Measuring Weather

By Research Science Students

`= What is the weather =` When we look up at the sky each morning, we are trying to work out the weather or the state of the atmosphere around the planet Earth.

The weather can change from hour-to-hour, day-to-day, and season-to-season. The climate is the average of weather over **time**? and space. The climate of the planet Earth is driven by the **energy**? from the sun.

`= Measuring the weather =` Using some scientific instruments we can measure things such as wind speed, temperature, humidity, atmospheric pressure, precipitation and rainfall pH. **Weather observers**? help to spot and measure different cloud types, cloud coverage and contrails. We can also make some measurements from space using geostationary **satellites**?.

Making accurate readings is important for BOM (Australian Bureau of Meteorology) to forecast the weather tomorrow with a weather map or for scientists to understanding climate change events such as global warming, **El Nino**? and La Nina.

`= Weather Stations and Instruments =` At Westall the David **AWS**? (Automatic Weather Station) can measure the weather for 24 hours a day. This is complimented with a **Stephensons box**? to make manual weather recordings.

A typical weather station has the following scientific instruments

- thermometer for measuring temperature
- **barometer**? for measuring atmospheric pressure
- hygrometer for measuring humidity
- anemometer or wind sock for measuring wind speed and **wind direction**?
- rain gauge for measuring precipitation

These instrument names come from some old **Latin**? and **Greek**? words.

- thermometer Greek = thermos = heat temperature
- anemometer Greek = anemos = wind wind speed
- **barometer**? Greek = baros = weight air pressure
- hygrometer Greek = hygros = wet air moisture
- psychrometer Greek = psychro = cold, to cool rel. humidity
- **udometer**? Latin = udos = wet rain
- **pluviometer**? Latin = pluvia = rain rain


This wiki was constructed by the following students: