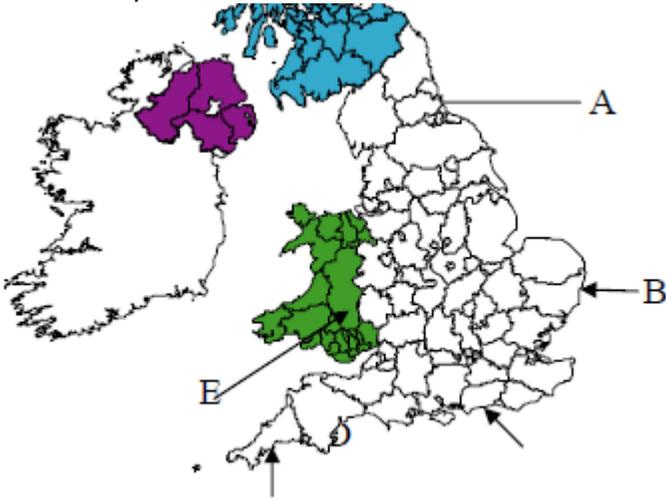


Lesson Focus	Learning Activities	Resources														
<p><u>LESSON 1</u></p> <p><u>LESSON TITLE</u> THE GROWING WORLD POPULATION</p> <p><u>LESSON OBJECTIVE</u></p> <p>TO EVALUATE THE GROWTH OF THE POPULATION OVER A PERIOD OF TIME</p>	<p><u>STARTER</u></p> <p>Go to the US census website to find a population clock http://www.census.gov/main/www/popclock.html. This shows you the current population of the world. Record the time and the world population growth for 1 minute, 3 minutes and 5 minutes.</p> <p><u>MAIN 1</u></p> <p>Construct a line graph of your data. Use your graph to work out how much the world population is currently growing every</p> <ul style="list-style-type: none"> • 1 minute • 5 minutes • 30 minutes • 1 hour <p><u>MAIN 2</u></p> <p>The world population reached 6 billion on 12 October 1999. Use the figures below to construct a graph with the years from 1800 to 2200 along the x-axis.</p> <table border="1" data-bbox="651 884 1787 962"> <tr> <td>Year</td> <td>1800</td> <td>1930</td> <td>1960</td> <td>1975</td> <td>1987</td> <td>2000</td> </tr> <tr> <td>Population</td> <td>1 billion</td> <td>2 billion</td> <td>3 billion</td> <td>4 billion</td> <td>5 billion</td> <td>6 billion</td> </tr> </table> <p>Use your second graph to predict when the world population will reach (i) 7 billion, (ii) 10 billion. Indicate this data on your graph.</p> <p><u>PLENARY</u></p> <p>At these rates the world population will double every 40 years making 48 billion by the year 2119, however the United Nations estimates that it will actually be only 12 billion by then. Why do you think the United Nations thinks this? Students discuss in pairs and write three factors which could affect the world population.</p>	Year	1800	1930	1960	1975	1987	2000	Population	1 billion	2 billion	3 billion	4 billion	5 billion	6 billion	<p>IWB World population clock Graph paper</p> <p>CensusAtSchool Resource</p> <p>Just how fast is the world population growing?</p>
Year	1800	1930	1960	1975	1987	2000										
Population	1 billion	2 billion	3 billion	4 billion	5 billion	6 billion										

	<p><u>HOMEWORK</u></p> <p>There is a fantastic website called www.geohive.com which investigates all sorts of things about the world population. Visit the website and, using some of the interesting ideas there, either design your own ‘Population Explosion?’ poster or write a summary of your own views regarding the world’s population and what you think will happen in the next fifty years.</p> <p><u>ASSESSMENT FOR LEARNING OPPORTUNITIES</u></p> <p>Questioning Writing across the curriculum Pair work</p>	
<p><u>LESSON 2</u></p> <p><u>LESSON TITLE</u> THE POLITICAL DIVISION OF ENGLAND</p> <p><u>LESSON OBJECTIVE</u> TO EXPLAIN THE GEOGRAPHICAL LOCATION OF ENGLAND</p>	<p><u>STARTER</u></p> <p>So how many bits does Britain divide into? Firstly there are the countries. Name the four countries within the British Isles? England is divided into counties. Study the map and identify the lettered counties.</p> 	<p>IWB Speaking frames Writing frames</p> <p>CensusAtSchool Resource</p> <p>Dividing up the Country</p>

MAIN 1

The piece of data, which gives a far more accurate position of the town or the city, is the postcode.

