

Turtle Threats: Marine Debris

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 marine debris threaten turtles?

- Marine debris (or marine litter) is described as any persistent, manufactured or processed solid material that has been discarded, disposed of or abandoned in the marine and coastal environment.
- Marine debris is basically just bits of rubbish - both big and small - that end up in the sea.
- Any rubbish dropped anywhere (including on the land) will probably end up in the ocean after travelling along drains and rivers.
- Plastic is the worst type of marine debris as it takes hundreds of years to break down. Most plastics just break into smaller and smaller pieces and continue to stay in the environment for a long, long time.



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- Turtles eat marine debris because it looks like their food. Some turtles eat jellyfish and when underwater, plastic bags look like jellyfish. Some plastics are so small that turtles can't even see them. These are known as microplastics and they are found in body soap/wash, or they are simply larger pieces of plastic that break down in the sun into smaller and smaller pieces.
- When eaten, marine debris can block a turtle's stomach, leading to the turtle's death.



- Turtles can get caught in marine debris like fishing line or ghost nets. For some, this means the marine debris cuts into their skin, causing them to get infections. For others, it can stop them from moving freely. In both cases, this can leave them tired and vulnerable to predators (such as sharks).

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 reduce the amount of waste entering our oceans?
- What are microplastics, and how do they affect marine life, including turtles?
- What is one thing that you found interesting or important about marine debris 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.



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Some places to get information about marine debris:

- Australian Government Department of Environment and Energy - Marine Debris
- Australian Marine Conservation Society - Marine Debris
- CSIRO Blog - Marine Debris.



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