



## Key Stage 3/4 Lesson 4 – Giving Seas a Chance

### Practical activity – Talking chips

#### Introduction

Humans have always relied on the ocean, whether it be for food, for leisure, or to make a living. Half of the world's population live within 100 kilometres of the coast, so our actions have a big influence on the marine environment. Pollution, overfishing and man-made climate change are all human influences that are impacting the marine environment.

Climate change is a change in the average conditions over a long period of time; it is causing a rise in atmospheric temperatures and a change in weather patterns. Since the beginning of the Industrial Revolution, humans have burned fossil fuels and carried out other activities that have increased the amount of greenhouse gases in the Earth's atmosphere, causing the Earth's average air and sea temperatures to rise; this is known as the greenhouse effect. Since the 1970s, the oceans have absorbed more than 90% of the excess heat energy trapped by greenhouse gases. As a result, the oceans have warmed by about 1°C. Many marine organisms are sensitive to small changes in their environment and are under threat as a result of climate change.

#### Apparatus

- Counters (2 or 3 per person)
- Paper
- Pens and colouring pencils

#### Activity

- In this activity, you will have two or three chips. You will take part in a group discussion about the impacts that humans have on the marine environment, both positive and negative, and what we can do to help protect the marine environment from any negative impacts.



- The size of the group and the amount of time for discussion will be determined by your teacher.
- Your discussion should include what actions could be taken by governments to protect the marine environment, such as the designation of marine protected areas, as well as what you could do at home or in school to help safeguard wildlife.
- Any student can begin the discussion by placing their chip in the centre of the table, e.g., “we could plant more seagrass”, or “turn the lights off when you leave a room”, or “we could avoid using single-use plastics”.
- You must use one of your chips to add to the discussion. Once you have used all of your chips, you are not able to ‘chip in’ until everyone else in the group has used up their chips.
- Once everyone in the group has used their chips, you can either have another round of discussion if there is time, or you should summarise the points made by your group in a mind map or poster.
- Once each of the groups have finished their mind maps or posters, you should present them to the rest of the class.

