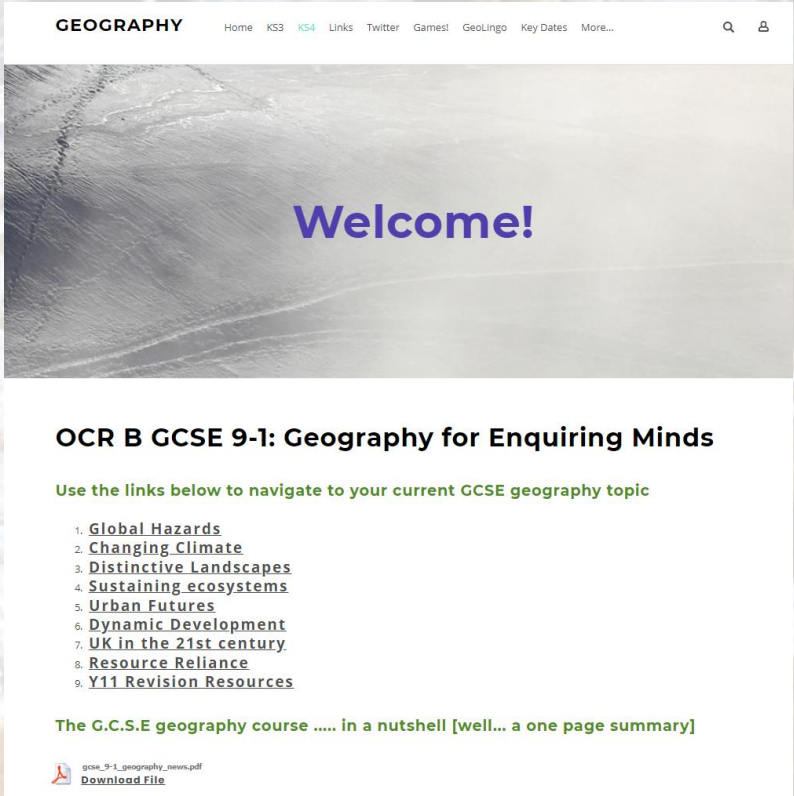
Welcome to
GCSE Geography

Where will it take us today?

	AO1: Knowledge	AO2: Understanding	AO3: Application of K&U
Comprehensive	good range detailed and accurate fully relevant to the Qn	good range detailed and accurate fully relevant to the Qn	detailed & accurate analysis substantiated judgements substantiated evaluation
Thorough	range accurate relevant to the Qn.	range accurate relevant to the Qn.	accurate analysis supported judgements supported evaluations
Reasonable	some relevant to the Qn.	some; relevant to the Qn	some accuracy partially supported judgement partially supported evaluation
Basic	limited relevant knowledge	limited but relevant	limited analysis unsupported judgement unsupported evaluation

1	G	3c
		3b
		3a
	F	4c
		4b
2		4a
	E	5c
		5b
		5a
3	D	5c
		6b
		6a
4	C	7c
		7b
		7a
		8c
5	B	8b
		8a
6		EP
		EP
		EP
7	A	EP
		EP
		EP
8		EP
	A*	EP
		EP
9		EP
		EP



Topic 2.1: Changing Climate

2.1b: Is climate change a natural process?

i) What is the greenhouse effect? How 'natural' is it?

1. Unscramble 2. Link together 3. link to previous learning

sugnoeheer

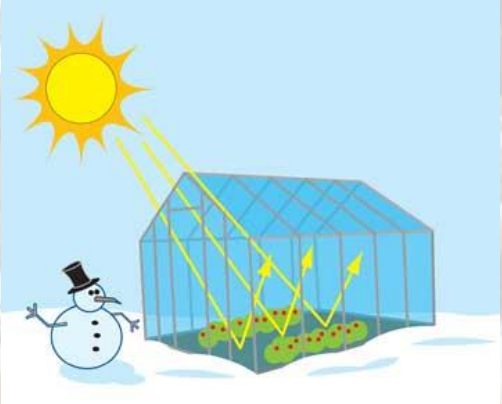
sgsae

oacbrn ddexiio

haeentm

rtnidiaao

riganwm



4. Add your own!

Think back…..

