

Large Data Set

Months included:

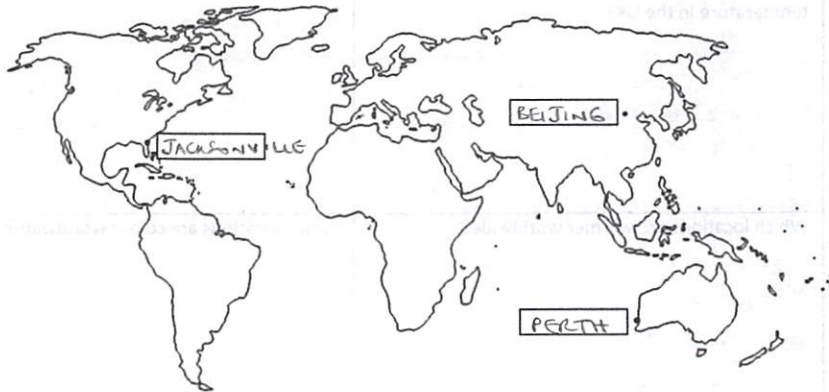
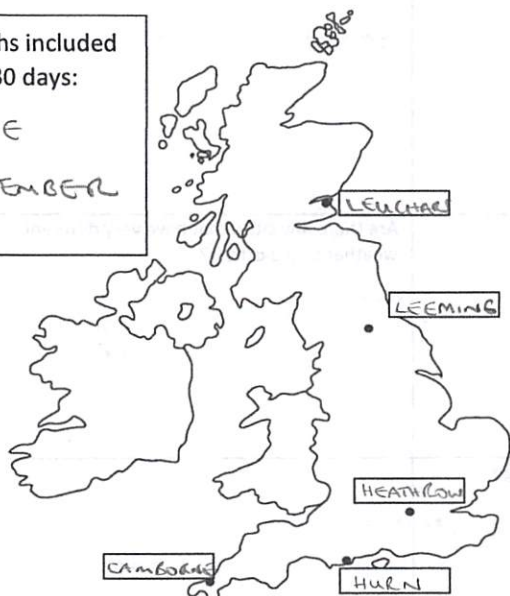
MAY to OCTOBER

Years included:

2015 & 1987

Months included with 30 days:

JUNE
SEPTEMBER



Cities included

1. Beijing
2. Camborne

3. Heathrow

4. Hurn
5. Jacksonville

6. Leeming

7. Leuchars
8. Perth

Data recorded

Daily Mean Temperature	Units and accuracy $^{\circ}\text{C}$, $\frac{1}{10}^{\circ}\text{C}$	n/a means Not available	Range of times covered 24 hours 0900 - 0900	Range of temperatures e.g. Heathrow 8 - 28.7 $^{\circ}\text{C}$
Daily Total Rainfall	Units and accuracy mm, $\frac{1}{10}$ mm What does tr mean? Trace, less than 0.05mm	Max rainfall UK/worldwide 51.6mm Heathrow 102mm Perth	Range of times covered 24 hours 0900 - 0900	
Daily Total Sunshine	Units and accuracy (how is it measured) Hours, $\frac{1}{10}$ Hour	Max/min Heathrow 2015 15 hrs, 0hrs.		
Daily Maximum Relative Humidity	What is it? Amount of water vapour in the air.	How is it measured? As a percentage of maximum water vapour that could be in the air.		
Wind	What is measured and how (4 types)? Daily mean windspeed " " " direction " max gust " " " direct	How are they measured? Knots / Beaufort. Degrees, NSEW Knots Degrees, NSEW	Max/min UK/worldwide 2015. MAX 23 knots Leuchars 6/6/15 MIN 2 knots Hurn 3/10/15 MAX 14.1 knots Perth MIN 0.9 knots Jacksonville	
Visibility	What is it? Greatest horizontal distance at which an object can be seen in daylight.	How is it measured? km Decametres (= 10 metres)		
Pressure	How is it measured? hPa = hectopascals.	Max/min Heathrow 2015 1036 hPa, 989 hPa		
Daily mean total cloud	What is it? How many eighths of the sky is covered.	What units are used to measure it? OKtas		

