

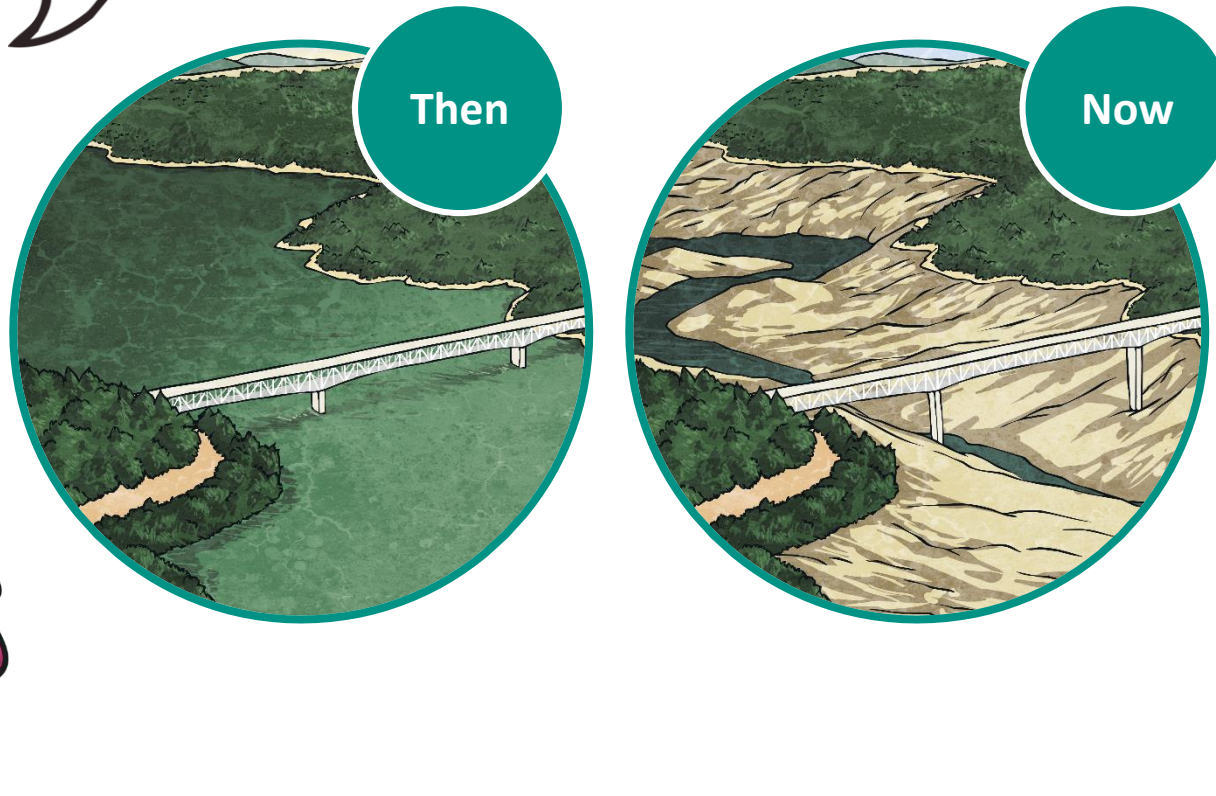
## Lesson 2

L.O: I understand and can describe the main aspects of climate change and how it affects the planet.

# What Is Climate Change?



Climate change is a term used by experts when describing the way that both weather and climate systems are changing as a result of mankind's industrial activity across the world.



# What Is Being Affected By Climate Change?

There are a lot of different environmental changes that are happening as a result of climate change. Some are big and some are small.

