



Date	Class Level Fifth and Sixth <small>May be suitable for younger children</small>	Subject Science / Geography
Strand Living Things / Natural Environments		Strand Unit Plants and animals / Rocks and Soils
Title Plant and Animal Life on the Seashore - Creating a Seashore, Species and Seaweed Guide.		
Objective(s) The children will create a Seashore, Species and Seaweed Guide. The lesson plan includes a series of activities for in the classroom and / or on the seashore including completing drawings and illustrations from observation. The children will also write about the seashore animals and plants demonstrating their understanding of the animals, habitats and the zones where the animals and seaweeds are typically found.		
Skills Required The children will create drawings of animals and the seashore environment developing their skills using line, shape, form, colour and tone, texture, pattern and rhythm as well as space.		
Learning Objectives The child will be enabled to: <ul style="list-style-type: none"> • Draw from observation • Use drawings to record the sand, shingle on the seashore • Write to communicate the different types of rocks and sand found on the seashore • Use drawings to record animals and plants in the natural environment. • Write to communicate the different animals and seaweeds found on the seashore. • Learn and understand the animals and seaweeds names in English and Gaeilge. • Prepare for exploring the seashore environment, questioning, observing and investigating the habitats, animals and seaweeds. 	Learning Activities Preparation This lesson plan includes a series of activities that can be carried out on the seashore and in the classroom based around drawing and writing about the animals and plants on the seashore. This lesson may be started prior to going to the beach by discussing and researching animals that the children think they may find on the seashore. Refer to the Explorers Presentations on www.explorers.ie : <ul style="list-style-type: none"> • The Explorers seashore ecology PowerPoint presentation • Living things – simple presentation • Seashore animals sorting and classifying presentation Activities can be started on the seashore and completed back in the classroom. It is advised that you prepare your students for their seashore visit using the following resources which can be found on www.explorers.ie <ul style="list-style-type: none"> • Preparing for a fieldtrip and planning a trip to the seashore checklist. • Safety on the seashore code • Seashore conservation code. 	

Students can also view the Explorers Seashore Presentation, the living things presentation and the seashore animals sorting and classifying presentation to familiarise themselves with seashore animals and plants, their features and how to draw them.

KWL chart:

Begin the lesson using a KWL chart, where students can track information before and after the lesson on what they know about seashore animals and plants.

Activity 1. Introduction to seashore animals and plants and producing scientific drawings.

Talk and Discussion:

Start the activity with a story about how over hundred years ago when scientists were exploring the seashores and oceans, they had to draw the animals in detail – as they didn't have cameras to record the information.

Beautiful pictures were drawn where the artist provided the finest details of the animals. (Search for pictures on the web to illustrate e.g.

Challenger Expedition 1872, illustrations of animals).

Explain to the students that they are to imagine that they have discovered a new country with new animals and plants that need to be recorded.

They are going to create a seashore guide and draw a selection of animals and seaweeds that they are likely to see on the seashore.

Note some of this activity can be done in class prior to going to the seashore by showing a selection of animals on a white board or as handouts for the students to draw. See the Explorers Seashore Presentation for images of animals and plants found on the shore.

Alternatively, the drawing can be done on the seashore as part of an investigative approach. The keys can then be completed back in class.

Activity 2: Producing a species profile including a scientific drawing and basic written information.

Provide the worksheet (attached below) and ask the students to find an example of an animal or plant from one of the following categories on the seashore. Get the students to find approximately a different type of animals and seaweed each. Alternatively, if in class show a selection of animals/plants on the white board or use resource books that students can draw from:

- Shells
- Crabs & Relatives – Crustaceans
- Fish
- Starfish & Sea Urchins – Echinoderms
- Sea Anemones & Relatives – Cnidarians (Jellyfish)
- Seaweed

Encourage the students to record as much about the animal or plant as possible. If in class provide information about each animal e.g.

- What type of animal is it?
- What is its English / Irish name?
- Where it is found on the seashore – where would I normally be found (e.g. under rocks, in the sand etc) and what zone would this be in?
- What size is the animal? Ask students to compare to an everyday item if they do not have a method for measuring, such as long as my show, as long as my little finger.
- What does it eat?

For older students, also discuss and elicit the following biological information (pending the age of students) using the acronym: MRS GREN

- Movement
- Respiration
- Sensitivity
- Growth
- Reproduction
- Excretion
- Nutrition

Let the students record the additional information based on their observations:

- What colour is the animal / seaweed?
- What texture the animal / seaweed?
- What shape the animal / seaweed?
- What does the animal remind the student



of – e.g. what name would you call it?

Drawing:

When in class further drawing and artwork may be done to complete the keys including making covers for the seashore guides. These can be used for the title, students (authors) name, date, where animals were recorded etc.

