

SUSTAINABILITY

YEAR 6

Autumn 2



LESSON 6

What is climate change?



Do Now – Retrieval practice

1) What is a greenhouse gas?

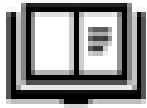
A greenhouse gas is _____

2) What are the products of combustion?

3) Give two examples of synthetic materials.

i. _____

ii. _____



Read the passage below about climate change.

As the amount of carbon dioxide in the air increases the global temperature rises, this is called global warming. As a result of the increase in temperature there are changes to the environment. These changes are called 'climate change'. Changes to the environment include: the acidification of oceans, increasing number of extreme weather events, the melting of polar ice caps and rising sea levels.



Use the text above to answer the following questions:





1. How is the environment changing?

2. What is causing these changes to take place?



Read the passage below about the environmental impacts of climate change.

The increased global temperature have caused several negative effects on the environment, including:

Ocean acidification	Extreme weather events	Melting ice caps	Rising sea levels
			
Carbon dioxide in the atmosphere dissolves in the oceans making the pH more acidic	Changes to the climate can increase the likelihood of extreme weather	Rising global temperatures means that the polar ice caps melt	As the ice caps melt the sea levels will rise
Coral reefs become bleached potentially killing the coral Other aquatic life also cannot survive	Distructive events such as hurricanes and flooding are more likely, this can cause significant damage and risk lives	Sea levels will rise Animals dependent on the polar ecosystem cannot survive	Flooding is increasingly likely Whole cities could become submerged by water

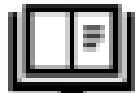


Find the answers in the text above.

1. What problem is associated with melting ice caps?

2. What problem is associated with ocean acidification?

3. How have humans contributed to rising sea levels?



Read the passage below about carbon footprints.

In order to help people reduce their impact on the environment scientist have created the carbon footprint, this helps people to see how much carbon dioxide is produced for different activities so that they can try to change their lifestyle.

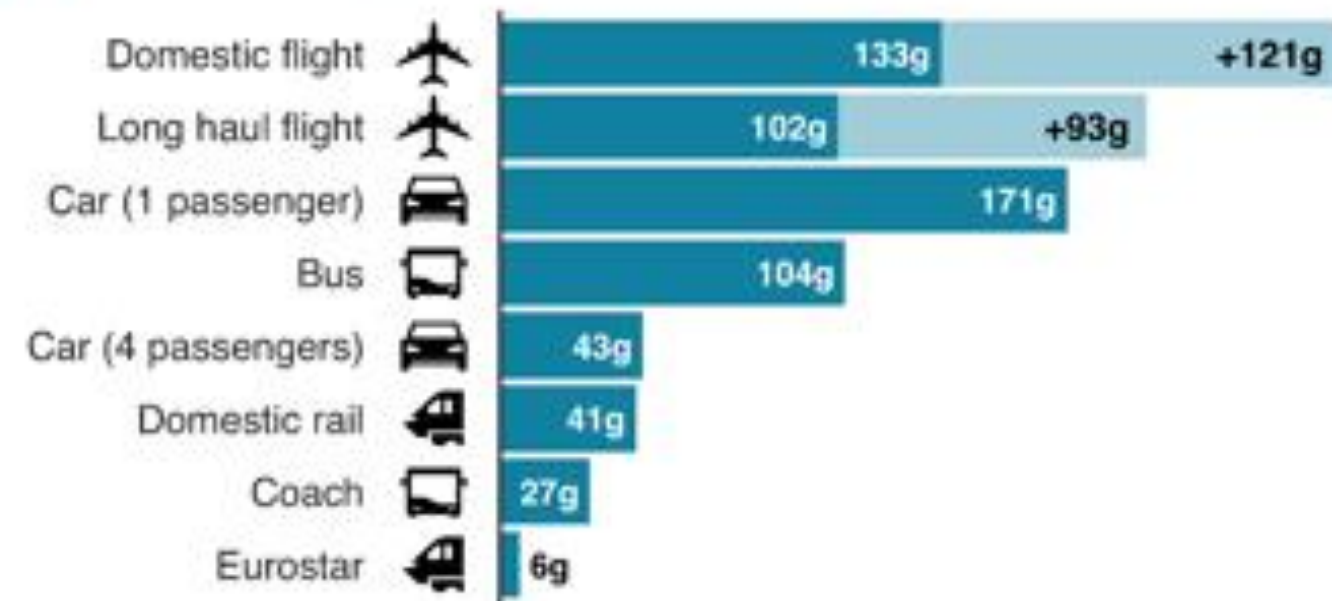


Look at the graph below and answer the questions.

Emissions from different modes of transport

Emissions per passenger per km travelled

■ CO2 emissions ■ Secondary effects from high altitude, non-CO2 emissions



Note: Car refers to average diesel car

Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019





Can you find 3 facts in the graph above about emissions from different types of transport



Use the graph to answer the questions below

1. Which is the least sustainable way to travel? How do you know?

2. Which is the most sustainable way to travel? How do you know.

3. Why is it better to car share when driving to the same place?



Fill out the table below using the graph above to compare which mode of road transport has the highest emissions and which has the lowest

Type of road transport	Amount of emissions given off per person per km
Car (1 passenger)	
Car (4 passengers)	
Bus	
Coach	



Should aeroplanes be banned?

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