



Curriculum Outdoors

Curricular Area: Social Studies People Place and Environment



E&O:

I can consider ways of looking after my school or community and can encourage others to care for their environment. SOC 1-08a

I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally responsible way. SOC 2-08a

Learning Outcome:

Pupils will be able to describe in simple terms the role of trees in mitigating climate change. Pupils will be able to suggest at least one way we can mitigate climate change.



Resources Needed

Year in the Life of a ... tree

Collection of videos from Woodland Trust – choose a tree pupils already familiar with or a tree that they may be planting soon

https://www.youtube.com/watch?v=UnP8L4qYLFY&list=PLbKmvYI09ziwg_Gdp2mUdyUeiL9jiTw2U

Carbon Capture Game Instructions – link to eaclost blog page

Teacher Information

<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/how-trees-fight-climate-change/>

These resources from OWL Scotland consist of activity plans and resources designed for learning about carbon footprints

https://www.owlscotland.org/resources/resource-library?channel=resources&resourcecat=all&subjectcat=29&age_group=26&page=5

Activity **Capture the Carbon game – Trees**

- Indoors, watch a *Year in the Life...* Pupils are told that leaves are food factories capturing light and CO₂ for the trees to use as they grow.
- Outdoors, ask pupils to breathe in and out (feel and/or see breath). *What do we breathe in, what do we breathe out?* - Oxygen in, CO₂ out. *CO₂ (along with other gases) helps form a blanket around the Earth trapping any heat. Sometimes called the Greenhouse Effect.* Can pupils suggest other sources of CO₂ or other greenhouse gases – possible suggestions, fumes from cars, power stations, home heating systems. *Trees, in contrast, during daylight hours, take in CO₂ and give out oxygen. Trees capture the carbon and fix it in their roots, trunk, branches and leaves so long as they are living.*
- Play the Carbon Capture game.
- Pupils suggest ways we, as a school community, can make changes to reduce the amount of greenhouse gases in the atmosphere. See Assessment

Assessment

Quick Quiz

- What are the main sources of CO₂ in our atmosphere.
- What do trees breathe in during daylight hours
- What do trees breathe out during daylight hours
- What would happen if someone chopped down the tree and used it for fuel for
- What would happen if the forest were allowed to grow without being managed by humans? What would happen if the entire woodland were chopped down all at once.

Can pupils suggest ways that **we** can limit the amount of CO₂ we put into the atmosphere?

Can pupils suggest ways **we** can help capture CO₂ from the atmosphere.

Suggested further activities –

Build a Tree – OWL resources

https://www.owlscotland.org/images/uploads/resources/files/Summer_text_stages_1+2.pdf

Research

Pupils investigate the life cycle of evergreen trees. Are they better, same or less effective in carbon capture?

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