

## Wind

### What is the wind?

Wind is moving air.

### How is wind formed?

The heat from the sun produces pressure differences in the atmosphere, which causes air to move as wind. Warm air is lighter than cold air.

### Can we see the wind?

It is not possible to see the wind but we can see its effect on things around us. For example, when it blows leaves up off the ground.



We can also hear the wind, particularly when it is very windy. Wind is a force. If you walk against a strong wind you can feel its force.

### Different types of wind

#### Trade Winds

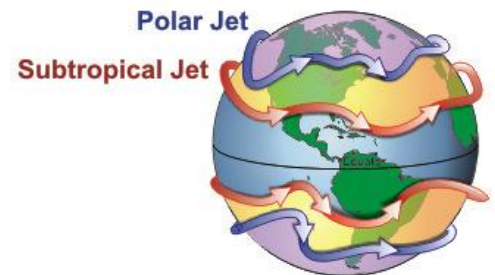
The trade winds are steady winds flowing towards the equator. In the 18<sup>th</sup> century sailing ships used them as guides for crossing the Atlantic Ocean.



#### Jet Streams

Jet streams are very strong winds blowing about 10 km above the earth. They can be up to 4,000 km long but no more than 500 km wide.

They were not discovered until World War II when fighter pilots found that their ground speed reduced when they flew against the jet stream.



## Sea Breezes

On a hot, sunny day the temperature of the sea hardly changes but the land heats up quickly. The warm air over the land rises and cool sea air moves in to replace it. This movement of air forms light winds called sea breezes.

At night, the opposite occurs and land breezes are created.

## What is wind chill?

Wind chill is the cooling effect of wind on skin. If the wind is strong, it causes heat loss on the skin and a person or animal feels cold.

## What is a windmill?

Windmills were once used to grind wheat to make flour.

Today they are used to generate electricity.



## Where is the windiest place in the world?

The windiest place in the world is the George V Coast in Antarctica, where winds of 320 km/hr have been recorded.

## What are the prevailing winds in Ireland?

The prevailing wind in Ireland comes from the southwest.

Wind in Ireland is most likely to come from this direction.



## What instruments do we use to measure wind?

A basic anemometer measures wind speed using rotating cups.

A weather vane is used to indicate the wind direction. They are often seen on the steeples of churches.

Can you draw a picture of a weather vane?