Name the following towns or cities by using the following postcodes.

- YO
- NP
- NG
- TQ

MAIN 2

Use <http://maps.google.co.uk/> and locate the following schools by their postcodes on a county map of England.

- School A NG9 5AL
- School B CF81 8LB
- School C B6 5NH
- School D YO11 1QB

Answer the following questions:

1. How far is School A from School B?
2. What is the direction from School D to School C?
3. How far is School D from School A?
4. What is the direction from School B to School C?

PLENARY

What three things did you learn in today's lesson?

	<p><u>HOMEWORK</u></p> <p>Use your postcode to find out all sorts of information about your local area and compare it to national figures or another local area by using http://www.upmystreet.com on the web. This allows you to compare property prices, GCSE results, crime figures and much more. It also draws graphs to show comparisons. Write five interesting comparisons and explain why the data is interesting.</p> <p><u>ASSESSMENT FOR LEARNING OPPORTUNITIES</u></p> <p>Questioning Writing across the curriculum Pair work</p>																					
<p><u>LESSON 3</u></p> <p><u>LESSON TITLE</u> TYPE OF HOUSING</p> <p><u>LESSON OBJECTIVE</u></p> <p>To evaluate the price of houses in the local area.</p>	<p><u>STARTER</u></p> <p>Students identify the types of houses and label each house with at least three features.</p> <p><u>MAIN 1</u></p> <p>Students work in pairs and compare the prices of terraced houses; semi detached houses and detached houses in different parts of the town. Students get data from a local property guide.</p> <table border="1" data-bbox="651 1058 1789 1337"> <thead> <tr> <th>Area</th> <th>Terraced</th> <th>Semi detached</th> <th>detached</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Area	Terraced	Semi detached	detached																	<p>IWB Speaking frames Writing frames Price guide from estate agencies</p> <p>CensusAtSchool Resource</p> <p>What do you live in?</p>
Area	Terraced	Semi detached	detached																			

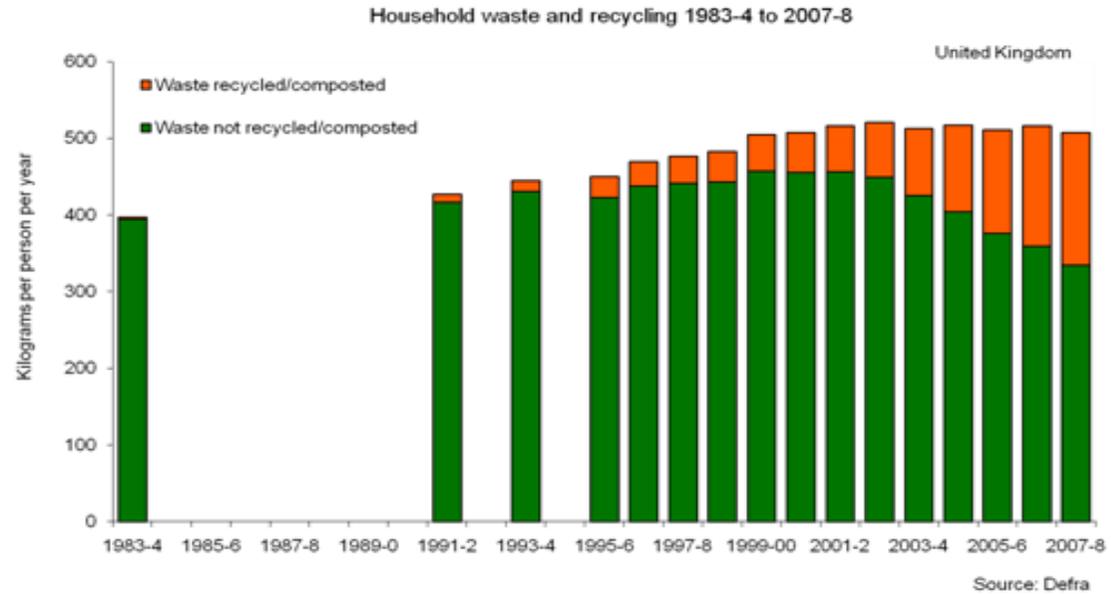
	<p><u>MAIN 2</u></p> <p>Students discuss in pairs the reasons why there are differences in the price of houses in the different areas of the town. Students write a paragraph on the reasons why the house prices are different in different areas of the town.</p> <p><u>PLENARY</u></p> <p>Students evaluate paragraphs. Write one comment on why the paragraph is good and one comment on how to improve the work in the future. Some of the students will read their paragraphs to the class.</p> <p><u>HOMEWORK</u></p> <p>Design a property guide for a local estate agent. The guide must have three different types of houses.</p> <p><u>ASSESSMENT FOR LEARNING OPPORTUNITIES</u></p> <p>Questioning Writing across the curriculum Pair work</p>	
<p><u>LESSON 4</u></p> <p><u>LESSON TITLE</u></p> <p>ENOUGH SPACE FOR EVERYONE</p> <p><u>LESSON OBJECTIVE</u> TO EVALUATE AND EXPLAIN THE POPULATION DENSITY OF THE</p>	<p><u>STARTER</u></p> <p>The population of the world reached 6 billion on 12 September 2000 and is expected to reach 10 billion by 2100. The question is: 'Will there be room for everyone?' The total land area of the world is approximately 135 million square kilometres. How much space does a single person need? Discuss, and perhaps experiment, to come up with an answer giving reasons for your decision. Now work out how much space 1 million people would need using your answer.</p>	<p>IWB Calculators Graph paper Writing frames Speaking frames</p>

