somali Republic.
11. South Africa.
13. Tanzania.
14. GNP.
15. Ethiopia.
17. Subsistence.
18. Indian Ocean.
19. Maasai.
22. Safari.
23. Tourism.
24. Poverty.
27. Shamba.
28. Ecotourism.
29. Grassland.
30. Nomads.
31. Rainforest.
32. Plantation.
33. Pastoral farming.

**a** Working with a partner, study the sets of numbers below, which match to words in the list above.

**b** Cross out the ‘odd one out’ in each set.

**c** Add a fourth number to match the other two.

**d** Explain what links the three ‘in’ numbers.

<table>
<thead>
<tr>
<th>Set A</th>
<th>1</th>
<th>12</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set B</th>
<th>4</th>
<th>16</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set C</th>
<th>19</th>
<th>8</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set D</th>
<th>10</th>
<th>11</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set E</th>
<th>7</th>
<th>21</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set F</th>
<th>22</th>
<th>3</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set G</th>
<th>1</th>
<th>19</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the link?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Be** Compile some sets of words to try on your partner. Choose two words that have something in common with each other and one that has nothing to do with the other two. Ask your partner to find the ‘odd one out’ and give reasons for their choice. Then try one of your partner’s sets.
Before you submit your final enquiry, spend some time thinking about the learning that you have carried out.

1. Look carefully at this list of skills. Geographers are skilled people! **Tick** the skills you are developing during your time working on this enquiry.

2. Describe one thing that enabled you to be successful in this task:

3. Describe one problem you had, or thought you had, that stopped you from achieving your potential:

4. In these boxes write two actions that you will carry out to help you be more successful and reach your target in the future.
STOP PRESS – Hold the front page!

World issues affect the lives of people across the world and often make newspaper headlines.

1 The headlines below are not real – not yet, anyway! For each one, say if the issue is local, regional, national or global.

2 Working with a partner, try to explain the points being made about world issues. Be careful! Some might be good but some might be bad.

3 For any headline:
   a explain the situation that could lead to this headline being printed for real
   b suggest what effects it might produce.

4 Write an imaginary news article using one of the headlines. If everyone in your class chooses a different topic, the class could produce a newspaper. Good presentation of your work is important so, if possible, use a word processing or a desktop publishing program to make your work look more professional.
What are world issues?

World issues affect the lives of people across the world and may only be solved by international cooperation.

|-------------------------------|------------------------|-----------------|--------------|

1. With a partner, read and cut out the statements above. Sort the cards into an order of importance using the diamond arrangement opposite:

2. Join with another pair of pupils and compare your arrangements. Agree on your preferred arrangement and discuss your findings as a class.

3. Working in small groups, use ICT to compile a leaflet about a world issue. Use information from a variety of sources including the internet. See: www.nelsonthornes.com/secondary/geography/key_geography/html/index.htm

Find out the following about the issue you have chosen:
- What has been done already?
- What should be done?
- What could be done?

<table>
<thead>
<tr>
<th>Most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Least important</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 3 3</td>
</tr>
<tr>
<td>2 2 1</td>
</tr>
</tbody>
</table>

4. Use PowerPoint or a word processing program to outline the benefits or disadvantages your world issue would bring and present a brief report to your class.
What is global warming?

The burning of fossil fuels has caused an increase in temperatures around the world. This is called **global warming**.

When complete, the diagram below explains global warming and how the earth is slowly getting warmer. Study the seven labels below and write each one in the correct box on the diagram.

- **1.** The sun warms the earth’s surface during the day.
- **2.** The earth loses heat at night.
- **3.** Thermal power stations burn fossil fuels and removing forests increases the level of carbon dioxide.
- **4.** Heat is reflected from the earth back into the atmosphere.
- **5.** The sun’s rays pass through the atmosphere to the earth’s surface.
- **6.** Some heat escapes into space.
- **7.** The earth loses heat at night. Carbon dioxide and other gases in the atmosphere trap some heat.
Phew – what a scorcher!

Nowadays, we have better opportunities than ever before to understand our world – and the threats to our world.

The heat is on!

