

Explorers Education Programme

Lesson Plan: Recognising and Interpreting Data

Class: Junior Infants / Senior Infants

Strand: Data

Strand Unit: Representing and interpreting data



TITLE: SEA ANIMALS AND DATA

Aim / Description:

The aim of this lesson plan is to introduce students to data by allowing them to sort and classify different sets of sea animals such as sea stars, fish, turtles, whales, sea snails, and seahorses. For more information on these species and their habitats see the teaching materials found at www.explorers.ie

Animals can be sorted based on colour, shape and size, and function. Students can also use sets of seashells to sort real objects based on shape, size and texture.

Students can use the sea animal pictures and seashells to represent and interpret a set of simple mathematical data based on real objects, pictures and models.

Materials

- Worksheet (following the lesson plan)
- Scissors
- Collection of empty seashells from the seashore

Activity:

SORTING AND CLASSIFICATION

- Step 1. Provide the Worksheet to each student. Assist the students in cutting the set of animals along the serrated lines. Allow students to classify the animals according to their colour. Mix the sets up again and ask students to classify animals by size and shape.
- Step 2. Provide students with the assortment of seashells. Allow the students to classify them according to texture. Which shells are rough / which are smooth.
- Step 3. Provide students with pictures of animals from the Worksheet and ask them to classify sets of animals based on different functions. E.g. the set of animals with a tail or fins to help them swim.

Extension for Senior Infants

- Step 4: Ask students to sort seashells based on one criterion: e.g. shells that are white / not white, shells that are rough / smooth. Then ask students to sort sets based on two criteria:

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e.g. shells that are white and rough.

Matching

- Step 5: Divide the class in pairs. Using the sets of animals, classify them based on colour. Ask the students to match them into groups. Which groups are equal/unequal in numbers; more, as many as/ less than? Repeat this with sets of seashells classified based on texture.

REPRESENTING AND INTERPRETING DATA

- Step 6: Using the fish picture from the worksheet explain to students that this represents a pet fish. Ask the students how many of them have a pet fish. Give each of these students a picture to represent the pet fish. Count the number of students who have a picture. Explain how this number represents a set of data e.g. the number of students who have a pet fish.

Extension for Senior Infants

- Step 7: Using the sets of sea animals ask students to choose whether they would like to have a pet fish or a pet turtle. Give students a picture of their chosen pet.
- Step 8: Pictures are arranged in two columns or rows (See example below). Discuss and compare the results. Find a common baseline and discuss what this is with the students, e.g. how both types of picture (fish and turtle) represent one animal and that they both represent the type of animal students would choose as a pet.

Sample table with two columns

| Pet Fish | Pet Turtle |
|----------|------------|
| | |

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Outcome / Objective:

The children in the class should have developed an understanding of early mathematical activities using data for:

- **Sorting**
- **Classification**
- **Matching**
- **Representing**
- **Interpreting**

The children in the class should have developed skills in the following:

- **Communication and expression**
- **Understanding and recalling**
- **Reasoning and implementing**
- **Applying and problem solving (Senior Infants)**