<p>WORLD</p>	<p><u>MAIN 1</u></p> <p>The total land area 135,000,000 divided by 6,000,000,000 is 0.0225 square kilometres or 22,500 square metres. That's about 2¼ football pitches each. Antarctica takes up about 14 million square kilometres. Students work in pairs and identify five places that are unsuitable to live in using an atlas to find the data. Students need to give reasons why these places are unsuitable to live in.</p> <p><u>MAIN 2</u></p> <p>Students need to work out the population density of different countries by using data. Students need to know that population density is the number of people per square kilometre. Formula: - Population density = Divide the area by the population to get the population density (the number of people per square kilometre) and then draw a bar chart of your results.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Country</th> <th>Land area (square km)</th> <th>Population (2009)</th> </tr> </thead> <tbody> <tr> <td>Australia</td> <td>7,617,930</td> <td>22,155,000</td> </tr> <tr> <td>China</td> <td>9,326,410</td> <td>1,319,175,330</td> </tr> <tr> <td>France</td> <td>545,630</td> <td>65,073,482</td> </tr> <tr> <td>India</td> <td>2,973,190</td> <td>1,198,003,000</td> </tr> <tr> <td>Italy</td> <td>294,020</td> <td>60,157,214</td> </tr> <tr> <td>Monaco</td> <td>2</td> <td>32,965</td> </tr> <tr> <td>Norway</td> <td>307,860</td> <td>4,858,200</td> </tr> <tr> <td>Spain</td> <td>499,542</td> <td>46,661,950</td> </tr> <tr> <td>South Africa</td> <td>1,219,912</td> <td>49,320,000</td> </tr> <tr> <td>United Kingdom</td> <td>241,590</td> <td>61,612,300</td> </tr> </tbody> </table> <p><u>MAIN 3</u></p> <p>Draw a bar chart of results from table and write a paragraph to compare the findings of the bar chart.</p> <p><u>PLENARY</u></p> <p>How can the problem of population density be solved in the future? Discuss in pairs and feedback. Draw a concept map on the IWB.</p>	Country	Land area (square km)	Population (2009)	Australia	7,617,930	22,155,000	China	9,326,410	1,319,175,330	France	545,630	65,073,482	India	2,973,190	1,198,003,000	Italy	294,020	60,157,214	Monaco	2	32,965	Norway	307,860	4,858,200	Spain	499,542	46,661,950	South Africa	1,219,912	49,320,000	United Kingdom	241,590	61,612,300	<p>CensusAtSchool Resource</p> <p>Enough room for you?</p>
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	<p><u>HOMEWORK</u> Visit the http://www.ecologicalfootprint.com/ to find out more about your ecological footprint - this is the amount of land you use to live. Write a paragraph on ecological footprint.</p> <p><u>ASSESSMENT FOR LEARNING OPPORTUNITIES</u></p> <p>Questioning Writing across the curriculum Pair work</p>	
<p><u>LESSON 5</u></p> <p><u>LESSON TITLE</u> RECYCLING AND THE ENVIRONMENT</p> <p><u>LESSON OBJECTIVE</u> TO EXPLAIN MY ROLE TO LOOK AFTER THE ENVIRONMENT</p>	<p><u>STARTER</u> Why is recycling so important for the environment? Discuss in pairs and complete a concept map.</p> <p><u>MAIN 1</u> Study the data and complete the task individually.</p>	<p>IWB Calculators Graph paper Writing frames Speaking frames</p> <p><i>CensusAtSchool</i> Resource</p> <p>Waste Not Want Not</p>

