

Year 7 Term 3 Geography

WHAT IS MY PLACE IN THE WORLD?

Where do people live in the UK?

- ❖ The UK population is unevenly distributed
- ❖ 82% of people live in urban areas
- ❖ This reflects the UK's industrial past
- ❖ One in four people live in London and the south east
- ❖ Lowest density= Scottish Highlands: 9 ppl per km²
- ❖ Highest density= Islington, London 14,517 ppl per km²
- ❖ Sunderland (NE) is the only major city where population has declined

- ❖ The distribution of the UK's major cities and most densely populated areas reflected its industrial past. This was shaped by the Industrial Revolution in the eighteenth century.
- ❖ There was a development of heavy industries and concentration of population near supplies of coal and raw materials such as iron ore.

London overspill initiative was a government plan to move people out of poor housing in greater London and move them to rural areas. Many council estates were built in small rural towns and villages, leading to their growth between the 1930s and 70s (this happened in Luton, Flitwick and Sandy)

PLACE: Geographical spaces shaped by individuals and communities over time.



Why is Sandy located where it is?

- ❖ Flat land
- ❖ Close to a river
- ❖ Fertile land (inference from amount of arable farming)
- ❖ Links to A1, A41
- ❖ Close to St Neots, Biggleswade and Bedford
- ❖ Railway station – east coast mainline

❖ **Settlement:**

A place where people inhabit (live) and establish a community. It could be a hamlet a village, town or city.

❖ **Site:**

The land the settlement is built on. (physical characteristics).

❖ **Situation:**

Where a settlement is in relation to its surrounding area. (nearby towns, road links, railway connections, etc.)

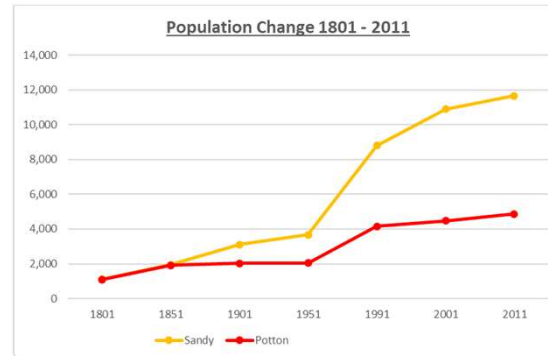
People have a strong influence on the future of settlements through their voice/vote and the way they use the town.

For example: Changes to shopping habits has led to the downfall of the High Street. Shops in Sandy used to include a range of shops. Today they are mostly betting and charity shops, along with hairdressers, reflecting local demand.

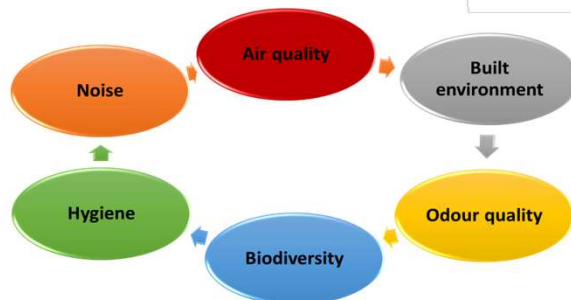
A new rail line between Oxford and Cambridge will likely see towns like Sandy experience another rapid rise in population as such an increase in house prices and congestion.

Between 1930 and 1970, the government moved people living in poor housing in Greater London to rural towns and villages. This led to the growth of towns such as Luton and Sandy.

- Potton and Sandy started off with a similar population size between 1801 and 1851
- All towns experience stunted growth in the early 20th Century due to the World Wars
- Sandy accelerated in the latter 20th century due to its connectivity - proximity to A1 and Railway station
- The London overspill saw social housing built in the town and families move into the area from Greater London.