These include:



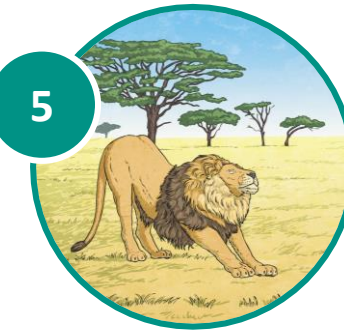
**Shrinking glaciers**



**Rising sea levels**



**Plant species shifting locations**



**Animal species becoming endangered**

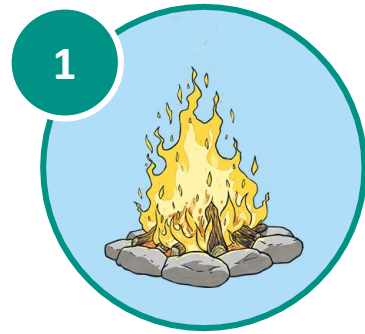
**Trees and plants flowering much earlier in the year**

# Why Is the World's Climate Changing?

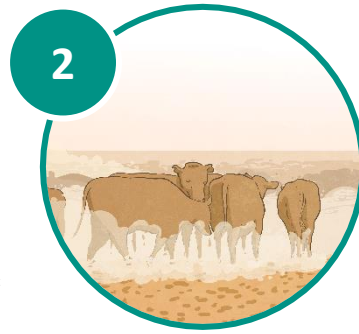
Experts believe that humans are the main reason why the world's climate and weather are changing.

A key contributing factor is the creation of greenhouse gases caused by human activities.

These include:



**Burning  
fossil fuels**



**Beef cattle  
farming**

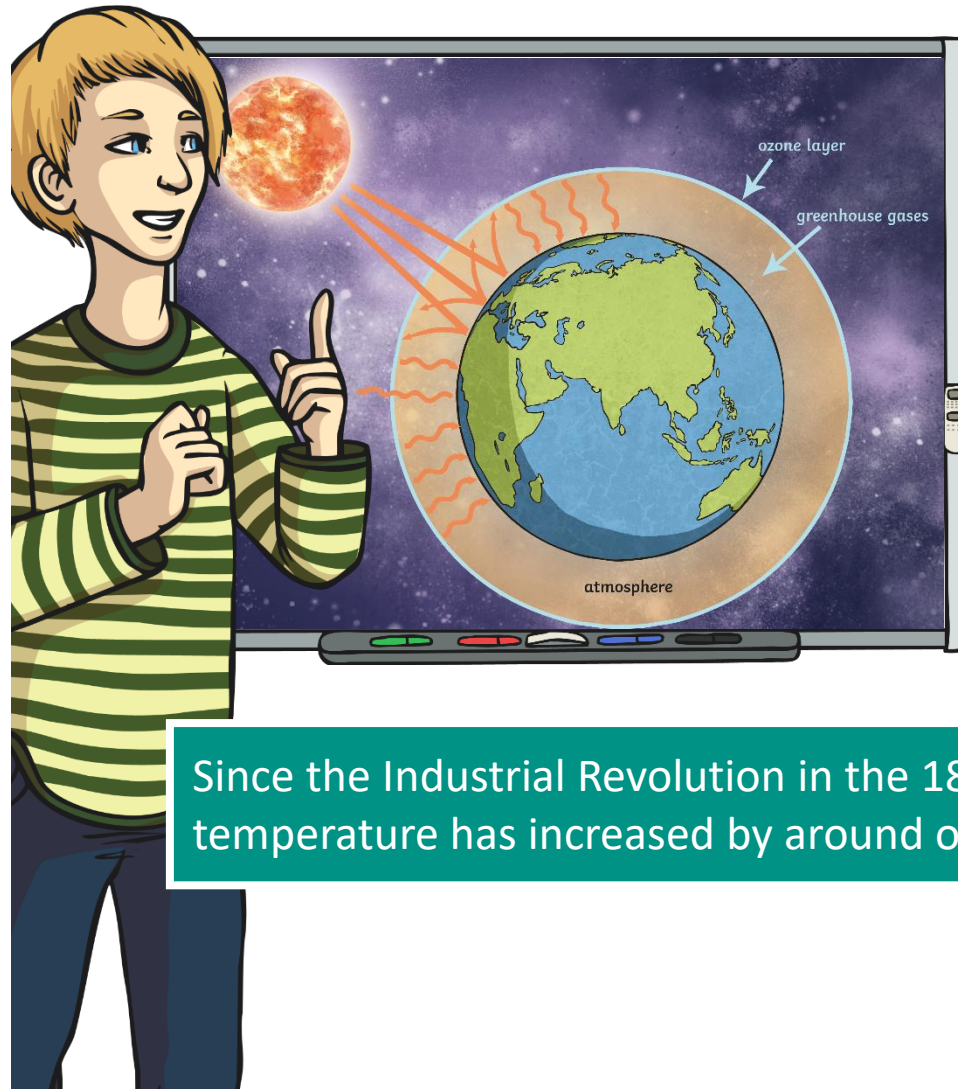


**Agricultural  
fertilisers**





# How Do Greenhouse Gases Change the Climate?



Greenhouse gases that get released into the atmosphere prevent heat from escaping the Earth.