Household waste and recycling: 1983-4 to 2007-8

United Kingdom



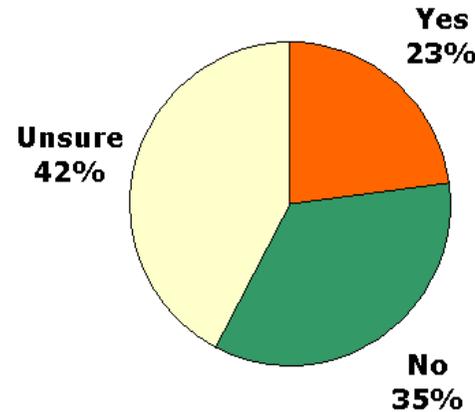
kilograms per person per year

	1983/4	1991/2	1995/6	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
Waste not recycled	394	417	423	455	456	449	425	404	376	259	334
Waste recycled/ composted	3	11	27	52	60	71	87	113	135	157	173
Total waste	397	428	450	507	516	521	512	517	511	516	507

Write a paragraph describing the statistics contained in the graph and table. Explain what the graph is telling you and comment on the trends shown.

MAIN 2

The pie chart shows the responses from 4000 secondary school students.



Do you think that YOU personally do enough to improve the environment?

Discuss in pairs the three questions below:-

Question 1

Why do you think so many students are unsure?

Question 2

What things could you personally do to improve the environment?

Question 3

Who do you think should be responsible for the environment we live in?

Write a paragraph and answer the following question:

Do you think that you personally do enough to improve the environment?

PLENARY

Discuss in pairs what we can do in the future to improve the environment. Each pairs must come up with five ideas. Draw a big concept map on the IWB.

HOMEWORK

Design a leaflet and warn humans what consequences waste can have for the future.

	<p><u>ASSESSMENT FOR LEARNING OPPORTUNITIES</u> Questioning Writing across the curriculum Pair work</p>																																																	
<p><u>LESSON 6</u></p> <p><u>LESSON TITLE</u> THE USE OF ELECTRICITY</p> <p><u>LESSON OBJECTIVE</u> TO EVALAUTE WHETHER PEOPLE USE ELECTRICTY SENSIBLE</p>	<p><u>STARTER</u></p> <p>Students design in pairs a concept map on the different ways which we can use electricity. Draw a big concept map on the IWB. One student from each pair will come to the IWB and write one usage of electricity on the IWB.</p> <p><u>MAIN 1</u></p> <p>Students study the tables below, which show the electricity used each month during 2009 in England and in South Africa. Electricity is measured in gigawatt hours. Students use the data and complete different activities on the tables.</p> <p>South Africa 2009</p> <table border="1" data-bbox="651 986 1800 1171"> <tr> <td>Month</td> <td>Jan</td> <td>Feb</td> <td>March</td> <td>April</td> <td>May</td> <td>June</td> <td></td> </tr> <tr> <td>Electricity</td> <td>16592</td> <td>15527</td> <td>17351</td> <td>16645</td> <td>18280</td> <td>18515</td> <td>YEAR</td> </tr> <tr> <td>Month</td> <td>July</td> <td>August</td> <td>Sept</td> <td>Oct</td> <td>Nov</td> <td>Dec</td> <td>TOTAL</td> </tr> <tr> <td>Electricity</td> <td>19706</td> <td>19007</td> <td>17999</td> <td>18527</td> <td>18025</td> <td>17707</td> <td>213881</td> </tr> </table> <p>England 2009</p> <table border="1" data-bbox="651 1279 1800 1374"> <tr> <td>Month</td> <td>Jan</td> <td>Feb</td> <td>March</td> <td>April</td> <td>May</td> <td>June</td> <td></td> </tr> <tr> <td>Electricity</td> <td>32658</td> <td>29781</td> <td>29660</td> <td>25947</td> <td>25319</td> <td>24670</td> <td>YEAR</td> </tr> </table>	Month	Jan	Feb	March	April	May	June		Electricity	16592	15527	17351	16645	18280	18515	YEAR	Month	July	August	Sept	Oct	Nov	Dec	TOTAL	Electricity	19706	19007	17999	18527	18025	17707	213881	Month	Jan	Feb	March	April	May	June		Electricity	32658	29781	29660	25947	25319	24670	YEAR	<p>IWB</p> <p>Graph paper</p> <p>Writing frames</p> <p>Speaking frames</p> <p>CensusAtSchool Resource</p> <p>Electricity Supply</p>
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Month	July	August	Sept	Oct	Nov	Dec	TOTAL
Electricity	25079	24738	25352	27551	28603	31128	330486

