

Calling all geographers!

What could you do to improve your geographical knowledge and understanding?

Here are some ideas to develop your understanding of geography and introducing you to the topic - **natural resources**.

This work should be completed over a number of lessons/weeks.

There are **extension activities** included for those of you who require greater challenge.

How well do you know different countries?

Activity:

Produce a fact file on each of these different countries. The fact file should include:

- Continent/neighbouring countries
- Capital
- National flag
- Climate.
- Total population
- Birth rate
- Death rate
- Political leader.

Countries to research:

Germany	Italy	Ghana
Colombia	Russia	Sudan

Read:

Article 1:

How does food impact the environment?
[bbc.co.uk/newsround/46903864](https://www.bbc.co.uk/newsround/46903864)

Article 2:

How can we create renewable energy?
[bbc.co.uk/newsround/40702911](https://www.bbc.co.uk/newsround/40702911)

Extension:

Article 3:

Reducing conflict over water.

[Theguardian.com/global-development/2020/jan/08/water-wars-early-warning-tool-uses-climate-data-to-predict-conflict-hotspots](https://www.theguardian.com/global-development/2020/jan/08/water-wars-early-warning-tool-uses-climate-data-to-predict-conflict-hotspots)

Now complete the 'Geography in the news' questions for each article.

Geography in the news: Article 1

How does food impact the environment?

Activity:

To begin with, it will be very useful to know what the following terms mean. Write a definition for each:

- a. Greenhouse gas b. Efficiency c. Carbon emissions d. Carbon footprint

Questions:

1. Explain which food source has the biggest impact on the environment. Use data to support your explanations.
2. Suggest why some food items are transported from distant countries.
3. Find out more about food miles. Visit <http://www.foodmiles.com/>. Find out how far some products in your kitchen cupboards have travelled (list three examples and the distance the food has travelled).

Geography in the news: Article 2

How can we create renewable energy?

Questions:

1. What do we mean by the term **renewable energy**?
2. List the examples of renewable energy mentioned in the article.
3. Which is your favourite method and why? (Think about which example will have the greatest impact on people and the environment).

Extension:

Find out which is the largest source of renewable energy in our country. Explain how this method provides us with energy in the UK.

Geography in the news: Article 3 (extension)

Reducing conflict over water.

Questions:

1. Why is there water conflict?
2. Which countries are most at risk and why?
3. Explain how an early warning system would help to reduce the conflict.
4. Research an example of a country that has experienced water scarcity and conflict.

Water activity: What are the demands for water in the UK?

Think about all the ways you use water. From washing, drinking, flushing the toilet, cooking and bathing. Almost 50% of the UK's water is used in households. The use of water is expected to rise due to three factors:

1. The growing population
2. More houses being built
3. An increase in appliances that use water, e.g. Washing machines.

Maths skills tasks:

1. Complete the missing part of the grid for water that is used in households.
2. Complete the pie chart for the way water is used in households.
3. What other type of graph could be used to present this data? Which is better?

