

Student activity Investigation

A. Introduction

- In this section you will explain what it is that you are investigating.
- You will **choose questions for enquiry** that you want to answer.
- You will explain important background information.

B. Results

- Use maps from the articles
- Use photographs from the articles, online research & GIS.
- Tabulate (put in tables) data.
- Convert the data into easier forms to interpret:
 - Use graphs
 - Diagrams

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1. Use the Section heading **Introduction** before answering the following questions in the form of a **paragraph** (not separately):
 - a. What are air masses?
 - b. Draw a sketch map to show the main air masses that affect the UK.
 - c. How do air masses affect the UK weather?
 - i. Polar Continental
 - ii. Polar Maritime
 - iii. Tropical Continental
 - iv. Tropical Maritime
 - v. Arctic



2. Use a subheading of **'Questions for Enquiry'** before completing these activities:
3. Write 3 or 4 of your own questions for enquiry based on the NOAA report headlines into the 2016 climate.
 - a. Greenhouse gases were the highest on record.
 - b. Global surface temperature was the highest on record.
 - c. Average sea surface temperature was the highest on record.
 - d. Arctic sea ice coverage was at or near record low.
 - e. Changes in the water cycle - Drought and Floods.

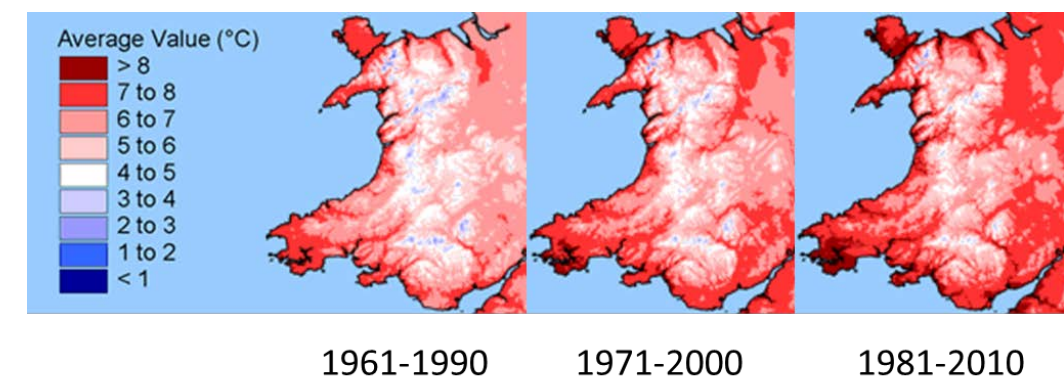
f. Roedd cylchwyntoedd trofannol, ar y cyfan, yn uwch na'r cyfartaledd.

4. Investigate these questions for Enquiry:

- a. How have monthly maximum temperatures for the UK changed between the 1961-1990 average and the 1981 -2010 average?
- b. How have mean monthly temperatures for Wales changed over the past 100 years?
- c. How have the annual temperatures for Wales changed over the past 100 years?
- d. How have the annual temperatures for the UK changed over the past 100 years?
- e. How has the winter temperature for Wales changed for the periods?:
 - i. 1961-1990
 - ii. 1971-2000
 - iii. 1981-2010

