

Deforestation

Teachers' Notes

Key Stage 3

Learning Outcomes

- Understand what deforestation is and why it occurs
- Appreciate the extent of deforestation globally and in Madagascar
- Learn why people deforest, what the short term gains are
- Appreciate the role of rainforests in ecology and what happens if forests are removed
- Understand the difference between 'rainforest' and 'eucalyptus woodland' in ecological terms
- Understand how deforestation interacts with other aspects such as climate change, water supply and soil quality
- Learn what people are doing around the world to stop deforestation and start reforestation
- Applying deforestation knowledge to the SDGs

Some Useful Websites

- World Economic Forum - <https://www.weforum.org/>
- World Resources Institute - <http://www.wri.org/>
- Conservation International - <https://www.conservation.org/>
- Centre for Biological Diversity - www.BiologicalDiversity.org
- WWF-UK - <https://www.wwf.org.uk/>
- <https://www.livescience.com/27692-deforestation.html>
- <https://www.nationalgeographic.com/environment/global-warming/deforestation/>
- <http://www.rainforestfoundationuk.org/>

Activities KS3

Class/Curriculum

- Research what animals live in the forests of Madagascar and in your local forests. Each pupil should create a fact sheet/poster on a different animal, one from Madagascar and one from NI. Create a wall display with your findings, comparing the differences and similarities between the animals.
- Investigate innovative ways to move beyond 'slash and burn' that are working in other parts of the world. Research the Web for ways to provide livelihoods while conserving forests.
- Compare the different ways statistics can be used to highlight issues. What are the most effective ways to use mathematics and graphs to raise awareness and stimulate action?

Campus

- Identify one thing your school could do that will help halt deforestation and promote it to the entire student body, teachers and governors
- Hold a debate for the school about a topic related to deforestation; what conflicts arise around e.g. illegal logging, clearing for agriculture, slash and burn. Contrast short term gain for individuals vs longer term benefits for the community.
- Create a display for the school highlighting deforestation issues, using a variety of media – art, drama, stories.
- Identify a charity addressing these issues and raise money to fund a specific project. Develop innovative ways to raise money that simultaneously raise awareness of the issues involved.

Community

- Plan a publicity campaign using social and other media to help the community understand the dangers of deforestation and promote local action (e.g. do not buy tropical hardwoods, buy fair trade/sustainable woods)
- Plant a tree(s) in the local community. Write letters to the local council or government official requesting permission. Promote the planting to the community through newspaper coverage, social media, etc. and make the link between planting trees locally and deforestation globally.
- Create a display (art, photography, poems, stories) open to the community to highlight the similarities and differences between local woodlands and rainforests and the threats to both.

Glossary of Key Terms

Biomass – the total weight of organisms within a given area.

Carbon sink – the ability of natural environments and organisms to absorb and retain carbon.

Charcoal – carbon obtained from burning wood, bone or other substances in the absence of air. Used for cooking on open fires.

Climate – weather conditions in a wide area over a long period.

Deforestation – removal of trees and woodlands, often leading to complete destruction of the woodland habitat.

Ecology – interaction of living things with each other and their physical environment.

Erosion – process by which stone and soils are weathered away by action of water, wind or other natural factors.

Extinction – when all members of a species have died.

Global Warming – the gradual increase in the overall temperature of the earth's atmosphere caused by greenhouse gases and other pollutants.

Greenhouse Gas Emissions – a group of gasses which contribute to global warming by absorbing infrared radiation.

Infrastructure – basic physical and organisational structures and facilities needed for society to function (roads, buildings, power, water).

Mining – removal of valuable materials contained within the soil.

Nutrients – substances providing nourishment essential for life and growth.

Plantation – an area of trees or plants grown as a crop for commercial purposes; generally consisting of only one species.

Rainforest – forests growing where rainfall is high. Can be tropical or temperate.

Sisal – a Mexican agave plant with large leaves cultivated for fibre used in ropes or matting.

Soil – surface of the earth generally containing a mixture of inorganic minerals and particles and organic remains.

Subsistence Agriculture – self-sufficient farming where people grow food to feed themselves and their families, sometimes with modest amount of local trade.

Tropics – region north and south of the equator reaching between the Tropics of Cancer in the North and Capricorn in the South.

Water Cycle – cycle of processes by which water circulates between oceans, atmosphere and land, including precipitation, drainage, evaporation and transpiration.