



## **Lesson Plan: PLANT AND ANIMAL LIFE ON THE SEASHORE**

**Class: All Classes**

**Subject: Science**

**Strand: Living Things**

**Strand Unit: Plants and Animals**

### **Aim / Learning Objective:**

Students will develop an understanding of the variety species and characteristics of the animals and plants that live on the seashore through scientific drawing and recording. The students will establish an understanding of the processes of life that takes place on the seashore due to environmental conditions and changes constantly taking place (e.g. tides & waves crashing on rocks, salinity of water, heat of the sun, predators) etc.

Students will create their own seashore guidebook by recording information and drawing the details of species from the seashore that have been collected for the Explorers Aquarium. Students are to explore and learn about the species and plants through their own investigation and draw them in detail. Students should become familiar with the species and seaweeds names.

### **Skills:**

Students will have developed questioning and predicting skills as well as the following:

- Questioning, Observing, Predicting
- Investigating and Experimenting
- Estimating and measuring
- Analysing – sorting and classifying
- Recording and Communicating

### **Materials:**

- Explorers Aquarium stocked with a selection of seashore animals. \*If the classroom doesn't have an aquarium in the class or all of the animals listed on the worksheet are not in the Aquarium Tank, use pictures and video footage of seashore species to discuss the types of animals found on the seashore. Teachers may also want to organize a seashore safari to the local seashore for the students. More information on Seashore Safari's and explorers' materials available on [www.explorers.ie](http://www.explorers.ie).
- Explorers Seashore PowerPoint presentation
- Explorers Species Information Booklet
- Explorers Anecdotes about the Seashore
- Explorers Illustration of Seashore zones
- Collection of samples of seaweeds from the local seashore (full parts including stipe, holdfast etc)
- Seashore species Identification keys (available from libraries and bookstores)
- Worksheet: Seashore Guide – Scientific Recording and Drawing (copy the number of pages required for each student)
- Pencil, ruler, colouring pencils / pens

### **Preparation / Background Information:**

- Review the types of seashores and the effects of tides – what happens to the plants and species when the tide rises and falls
- Review tidal zones – the seashore can be divided into three main areas called zones: Splash zone, Intertidal zone and Sub tidal zone. The Intertidal zone is also divided into the upper, middle and lower shore. Animals and plants have adapted to live in the different zones.
- The Plants found on the Seashore: Seaweeds – belong to a group of plants known as Algae. Seaweeds



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have also adapted to live on different parts of the seashore and provide food and shelter for many of the animals. Lichens – are made up of algae and fungus and often live together in the splash zone area. Samples can be collected from the seashore for students to examine.

- Species – review the various types of species that live on the seashore. These can include:
  - Cnidarians (the jelly animals)
  - Worms
  - Shells and Relatives
  - Crabs and Relatives
  - Starfish and Sea Urchins
  - Fish

### **Activity:**

#### **Scientific Recording and Drawing**

#### **Discussion**

1. Provide an introduction and overview to the Seashore looking at the environment (substrate), plants, seaweeds and species. Provide a presentation to the class about the seashore and review the animals that are being kept in the Explorers Aquarium.
2. Explain to the students that they are to imagine themselves as scientists visiting an undiscovered country or another planet and they are discovering species and plants that have never been seen by anyone before. The animals in the aquarium have been collected as samples. As scientists' it is their job to create a "Record of the Animal Life". They should record as much information as possible for future scientific investigations.
  - The students will need to complete the worksheets recording information about each species / seaweed: Name (Irish & English,), Colour, Size, Texture, Shape, Location on the beach species animals are likely to be found (including zones), Food they eat, How have they adapted to cope with the exposure of the sun, salt water, crashing waves etc. What does the species / plants remind them of?
  - The students should draw a detailed picture of the species and seaweeds. Each drawing should be labeled identifying the different parts. The seaweeds should show the holdfast, stipe, fronds, air bladders, reproductive bodies etc. The species should identify all of their key features. Encourage the students to use their own words to describe and create stories and anecdotes about the plants and species. Depending on the age of students, they could also include biological information about the species and seaweeds: Movement / Respiration / Sensitivity / Growth /Reproduction / Excretion /Nutrition.
  - The students should be encouraged to examine, investigate, and discuss their finds with other students.



**DESCRIPTION**

English / Irish Name: \_\_\_\_\_

Animal / Plant Group: \_\_\_\_\_

What colour am I? \_\_\_\_\_

What size am I? \_\_\_\_\_

What texture am I? \_\_\_\_\_

What shape am I? \_\_\_\_\_

Where do I live? \_\_\_\_\_

\_\_\_\_\_

What do I eat / what eats me? \_\_\_\_\_

\_\_\_\_\_

What do I remind you of? \_\_\_\_\_

\_\_\_\_\_

Other Information: (e.g. how do I breathe, reproduce etc.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Scientific Drawing**