Nepal earthquake - magnitude

Nepal earthquake: cost of damage

Measures plate movement

3 ways of adapting buildings to reduce/quake damage

Drilling for climate change evidence?

P's & D's are subjective

This is retreating in the Arctic

Happened most recently in 1963

MC – evidence of natural climate change

2 years after the eruption of Mount ? Earth's temperatures dropped by ? degrees Celsius

'wobble'

'Mad' spinning?

How many points can you rack up?

Climate Change – Natural Causes

Learning is successful when I can:

*To understand the difference between the greenhouse effect and the enhanced greenhouse effect

Impressive Vocabulary

Keywords
Greenhouse gases
Radiation
Sub-zero

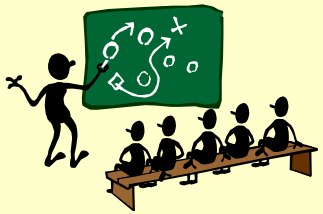
Geography Skills:
Scale
Conceptual understanding

Literacy Skills:
Exam response writing
Describing trends

Employability Skills:
Independent thinking
Evaluating sources

PRESENT NEW INFORMATION

LOOK, LISTEN, LEARN



What do we already know about…

the Greenhouse Effect?

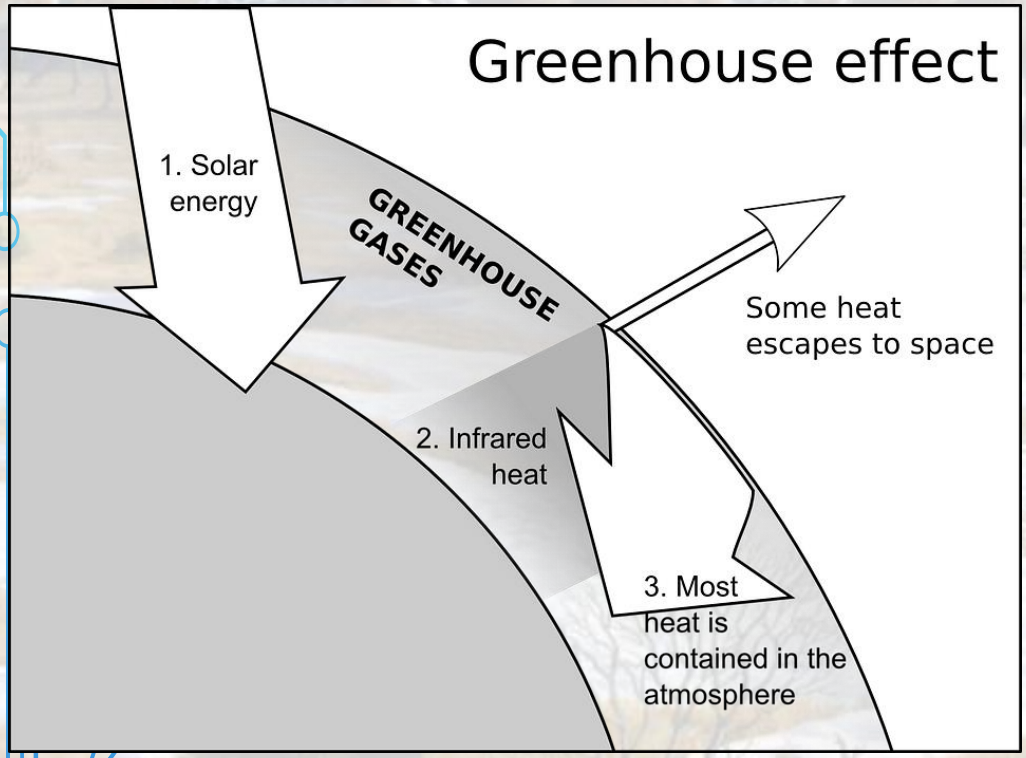
What are we sure of?

