

# Key Stage 3

## Curriculum Fit



## Making Waves: Inventing for a better ocean

### Learning Opportunities and Objectives

Little Inventors provides great opportunities for students to develop their creative and problem solving skills. Additionally:

- To understand that inventions are all around us, that invention is a way to create solutions to problems or challenges
- How and when the oceans were formed
- They will learn why humans are dependant on the ocean and its importance on all life
- The typography of the ocean landscape
- Learn about climate change and its impacts on humans and the ocean
- The environmental impacts of a variety of pollutants
- Discuss the impacts of overfishing on the marine life and humans
- To articulate and communicate their ideas in drawing, writing and speech for an audience, as well as to plan and evaluate their writing
- Expand skills in STEM learning
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future
- Ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience
- Make predictions using scientific knowledge and understanding
- Become innovative designers through use of a deliberate design process for generating ideas



By promoting creative thinking and problem-solving skills, Little Inventors offers many opportunities to link to several curriculum areas with an integrated approach.

## Curriculum links

The primary programme of study includes coverage of changes to environments that can pose dangers to specific habitats, marine and life.

The programme includes the production of carbon dioxide by human activity and the impact on climate, and the efficacy of recycling; the interdependence of organisms, including food webs and the accumulation of toxic materials; how organisms affect and are affected by their environment; changes in the environment that leave some species less well-adapted which might lead to extinction.

The topic has cross-curricular links to a variety of other objectives, including:

## Geography

- Develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- Understand how human and physical processes interact to influence, and change landscapes, environments and the climate; and how human activity relies on effective functioning of natural systems
- Human geography relating to: population and urbanisation; and the use of natural resources

## Science

Pupils should begin to see the connections between different subject areas and become aware of some of the big ideas underpinning scientific knowledge and understanding. The can:

- Learn how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.
- The interdependence of organisms in an ecosystem
- Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction



## Art and Design

Students can produce creative work and explore their ideas using drawing, design and optionally craft. They can:

- Use a range of techniques to record their observations in sketchbooks, journals and other media as a basis for exploring their ideas
- Use a range of techniques and media, including painting to increase their proficiency in the handling of different materials
- To analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work