Global average temperatures rose in the 20th century by 0.6°C. They are projected to rise by anything from 1.4 to 5.8°C over the period 1990 to 2100. A report in 2005 by an international group chaired by the head of the UN’s Intergovernmental Panel on climate change (IPPC) identified a 2°C increase as the threshold beyond which ‘the risks to human societies and ecosystems grow significantly’. Such an increase is considered probable if atmospheric concentrations of carbon dioxide (CO₂) exceed 400 parts per million (ppm). Concentrations of CO₂ now exceed 370 ppm – their highest levels for at least 420,000 years – and are still rising; in 1958 the level was 315 ppm. In June 2005, a joint statement by the science academies of 11 countries, including all the G8 nations, warned: ‘It is vital that all nations identify cost-effective steps that they can take now to contribute to substantial and long-term reduction in net global greenhouse gas emissions.’ Since 1750, CO₂ levels in the atmosphere have increased by about 35 per cent. Nineteen of the 20 warmest years of the past 150 years have occurred since 1980. NASA predicts that 2006 will be the warmest year since records began. According to the IPPC, which used research from 2,000 experts, ‘Most of the warming observed over the past 50 years is attributable to human activity’. It is calculated that, to halt global warming, greenhouse gas emissions would have to be cut by 60 per cent from 1990 levels. The 1997 Kyoto protocol aims to reduce them by 5.2 per cent by 2010, compared with 1990 levels. The US, which produces 24 per cent of the world’s carbon emissions, rejects Kyoto. Between 1990 and 2002, US CO₂ emissions grew by 13 per cent. G8 nations account for 45 per cent of greenhouse gases. The US has resisted the use of the phrase ‘Our world is warming’ in a draft G8 statement on climate change.

1. In the box, write a brilliant slogan to go with the image above. Here are two ideas to get you thinking:

FRAGILE. HANDLE WITH CARE. FOLLOW MAKER’S INSTRUCTIONS (Christian Aid)

ATTRACTIVE DETACHED RESIDENCE – SADLY NEGLECTED IN RECENT YEARS (Friends of the Earth)

2. Do you think people today are seriously damaging the earth’s future?
Are you to blame?

Use the storyboard below to produce a cartoon strip highlighting how the general public are contributing to global warming. Each cartoon needs to be accompanied by a written explanation of how each action is increasing global warming.

<table>
<thead>
<tr>
<th>Text</th>
<th>Cartoon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image" alt="Fossil fuels" /> <img src="image" alt="CFCs" /> <img src="image" alt="Deforestation" /> <img src="image" alt="Transport" /> <img src="image" alt="Aerosols" /> <img src="image" alt="Nitrous oxide" /> <img src="image" alt="Carbon dioxide" /> <img src="image" alt="Cattle farms" /> <img src="image" alt="Refrigerators" /> <img src="image" alt="Methane" /></td>
</tr>
</tbody>
</table>
Effects of global warming

Global warming will cause serious problems throughout the world due mainly to rising sea levels and climate change.

GET AWAY!
TRAVEL AGENTS
‘Your passport to the world’
SKIING IS BELIEVING!
An urgent message to all our customers

regrets to announce that due to extreme circumstances beyond our control* all our winter sports holidays have been cancelled.

Europe has had very little snow this year. This may be a result of global warming.

GET AWAY!
apologises for any inconvenience caused to its customers.

For an immediate refund, ring our Free Emergency 24-hour automated helpline on
0800 1234567
where you will be put on hold for the foreseeable future.

* We take no responsibility for global warming and climate chaos despite the fact that we encourage people to fly around the world in aeroplanes – the fastest growing contributors to greenhouse gases.

1. Going on holiday really can ‘Cost the earth!’ What do you understand by this statement?
2. Carefully read the small print at the bottom of the poster. Can we really blame travel agents for the increased levels of greenhouse gases, or should we blame tourists? Who else do you think is to blame?
3. A ‘greenhouse gas tax’ is one way of making airline companies pay for global warming. Do you think that this is a good idea? Explain your answer.
Global warming: a scientist’s view

The British Government has said that global warming is one of the biggest threats to face the people of Britain. In order to start making serious preparations to deal with this, they need to identify exactly how Britain is threatened.

Using the success criteria below, write a report outlining the consequences of global warming.

Report

You must include...
- rising sea levels.
- coastal flooding.
- examples of both.

