



## BioBeo's 'Sparkling Seas A Bioeconomy Adventure' Video: Guidance Notes

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# ‘Sparkling Seas: A Bioeconomy Adventure’ Video

(Ages: 4–12, adaptable)



## Sparkling Seas: A Bioeconomy Adventure



## Introduction:

Begin by discussing the concept of the bioeconomy. Discuss whether plastic belongs in our seas. Emphasise the importance of sustainability and circularity in nature. Plastic does not belong there! Follow Beo and Raja as they explore the sea, encounter marine life, and take action against the pollution of the seas.

**Themes:** Marine life, pollution, sustainability, health & inclusivity (diabetes monitor)

## Before Viewing...

### Activities:

#### 1. Beach Life Sorting Table (Science & Maths)

**Activity:** Using real objects ideally (e.g. shells, crabs shells, bits of clean plastic), children sort items into two groups: 'natural' vs 'human-made'. If real objects are not available, you could use toys, but real-life material is favourable.

**Extension:** Sort by colour, size, material.

**Resources:** Tubs or trays, sorting mats, printed or 3D items

**Learning Focus:** Classifying living and non-living things, materials, data handling.

#### 2. Saltwater Simulation (STEM)

**Activity:** Mix salt into water to replicate sea water. Drop in various small objects (natural & plastic) and observe what floats or sinks. Do a control experiment with unsalted water alongside this activity. Be sure to invite the children to predict what they think will happen.

**Learning Focus:** Properties of materials, prediction, floating and sinking.

## During Viewing...

### Activities:

#### 1. Sea Life - See and Sketch (Geography, Science, Visual Arts)

**Activity:** As children watch, they draw or colour a sea scene, adding each creature they see (e.g., starfish, octopus, crab, seabird etc)

**Extension:** Label each creature and group as vertebrate/invertebrate.

**Learning Focus:** Marine biodiversity, visual observation, creative expression.

## 2. Pollution Count Tally Sheet (Maths)

**Activity:** Children keep a tally of how many pieces of plastic or rubbish they see during the video.

**Follow-Up:** Use results to make a pictogram or bar chart.

**Learning Focus:** Counting, data recording, interpreting results.

## After Viewing...

### Activities:

#### 1. Beach Clean-Up Simulation & Weigh-In (PE, Maths, Environmental Studies)

**Activity:** If possible, go to your nearest beach with utensils to do a beach clean. If a beach is too far, set up a mock beach with scattered items (paper, plastic bottles, string). In teams, children “clean” the area using tongs or gloves. They weigh and record their collection.

**Learning Focus:** Environmental care, weight measurement, teamwork.

**Extension:** Graph class totals or compare types of litter collected.

#### 2. Sparkling Seas Installation (Visual Art & STEM)

**Activity:** Children use clean plastic wrappers, bottle caps, and other recyclables to create a sculpture or collage depicting ocean animals and pollution.

**Learning Focus:** 3D art, sustainability, expressive communication.

#### 3. Plastic-Free Snack Challenge (SPHE, Home/School Link)

**Activity:** Children plan a school snack using no plastic packaging. They bake in school during science class. Invite the children to draw their baked goods and write out their recipes in procedural writing.

**Learning Focus:** Sustainability, personal responsibility, home-school cooperation.

#### 4. Underwater Movement Game (PE & Drama)

**Activity:** Children move like sea creatures (e.g., glide like a stingray, crawl like a crab, wave like seaweed). When “plastic” is called out, they freeze.

**Learning Focus:** Creative movement, listening skills, body control.

#### 5. Design a BioEco Beach Buddy (STEM/Visual Art)

**Activity:** Children design a sea-cleaning eco-gadget or creature using junk materials. They then build the model. It should help clean the sea in some way. The children present their eco-gadget to the class and they explain their invention’s functions!

**Learning Focus:** Problem-solving, creative design, sustainability.

Another video of interest about plastic in the oceans and seas:

### The Great Pacific Garbage Patch

[https://youtu.be/MnCbTTTi7ic?si=zAd4C\\_dmk4YKdtKd](https://youtu.be/MnCbTTTi7ic?si=zAd4C_dmk4YKdtKd)

## Assessment

This unit blends formative and summative assessment across Science, Maths, STEM, PE, Drama, and SPHE. Focus is on children’s engagement, creativity, problem-solving, and environmental understanding.

### Assessment Methods

- Teacher Observation Checklists - Use during group tasks, STEM builds, PE games

*Focus on cooperation, creativity, and effort*

- Practical Task Outcomes - Tally sheets (pollution count), clean-up weights, snack planning, sculpture display

*Visual evidence can be displayed or added to portfolios*

- Self/Peer Assessment - Simple traffic light feedback (e.g., “How did I do today?”)

*Reflection slips after the art installation or movement game*

- Mini Project Review - Each child chooses one thing they did (e.g. art, robot design, snack plan). Add one sentence: "This helps the ocean because..."