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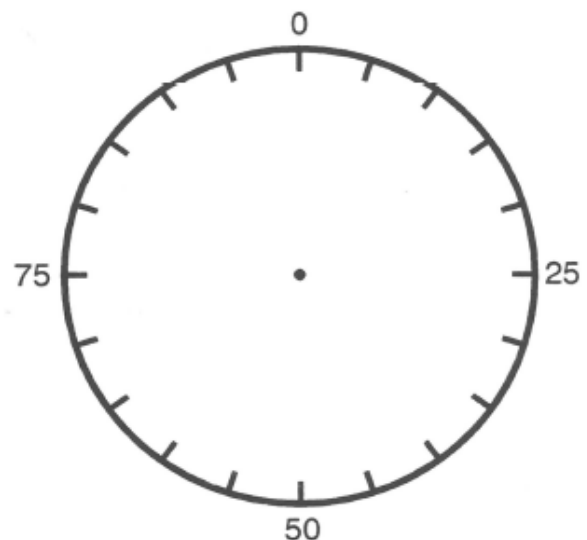
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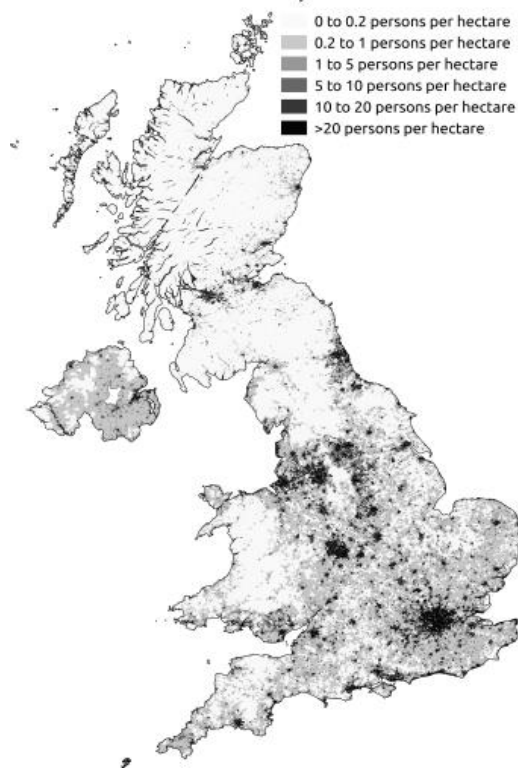
Water usage	Percentage
Toilet flushing	30%
Bathing	20%
Clothes washing	14%
Showering	12%
Kitchen sink and dishwasher	
Leaks	5%
Other uses	12%
Total	100%



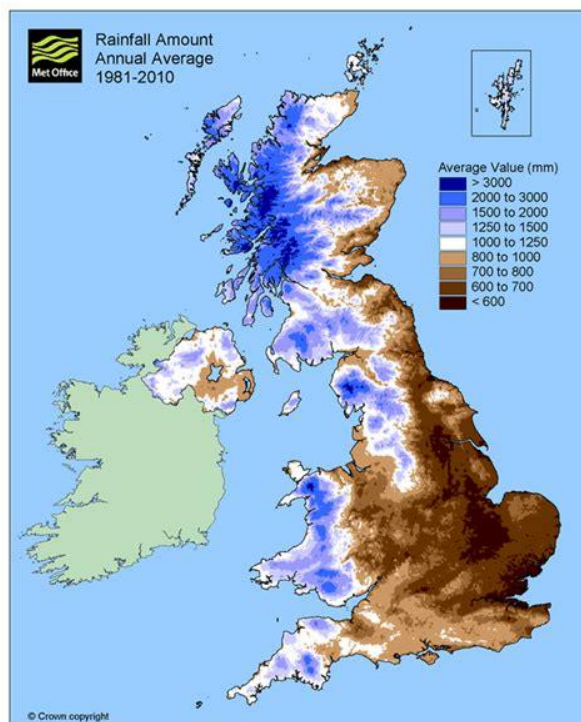
Water activity:

Map analysis:

Population density map:



Average rainfall map:



Questions:

1. Identify one of the most densely populated areas of the UK.
2. Identify an area of the UK that gets heavy rainfall.
3. Write two sentences to describe the distribution of rainfall in the UK.
4. Name two areas in the UK that may struggle to provide enough water for their population.
5. Research and define the words: water surplus, water deficit and water stress.

Energy activity: Controversial energy - nuclear disaster

What is nuclear energy?

Nuclear energy is the energy stored inside an atom by the forces that hold together the nucleus of the atom. Scientists have learned how to capture large amounts of energy from these forces that can then be used to generate electricity.

Why is nuclear energy controversial?

