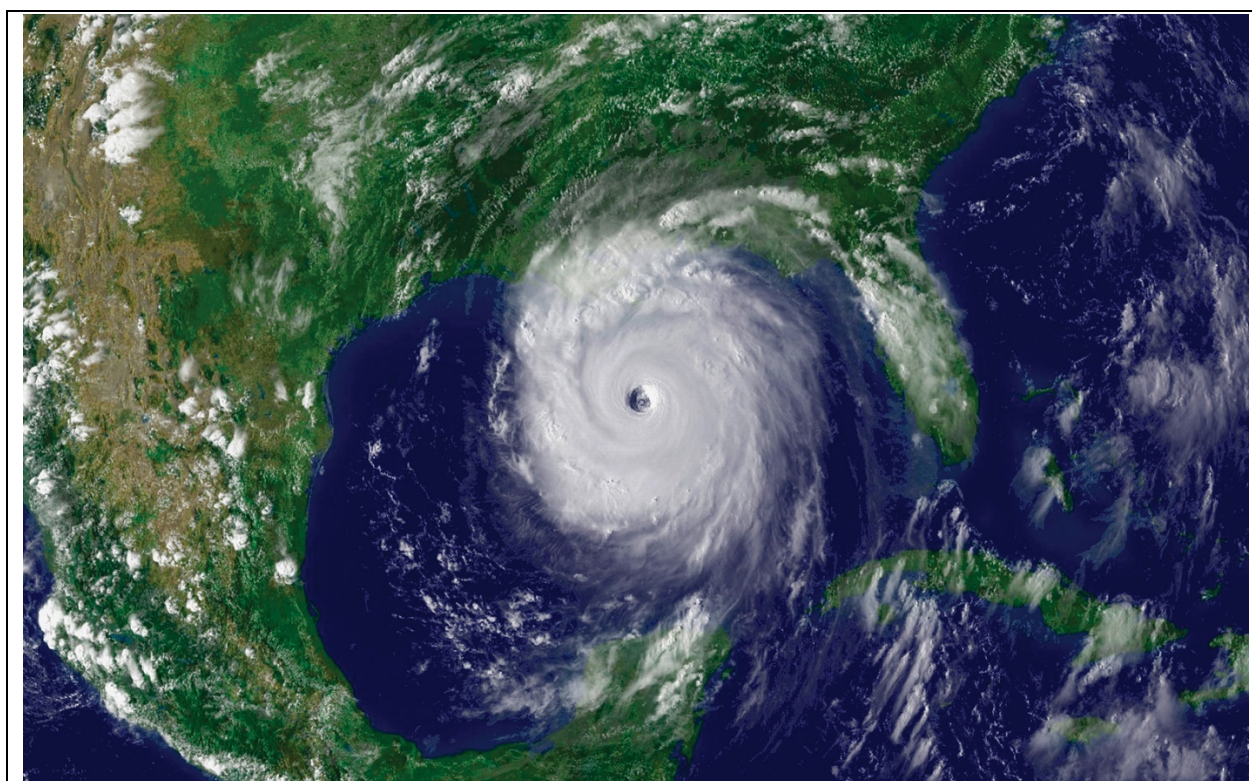


Name: _____



Geography

Homework Booklet



Year 10

Term 3: Weather and Climate

Homework 1	Learn keywords	Due date:	Completed? Yes/No
Homework 2	Guided Reading Activity	Due date:	Completed? Yes/No
Homework 3	Prepare for knowledge test	Due date:	Completed? Yes/No

Geography Homework Tasks Term 2

Homework 1 - Learn the keywords below for a mini test at the start of next lesson.
You could read through the words, write them out, create a match up activity or get someone to test you.

Keyword	Definition
Latitude	The measurement of distance north or south of the Equator
Altitude	The distance above sea level
Atmosphere	The layer of gases surrounding the Earth
Air mass	A large volume of air having the same temperature and moisture properties
Drought	A period of time when an area experiences below-normal precipitation
Depression	An area of low pressure where air rises.
Anticyclone	An area of high pressure where air is sinking.
Cyclones (or hurricanes)	A large scale air mass that rotates around a centre of low pressure.

Homework 2 – Complete the guided reading activity on the next page.
You may wish to write your answers out on paper, so you have more space.

Homework 3 - Study the knowledge organiser on the weather case studies. Complete this 6 mark exam question:

Explain the impacts that extreme weather can have on people and the environment.

You should also use this as part of your revision for your end of term assessment.

5 What did the dry conditions do to the forests?

6 What were the environmental impacts of the fire?

7 How many deaths were there? What caused these deaths?

1 What does extreme weather mean?

2 How much rain fell between June to 16 July?

3 What happened at Burrator reservoir that shows you there was a drought?

4 What weren't the 7 million residents allowed to do? Why do you think they did this?

UK EXTREME WEATHER: 2018 SUMMER HEATWAVE

This article examines the heatwave that struck the UK during the summer of 2018.