The result of this is that whilst the Sun's rays can enter the atmosphere to provide our planet with heat and warmth, not as much can escape.

Therefore, the planet keeps getting hotter and hotter.

Since the Industrial Revolution in the 18<sup>th</sup> Century, the planet's average temperature has increased by around one degree.

# Where Do These Greenhouse Gases Come From?

## Water Vapour ( $H_2O$ )

The most abundant greenhouse gas, created through the heating of water.

## Carbon Dioxide ( $CO_2$ )

Created through the burning of substances containing carbon, such as fossil fuels.

## Methane ( $CH_4$ )

Produced by cattle, chickens and pigs. As the global population increases, the more of these creatures are farmed and the more gas they produce.

## Nitrous Oxide ( $N_2O$ )

Used in rocket fuel, racing cars, hospitals and dentist surgeries. Also found in agricultural fertilisers.

## Hydrofluorocarbons (HFC)

Found in air conditioning and refrigerators.

# How Do Greenhouse Gases Change the Climate?

It is very important to reduce the production of the gases that are creating the greenhouse effect. This is reliant on governments across the world creating laws and strategies to meet certain targets in pollution reduction.

In developed countries, such as those in the European Union, plans and laws are already in place. In developing countries, however, there is still a greater dependency on industries that create greenhouse gases.

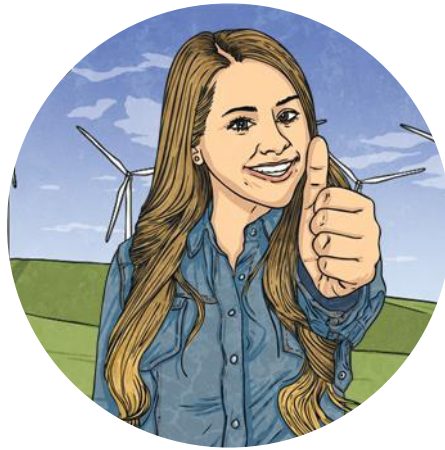


# How Do Greenhouse Gases Change the Climate?

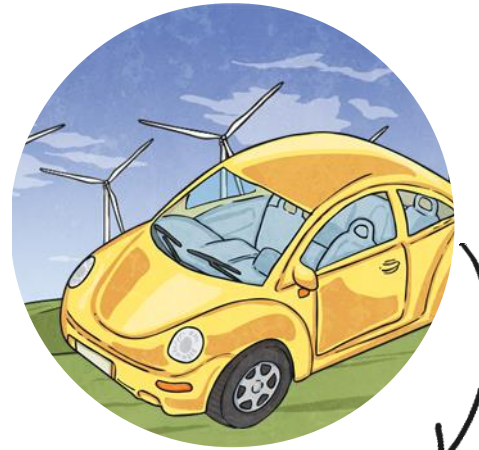
Some countries, including the UK, have committed to reducing emissions and finding alternative energy sources, including:



building wind farms,  
solar farms and other  
means of creating  
electricity from  
renewable energy;



supporting the  
manufacture and  
purchase of electric  
vehicles;



committing to phasing  
out the manufacture of  
petrol and diesel  
powered transport.



