Turtle Threats: Climate Change

Turtles are vulnerable to a range of threats because:

- When baby turtles are born they are on their own; their mothers aren't around to care for them or teach them how to avoid threats.
- They don't begin breeding until they are about 30 to 40 years old (depending on the species).
- Development and lighting along the coast disturb turtles that need to nest on or close to the same beach that they originally hatched on, and stop the hatchlings from being able to find the ocean.
- Their gender is dependent on the temperature of the sand in which the eggs are hatched: the warmer the sand, the more females will be born. This means that climate change, which will raise temperatures around the globe, could result in too many female turtles and not enough males.
- They make long migrations. Spending so much time travelling in the water means that they are exposed to more impacts, as turtles may travel from safe waters to waters that are full of dangers such as fishing nets, boats or marine debris. They have poor hearing and sight when above the surface of the water. This means boats often hit them.
- There are a range of threats to nesting beaches and nests, including predators, people, vehicles, varying temperatures, and flooding or natural erosion (washing nests away).

How does climate change threaten turtles?

- Climate change is a change in the pattern of weather, and related changes in oceans, land surfaces and ice sheets, occurring over time scales of decades or longer. It is true that the climate has changed many times in the past; however, the climate change we are experiencing now is believed to be a result of human activity and is occurring faster than ever. Rising levels of greenhouse gases particularly CO_2 – caused by the burning of fossil fuels, are heating the atmosphere to an extent where the climate is changing. Most plants and animals can't adapt to these rapid changes.
- More storms and rising ocean temperatures may damage seagrass beds and coral reefs, both habitats that turtles rely on.

- The ocean is absorbing more carbon dioxide which is making it more acidic. This may be damaging the plants and reefs that turtles feed and live on.
- Rising sea levels and increased storms may affect the beaches that turtles rely on for nesting.
- Increased sand temperatures will see more female turtles born than males (turtle gender is dependent on the temperature of the sand the eggs are hatched in: the warmer the sand the morefemales will be born).

Once you have read through this information, you will need to work in your groups to create a poster or presentation to share with the other people in your class. You will need to undertake the research necessary to find out the answers to the following points and then include this information in your poster or presentation:

- A description of the threat
- How this threat affects turtles
- Where this threat occurs
- The particular species of turtle that is/are affected

In addition, pick one of the following questions to answer:

- What is something we can all do to help change climate change?
- What is something you are already doing to help change climate change?
- What is one thing that you found interesting or important about climate change and/or turtles that you want to share with the class?

Work in your groups to create a poster or presentation to share the information you have found.

Some places to get information about marine turtles:

- WWF - Green Turtle and Hawksbill Turtle
- Great Barrier Reef Marine Park Authority - Marine Turtles
- Australian Government Department of Environment and Energy - Marine Turtles in Australia
- Sea Turtle Foundation
- Western Cape Turtle Threat Abatement Alliance
- Department of Environment and Heritage Protection - Marine Turtles
- Reef Guardian Schools - Marine Turtles.

Some places to get information about climate change:

- WWF - Threats To Oceans and Coasts
- Reef Resilience - Coastal Development