5. Use the Section heading **Results** before answering the following activities:

6. Describe how winter temperatures have changed over the past 50 years.



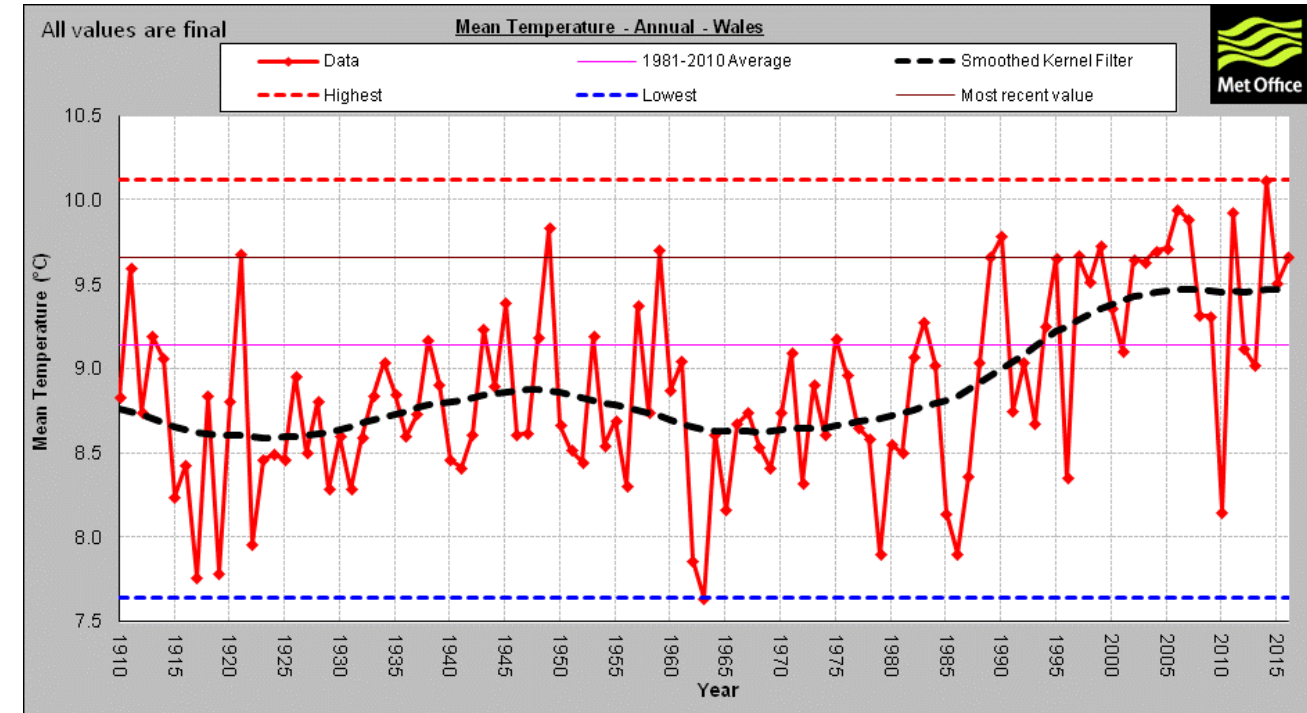
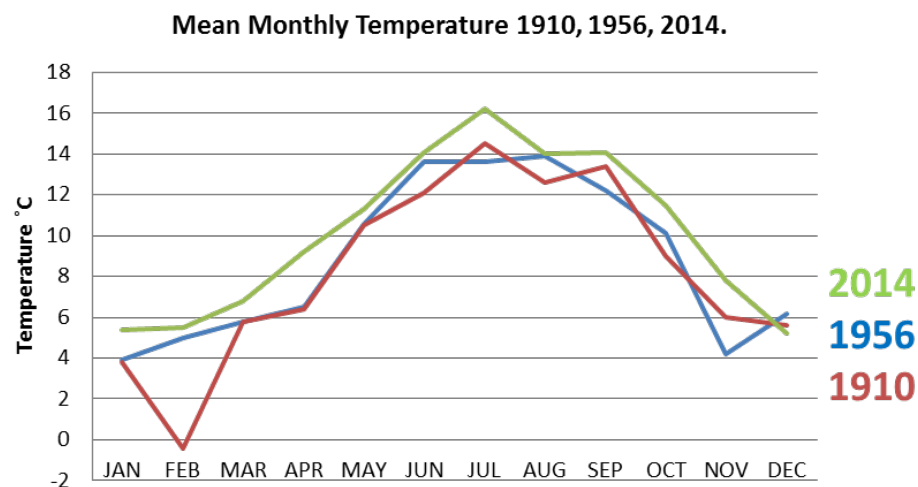
Investigating Changing Climate Patterns - Activity Sheet Part 1