Nuclear energy is controversial (something that splits opinions) because of the drawbacks. Nuclear waste is the main drawback of nuclear power and is the remnants of the split uranium or other fuel and is highly unstable. It is radioactive so therefore is harmful to humans, animals and plants so consequently must be sealed up and contained for hundreds of years before it is safe to deposit into the environment. Exposure to radioactive materials can cause radiation sickness and cancer; therefore, protective layers must be worn. However, a lot of research is being put into either breaking it down into harmless substances or being able to store it safely, economically, subtly and for shorter periods of time.



Watch: youtu.be/eB1vfga9Y_c

A case study of a nuclear disaster: Chernobyl, 1986.

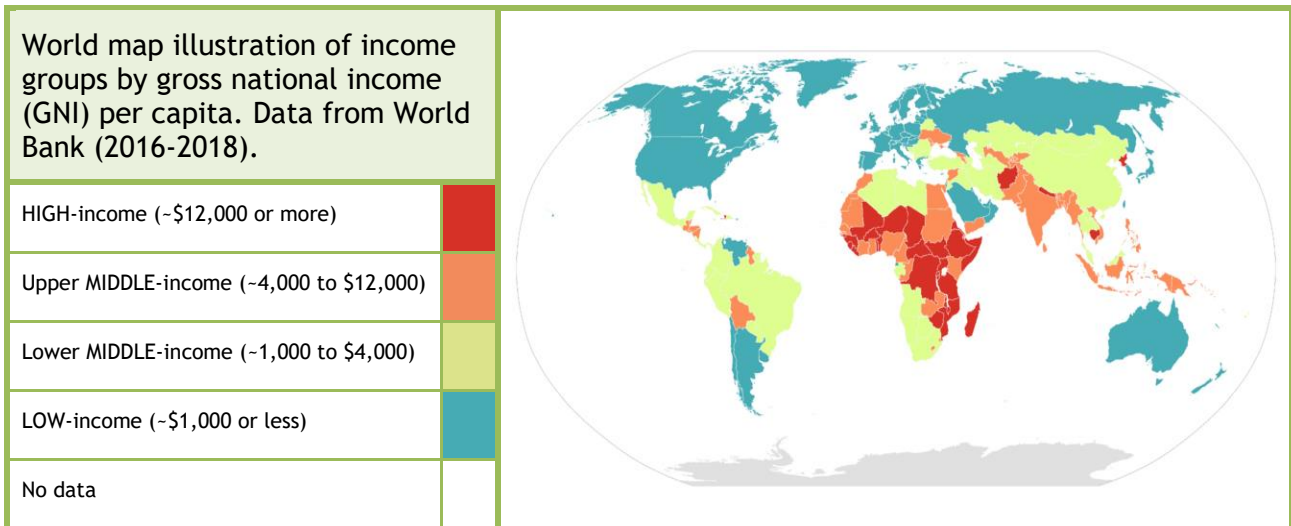
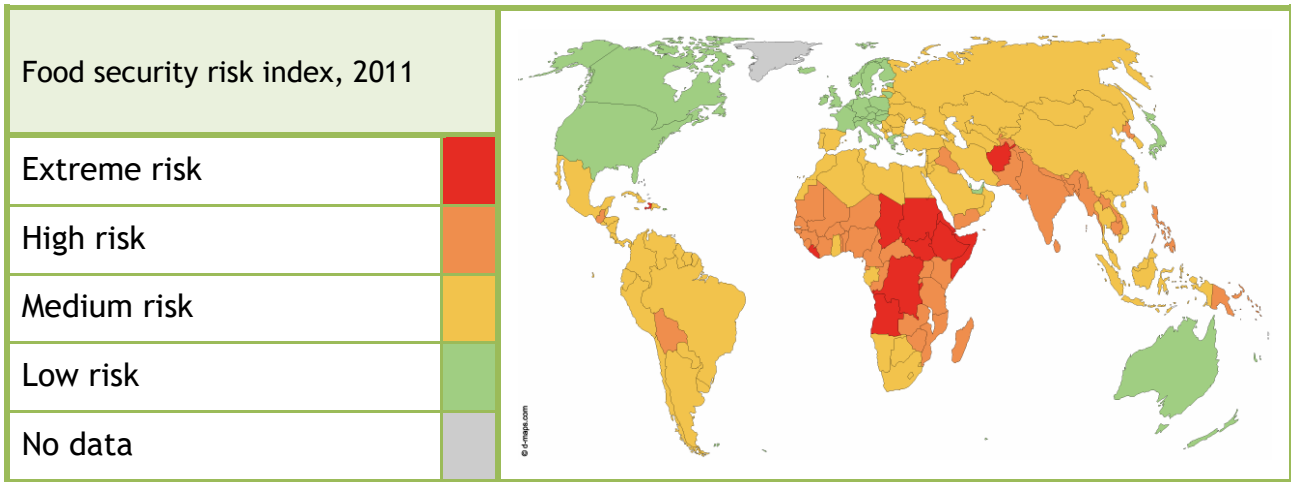
Nuclear power has the potential to be extremely dangerous if not properly managed or built. A nuclear power station could inflict radiation poisoning and the nuclear reactor, being very unstable, could explode killing the workers there and emitting radioactive fallout into the atmosphere.

