**Weather Variables and How we Measure Them**

|  |  |  |  |
| --- | --- | --- | --- |
| Weather element | Instrument | Units | Image |
| Air pressure |  | mb (millibars) |  |
| Cloud cover | Satellite or Human sight |  |  |
| Precipitation | Rain gauge | mm (millimetres) |  |
| Temperature |  |  |  |
| Wind direction |  | Compass point that the wind is coming from (e.g. north) |  |
| Wind speed | Anemometer | m/s or km/h (metres per second or kilometres per hour) or sometimes the Beaufort scale |  |

## Weather stations – what they are and where to place them

1. Label the image of a weather station, which instrument do you think measures;
2. Temperature (digital thermometer)
3. Wind speed (Anemometer)
4. Wind direction (Wind vane)
5. Rainfall (via a rain gauge)

2. Why do you think that the thermometers are kept within a slatted screen?

3. Attempt the extension activities

Extension - What is this and why is it needed?

Extension – what do you think is held in this box?

A close up of a light pole

Description automatically generated

**Where to place a weather station**

Where would you place a weather station at Reading University and why?



Image source: Google Maps with CNES / Airbus, Getmapping pls, Infoterra Ltd & Bluesky, Landsat / Copernicus, Maxar Technologies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Site** | **Level ground** | **No trees that influence measurements** | **No buildings that influence measurements** | **In a Frost Hollow?** | **Close to water source which affects humidity measurement** |
| **1** | **Slightly sloping next to lake bank 3/5** | **There are trees next to the lake**  **1/5** | **None – 5/5** | **No, 5/5** | **Yes – the lake 1/5** |
| **2** |  |  |  |  |  |
| **3** |  |  |  |  |  |
| **4** |  |  |  |  |  |
| **5** |  |  |  |  |  |

I have selected site because