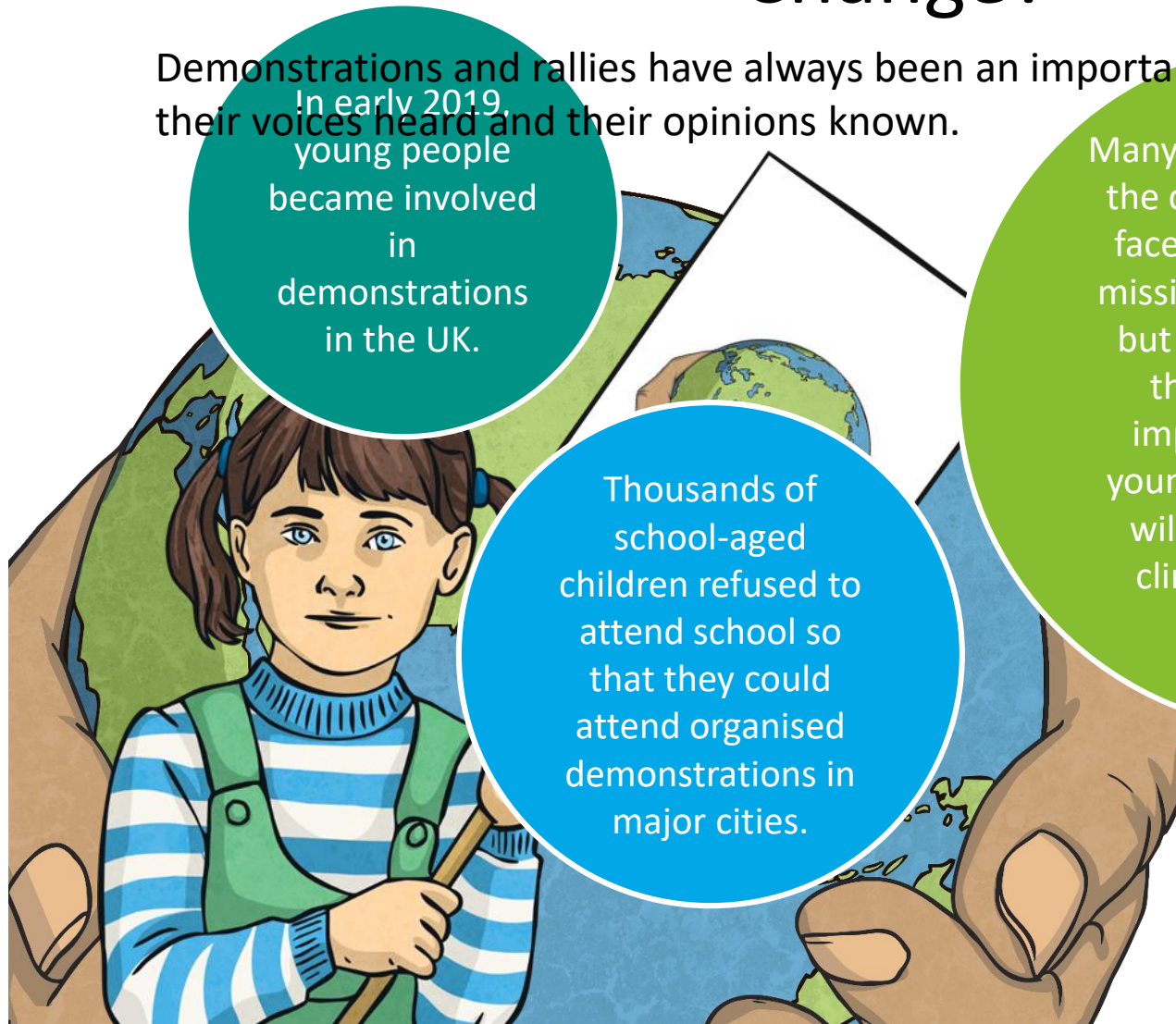
# What Is Being Done to Combat Climate Change?

Demonstrations and rallies have always been an important way of people making their voices heard and their opinions known.

In early 2019,  
young people  
became involved  
in  
demonstrations  
in the UK.

Thousands of  
school-aged  
children refused to  
attend school so  
that they could  
attend organised  
demonstrations in  
major cities.