This occurred in Chernobyl, Ukraine on 26th April 1986. This is considered the worst nuclear power plant accident in history. The nuclear reactor vessel ruptured during a sudden power surge and multiple explosions followed. A plume of radioactive fallout spread first over the nearby town of Pripyat, killing and severely poisoning all the citizens. The cloud then spread extensively over other areas of Ukraine, Belarus and Russia, contaminating the farmland, rivers and the natural environment. It also killed or harmed animals and humans. Over 350000 people were evacuated from areas at risk of contamination. The town of Pripyat is now a ghost town.

As of January 2018, 1.8 million people in Ukraine, including 377589 children, had the status of victims of the disaster, according to Sushko and his colleagues. There has been a rapid increase in the number of people with disabilities among this population, rising from 40106 in 1995 to 107115 in 2018. Even now the Ukrainian government is paying benefits to 36525 women who are considered to be widows of men who suffered as a result of the Chernobyl accident. Thousands of animals were slaughtered in order to stop the spread of radiation.

This accident has emphasised how important safety needs to be in a nuclear power station, as even a slight malfunction can be catastrophic. However, despite rare accidents, nuclear power stations are relatively safe nowadays and everything is taken with extreme precaution.

Food activity: What is the link between wealth and food security?



Key words:	Activity:
Food security Enough nutritious food for people to stay healthy.	Look at the two maps above and describe the patterns you see comparing food security risk and GNI (wealth) per person.
Food insecurity Lack of enough food for a country to feed its people.

Factors affecting food supply:

Read the following information:
bbc.co.uk/bitesize/guides/zsdhbk7/revision/3



Watch this clip:

youtu.be/g_iYTe-ixkU

Activity:

Now create a mind map below showing the main six factors affecting food supply.

Extension:

In contrast, HICs like the UK are lucky to have food security.

1. Outline two reasons why the UK is food secure.
2. As a result of food security, the UK has a problem with overnutrition. What are the consequences of this in the UK?

Now compile a **key word grid** for this unit of work.

Key word:	Definition:
Resources:	A stock or supply of something that has value or a purpose.
Renewable energy:	
Greenhouse gas:	
Distribution:	The way something is spread out (where in the world are things/do things happen).

Can you now test yourself on these words? Try the **look/cover/write** method.

Check your understanding questions:

1. What is the capital city of Russia?
2. Give three examples of resources.
3. What is the difference between renewable and non-renewable energy?
4. Describe one advantage and one disadvantage of wind power.
5. Give two reasons why the demand for water in the UK is expected to increase.
6. Which area in the UK has a water surplus?
7. Define the term densely populated.
8. Describe one way the Chernobyl disaster effected the local people.
9. Explain one reason why some countries are food secure whilst others are food insecure.
10. How can conflict effect food supply to countries like Sudan?

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