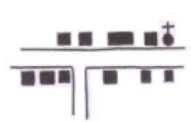
- The general health of the population of Sandy is better than the national (UK) average.
- Sandy has a large workforce (like the rest of the UK) but has a slightly higher proportion of young people and fewer retired.
- Home ownership is higher than the national average, but lower than CBC overall
- Car/van ownership is much higher than the national average
- Qualification levels vary. A higher proportion of people leave school with GCSEs, but fewer gain degrees
- Crime rates in Sandy are lower than Bedfordshire as a whole.



Environmental Quality = is a measure of the condition of an area

Not all urban areas look the same. As they grow over time, they develop a pattern.

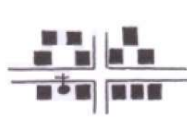
Buildings come in all shapes and sizes and are a reflection of the value of land and competition for space. The age of buildings changes in settlements – older buildings tend to be found in the center of towns, gradually becoming newer as we move outwards.



LINEAR
*along a road or valley or coastline (communication line)



DISPERSED
*isolated farms, often in areas of steep relief



NUCLEATED
*clustered round a water supply, or crossroads etc



PLANNED
*square, grid, found in new towns e.g. Brasilia = aeroplane



Two houses joined together. Usually further away from the centre where there is more space.

A single house not attached to another. Usually surrounded by a front and back garden. Lots of space.

Multiple houses joined. Sometimes they don't have front gardens. Built where there is little space

One building: many separate living areas. Lots of people in once place. Built to make the most of the space available.



WEATHER AND CLIMATE

WEATHER – The day-to-day conditions outside.

CLIMATE – The average weather for an area measured over a period of 30 years.

A weather hazard is an extreme weather event that threatens people or property.

Everyday weather does not threaten people or their health. When weather becomes more extreme it can cause problems. For example, running out of food or water, being injured.

Extreme weather:

People around the globe are experiencing dramatic heatwaves, deadly floods and wildfires as a result of climate change.

The UK and parts of Europe saw temperatures of above 40C this Summer, leading to transport disruption and water shortages.

1. Hotter, longer heatwaves

Increased overall temperatures mean heatwaves become more frequent and extreme.

2. More persistent droughts

As heatwaves become more intense and longer, droughts can also worsen.

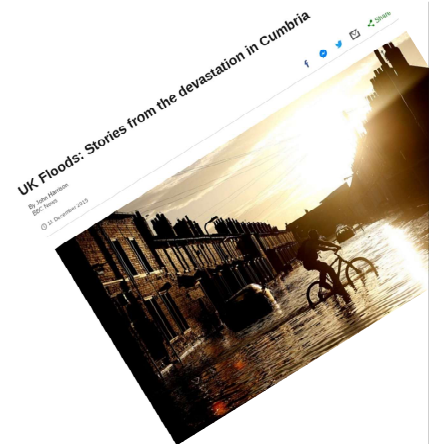
Less rain falls between heatwaves, so ground moisture and water supplies run dry more quickly

3. More fuel for wildfires

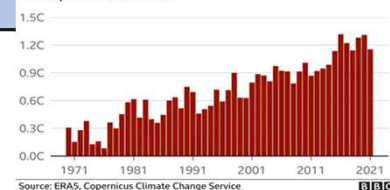
Wildfires can be sparked by direct humans - but natural factors also play a huge part.

4. More extreme rainfall events

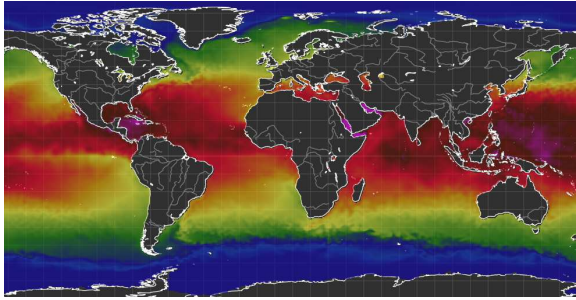
In the usual weather cycle, hot weather creates moisture and water vapour in the air, which turns into droplets to create rain.