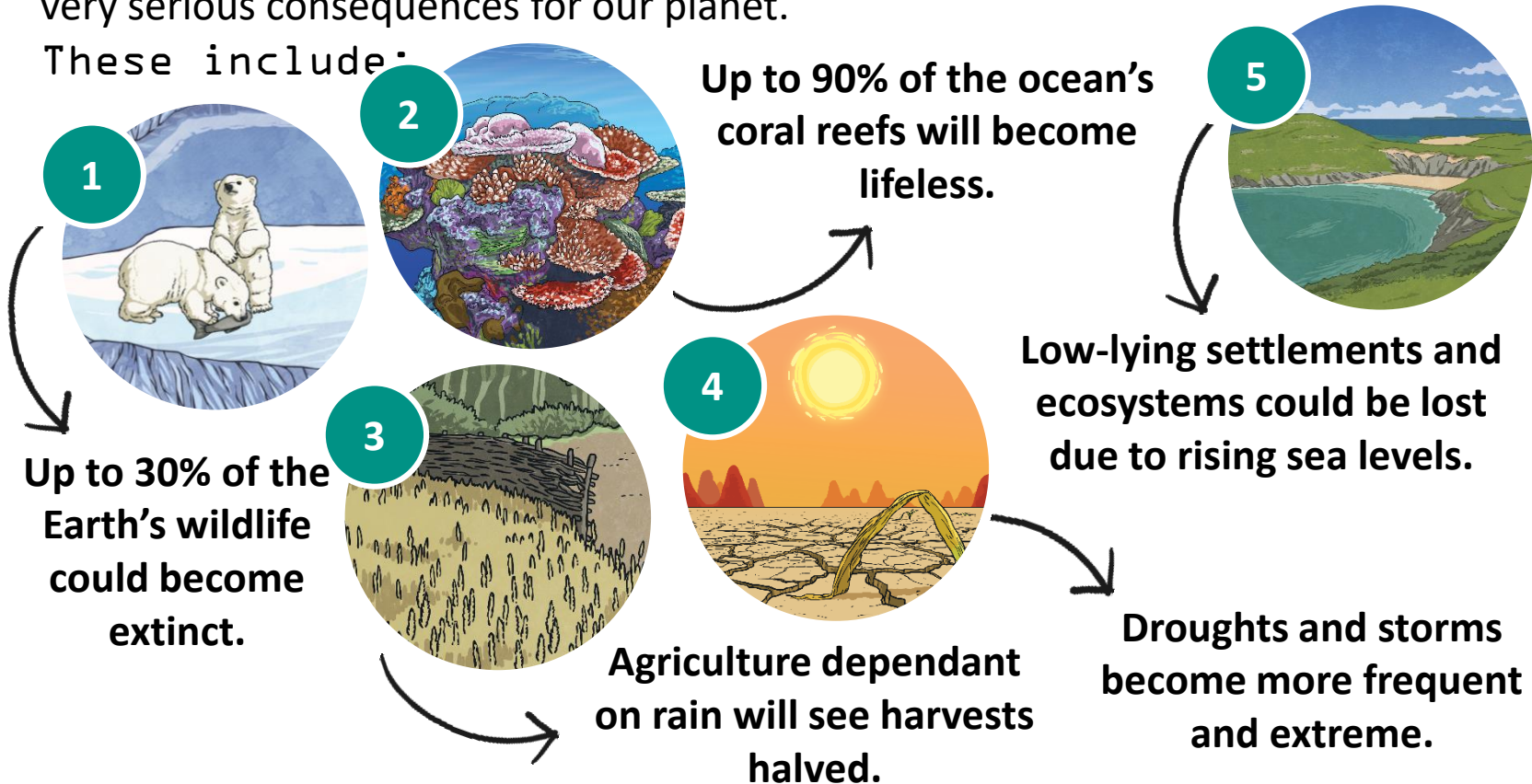
Many people believed that  
the children should have  
faced consequences for  
missing time from school,  
but some believed that  
their protests were  
important, as it is the  
younger generation who  
will feel the impact of  
climate change more  
severely.



# What Are the Consequences of Not Doing Enough?

Without global warming slowing down, experts have predicted there are some very serious consequences for our planet.