You should include...
- changes in climate.
- potential threats to industry.
- examples of both.

You could include...
- habitat loss.
- threats to animals and plants.
- examples of both.
Mystery – Mrs Tiler on the roof

There are limited supplies of fossil fuels and once they are gone, they cannot be replaced. Other forms of energy need to be developed in their place.

You are going to solve the mystery of what Mrs Tiler is doing on her roof!

1. Working with a partner, read and cut out the statements below. These tell a story. Study the statements and think about the mystery you have to solve.

2. Find links between the statements and sort them into groups. Each statement can be linked with at least one other. Put any information that seems to be irrelevant to one side.

3. Describe the links you have suggested. This will help you to make a plan linking all of the statements.

4. Try to solve the mystery of what Mrs Tiler is doing on her roof.

<table>
<thead>
<tr>
<th>Mrs Tiler’s favourite song is ‘Up on the roof’ sung by The Platters.</th>
<th>The solar power industry in the UK is among the best in the world.</th>
<th>Mrs Tiler hates heights!</th>
<th>Local councils will help towards the cost of installing renewable energy schemes.</th>
<th>A typical solar-powered system can generate 2,000 watts on a sunny day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Tiler family lives in Cornwall.</td>
<td>Government target for getting more electricity from renewable energy is 20% by 2020.</td>
<td>A cloudy day will still generate ample sunlight to produce electricity.</td>
<td>Mrs Tiler is keen to recycle her household waste.</td>
<td>The UK has many of the world’s best solar designers.</td>
</tr>
<tr>
<td>A typical solar-powered system can generate enough power to meet the energy needs of 60–70% of a typical UK family’s needs.</td>
<td>Mrs Tiler books cinema tickets to see the musical ‘Fiddler on the Roof’.</td>
<td>The burning of fossil fuels such as oil causes pollution and harms the environment.</td>
<td>Solar panels are fixed to roofs at the best angle to the sun.</td>
<td>Mrs Tiler cycles rather than drives the three miles to work.</td>
</tr>
<tr>
<td>One side of Mrs Tiler’s roof faces south.</td>
<td>The use of fossil fuels is not sustainable.</td>
<td>Mrs Tiler’s boiler, powered by electricity and oil, is broken and needs replacing.</td>
<td>Solar power is a renewable source of energy and will never run out.</td>
<td>Even small-scale sustainable energy schemes make a difference to the environment.</td>
</tr>
<tr>
<td>Both of Mrs Tiler’s children live with asthma and eczema.</td>
<td>Mrs Tiler is a DIY fanatic.</td>
<td>Solar power means getting energy direct from sunlight.</td>
<td>The government promotes renewable energy schemes.</td>
<td>Mrs Tiler’s first name is Ruth.</td>
</tr>
<tr>
<td>A local DIY store has begun to stock solar panels.</td>
<td>Solar panels work best on roofs that face the sun.</td>
<td>There is nothing wrong with Mrs Tiler’s roof!</td>
<td>Mrs Tiler is a geography teacher.</td>
<td>In developing countries, the fitting of solar cells to hut roofs enables people to have electric lighting.</td>
</tr>
</tbody>
</table>
Planning for success

Before you complete activity 5 on page 131 of the pupil book, it would be a good idea to think about what the question is asking you to do and to plan your answer.

Organise your thoughts by using the headings below.

<table>
<thead>
<tr>
<th>Which types of energy will be used much less in 50 years’ time?</th>
<th>Which types of energy will be used much more in 50 years’ time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

How will these changes affect global warming? __________________________________________________________

______________________________________________________________________________________________

How might the environment benefit from these changes? _____________________________________________

______________________________________________________________________________________________

What benefits might people gain from these changes? _______________________________________________

______________________________________________________________________________________________

What sorts of businesses will benefit? ____________________________________________________________

______________________________________________________________________________________________

What problems do you foresee with these changes? _________________________________________________

______________________________________________________________________________________________

Overall, what do you think will be the greatest benefit? ____________________________________________

______________________________________________________________________________________________
World issues

Think about your learning!

Before you submit your final enquiry, spend some time thinking about the learning that you have carried out.

