



## Being a Pilot.

British Airways Pilot Mr. Hawkins visits Vine class to lead a workshop on Meteorology and how the weather hugely impacts on a pilot's job.



Air Pressure-Commercial planes fly about 30,000 feet above sea level, where the average air pressure is **about 4.3 psi**. In order to raise the cabin to a comfortable level of pressure, high-pressure air is poured into the cabin area, usually recycled from the compression stage of the jet engine functions.

The children looked at the MET office website to understand how it is used to inform flight paths. The globes were used so that the children could look at the equator line and link the position of a country in relation to this to the climate.

### The Climate at the Equator

The equator is distinct from the rest of the globe in its physical environment as well as its geographic characteristics. For one thing, the equatorial climate remains much the same year-round. The dominant patterns are warm and wet or warm and dry. Much of the equatorial region is also characterized as being humid.

These climactic patterns occur because the region at the equator receives the most incoming solar radiation. As one moves away from the equatorial regions, solar radiation levels change, which allows other climates to develop and explains the temperate weather in the mid-latitudes and the colder weather at the poles. The tropical climate at the equator allows an amazing amount of biodiversity. It features many different species of plants and animals and is home to the largest areas of tropical rainforests in the world.

Mr Hawkins spoke of the seasons;

Because of Earth's axial tilt (obliquity), our planet orbits the Sun on a slant which means different areas of Earth point toward or away from the Sun at different times of the year.

Around the June solstice, the North Pole is tilted toward the Sun and the Northern Hemisphere gets more of the Sun's direct rays. This is why June, July and August are summer months in the Northern Hemisphere.

### Opposite Seasons

At the same time, the Southern Hemisphere points away from the Sun, creating winter during the months of June, July and August. Summer in the Southern Hemisphere is in December, January, and February, when the South Pole is tilted toward the Sun and the Northern Hemisphere is tilted away.



The children were able to study a flight plan to Chile, they could see how the path was carefully planned and weather fronts were considered. The children were also talked about the flight path to New York.



This is called the big curve!

### How geodesics work

Planes travel along the true shortest route in 3-dimensional space. This route is called a geodesic or great circle. While map projections distort these routes confusing passengers, the great circle path is the shortest path between two far locations. This is why pilots fly polar routes saving time and distance. And this is why pilots often fly over Greenland.

Please talk to your children about what they have learnt and look at the website for more information.

