



Explorers Education Programme

Date	Class level 5 th - 6 th	Subject Maths
Strand Data	Strand Unit Representing and interpreting data	
Title Data on the seashore		
Objective(s) The children will create simple data sets based on living things on the seashore. They will organise data and represent it using pictograms, single and multiply bar charts. Sixth class students will represent data using simple pie charts, as well as explore and calculate averages of simple data sets.		
Skills Required Students will need to apply prior knowledge of the types of living things on the shore, classify animals and plants and make connections between groups of animals and plants. Understand the data collected.		
<p>Learning objectives</p> <p>The child should be enabled to</p> <p>collect, organise and represent data using pictograms, single and multiple bar charts and simple pie charts</p> <p>compile and use simple data sets</p> <p>explore and calculate averages of simple data sets</p>	<p>Learning activities</p> <p>Preparation: This lesson plan can be started on the seashore and completed make in the classroom. Before visiting the seashore familiarise the students with the types of flora and fauna that live there by showing the Explorers Seashore Presentation.</p> <p>It is also advised that you prepare your students for their seashore visit using the following resources which can be found on www.explorers.ie</p> <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. <p>Guided and Discovery Learning</p> <p>Activity 1 Ask your students to collect data (numbers) on one type of animal or plant on the different zones on the shore (upper, middle and lower). See illustration on zonation on the shore on www.explorers.ie teacher resources.</p>	



This data can then be used to produce a:

- Simple pictogram
- Single bar chart
- Simple pie chart.

Put the students into small groups and ask them to calculate the average number of the animal or plant on each zone on the shore.

Activity 2

Ask your students to collect data (numbers) on animals and plants on one zone of the shore. This can be repeated at other zones and data from the zones can be compared. To ensure a fair comparison ask students to collect data for a set period of time on each zone.

Students can then calculate the total number of animals and plants for each zone separately. This data can be used to:

- Construct single bar charts
- Pictograms
- Simple pie charts

Next, students can compare the total numbers of animals and plants on the different zones on the shore with each other. This data can be used to create:

- Multiple bar charts

Students can calculate the average number of plants and animals on the seashore. This data can be used for:

- Single bar charts
- Pictograms
- Simple pie charts

Activity 3

Ask your students to collect data (numbers) on animals and plants in a set area on the shore, such as in a hula hoop or quadrat (square frame used for sampling living things).



Explorers Education Programme

	<p>This can be repeated and data from the sampling areas can be compared. To ensure a fair comparison ask students to collect data for a set number of sampling areas.</p> <p>Students can then calculate the total number of animals and plants for each area separately. This data can be used to:</p> <ul style="list-style-type: none">• Construct single bar charts• Pictograms• Simple pie charts <p>Next, students can compare the total numbers of animals and plants in the different areas with each other. This data can be used to create:</p> <ul style="list-style-type: none">• Multiple bar charts <p>Students can calculate the average number of plants and animals on the seashore. This data can be used for:</p> <ul style="list-style-type: none">• Single bar charts• Pictograms• Simple pie charts <p>Resources</p> <ul style="list-style-type: none">• Data collection sheet• Pencil
<p>Differentiation Teacher support and mixed ability grouping. By task/ activity.</p>	
<p>Assessment Question and answer, Oral feedback from children, teacher observation, teacher check, and pupil work samples.</p>	
<p>Linkage and Integration Science: Living things- Ask the students to produce a species profile for one of the animals or plants found on the shore. Visual Art: Drawing- ask the students to draw one of the animals or plants found on the shore</p>	



Explorers Education Programme

Data Collection Sheet

Activity 1

Insert the name of the animal or plant which is being studied. Insert the number in each zone in the space provided.

Zone	Upper	Middle	Lower
Name of the Animal or Plant			

Activity 2

Insert the name of the animals and plants which are identified in each zone. Insert the number in each zone in the space provided. Also note the amount of time spent searching in each zone: _____ mins

Name of the Animals or Plants	Upper zone	Middle zone	Lower zone	Total	Average

Activity 3

Insert the name of the animals and plants which are identified in each quadrat or hula hoop. Insert the number in each area in the space provided.

Name of the Animals or Plants	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Total	Average