

Game 3S1: 2-D Shapes

Strand: Shape and Space

Strand Unit: 2-D Shapes

Curriculum Objectives Covered:

- Identify, describe and classify 2-D shapes: square, rectangle, triangle, hexagon, circle, semicircle, oval and irregular shapes.
- Explore, describe and compare the properties (sides, angles, parallel and non-parallel lines) of 2-D shapes.
- Construct and draw 2-D shapes.
- Combine, tessellate and make patterns with 2-D shapes.
- Identify the use of 2-D shapes in the environment.
- Solve and complete practical tasks and problems involving 2-D shapes.

Part 1: “Name the Shape”

Aim: To guess the shape being described by its properties.

Activity Area: Classroom

Duration: 10 minutes

Resources:

- A feely bag
- A selection of 2-D shapes including squares, rectangles, triangles, hexagons, circles, semicircles, ovals and irregular shapes.

Start Playing:

1. The teacher stands at the top of the classroom with a feely bag containing a selection of 2-D shapes.
2. The teacher puts his/her hand into the bag and takes hold of one shape without letting the class see it.
3. The teacher describes the properties of the shape and the class have to guess which one it is, eg. ‘The shape I am holding has X amount of sides/angles/parallel lines...’
4. When a child guesses correctly he/she then takes the place of the teacher and the game continues.

Part 2: “Making Shapes”

Aim: To construct 2-D shapes and see the patterns they make together.

Activity Area: Classroom

Duration: 20 minutes

Linkage: Area

Integration: Visual arts: drawing – An awareness of line, shape.

Resources:

- Cardboard, scissors, pencils, templates, stencils, geostrips and geoboards for constructing 2-D shapes

Start Playing:

1. The second activity involves the construction of 2-D shapes.
2. Each child draws one or two of the same 2-D shape onto a piece of card and cuts it/them out. The children can use templates, or plastic 2-D shapes, to draw their own 2-D shapes.
3. The children then sort themselves into small groups of 4 or 5 children according to the shapes they have made i.e. All the triangles together, all the squares together, etc.
4. In their small groups, the children put their shapes together on the floor in the centre of the room to see if their shapes will tessellate or make a pattern.
5. The whole class then sits in one large circle on the floor around the various tessellations and patterns so that every child can see the shapes.
6. The class can then discuss the tessellations and patterns they have made and identify properties that facilitate or hinder tessellation.

Part 3: “I Spy”

Aim: To find 2-D shapes in the environment.

Activity Area: Classroom

Duration: 10 minutes

Start Playing:

1. The children can simply play ‘I-Spy’ in pairs, eg. ‘I spy with my little eye something in the room that’s a square, triangle etc....’.
2. The children could also be given a list of 2-D shapes to see how many of them they could find in the environment before the next morning, eg. buildings, road signs, printing, household objects etc.

Part 4: “Shape Shifters”

Aim: To find 2-D shapes in the environment.

Activity Area: Classroom

Duration: 20 minutes

Resources:

- A selection of 2-D shapes including squares, rectangles, triangles, hexagons, circles, semicircles, ovals and irregular shapes.

Start Playing:

1. The children work together in small groups.
2. Each group is given a selection of 2-D shapes (these can be taken from the shapes the children made earlier in Part 2) and the following problems to solve.
 1. Using only the squares and the triangles, can you make 1 large rectangle?
 2. Using a minimum of 3 different shapes can you make 1 large square?
 3. Can you make a house/car/bicycle using the shapes?
 4. What other pictures can you make using the various shapes?
 5. Can you make a square or a rectangle using only 6 triangles?
 6. Can you take away 4 triangles to leave a diamond?
 7. Is it possible to make a square using only triangles?
 8. What is the minimum number of triangles needed to make a square?
 9. Is it possible to make a circle using triangles? Why/Why not?
 10. Is it possible to make any other 2-D shape using only circles? Why/Why not?