

Task: Doers, Shoppers, Learners, Shouters

This Eden Project resource reflects on the climate change crisis and considers how we can respond confidently to the climate emergency. There are opportunities for individual and collaborative reflection in this structured activity.

Download the resource by clicking on these icons. 



SIR DAVID ATTENBOROUGH

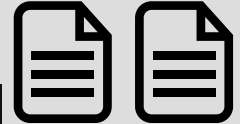
“Never before have we had such an awareness of what we are doing to the planet, and never before have we had the power to do something about that. Surely we all have a responsibility to care for our blue planet. The future of humanity and indeed, all life on earth, now depends on us.”

Task: How will we rise to the challenge of climate change?

This Eden Project resource is an absolute must-do! You could combine this with a Young STEM Leader Programme (YSLP) award too. Learners will discover their part to play in the climate emergency; how small changes together can make a big difference; they will grow "new ideas, approaches and solutions for a cleaner, more sustainable future".



watch this film to introduce activity




download resources here

Objectives and Curriculum Links

This enquiry enables pupils to:

- understand the science and the jeopardy (the causes and effects) of climate change
- learn about, and from, the indigenous knowledge of the Inuit
- describe ways in which individuals can respond confidently, to climate change
- understand that, by acting together, we can achieve amazing things and that our individual actions added together can make a big difference
- begin to build a 'language of connection' to describe how we are connected to each other and the natural world, and to act collectively as a school community.



Task: Climate change and the ocean

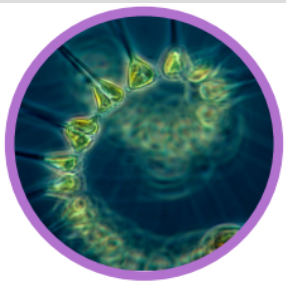
As a result of human activities that add greenhouse gases to the atmosphere, global temperatures and weather patterns are changing - this is called climate change. This is having an effect on our atmosphere and oceans, resulting in rising sea levels, ocean acidification and extreme weather events.



The ocean plays a key role in reducing the rate of climate change but climate change is altering the natural conditions of our ocean. Use this resource to explore ocean acidification, discover what is meant by "blue carbon ecosystems" and learn how to manage our oceans more efficiently to reduce climate change. Click on the File icon below to access the resources.



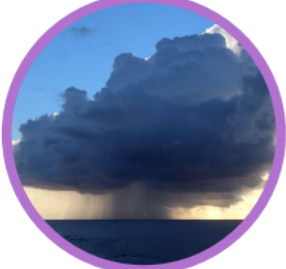
Eelgrass bed © Divedog



Phytoplankton © NOAA



Bleached corals © ARC Centre of Excellence for Coral Reef Studies



Storm clouds over the sea © Sr. Pacman



Why is the ocean so important?

- The ocean is incredibly diverse and home to a huge range of habitats and species
- Marine plants and algae produce over 50% of the oxygen we breathe
- Marine habitats help to store carbon, which is incredibly important in the fight against climate change
- The ocean regulates our climate and weather systems, and plays a major role in the water cycle
- Coastal habitats help to protect coastal communities and towns from storms and flooding by reducing wave energy
- Millions of people have jobs in marine industries
- The ocean is important for our health and wellbeing, with millions of people using the ocean and coastline recreationally and creatively
- Seafood provides a source of food and protein for millions of people

Image from [Marine Conservation Society](#)

THE EFFECTS OF CLIMATE CHANGE



We're facing the biggest environmental challenge our species has ever seen. No matter what we're passionate about, something we care about will be affected by climate change.

There is a wealth of teacher resources available on the WWF website. Of particular note, are downloadable infographics, discussion pack on climate change and a discussion pack on carbon footprint. All accessible by clicking on the icons below.



When a fossil fuel is burned

A classic demonstration where a candle (or similar) is burned. The fumes are pulled through ice, to condense the water vapour, and lime water, to demonstrate the presence of carbon dioxide.



Biofuels

Biofuels are an important area of chemistry and chemical engineering. The resources here involve the making and testing of biodiesel from vegetable oil. There are different activities exploring different aspects of biodiesel manufacture, suitable for different levels. In addition, there are discussion activities to assist in learners' understanding of the environmental and other ethical aspects of commercial biodiesel production.



Ocean Acidification

This resource looks at the effect carbon dioxide concentration is having on the equilibrium between carbonate ions and hydrogen carbonate ions in the world's oceans. It contains work on weak acids, indicators and equilibria.