7. Draw a graph to show how monthly maximum temperatures have changed over the past 50 years.

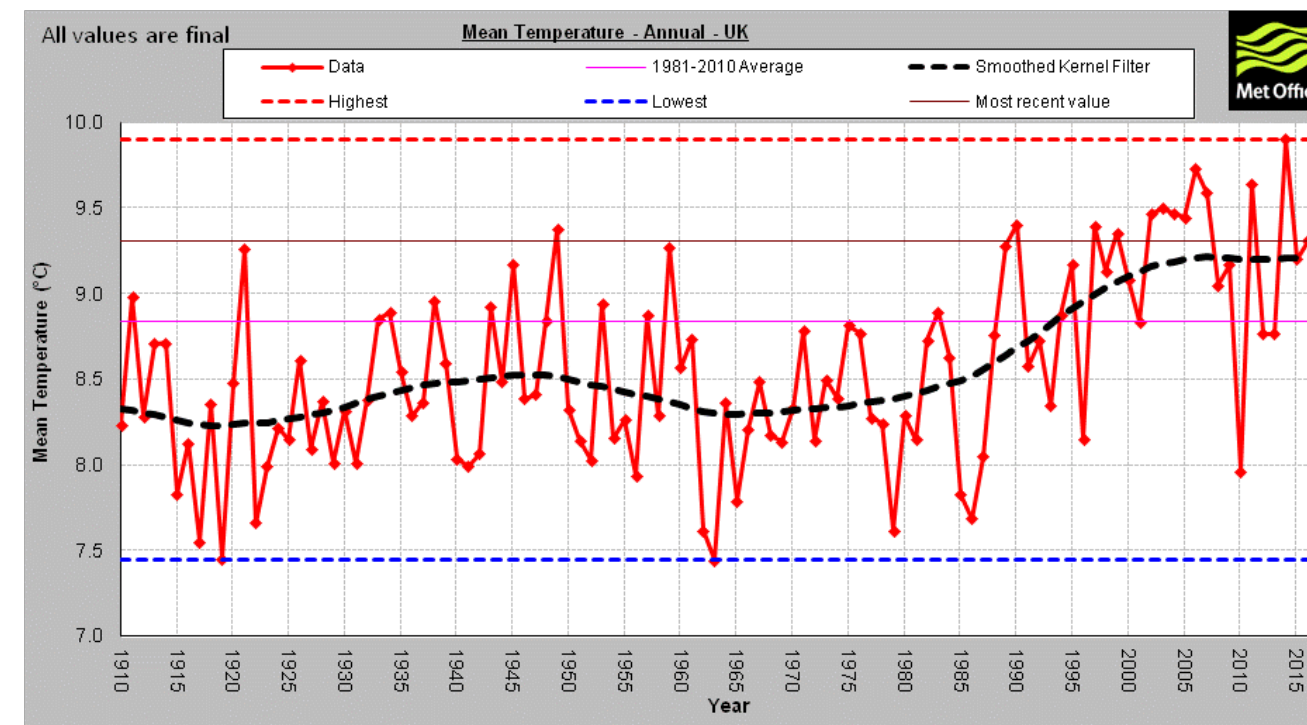
Max Temperature °C												
Year	J	F	M	A	M	J	J	A	S	O	N	D
1961-1990	5.7	5.8	8	10.6	14.1	17	18.6	18.4	16	12.7	8.4	6.5
1981-2010	6.4	6.6	8.9	11.4	14.7	17.3	19.4	19.1	16.5	12.8	9.1	6.7

8. Draw a graph to show monthly mean temperatures for 1910, 1956 & 2014.

Monthly Mean Temperature °C												
Year	J	F	M	A	M	J	J	A	S	O	N	D
1910	3.9	5.0	5.8	6.5	10.6	13.6	13.6	13.9	12.2	10.1	4.2	6.2
1956	3.8	-0.4	5.8	6.4	10.5	12.1	14.5	12.6	13.4	9.0	6.0	5.6
2014	5.4	5.5	6.8	9.2	11.3	14.1	16.2	14.0	14.1	11.5	7.8	5.2



9. Describe how mean annual temperatures for Wales have changed over the past 100 years.



10. Describe how mean annual temperatures for the UK have changed over the past 100 years.