2021 was the fifth warmest year on record
Annual global-average temperature increase (degrees C) above pre-industrial level



TROPICAL CYCLONES



- ✓ Warm oceans – typically above 26.5 degrees
- ✓ Low pressure - unstable atmosphere due to warm rising air
- ✓ Moist air
- ✓ Trade winds near the equator – or Coriolis force (caused by the spin of the Earth)



<u>Hazard</u>	<u>Impact</u>
Strong winds	Building damage, flying debris, loss of infrastructure (power lines), loss of life
Heavy rainfall	Flooding, contamination
Storm surge	Flooding, building damage, loss of life



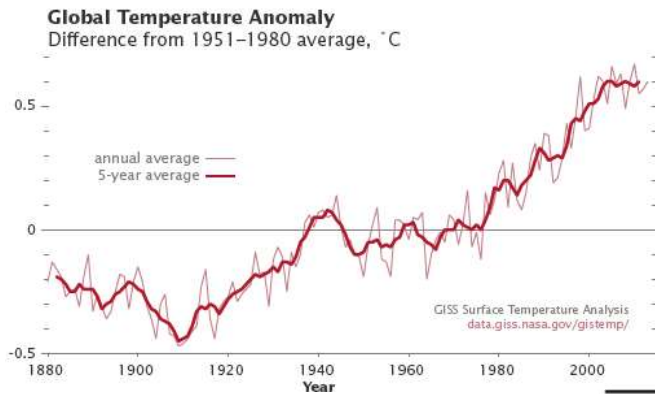
Hurricane Ida was a large category 4 hurricane causing damage across Cuba and the USA, particularly in Fort Myers, Florida.

Hurricane Ida first made landfall on the 26th August 2021 in the Cayman Islands. It gained energy and grew stronger within the warm waters of the Gulf of Mexico. Three days later, on the 29th August, Ida reached the state of Louisiana on the US coast.

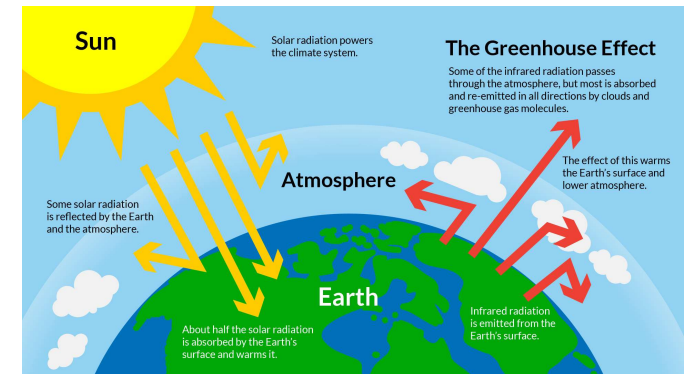
Typhoon Rai was a Category 5 tropical storm, which was later named a super-typhoon. In some parts of the country, over 150 cm of rainfall was recorded in just three days.

CAUSES OF CLIMATE CHANGE

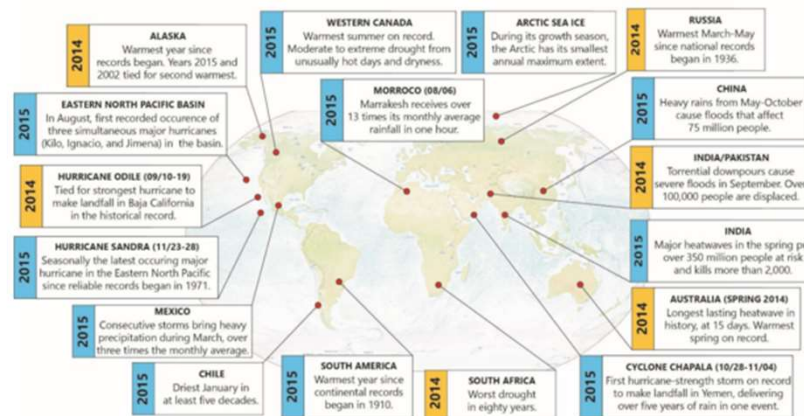
CLIMATE CHANGE is the long-term change of temperature and typical weather patterns in a place. Often **climate change** refers specifically to the rise in global temperatures from the mid 20th century to present.



