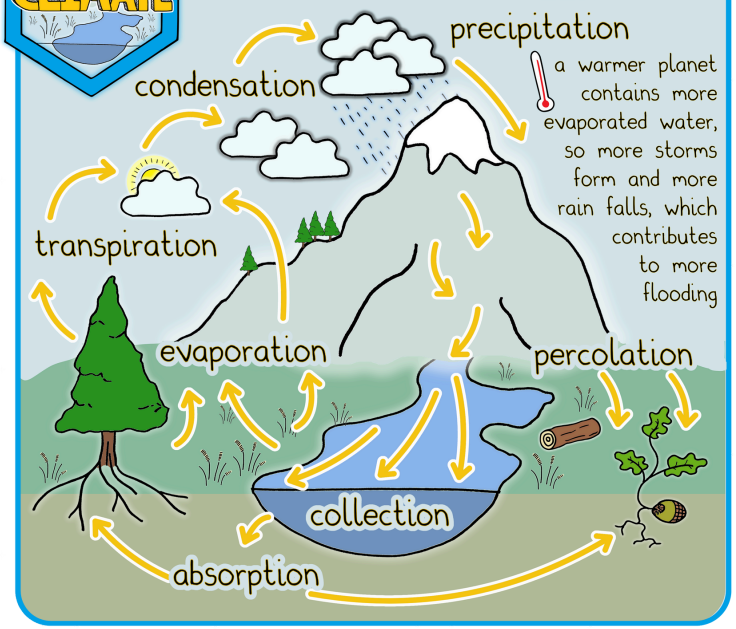
WATER CYCLE



a warmer planet contains more evaporated water, so more storms form and more rain falls, which contributes to more flooding

SKY

Our atmosphere is a thin layer of gas surrounding the Earth responsible for allowing life to thrive

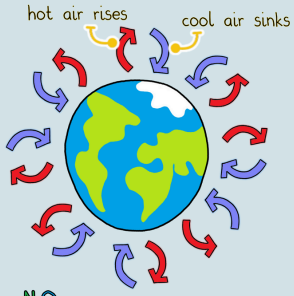
CORIOLIS EFFECT

Earth rotates from west to east causing air to flow over its surface

Earth is a sphere so air moves at different speeds in different places on the surface

this creates pressure differences which drives winds in different directions across the globe

CONVECTION CELLS



N_2O CH_4 CO_2

greenhouse gases trap heat to keep us warm, but too much affects the convection cells

this causes more intense and dangerous storms and higher risks of flooding

HUMAN IMPACT

BURNING FOSSIL FUELS

CO_2

releases greenhouse gases which trap thermal energy, warming the atmosphere and making weather more extreme than most species have adapted to survive

CH_4

INDUSTRIAL AGRICULTURE

N_2O

draining wetlands and straightening rivers to create farm fields releases methane and increases flooding risks

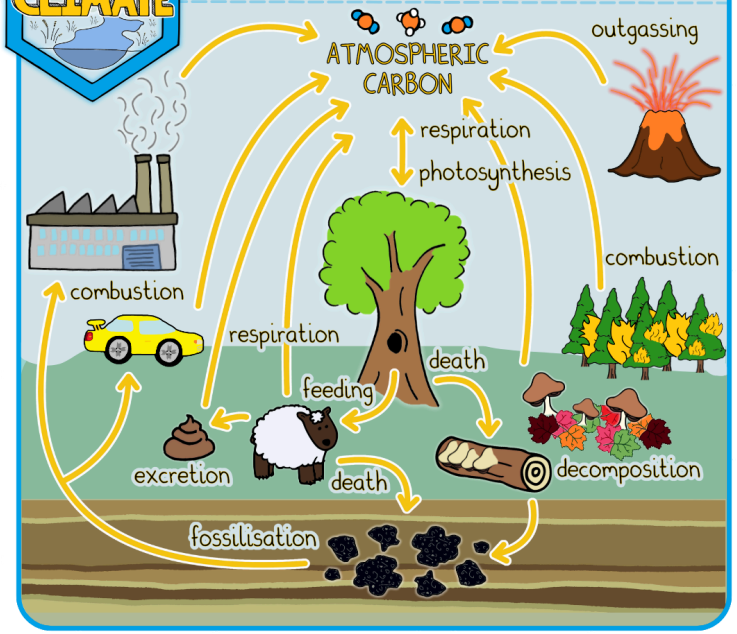
CH_4

fertiliser releases nitrous oxide which is 300 times as potent as carbon dioxide as a greenhouse gas

DEFORESTATION

increases the chances of flooding as roots no longer absorb rain water and trees no longer absorb carbon dioxide to store as wood via photosynthesis

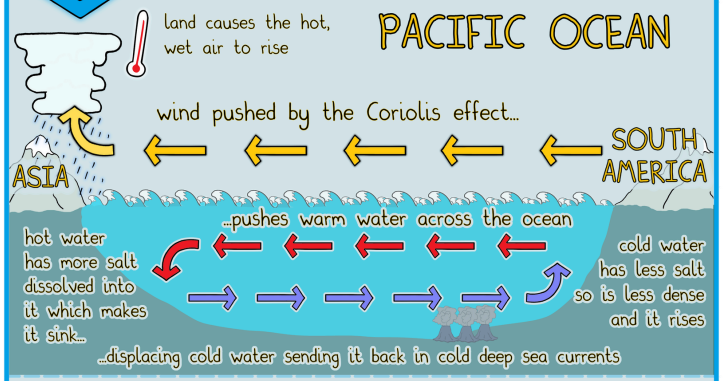
CARBON CYCLE



OCEANS

Ocean currents help control the climate by moving heat from the equator to the poles

PACIFIC OCEAN



as global air temperatures rise, oceans absorb this heat thus changing the ocean currents leading to more extreme weather

warmer oceans also melt land and sea ice which increases the sea level and reduces habitat for the animals that live there

POSITIVE ACTIONS

INCREASE PUBLIC TRANSPORT

prioritises green fuel sources such as electric rail that uses renewable energy or hydrogen buses and reduces the number of individual cars emitting greenhouse gases

ECOLOGICAL AGRICULTURE

restore wetlands to trap carbon sucked out of the air and stored as wood and peat

use crop rotation to maintain soil fertility thus reducing the need for fertiliser

INCREASE RENEWABLE ENERGY

reduces the need to burn fossil fuels to produce energy meaning that there are fewer greenhouse gas emissions

www.steampink.education/climate