What are we pretty sure about?

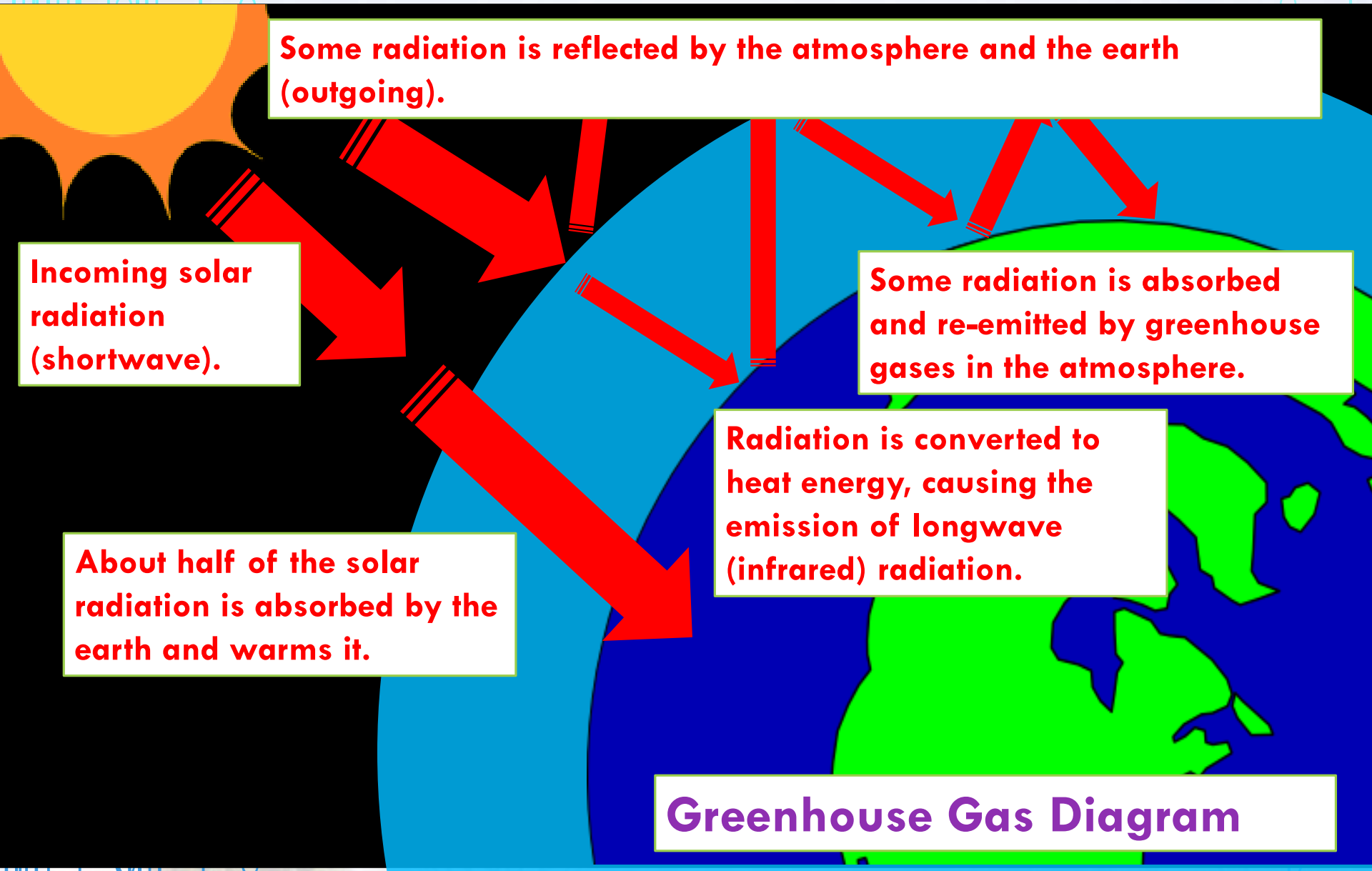
The Natural Greenhouse Effect

RE-ARRANGE ME to get a definition of the natural greenhouse effect!

atmosphere by Earth gases in insolation keep naturally occurring the the trapping warm



Without them it would be too cold for life to exist on Earth. The average temperature would be -18 rather than +15!