CONSIDERING 2015

KEY

- C - Camborne
- H - Heathrow
- Hu - Hurn
- Lee - Leeming
- Leu - Leuchars
- B Beijing
- J Jackson
- P Perth

Daily Mean Temperature

<p>Which months have the highest average temperature in the UK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>M</th> <th>J</th> <th>J</th> <th>A</th> <th>S</th> <th>O</th> </tr> <tr> <td>C</td> <td>11.2</td> <td>13.8</td> <td>15.7</td> <td>15.4</td> <td>13.6</td> <td>12.2</td> </tr> <tr> <td>H</td> <td>13.2</td> <td>16.8</td> <td>18.8</td> <td>18.1</td> <td>14.4</td> <td>12.5</td> </tr> <tr> <td>Hu</td> <td>11.9</td> <td>15.1</td> <td>16.8</td> <td>16.2</td> <td>13.3</td> <td>11.3</td> </tr> <tr> <td>Lee</td> <td>10.4</td> <td>13.3</td> <td>15.1</td> <td>15.6</td> <td>11.9</td> <td>10.0</td> </tr> <tr> <td>Leu</td> <td>9.5</td> <td>12.8</td> <td>14.1</td> <td>14.7</td> <td>12.1</td> <td>9.8</td> </tr> </table>		M	J	J	A	S	O	C	11.2	13.8	15.7	15.4	13.6	12.2	H	13.2	16.8	18.8	18.1	14.4	12.5	Hu	11.9	15.1	16.8	16.2	13.3	11.3	Lee	10.4	13.3	15.1	15.6	11.9	10.0	Leu	9.5	12.8	14.1	14.7	12.1	9.8	<p>Which locations are warmest in the UK?</p> <p>Based on the mean temperature</p> <table border="1" style="width: 100%;"> <tr> <td>Heathrow</td> <td>15.6°C</td> </tr> <tr> <td>Hurn</td> <td>14.1°C</td> </tr> <tr> <td>Camborne</td> <td>13.6°C</td> </tr> <tr> <td>Leeming</td> <td>12.7°C</td> </tr> <tr> <td>Leuchars</td> <td>12.2°C</td> </tr> </table>	Heathrow	15.6°C	Hurn	14.1°C	Camborne	13.6°C	Leeming	12.7°C	Leuchars	12.2°C	<p>Which locations are coldest in the UK?</p> <p>LEUCHARS 12.2°C</p>
	M	J	J	A	S	O																																																
C	11.2	13.8	15.7	15.4	13.6	12.2																																																
H	13.2	16.8	18.8	18.1	14.4	12.5																																																
Hu	11.9	15.1	16.8	16.2	13.3	11.3																																																
Lee	10.4	13.3	15.1	15.6	11.9	10.0																																																
Leu	9.5	12.8	14.1	14.7	12.1	9.8																																																
Heathrow	15.6°C																																																					
Hurn	14.1°C																																																					
Camborne	13.6°C																																																					
Leeming	12.7°C																																																					
Leuchars	12.2°C																																																					
<p>Which locations are warmer worldwide?</p> <p>Based on the mean temperature</p> <table border="1" style="width: 100%;"> <tr> <td>J</td> <td>24.8°C</td> </tr> <tr> <td>B</td> <td>22.6°C</td> </tr> <tr> <td>P</td> <td>15.2°C</td> </tr> </table>	J	24.8°C	B	22.6°C	P	15.2°C	<p>Which locations are colder worldwide?</p> <p>P 15.2°C outside UK</p> <p>Leu 12.2°C including UK</p>	<p>Are there any cities that have very different weather to the others?</p> <p>max temp Beijing 32.5°C</p> <p>cf max Leuchars 19.2°C</p>																																														
J	24.8°C																																																					
B	22.6°C																																																					
P	15.2°C																																																					
<p>What range of temperatures do you get in the UK? Worldwide?</p> <p>UK - All locations</p> <p>3.8 - 28.7°C</p>	<p>Is there a difference between 1987 average temperatures and 2015?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>2015</th> <th>1987</th> <th>1987→2015</th> </tr> <tr> <td>H</td> <td>15.6</td> <td>14.6</td> <td>+1°C</td> </tr> <tr> <td>Hu</td> <td>14.1</td> <td>13.7</td> <td>+0.4°C</td> </tr> <tr> <td>C</td> <td>13.6</td> <td>13.3</td> <td>+0.3°C</td> </tr> <tr> <td>Lee</td> <td>12.7</td> <td>12.5</td> <td>+0.2°C</td> </tr> <tr> <td>Leu</td> <td>12.2</td> <td>11.5</td> <td>+0.7°C</td> </tr> </table>		2015	1987	1987→2015	H	15.6	14.6	+1°C	Hu	14.1	13.7	+0.4°C	C	13.6	13.3	+0.3°C	Lee	12.7	12.5	+0.2°C	Leu	12.2	11.5	+0.7°C																													
	2015	1987	1987→2015																																																			
H	15.6	14.6	+1°C																																																			
Hu	14.1	13.7	+0.4°C																																																			
C	13.6	13.3	+0.3°C																																																			
Lee	12.7	12.5	+0.2°C																																																			
Leu	12.2	11.5	+0.7°C																																																			

