

# How do Satellites Monitor Air Quality?

AIM: This worksheet will help you to learn about satellites and how they monitor air quality.

## What is a satellite?

Man-made satellites are used in many different areas of our lives and scientific research. A satellite is an object that goes around (orbits) a planet. Satellites can be natural e.g. the moon, or they can be man-made. The first man-made satellite put into space was in 1957 and was very simple. Now, man-made satellites are much more complex and can tell us a lot about different processes on the Earth's surface.

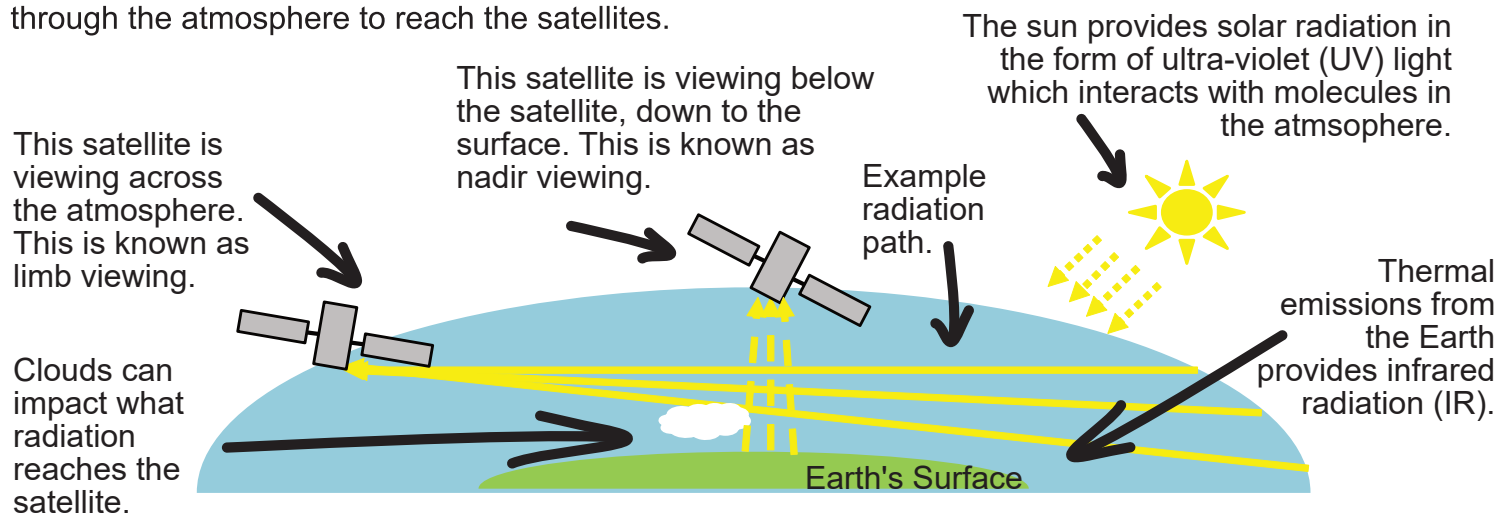
Some satellites have instruments on board which can monitor air quality. The instruments monitor which wavelengths of radiation reach the instrument after passing through the atmosphere. Atmospheric scientists can then use this data to calculate the concentrations of different gases in the atmosphere.

## How do satellites move around the Earth?

Satellites orbit the Earth. An orbit is the curved path that the satellite takes around the Earth due to gravity.

## How do satellites monitor air quality?

The diagram below shows how satellites monitor air quality by observing the radiation which passes through the atmosphere to reach the satellites.



## Can you define these words?

Limb viewing	
Orbit	
Satellite	
Solar radiation	
Nadir viewing	

# How do Satellites Monitor Air Quality? - Answers

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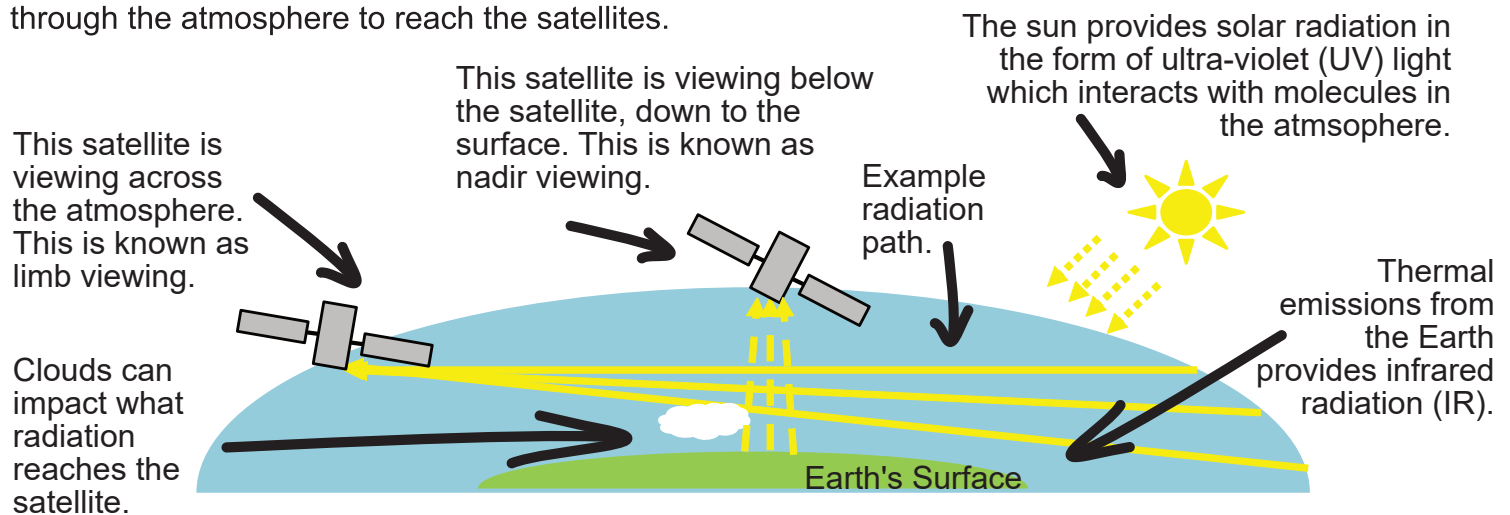
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The diagram below shows how satellites monitor air quality by observing the radiation which passes through the atmosphere to reach the satellites.



## Can you define these words?

<b>Limb viewing</b>	When the satellite observes radiation across the atmosphere.
<b>Orbit</b>	The curved path a satellite takes around the Earth due to gravity.
<b>Satellite</b>	An object which orbits a planet.
<b>Solar radiation</b>	UV radiation produced by the sun.
<b>Nadir viewing</b>	When the satellite observes radiation directly below the satellite.