1. Look carefully at this list of skills. Geographers are skilled people! **Tick** the skills you are developing during your time working on this enquiry.

2. Describe one thing that enabled you to be successful in this task:

3. Describe one problem you had, or thought you had, that stopped you from achieving your potential:

4. In these boxes write **two** actions that you will carry out to help you be more successful and reach your target in the future.

<table>
<thead>
<tr>
<th>Teamwork</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>Problem solving</td>
<td></td>
</tr>
<tr>
<td>Decision making</td>
<td></td>
</tr>
<tr>
<td>Map interpretation</td>
<td></td>
</tr>
<tr>
<td>Graphing</td>
<td></td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
</tr>
<tr>
<td>Questioning</td>
<td></td>
</tr>
<tr>
<td>Debating</td>
<td></td>
</tr>
<tr>
<td>Time management</td>
<td></td>
</tr>
<tr>
<td>Presenting</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
</tr>
<tr>
<td>Annotation</td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Using ICT</td>
<td></td>
</tr>
<tr>
<td>Comparing</td>
<td></td>
</tr>
<tr>
<td>Prediction</td>
<td></td>
</tr>
<tr>
<td>Creating ideas</td>
<td></td>
</tr>
</tbody>
</table>
Think about your teamwork skills!

Spend time thinking about how you have worked as part of a team. Complete the bar diagram below by deciding which numbers match your performance in a team. Add up your total score out of 80 and then decide upon a target for the next time you work in a team.

1 = Needs a great deal of improvement
10 = Excellent

When working as part of a team...

I spend time sharing ideas and opinions.

I spend time planning and organising the task.

I manage my time effectively.

I encourage and help others.

I listen to others and have useful discussions with them.

I work with others to solve problems and create solutions.

I manage distractions and stay focused on the task.

I find ways of coming to an agreement with others.

Total score out of 80:
Think about your decision-making skills!

Spend time thinking about how you have made decisions in your work. Complete the bar diagram below to see where your strengths and weaknesses lie by deciding which numbers match your performance. Add up your total score out of 80 and then decide upon a target for the next time you have a decision to make.

1 = Needs a great deal of improvement
10 = Excellent

When making decisions ...

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am clear about the decisions that need to be made.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use all of the sources available to gather information.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I use questions to survey other people’s opinions.</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>I spend time carefully analysing sources to find information.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use labels to help me collect information and make decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I refer back to the tables to help me give reasons for my decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I ask questions to help me clarify my understanding and solve problems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I stay focused on the task.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

Total score out of 80:   

Target for improvement

______________________________________________________________

______________________________________________________________

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______________________________________________________________
Think about your research skills!

Spend time thinking about the research techniques you have used in your work. Complete the bar diagram below to see where your strengths and weaknesses lie by deciding which numbers match your performance. Add up your total score out of 80 and then decide upon a target for the next time you have research to undertake.

1 = Needs a great deal of improvement
10 = Excellent

When carrying out research ...

1. I read the task and make a list of exactly what I am looking for.
2. I understand clearly what research needs to be carried out.
3. I plan carefully how I will collect my information.
4. I use all of the sources available to carry out research.
5. I ask questions to help me clarify my understanding and solve problems.
6. I manage my research time effectively.
7. I stay focused on the research task.
8. I work with others to help me complete the task more effectively.

Total score out of 80:
Think about your learning!

Spend some time thinking about the learning that you have carried out during your work in Geography in Key Stage 3.

1. Look carefully at this list of skills. Geographers are skilled people! Tick the skills you have developed during your time doing Geography:

   - Teamwork
   - Reading
   - Listening
   - Discussion
   - Problem solving
   - Decision making
   - Map interpretation
   - Graphing
   - Data analysis
   - Questioning
   - Debating
   - Time management
   - Presenting
   - Empathy
   - Annotation
   - Evaluation
   - Research
   - Using ICT
   - Comparing
   - Prediction
   - Creating ideas

2. Choose three skills that have enabled you to be a successful geographer:

   __________________________________________
   __________________________________________
   __________________________________________

3. Choose three skills you need to improve upon in the future:

   __________________________________________
   __________________________________________
   __________________________________________

4. In these boxes write two actions that you will carry out to help you be more successful in the future.

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________