

## Explorer Education Programme



**Lesson Plan: Shapes and Spaces**

**Class: First Class / Second Class**

**Strand: Shape and Space**

**Strand Units: Spatial awareness, Symmetry, Angles**

### **TITLE: SHAPES AND SPACES**

#### **Aim / Description:**

The aim of this lesson plan is to develop the students understanding of particular concepts of spatial awareness; symmetry, and angles using pictures that include marine animals and items from the seashore.

For more information on sea animals and their habitats see teaching materials found at [www.explorers.ie](http://www.explorers.ie)

#### **Materials**

- Worksheet (following the lesson plan)
- Collection of shells from the beach
- Scissors
- Paper and a pencil

#### **Activity:**

##### **SPATIAL AWARENESS**

- Step 1. Provide the 1<sup>st</sup> Worksheet and a shell to each student.
- Step 2. Using the shell get students to pick a spot in the ocean picture and place there shell on it. Next ask the students to move their shell around in a circle without having to turn around the shell.
- Step 3. Once students have done this ask them to walk out the same shape in front of their desk.
- Step 4. Ask students to return to their chairs. When ready ask the students to move the shell in a V shape from one end to the ocean picture to the other and back again by turning the shell around. Again ask the students to walk out this shape in front of their desks.
- Step 5. Once completed ask the students to remain standing in front of their desks. Give the students directions to follow around the classroom: E.g. go from the desk to the window. If possible place some empty shells in a specific location in the room and ask the students to find them using detailed directions using shape and space.

##### **Extension for Second Class**

- Step 6. Ask students to stand in front of their desks. Give the students directions to follow around the classroom that use half and quarter turns e.g. walk three steps forward, turn one quarter to the left and walk ten steps etc.
- Step 7. Ask the students to turn left or right also using vocabulary such as “do a half turn”.

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### SYMMETRY

- Step 9. Ask students to draw two simple shapes such as a circle, and a square and one simple marine animal such as a fish or a starfish on sheet of paper (the back of the worksheet can be used for this purpose).
- Step 10. Allow the students to decide if a shape is symmetrical or not by observation. Ask them to cut out their pictures of shapes with the scissors and fold the shapes to prove if the shape/marine animal has a line / lines of symmetry.
- Step 11. Give students a selection of shells from the shore. Ask the students if they think these shapes are symmetrical. Allow the students to sort the shells into groups based on symmetry e.g. they are symmetrical, have a line / lines of symmetry or they are non- symmetrical, have no lines of symmetry)
- Step 12. Discuss other symmetrical and non-symmetrical shapes including jellyfish, seaweed, submarines, buoys, seabirds etc.

### ANGLES

#### Content for Second Class

- Step 13. Ask students to investigate things that turn and look at their angles including door handles, wheels.
- Step 14. Working in the hall or yard, ask students to spread out and stand so that they all have room to move in a circle without hitting into each other.
- Step 15. Tell the students to pretend they are fish swimming in an ocean. Ask them to make different types of turn; full, half and quarter while they swim in the sea.

#### Outcome / Objective:

The children in the class should have developed an understanding of concepts of space and shape, symmetry and angles (2<sup>nd</sup> class only) using:

- **Appropriate vocabulary**
- **Exploration**
- **Interpreting**

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

- **Understanding and recalling**
- **Communication and expression**
- **Reasoning and implementing**



Worksheet

Diving in the Explorers Ocean

