



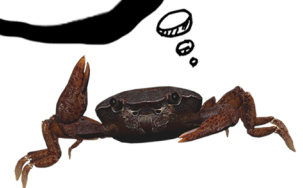
CLIMATE CHANGE

We all know that climate change isn't just a bit of bad weather. It's serious and it is happening faster than we expected. News reports around the world are increasingly highlighting **unpredictable and extreme weather events** (even in Singapore), **natural disasters** and **animals driven to extinction!**

Look around you. Where do you see the effects of climate change in Singapore?



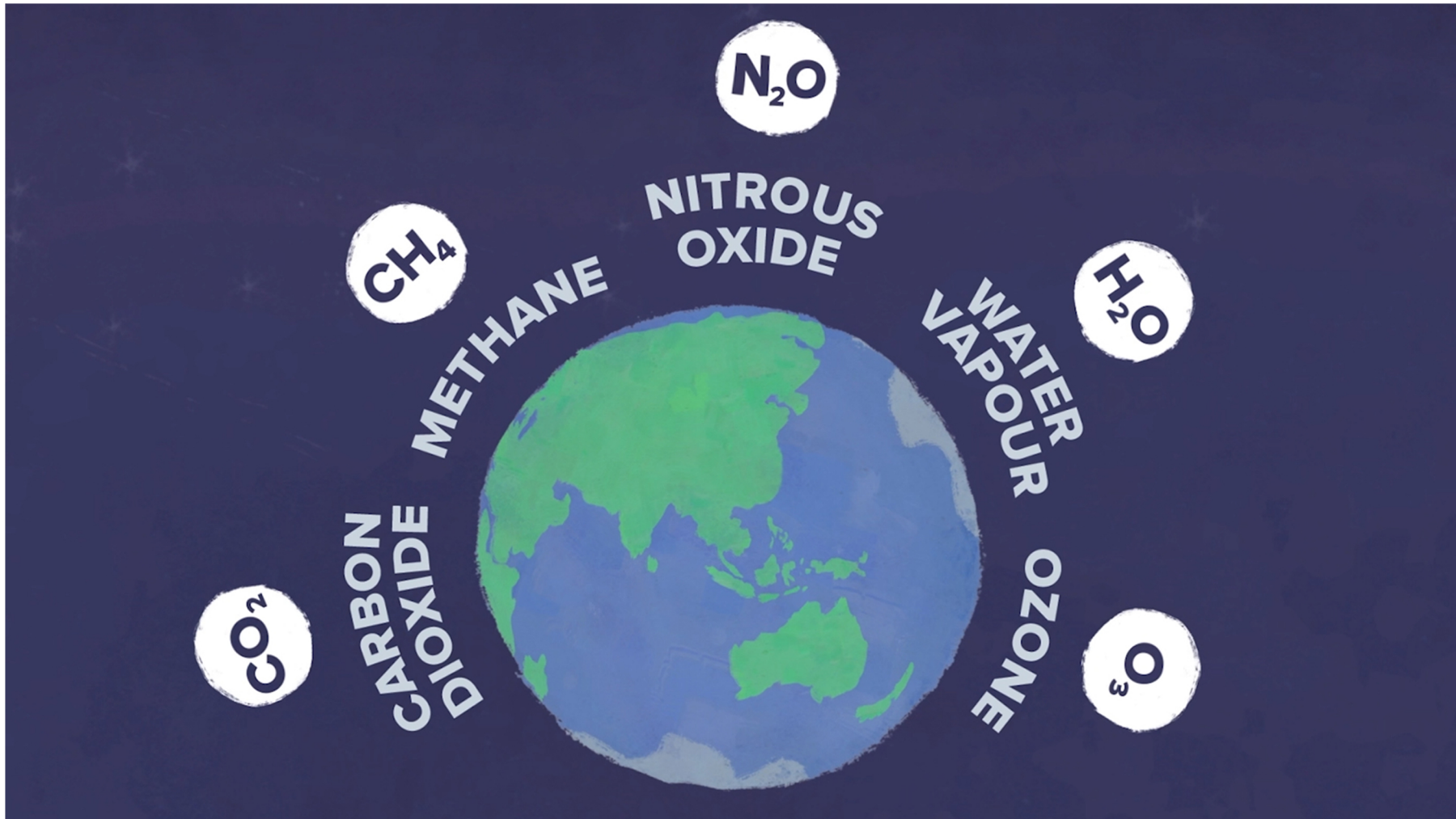
Watch the video. Why does climate change matter to Jo, the Singapore freshwater crab?



Reflect: Draw/write how Singapore in 1960 looked like vs today. Speak to your family members to find out more!



Appendix 1: Greenhouse gases like carbon dioxide, methane, nitrous oxide, water vapour and ozone trap heat on Earth by preventing heat from escaping into the atmosphere.





Appendix 2: Vocabulary

Word	Meaning
Weather	Specific event like a rainy day or a sunny day, that happens over a few hours, days or weeks.
Climate	The average weather conditions in a place over a period of 30 years or more.
Global warming	Process that causes the Earth's temperature to rise and makes the Earth warmer
Emission	Release of a gas or other substance into the air
Greenhouse gases	Known as "heat-trapping" gases, they can be natural or human-produced. These gases trap heat in the atmosphere and contribute to global warming.
Carbon dioxide	A colourless and odourless gas. Occurs both naturally (volcanic eruptions, wild fires, decomposing biomass) and through human activities (such as burning fossil fuels like coal, oil or natural gas, using electricity for our gadgets, clearing of land through deforestation).
Fluorinated gases	A group of powerful greenhouse gases that stay in the atmosphere for hundreds to thousands of years. These gases are artificially produced which means they do not occur naturally. They are used in refrigeration and air-conditioning systems, fire extinguishers and foam products.
Methane	A colourless and odourless greenhouse gas. Occurs both naturally (decay of plants and animals) and through human's activities (when cattle burp).
Nitrous oxide	A colourless and odourless greenhouse gas. Occurs both naturally (when bacteria break down nitrogen found in soils and rivers) and through human activities (such as using fertilisers.)
Parts per million (ppm)	One part of that gas in 1 million parts of a given amount of air.
Fossil fuels (Coal, oil and natural gas)	Fossil fuels are formed over a long period of time through decomposition of dead animals and plants. Coal comes from dead plants. Oil and natural gas comes mainly from microscopic organisms such as algae and plankton.