Daily Total Rainfall

<p>Which months are wettest for UK cities?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>M</th> <th>J</th> <th>J</th> <th>A</th> <th>S</th> <th>O</th> </tr> <tr> <td>C</td> <td>2.1</td> <td>1.3</td> <td>3.2</td> <td>5.6</td> <td>2.3</td> <td>1.9</td> </tr> <tr> <td>H</td> <td>1.4</td> <td>0.4</td> <td>2.3</td> <td>3.8</td> <td>1.7</td> <td>1.3</td> </tr> <tr> <td>Hu</td> <td>2.2</td> <td>1.0</td> <td>1.9</td> <td>4.5</td> <td>2.5</td> <td>2.2</td> </tr> <tr> <td>Lee</td> <td>2.5</td> <td>0.7</td> <td>2.6</td> <td>2.2</td> <td>1.3</td> <td>2.8</td> </tr> <tr> <td>Leu</td> <td>2.5</td> <td>1.2</td> <td>3.6</td> <td>1.7</td> <td>1.3</td> <td>1.6</td> </tr> </table>		M	J	J	A	S	O	C	2.1	1.3	3.2	5.6	2.3	1.9	H	1.4	0.4	2.3	3.8	1.7	1.3	Hu	2.2	1.0	1.9	4.5	2.5	2.2	Lee	2.5	0.7	2.6	2.2	1.3	2.8	Leu	2.5	1.2	3.6	1.7	1.3	1.6	<p>Is there a difference in rainfall between 1987 and 2015 considering mean rainfall in UK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>2015</th> <th>1987</th> <th>1987→2015</th> </tr> <tr> <td>C</td> <td>2.8</td> <td>2.7</td> <td>Higher</td> </tr> <tr> <td>H</td> <td>1.8</td> <td>2.6</td> <td>Lower</td> </tr> <tr> <td>Hu</td> <td>2.4</td> <td>2.0</td> <td>Higher</td> </tr> <tr> <td>Lee</td> <td>2.0</td> <td>2.1</td> <td>Lower</td> </tr> <tr> <td>Leu</td> <td>2.0</td> <td>2.3</td> <td>"</td> </tr> </table>		2015	1987	1987→2015	C	2.8	2.7	Higher	H	1.8	2.6	Lower	Hu	2.4	2.0	Higher	Lee	2.0	2.1	Lower	Leu	2.0	2.3	"	<p>Do all cities follow a similar pattern for rainfall? Are there any with very different patterns?</p> <p>UK locations have a similar pattern; varied, peaking at similar times. Worldwide peaks occur at different times.</p> <p style="text-align: center;">↓</p> <p>(See graphs on Excel)</p>
	M	J	J	A	S	O																																																														
C	2.1	1.3	3.2	5.6	2.3	1.9																																																														
H	1.4	0.4	2.3	3.8	1.7	1.3																																																														
Hu	2.2	1.0	1.9	4.5	2.5	2.2																																																														
Lee	2.5	0.7	2.6	2.2	1.3	2.8																																																														
Leu	2.5	1.2	3.6	1.7	1.3	1.6																																																														
	2015	1987	1987→2015																																																																	
C	2.8	2.7	Higher																																																																	
H	1.8	2.6	Lower																																																																	
Hu	2.4	2.0	Higher																																																																	
Lee	2.0	2.1	Lower																																																																	
Leu	2.0	2.3	"																																																																	
<p>Which of the cities is the wettest in the UK? What about worldwide?</p> <p>Based on mean rainfall</p> <p>Camborne, UK 2.8mm</p> <p>Jackson, Worldwide 5.9mm</p>	<p>Which of the cities is the driest in the UK? What about worldwide?</p> <p>Heathrow, UK 1.8mm</p> <p>Heathrow, Worldwide 1.9mm</p> <p>(Just B, J & P then Beijing at 2.1mm)</p>																																																																			

