



Weather and the Atmosphere

Geography – Junior Cert

Quick Notes

Weather and the Atmosphere

Weather is the result of changes in temperature, rainfall, wind, atmospheric pressure, humidity and sunshine at a particular place at a particular time. The temperature on earth is determined by the heat provided for by the sun. However, this heat is not evenly distributed due to latitude and the spherical shape of the earth. The further away a place is from the equator, the colder it is. Atmospheric pressure is caused by gases such as nitrogen, oxygen, water vapour and carbon dioxide being pulled towards the earth's surface due to gravity. Pressure is measured in millibars and it may be high or low. Winds blow from high pressure to low pressure. The three winds of the northern hemisphere are the north-east polar winds, the south westerlies, the north-east trade winds. The three winds of the southern hemisphere are the south-east polar winds, the south westerlies and the south-east trade winds. The prevailing wind is the term given to the most frequent wind that blows in an area. Ferrel's Law states that a body of air will be deflected to the right in the northern hemisphere and to the left in the southern hemisphere due to the earth's rotation. Ocean currents occur due to the unequal heating of the sea; they are movements of water from hot areas to cold areas e.g. North Atlantic Drift, Labrador Current. Precipitation is the name given to all moisture falling from the atmosphere be it rain, snow, hail or sleet. In Ireland, the most common form of precipitation is rainfall of which there are three types – relief, convectional and cyclonic. Ascending air creates weather patterns such as depressions or cyclones due to the low pressure created with rising air. On the other hand, descending air or falling air cause areas of high pressure called anti-cyclones.