COME RAIN OR SHINE: A-Z GLOSSARY

This glossary explains some of the words and phrases that we use in the course. It's a work in progress, so if there's anything you think is missing, let us know in the comments and we'll add them to the document for next time.

Name	Description
Adiabatic	The cooling or warming of air due to changes in pressure, with no influence from outside heat sources. For example, if a parcel of air rises through the atmosphere it experiences lower pressure and so it cools. This change of temperature is said to be adiabatic as no heat is actually added or taken away from the air.
Ageostrophic	Any flow which is not the result of the balance between the atmospheric (or oceanic) pressure gradient and the Coriolis force.
Air mass	A large body of air with fairly uniform temperature and humidity.
Albedo	The proportion of radiation from the Sun that is reflected off the Earth's surface and back into space without being absorbed. Snow has a high albedo because it reflects a lot of sunlight. Dark soil has a low albedo.
Anticyclone	A region of relatively high atmospheric pressure
Atmosphere	An envelope of gases surrounding the Earth. The main gases are nitrogen and oxygen, with smaller amounts of other gases such as water vapour, carbon dioxide and methane.
Climate	Climate is the description, in terms of the long term average, of temperature, precipitation and other elements of the weather. Generally taken over a 30 year period.
Condensation	The process of a gas changing to a liquid.
Convection	Heat transfer in a gas or liquid through the movement of the hotter parts into the cooler parts.

Coriolis Effect	The apparent deflection of objects which are moving over the surface of a rotating object. On the Earth, the Coriolis Effect makes moving objects appear to curve to the right in the northern hemisphere and to the left in the southern hemisphere.
Cumulus	Puffy clouds with flat bases, Formed by convection.
El Niño	A natural warming of the tropical Pacific Ocean east of the dateline, that typically occurs every few years. It has effects throughout the Pacific region and in many other parts of the world. At other times, there may be a cool phase called La Niña.
Evaporation	The process by which a liquid becomes a gas.
Front	Boundary between two differing air masses, often associated with a thick band of cloud and rain
Geostrophic	A flow which is the result of the balance between the atmospheric (or oceanic) pressure gradient and the Coriolis force.
High pressure	An area where the weight of air on the Earth's surface is relatively high
Isobar	Line on a weather map joining points of equal pressure
Isolines	Contoured lines on a weather chart that link points of equal value of a particular quantity such as pressure or temperature.
Jet stream	A narrow belt of strong winds in the upper Troposphere.
Kelvin	International unit for temperature
La Niña	Occurs when temperature drops to lower-than-normal levels in the Equatorial Pacific Ocean and is the cooler counterpart to El Niño – see above.
Latent heat	The heat released or taken up when there is a change of state- e.g. when a gas condenses into a liquid, or a solid melts into a liquid.
Latitude	A number which tells you how far north or south of the equator you are. Lines of equal latitude are frequently drawn on maps.
Longitude	A number which tells you how far east or west of the Prime (Greenwich) Meridian you are. Lines of equal longitude are frequently drawn on maps.
Low pressure	An area where the weight of air on the Earth's surface is relatively low
Maritime	Activities or objects relating to the sea.
Meteorology	Scientific study of the atmosphere.

Mid-latitude	The areas between the tropics and the polar regions, typically between 30° to 70° North or South of the Equator. The weather in the mid-latitudes is different to the weather in the tropics or polar regions.
Monsoon	Tropical climates that experience very distinct shifts in wind direction through the seasonal cycle, which are also usually accompanied by quite abrupt changes in rainfall rates.
Obliquity	The angle between a planet's equator and the plane of its orbit around the Sun – an indication of the tilt of the planet's rotation relative to its orbit around the Sun.
Occluded front	A front where, at the surface, one cold polar air mass meets another. Usually, warm, tropical air is found above the surface. It is a sign that a weather system is starting to decay.
Orography	Hills, mountains and other features related to changes in the elevation of the Earth's surface above sea level.
Photosynthesis	Process of plants producing sugars using energy from sun light, carbon dioxide and water.
Precipitation	Any form of water, such as rain, snow, sleet, or hail that falls from the atmosphere to the Earth's surface. Also used to describe the quantity of such water falling in a specific area within a specific period.
Sting Jet	A descending jet of fast moving air sometimes found near the centre of a depression and associated with damaging surface winds.
Stratosphere	The region of the atmosphere between about 10-15 km and 50km, where temperature increases as you go higher.
Synoptic chart	Weather chart that uses lines and symbols to represent weather patterns such as air pressure, fronts, rainfall, temperature, wind direction and speed.
Tephigram	One of a number of thermodynamic diagrams designed to aid in the interpretation of the temperature and humidity structure of the atmosphere
Tropics	The region between latitudes of about 23 degrees north and 23 degrees south, where, at some point in the year, the Sun is directly overhead.
Tropopause	The boundary between the Tropospheric and Stratospheric layers of the Earth's atmosphere. At this boundary the temperature stops decreasing with height.
Weather	The temporary state of the atmosphere including elements such as temperature, rainfall, wind, thunder and lightning and so on. The weather can change on timescales from seconds to years.

Weather bomb	A depression which deepens by more than 24millibars in 24 hours.