

What is climate change?

What are the possible causes of climate change?

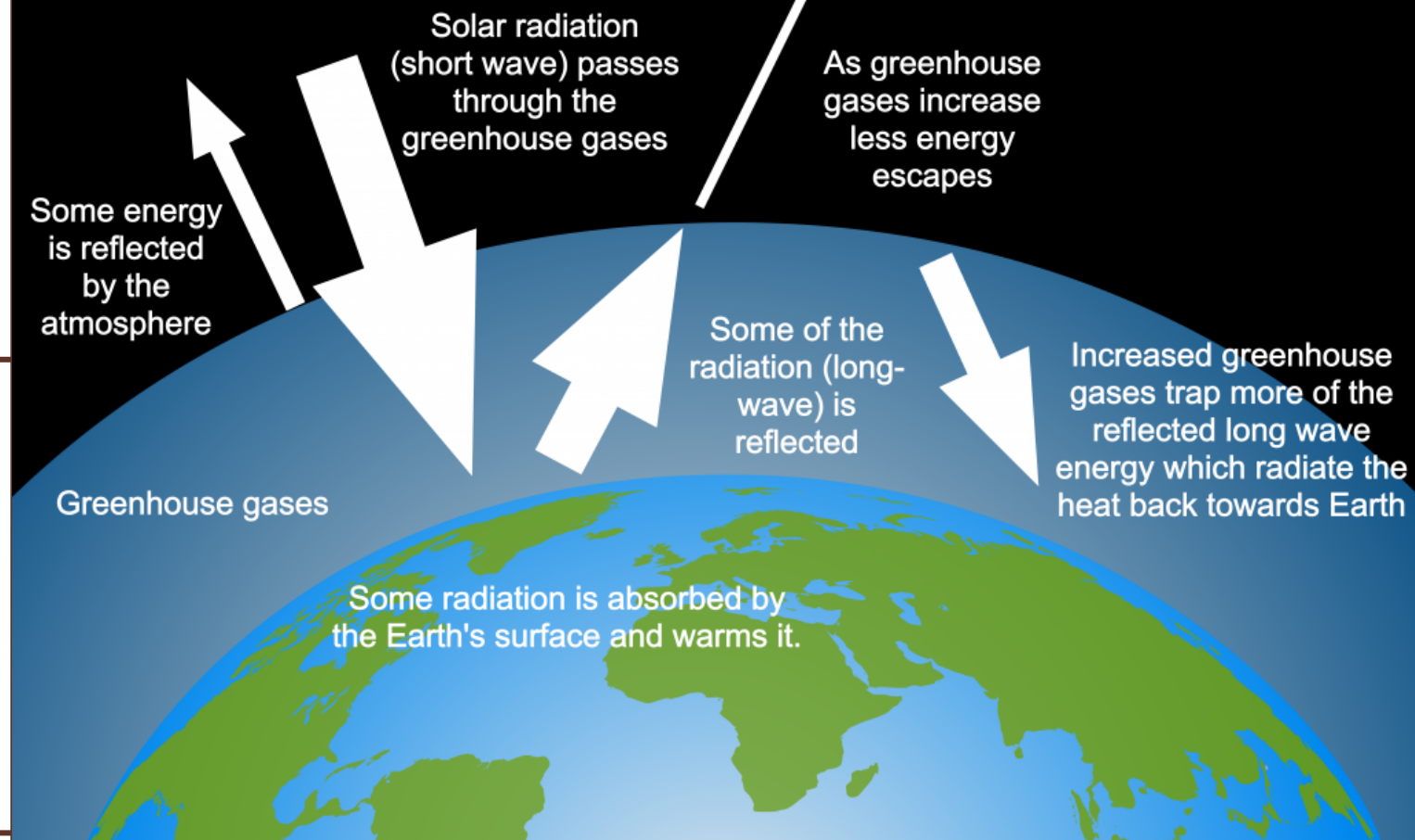
What is the evidence for climate change?

Identify 3 social effects of climate change.

Identify 4 environmental effects of climate change

Enhanced Greenhouse Effect

 internet geography



Give one positive and two negative effects of climate change.

What is the difference between climate change mitigation and adaption?

Describe two ways climate change can be mitigated.

How can agricultural systems be adapted to reduce the impact of climate change?

How can water supplies be adapted to reduce the impact of climate change?

How can reducing risk be adapted as a way of reducing the impacts of climate change?

Explain why low-lying coastal areas are at risk due to climate change.



Climate Change

 internet geography

Climate change is a long-term, large-scale change in the planet's average temperatures and weather patterns.

- Natural factors:**
Orbital changes
Solar output
Volcanic activity
- Human factors:**
Burning fossil fuels releasing greenhouse gases
Agriculture releasing greenhouse gases
Deforestation