MAIN 2

In the table below are some results from *CensusAtSchool* in South Africa (pilot) and a table showing the power supply to schools. From the data in the table draw a graph to show the *CensusAtSchool* findings and comment on them. Try to think of some reasons for these findings. How high a priority do you think it is to get electricity to the schools? How do you think the South African government is trying to do this?

Percentage of children having access to services
 Source *CensusAtSchool* South Africa Pilot July 2001

SERVICE	Water	Radio	TV	Computer	Internet	Mobile Phone
Children with this service	45.3%	91.6%	73.1%	15.3%	7.9%	3.7%

PLENARY

Write three bullet points and explain what we can do to use less electricity in the future.

HOMEWORK

Write a letter to the Mayor of your town and explain reasons why citizens of the town must use electricity more sensibly.

ASSESSMENT FOR LEARNING OPPORTUNITIES

Questioning

	<p>Writing across the curriculum Pair work</p>															
<p>LESSON 7</p> <p>LESSON TITLE WATER, WATER EVERYWHERE</p> <p>LESSON OBJECTIVE TO ANALYSE AND EXPLAIN THE EFFECTIVE USE OF WATER</p>	<p>STARTER</p> <div data-bbox="824 363 1733 847" data-label="Figure"> <table border="1"> <caption>Domestic water use 2009</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Bath/Shower/Handbasin</td> <td>38%</td> </tr> <tr> <td>WC Flushing</td> <td>30%</td> </tr> <tr> <td>Clothes Washing</td> <td>12%</td> </tr> <tr> <td>Dishwashing</td> <td>6%</td> </tr> <tr> <td>Garden Use and Car Washing</td> <td>3%</td> </tr> <tr> <td>Other</td> <td>11%</td> </tr> </tbody> </table> </div> <p>In pairs write three speech bubbles on the domestic use of water in 2009. Each pair will get a sticky note and write the main finding on the sticky note. One member from the pair will feedback and stick the note in front of the class.</p> <p>MAIN 1</p> <p>Students work in pairs and calculate the water usage for a household for one month and one year. Students find a different pair and mark the calculations as a group. Use the table from Water Water Everywhere.</p> <p>MAIN 2</p> <p>Discuss in pairs and decide what your priorities would be if you and your household were limited to 6000 litres a month or 200 litres a day.</p>	Category	Percentage	Bath/Shower/Handbasin	38%	WC Flushing	30%	Clothes Washing	12%	Dishwashing	6%	Garden Use and Car Washing	3%	Other	11%	<p>IWB Writing frames Speaking frames Sticky notes Calculators</p> <p>CensusAtSchool Resource</p> <p>Water, Water Everywhere!</p>
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	<p>Write an extended piece of writing. Give the piece of writing a title. Layout of the piece of writing as follow:</p> <ol style="list-style-type: none"> 1. Introduction. 2. The priorities of people in the household. 3. The lifestyle changes that people have to make in the household. 4. Conclusion. <p><u>PLENARY</u></p> <p>Students will use the level descriptors. Mark extended piece of writing as a self assessment and then as a pair assessment.</p> <p><u>HOMEWORK</u></p> <p>Use the calculator and calculate the water consumption for your household. Calculator can be found at: http://news.bbc.co.uk/1/hi/in_depth/629/629/5086298.stm . Write a paragraph and explain the findings of your calculations.</p> <p><u>ASSESSMENT FOR OPPORTUNITIES</u></p> <p>Writing across the curriculum Self assessment Pair assessment</p>	
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