Windspeed

<p>Typical average windspeed</p> <table border="1" style="width: 100%;"> <tr> <th></th> <th>km</th> </tr> <tr> <td>C</td> <td>9.4</td> </tr> <tr> <td>H</td> <td>8.0</td> </tr> <tr> <td>Hu</td> <td>7.7</td> </tr> <tr> <td>Lee</td> <td>7.4</td> </tr> <tr> <td>Leu</td> <td>8.7</td> </tr> </table>		km	C	9.4	H	8.0	Hu	7.7	Lee	7.4	Leu	8.7	<p>Windiest months UK? Any difference with worldwide cities?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>M</th> <th>J</th> <th>J</th> <th>A</th> <th>S</th> <th>O</th> </tr> <tr> <td>C</td> <td>10.8</td> <td>9.5</td> <td>10.1</td> <td>8.6</td> <td>9.0</td> <td>8.3</td> </tr> <tr> <td>H</td> <td>9.9</td> <td>8.5</td> <td>9.1</td> <td>7.3</td> <td>6.8</td> <td>6.4</td> </tr> <tr> <td>Hu</td> <td>9.1</td> <td>8.1</td> <td>8.3</td> <td>6.9</td> <td>6.9</td> <td>6.8</td> </tr> <tr> <td>Lee</td> <td>9.4</td> <td>8.1</td> <td>7.4</td> <td>7.7</td> <td>6.0</td> <td>6.1</td> </tr> <tr> <td>Leu</td> <td>11.5</td> <td>9.3</td> <td>8.8</td> <td>8.7</td> <td>6.8</td> <td>7.1</td> </tr> </table>		M	J	J	A	S	O	C	10.8	9.5	10.1	8.6	9.0	8.3	H	9.9	8.5	9.1	7.3	6.8	6.4	Hu	9.1	8.1	8.3	6.9	6.9	6.8	Lee	9.4	8.1	7.4	7.7	6.0	6.1	Leu	11.5	9.3	8.8	8.7	6.8	7.1	<p>Any differences between 1987 and 2015?</p> <p>2015</p> <p>Average windspeed</p> <p>Heathrow 8.0 kws</p> <p>1987 6.0 kws</p> <p>windspeed greater for Heathrow in 2015.</p>
	km																																																							
C	9.4																																																							
H	8.0																																																							
Hu	7.7																																																							
Lee	7.4																																																							
Leu	8.7																																																							
	M	J	J	A	S	O																																																		
C	10.8	9.5	10.1	8.6	9.0	8.3																																																		
H	9.9	8.5	9.1	7.3	6.8	6.4																																																		
Hu	9.1	8.1	8.3	6.9	6.9	6.8																																																		
Lee	9.4	8.1	7.4	7.7	6.0	6.1																																																		
Leu	11.5	9.3	8.8	8.7	6.8	7.1																																																		

B	5.5	4.6	4.0	3.8	3.6	4.0
J	6.0	5.1	5.2	4.6	4.8	6.1
P	7.9	8.3	7.4	7.8	8.8	8.7

All May except Jacksonville & Perth; Oct & Sept respectively