- Ice and sediment cores indicate a higher concentration of greenhouse gases and higher temperatures
- Temperature records
- Tree rings indicate a warmer, wetter climate recently
- Pollen analysis
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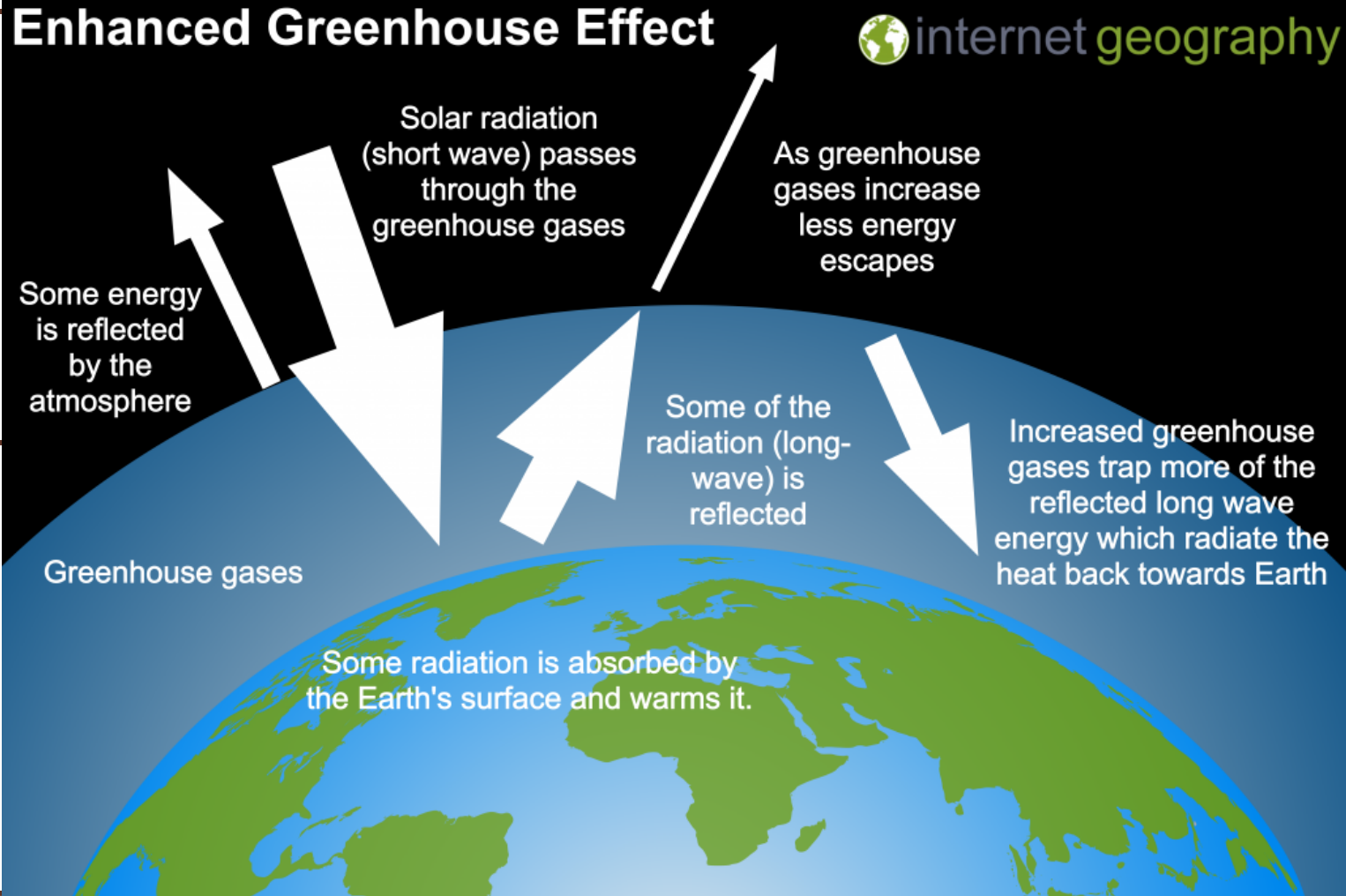
- Increased risk of diseases such as skin cancer and heat stroke due to temperature increase
- Winter related deaths decrease due to milder temperatures
- Drought reduces food and water supplies, especially in sub-Saharan Africa and water shortages in south-east England
- Increased flood risk close to rivers and coast
- Difficulty getting home and contents insurance in areas at risk of flooding
- New jobs in prediction and protection

- Increased drought in areas such as sub-Saharan Africa and Mediterranean regions leading to loss of habitat
- Sea level rise increases flooding and coastal erosion
- Ice melts so wildlife that depends on it suffer e.g. polar bears & penguins
- Increase in forest fires, pests and disease leading to loss of habitats
- Warm rivers will affect marine wildlife

Mitigation involves reducing the causes of climate change by reducing greenhouse gases in the atmosphere whereas adaption strategies respond by reducing its negative effects.

Production may move location to suit climates. Irrigation may be required due to decreasing rainfall in some areas. Changes to crops and varieties may be required.

Enhanced Greenhouse Effect



A positive effect will bring benefits to humans and/or the environment. Two negatives will bring problems for humans and/or the environment.

Alternative energy production (solar, wind, geothermal, wave, tidal and biomass) reduces greenhouse gas emissions. Carbon capture taking CO2 from emission sources and storing it underground. Tree planting removes CO2 from the atmosphere through photosynthesis. International agreements, such as the Paris 2015 agreement, encourages countries to take more responsibility for reducing CO2 emissions.

Reduce demand by installing more efficient devices. Increasing supply by water transfer schemes or by developing desalination plants to transform sea water into fresh water.

Reducing risk could involve constructing sea defences to protect from sea level rise. As could relocating people at risk. River defences could be improved to cope with increased capacity from higher levels of rainfall. Mangrove swamps can be restored. Large scale schemes such as the Thames Barrier could be replicated on other major rivers.

Climate change means low-lying coastal areas are at greater risk of flooding as sea levels rise due to thermal expansion and meltwater from glaciers reaching the sea. They are also at risk from coastal erosion as weather patterns change leading to larger storm events. The increasing intensity of tropical storms will lead to more severe storm surges.