The summer of 2018 will be remembered for being a scorcher! High temperatures and low rainfall are not the typical weather conditions the U.K. is used to. Summer 2018 is an example of extreme weather. Extreme weather is when a weather event is significantly different from the average or usual weather pattern.

In 2018, Britain experienced its longest heatwave in 42 years; just 47mm of rainfall fell between 1 June to 16 July. It is the driest summer on record since 1961 when modern records started.

The heatwave led to falling water levels in reservoirs across the country. At Burrator reservoir in Dartmoor, Devon, a "drowned village" has been revealed having been submerged for more than a century. As the water in Burrator Reservoir dropped to beneath 50 per cent capacity, ruins of a wall were revealed, while a farmhouse and a bridge are thought to be beneath the surface.

7 million households in the north-west of England are facing the first hosepipe ban in the country since 2012. This is because reservoir levels are 17% lower than the same period last year. A hosepipe ban can reduce water usage by 5-10%.

The dry conditions contributed to a

series of large fires on the Lancashire moors in June. This included Winter Hill, near Bolton and Saddleworth Moor, close to England tackled the blaze on Winter Manchester. Up to 100 firefighters from across Hill. At its peak, the fire covered an area of 18 sq km of moorland. People living in the vicinity of the smoke plume were advised to keep their doors and windows shut. Lancashire Wildlife Trust said a separate "devastating" fire on Saturday destroyed a large part of a nature reserve in St Anne's, Lancashire.

But higher temperatures posed a health risk to some people, and there were record A&E numbers over the summer. Nearly 700 more deaths than average were recorded during the 15-day peak of the heatwave in June and July in England and Wales, according to official statistics. Although these deaths cannot be directly linked to the heat wave this is more than a coincidence.

The hot, dry weather has brought benefits to the UK tourism industry. Holidaymakers already booked in for a summer break in the UK are the obvious and clear winners.

Last year saw a rise in the number of British people taking domestic holidays with more than 33 million trips taken between January and August – and two-thirds of Britons have planned a UK

break for this year, the Association of British Travel Agents said. This was an economic benefit for popular tourist destinations across the UK, leading to a rise in the local area's GDP.

The drought has exposed previously undiscovered or long-hidden outlines of various archaeological sites, from ancient fortifications to remnants of the Second World War, across the country.

The "beast from the east" cold of late winter 2018 and the dry heat of the UK's summer so far, are both caused atmospheric blocking. Large meanders in the jet stream often lead to the development of huge anticyclones – areas of high pressure that can remain in the same place for weeks at a time. This causes cold temperatures during winter and hot, dry conditions during the summer.

According to the Met Office, a longer term perspective suggests this year is not an anomaly, but another sign of a warming global climate. An average temperature above 17 degrees Celsius has only been recorded 10 times since 1659 and six of those have occurred since 1976, the Met Office said.

8 Suggest why there might have been more deaths in a LIC

9 Explain the economic benefit the heatwave brought

10 What conditions does high pressure create during the summer?

12 Use evidence from this article to suggest why an increase in the frequency of heatwaves would be an issue for countries

11 What does the Met Office suggest the heatwave is a sign of? What evidence is there for this?

Weather and Climate Case Studies

High Pressure Extreme Weather (Drought)

Horn of Africa Drought (LIC)

- Crop failure due to lack of rainfall, led to malnutrition
- Food prices increased
- In some places rainfall was less than 30% of the average
- Over 920,000 people left Somalia as refugees to find food, aid and water
- They went to refugee camps, where overcrowding and lack of sanitation and medical care led to outbreaks of diseases like Cholera



Summer Heatwave, UK (2008) (HIC)

- Only 47mm of rain between June 1st – 16th July
- Falling water levels in reservoirs
- 7 million households had a hosepipe ban
- Large scale fires on the Lancashire moors, 18 sq km of forest were destroyed
- Nearly more than 700 deaths than average due to heatstroke/dehydration
- Benefit = More UK tourism



Low Pressure Extreme Weather (Storms)

Cyclone Nargis, Myanmar (2008) (LIC)

- Rice fields flooded
- 1.5 million people were made homeless
- \$10 billion economic damage
- 50% of livestock was killed
- 138,000 deaths

Storm Desmond, The UK (2015)

- Cumbria, north west England
- 5200 homes flooded
- NHS declared a major incident as staff couldn't get to work
- Roads closed, people couldn't get to work
- Upland soils washed into rivers due to rainfall → affected wildlife habitats

Hurricane Katrina, USA (2005) (HIC)

- August 2005
- Storm surge (change in sea level) → flooding
- \$150 billion economic damage
- 30 oil platforms destroyed, these provided local people with jobs → unemployment
- 300,000 homes destroyed
- Coastal habitats destroyed e.g. sea turtle breeding spots