Greenhouse Gas Diagram

Greenhouse Gases – what?

1. W. V. Has a big Efekt as there is more of this than another. Huemanz do not influenza the amount of this so it duzzn't normalee get a menshun in the globle warming debait

2. CO_2 Is the most signifekant greenhouse gas, it accounts 4 60% of the enhanced greenhouse Efekt. sources of CO_2 = ???

3. Methane accounts for 15% of the enhanced greenhouse efekt; is only prezant in small amounts but is 25 times more effecktive than CO_2 radyashun. sources of methane = ???

4. Halocarbons, mainly CFCs are the only human-made greenhouse gases. They make up a minute proportion of all greenhouse gases but are 15 000 times more eefishunt at trapping radyashun so account for 15% of the enhanced greenhouse efekt. sources of halocarbons = ???

5. Nitrous Oxide is 250 times more eefishunt than CO_2 at trapping radyashun and accounts for 6% of the enhanced greenhouse efekt. sources= ???

Considering the causes of each of the gases, which would be the easiest to reduce? Explain your answer.

How could we present this data? Why would that techniques be most effective?

Which of the gases is most effective in trapping radiation? (**this is known as the global warming potential**) Why is this important to know?

If you enhance something you intensify, increase, or further improve the quality, value, or extent of. Which of these best fits the definition of the 'enhanced greenhouse effect'?

Light from the Sun

1. What type of radiation does the sun emit?

2. The radiation passes through the Earth's _____ ___and hits the Earth's surface.

3. When radiation passes through something this means that it is
absorbed / reflected / transmitted

4. When the radiation hits the Earth's surface some of it bounces back into space. This means it has been
absorbed / reflected / transmitted

5. Some of the radiation that hits the Earth's surface does not bounce back. This means it has been
absorbed / reflected / transmitted

6. This radiation warms the Earth's surface and the heat energy is radiated back into space.
This is called _____ radiation.

The Greenhouse effect

Which gases in the atmosphere stop the heat from escaping?

i.
ii.
iii.
iv.

This is because these gases (*absorb/reflect/transmit*) the heat energy?

Which gas has increased due to humans?

What human activities have led to an increase in this gas?

i.
ii.
iii.

Climate change

What is the difference between the terms 'climate' and 'weather'?

How has the Earth's climate changed over the last 150 years?

What negative effects might this have?

What is being done to prevent climate change?

The biggest overall CO_2 emitter is ….. ?

The biggest CO_2 per capita emitters are …… ?

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How does the UK compare?

Think about it #1 …… what's the fairest way of judging the carbon footprint of a country?

a) Total amount of carbon dioxide emissions produced? OR

b) Per capita (per person) carbon dioxide emissions

Think about it #2 …… China makes a lot of products consumed by other countries?

a) Where should this CO_2 be accounted for? In China

Climate Change – Natural Causes

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WHAT WOULD AN EXAM QUESTION LOOK LIKE?

12 mins

"Explain why the lifestyles of AC people might be causing climate change" **[6]**

Steps to Success

1. **Box**
2. **Underline**
3. **Lingo to include …..**
4. **Write it! Remember to Glance back**
5. **Spell- check**

* Point Explain Evidence Evaluation Link

S H E E P Place Specific Detail

WHAT WOULD AN EXAM ANSWER LOOK LIKE?

