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| Lesson 2: **Measuring the Weather** | *Date: 5/6/20* |

Collecting accurate weather data is vital to our understanding of both weather **and** climate. Weather data allows us to understand what is happening now and create forecasts for the near future. Long-term weather data (particularly **temperature and precipitation\*** data) allow us to describe climate and identify changes in climate.

*\* - precipitation is the word for all moisture from the atmosphere (rain, snow, sleet etc)*

The table below summarises the elements of the weather that meteorologists will study, the traditional instruments that are used and the scientific units of measurement of each.

**TASK:** Use the word-banks to complete the table. If there are words you don’t know, look them up in the dictionary, online or ask someone!

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| **Weather Element** | **Definition** | **Measurement Equipment** | **Unit of Measurement** |
| Temp | *Exactly how hot or cold it is* | Thermometer | Degrees Celsius (oC) |
| Precipitation | *Moisture that falls from the atmosphere, inc rain, snow, sleet, hail etc* | Rain Gauge | Millimetres (mm) |
| Wind Speed | *How fast the air is moving around us* | Anemometer | *km/hr or miles/hr*  *knots*  *can use the Beaufort Scale* |
| Wind Direction | *Where the wind is coming FROM* | Weather-vane | *Compass Points (or degrees around a circle!)* |
| Cloud Cover | *How much open sky can be seen* | Observation by scientist | *Oktas (eighths: clear day is zero oktas; completely overcast is 8 oktas)* |
| Visibility | *How far can be seen* | Observation by scientist | *Kilometres (km)* |
| Humidity | *How much moisture is in the air* | Hygrometer or a set of wet & dry thermometers | *Percentage* |
| Air Pressure | *The weight of the air pressing down on us* | barometer | *millibars*  *(commonly given as High & Low in forecasts)* |

**Word Banks**

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| --- | --- |
| **Elements** | Precipitation, Wind Direction, Air Pressure, Visibility, Wind Speed, Temperature, Cloud Cover |
| **Equipment** | Barometer, Anemometer, Rain Gauge, Weather-vane, Thermometer |
| **Units** | oC, Compass Points, mm, km, millibars |

**TASK**: Keep a 5-days **weather diary** using the table below:

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| **Day & Date** | **Temperature & Precipitation.**  *Estimate the Temperature in your area.*  *How much precipitation did you have?* | **Cloud Cover in Oktas (out of 8)** | Other Weather Observations |
|  | **THIS WILL DEPEND ON YOUR TIMINGS & LOCATIONS – Good luck becoming junior meteorologists!** |  |  |
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**You might like to look at** [**map.darksky.net**](file:///C:\Users\Turner%20Morgan\Desktop\Keith\map.darksky.net) **for weather maps & data, especially if you miss a day!**