- ❖ This graph shows how global temperature changed between 1880 and 2000.
- ❖ Anything below 0 means the temperature was colder than the average over this period. Anything above zero means the temperature was warmer than the average over this period.



Selected Significant Extreme Weather Events, 2014-2015



Source: National Oceanic and Atmospheric Administration (NOAA), State of the Climate Reports, 2014, 2015.
Some events were influenced by an unusually large El Niño pattern that emerged in the last half of 2015.

The atmosphere is extremely complex, and it is impossible to make accurate predictions into the future. However, evidence does suggest that we are living in a world with more extreme weather events.

In 2013 the IPCC (**Intergovernmental Panel on Climate Change**) reported a clear increase in the number, frequency and intensity of heatwaves and heavy rainfall events.

In a warming world there is more energy in the atmosphere. Greater rates of evaporation from the world's oceans result in more water vapor that can in turn lead to precipitation.

Climate patterns may therefore shift, so that some areas become much drier and other much wetter.

WHAT ARE THE CONSEQUENCES OF CLIMATE CHANGE FOR THE UK?

Flooding already causes about £1 billion of damage every year, but the risks will rise further as climate change leads to more intense rainfall, bringing floods to places not currently in danger. The number of households at significant risk of flooding will more than double to 1.9 million by 2050, if the global temperature rises by 4°C.

Severe water shortages are expected as summers get drier and, by the 2050s, will extend across the UK. If temperatures are driven up significantly, many places in the UK will have a demand for water 2.5 greater than what is available.

Resorts on the south coast could experience warm summers like those found in Southern Spain and Greece which will increase the numbers of tourists staying in the UK.



The deadly heatwave of 2003, which peaked at 38.5°C in the UK, will be a normal summer by the 2040s and related deaths will more than triple. There are currently no policies to ensure home, schools, hospitals and offices remain tolerable in high heat.

A warmer, wetter climate will bring benefit to British agriculture, allowing for year-round crop cover and opportunities to grow a more diverse range of crops that until recently were unable to grow here, such as maize.

Climate change is likely to drive food prices up, with extreme weather leading to lost crops and price hikes. About 40% of UK food is imported, making the UK vulnerable to droughts and flood driven by climate change around the world.

The rise in world sea levels will mean an increase in sea level exceeding one metre and possibly as much as 2 metres on the UK coasts by 2080. This plus the increase in intense storm events, will cause greater coastal erosion. Low-lying and soft-sediment coastlines will be most at risk. The 5 most vulnerable coastlines are South Wales, North West Scotland, Yorkshire, Lincolnshire, East Anglia and the Thames Estuary,

WHAT OPTIONS ARE AVAILABLE TO THE UK?

Mitigation strategies

Mitigation means to reduce or prevent the effects of something happening.

Mitigation strategies for global warming include:

- **Alternative energy** - such as solar, wind or tidal can reduce the use of fossil fuels. This will reduce the amount of carbon dioxide released into the atmosphere.
- **Planting trees** - encouraging *afforestation* means that there will be more trees to absorb the carbon dioxide in the atmosphere during the process of photosynthesis.
- **International agreements** - in 2015 the Paris Agreement was signed by almost all members of the United Nations. They pledged to slash carbon emissions to 70% of pre-1990 levels to limit warming to less than 2 degrees.



Adaptation strategies

Adaptation strategies do not aim to reduce or stop global warming. Instead, they aim to respond to climate change by limiting its negative effects.

- **Agriculture** - farmers will have to adapt as some crops may not be able to grow in a warmer climate, however other crops (eg oranges and grapes) will be able to be planted.
- **Water supply** - water transfer schemes could be used. This is where water is transferred from an area of water surplus to an area of water shortage.
- **Reducing risk from sea level rise** - areas at risk from sea level rise may use **sea defences** to protect the land from being eroded away.



Carbon footprint is the amount of carbon dioxide released into the atmosphere as a result of human activities.