6 mins peer assess

"Explain why the lifestyles of AC people might be causing climate change" **[6]**

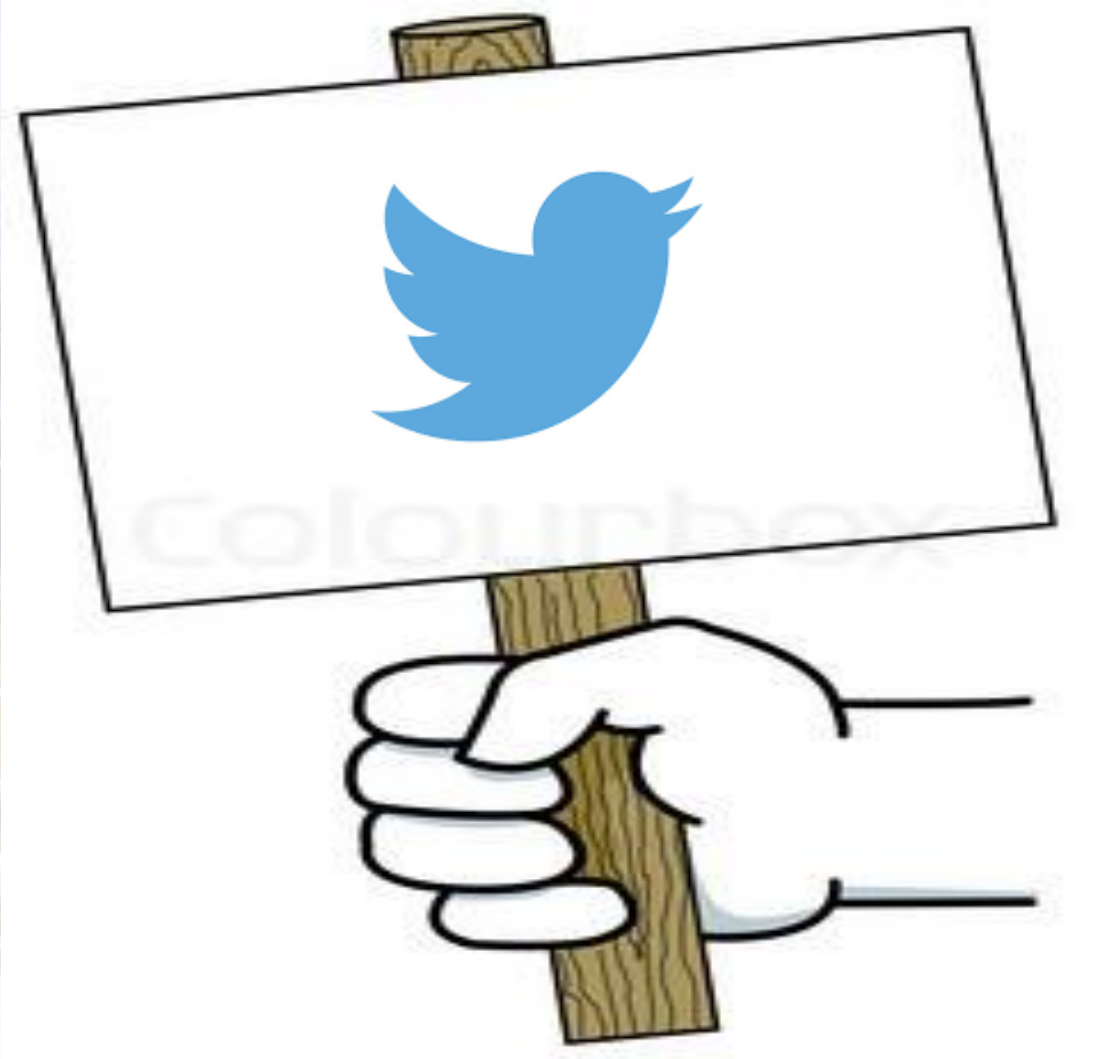
Energy Use - think about demand

Amount of technology in use at home and at work

Transport Use

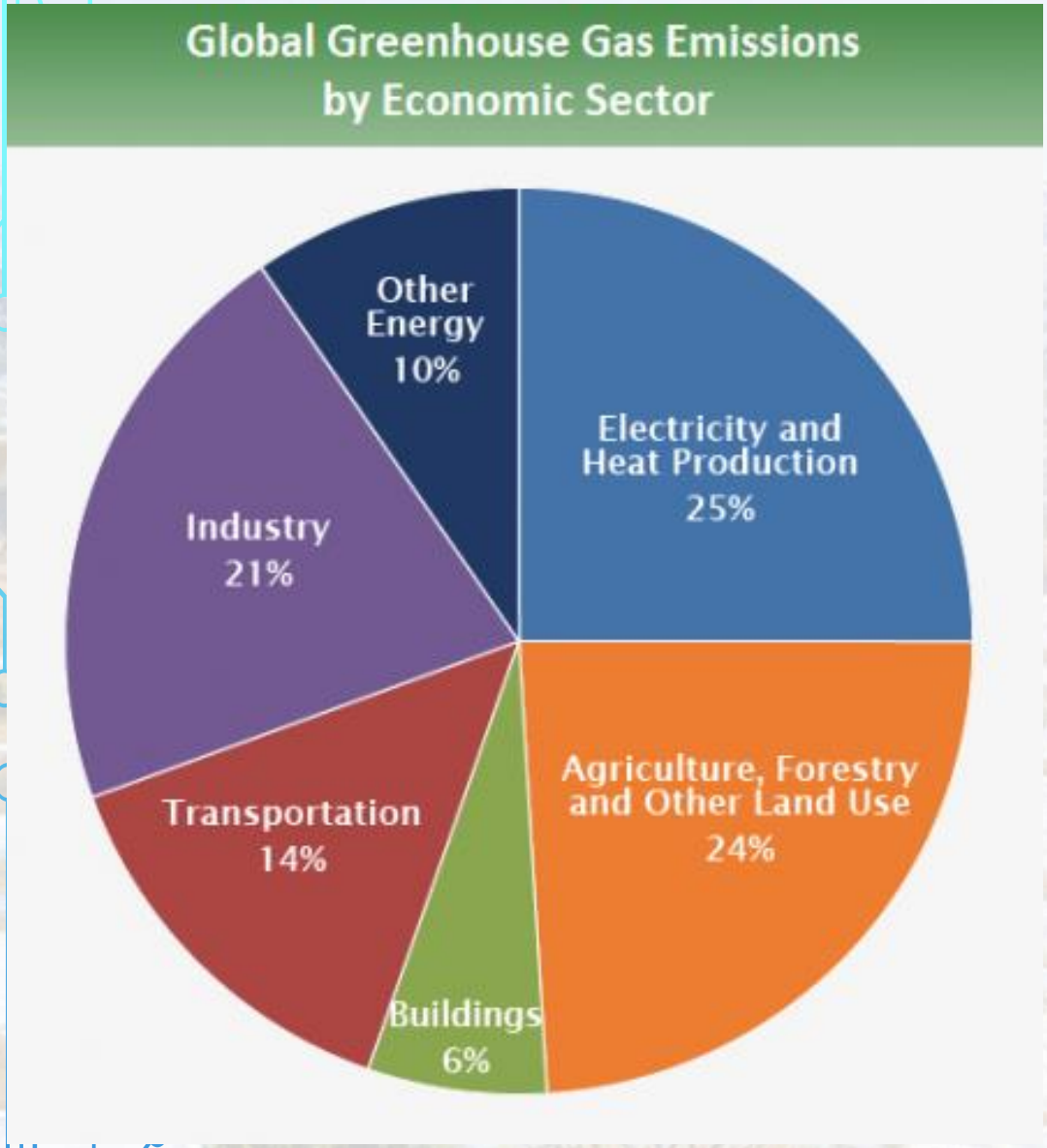
'Disposable' lifestyles

'Food' and 'Product' miles



Summarise today's learning in a 240 character tweet in the 4 lines at the bottom of your page OR write two questions that someone could ask you to check if this content has been mastered!

Homework



1. Which sector contributes the most GHGs?
2. How does the transportation sector use fossil fuels?
3. How can use of electricity at home sometimes be wasteful?
4. Describe two ways farming releases greenhouse gases.
5. How might the % on the pie-chart change for an AC? Explain your thinking!
6. How might the % on the pie-chart change for an LIDC? Explain your thinking!