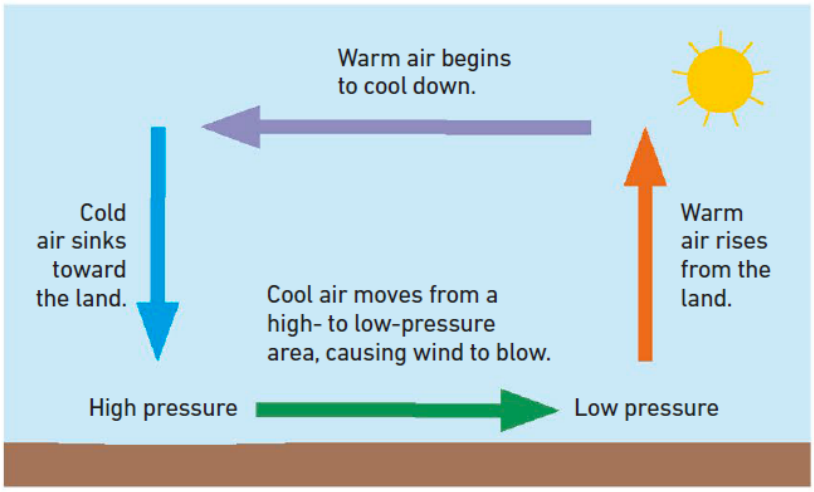
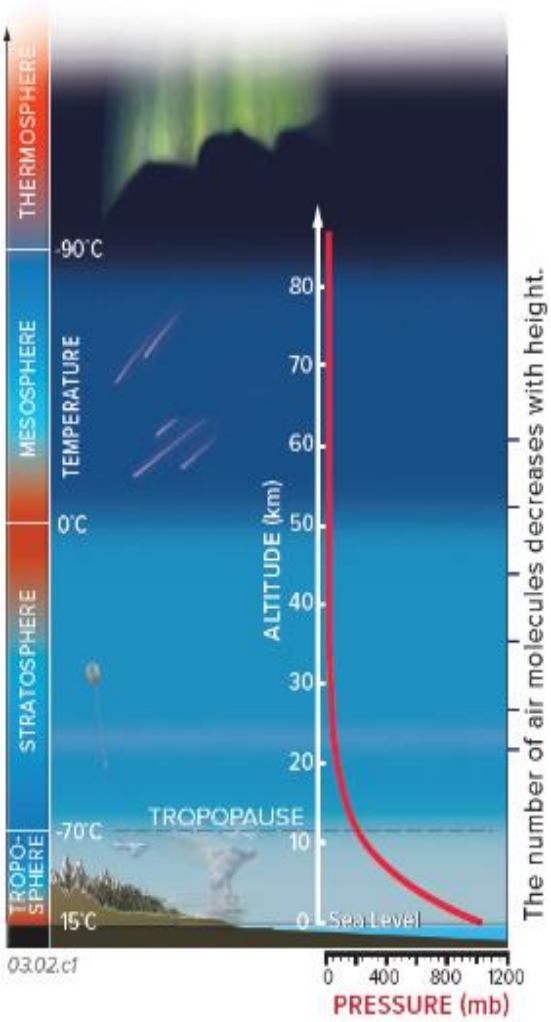
Why do winds blow?

The sun warms some places more than others, creating differences in air pressure. Where air is warmer and lighter, it rises and pressure is low. In other places, cool, dense, sinking air creates high pressure. When warm air rises, cooler air moves in to replace it, so wind often moves from colder to warmer areas.

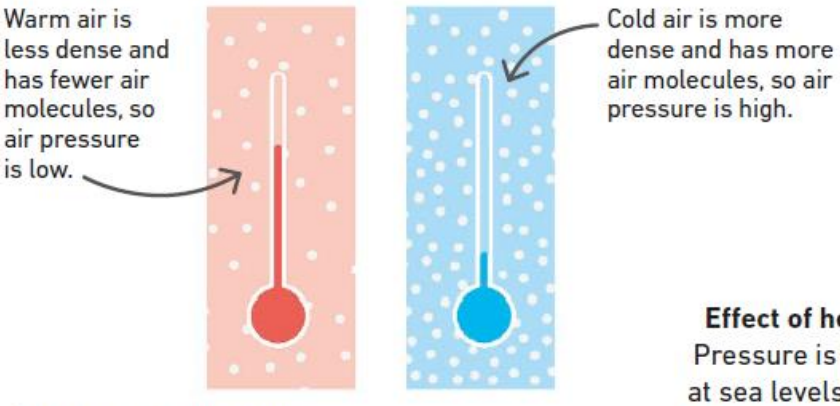


△ **Continuous cycle**
Winds circulate continually around the Earth, moving from high-pressure areas to low-pressure areas at ground level. Winds blow wherever there are differences in air temperature.

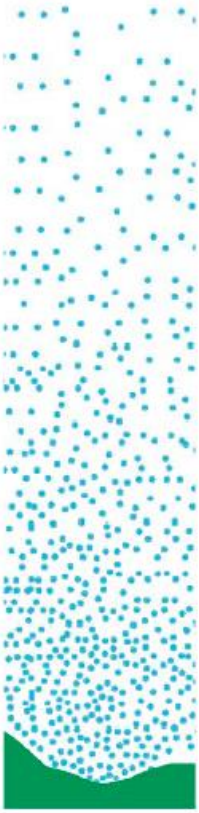


Atmospheric pressure

Air is packed with countless molecules that are constantly moving. These movements create atmospheric pressure, which is measured in units called bars and millibars. The higher the number of molecules, the greater the pressure. Atmospheric pressure changes in different weather conditions and at different heights.



△ **Effect of temperature**
Warmth expands air and reduces air pressure, creating a "low pressure" area. Cold makes air contract and increases pressure, creating a "high pressure" area.



Effect of height ▷
Pressure is highest at sea levels, where the air is dense and contains the most air molecules. It drops with increasing height as the air thins out.