These include:



# What Do You Think?



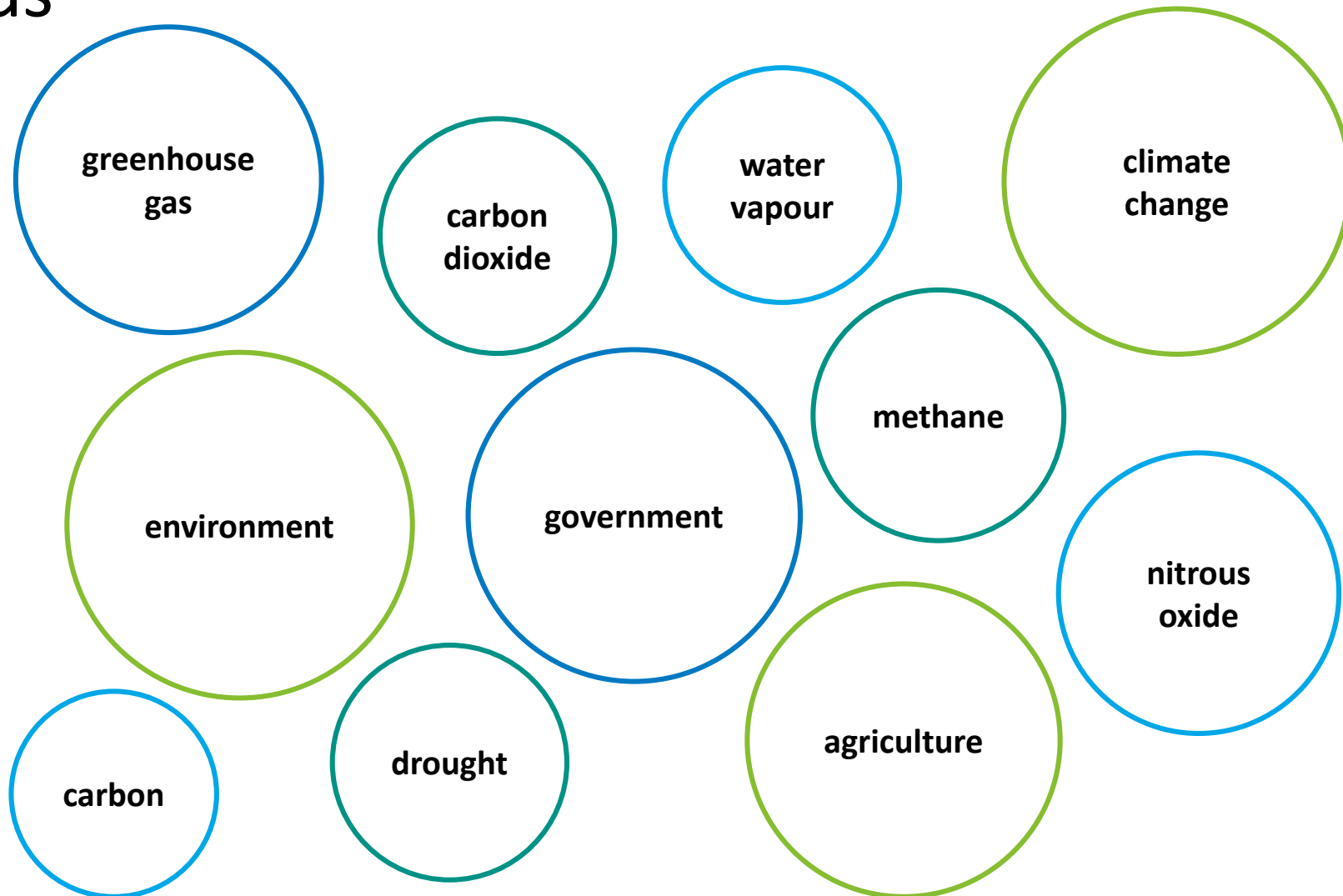
What would  
you like to  
see happen?

Were the young  
protestors right  
to take time out  
from their  
learning to  
protest?

Is enough being  
done  
worldwide to  
combat climate  
change?

Is enough being  
done in this  
country to  
combat climate  
change?

# Keywords





# Weblinks

The effects of climate change over time from <http://climatekids.nasa.gov>

What is climate change? from [www.bbc.co.uk](http://www.bbc.co.uk)

'Global warming' guide from <http://news.bbc.co.uk>

Greenhouse effect explanation from <http://kids.britannica.com>

Greenhouse effect explanation from <http://climatekids.nasa.gov>