This profile can be repeat until the student has produce a collection of profile sheets and information can be added by reviewing the Explorers Species Information book on www.explorers.ie

Resources

Prior to going to the seashore:

- KWL chart
- The Explorers seashore ecology PowerPoint presentation
- Living things – simple presentation
- Seashore animals sorting and classifying presentation
- Internet access – show images of sea animals drawn by scientists / artists during expeditions e.g. Challenger Expedition 1872, illustrations of animals

On the seashore:

- Seashore Worksheet (at the end of this lesson plan – My Seashore Guide)
- Pencils, rulers, erasers etc
- Small handheld microscopes
- If on completing the exercise on the seashore use a clipboard to draw on and plastic slip over it in the event of rain.
- Also include seashore exploration items including wellies, buckets, plastic bags, mini handheld microscopes etc – see Explorers lesson plan on Seashore safaris for more information.
- Explorers Species Information Book

In class:

- samples of sand / shells from the local beach.
- Materials to decorate the cover for the Seashore guide including card and ribbon to tie the pages together.



Differentiation	
Higher and Lower order questioning. Differentiate group activities and roles to account of individual needs, by support, task. Mixed ability pairing.	
Assessment	
Students: KWL chart (What I know, What I want to know, What I learned) Teacher observation and questioning: Mind Mapping Examine learning outcomes before and after e.g. knowledge, understanding, and skills. Evaluation: Reflect on learning experiences that lead to the outcomes e.g. attitudes, enjoyment, as well as motivation to learn about the subject.	
Linkage and Integration	
Science – Living Things - Plants and animal life English – Oral Language / Writing - Competence and confidence in using language Gaeilge – Labhairt / Scríbhneoireacht - Ag cothú spéise, Ag tuiscint teanga, Ag úsáid teanga.	



My Seashore Guide

By

Name: _____



My Seashore Guide

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Observations about the Seashore

The seashore that I am visiting today is called:

Where is the seashore located?

Circle what type of seashore you are visiting?

Rocky Shore

Sandy Shore

Shingle Shore

Muddy Shore

Describe what you see on the shore.

Is it sheltered by surrounding land? Are there any waves? Is there seaweeds growing on the rocks? Are the shores exposed? Are there any human structures?

Draw an illustration of the seashore as if you were a seagull flying above. You should show the shape of the shore indicating where the land, rocks and ocean are located.

Observations about the sand, shingle or rocks on the seashore

Record your observations of the sand, shingle or rocks on the seashore.

1. Record your observations of the sand, shingle or rocks in column one e.g. size, shape, colour.
2. Explain why you think the sand, shingle or rocks are the way they are in column two. Inference

	Observation	Why
Size		
Shape		
Size		

What colours do you see in the sand, shingles or rocks?

Record the colour on the sand. Take a sample of the sand to glue on the square when you are in class.



Sand is made up of many different things. Lots of materials on the beach can break down into tiny pieces to make up sand. Investigate your sand sample and circle the items that think you can observe. A little hand held microscope is useful for this exercise.

Pieces of glass Pieces of wood Pieces of shell Coral

Small rocks Pieces of seaweed Pieces of plastic

Other

Explanaiton _____

The Seashore Zones - Scientific Recording and Drawing

Draw a picture of the seashore showing the division of ZONES. Provide information of the main plants and animals and where they are likely to be found in the different zones on the seashore. The Animals: Shells, Crabs & Relatives – Crustaceans, Fish, Starfish & Sea Urchins – Echinoderms, Sea Anemones & Relatives – Cnidarinans

	<p>Splash Zone:</p>
	<p>Intertidal Zone:</p> <p>Upper Shore</p>
	<p>Middle Shore</p>
	<p>Lower Shore</p>
	<p>Subtidal Zone:</p>

Example Illustration showing the zones of the sea shore showing the different plants and seaweeds found in the different zones on the seashore:



Image courtesy of © John Joyce, Marine Institute

Observations about Animals:

Draw your favorite animal from the seashore in the boxes below. Then fill in the information about the animal to help describe it.



Don't forget to carefully look at the shape of the animal that you are drawing. Does it have sharp or rounded edges? Remember to draw your picture BIG!

Do I have more than one colour?

What type of animal am I _____

My English Name is: _____

My Irish Name is: _____

What colours am I _____

What size am I _____

What texture am I _____

What shape am I _____

Where do I live and what zone on the beach did you find me

What do I eat _____

What do I remind you of _____

Observations about Seaweeds:

Draw your favourite seaweed from the seashore in the boxes below. Then fill in the information about the animal to help describe it.



Don't forget to carefully look at the shape of the seaweed that you are drawing. Does it have sharp or rounded edges? Remember to draw your picture BIG!

Do I have more than one colour?

What type of animal am I _____

My English Name is: _____

My Irish Name is: _____

What size am I _____

What texture am I _____

What shape am I _____

What colours am I _____

Where do I live and what zone on the beach did you find me

What do I eat _____

Observation, Evidence and Inference Words

Use the mind map below showing the new words you have learned while on the seashore creating your seashore shore guide.

