Constructing 2D and 3D Shapes using Marshmallows and Toothpicks

Class Level: 2nd Class

Learning Objectives:

Recognise and name basic 2D and 3D shapes.

Demonstrate an understanding of the concept of stability and balance in structures.

Create simple 2D and 3D structures using marshmallows and toothpicks.

Resources:

Toothpicks

Marshmallows - small and regular size

Images of various 2D and 3D shapes

Paper plates

Markers

Lesson Introduction (10 minutes)

Using a powerpoint, display images of various 2D shapes. Ask students to identify and name the shapes. Discuss the characteristics of each shape. Use real life objects to present 3D shapes to the class. Ask students to name each 3D shape and discuss the characteristics. Discuss the difference between 2D and 3D shapes.

Exploring 2D shapes (15 minutes)

Distribute paper plates or trays, mini marshmallows, and toothpicks to each student/group.

Show students how to insert toothpicks into marshmallows to create lines, and then connect the lines to form different 2D shapes (e.g., squares, triangles, rectangles).

Allow students time to experiment with creating their own 2D shapes. Encourage them to discuss their creations with their peers.

Building 3D Structures (15 minutes)

Show students how to connect toothpicks and marshmallows to build simple 3D structures, such as cubes and pyramids.

Allow students to work individually or in small groups to build their own 3D structures. Encourage creativity and experimentation.

Plenary (10 minutes)

Have students present the 2D and 3D shapes they created.

Ask students which shapes were easier to build, 2D or 3D and why. Discuss the importance of balance and stability in structures. Ask questions like, "Why do you think some structures stayed upright while others fell over?"

Recap the main concepts learned during the lesson: identifying shapes, creating structures, and understanding balance.

STEM skills are used in many different ways in the world around us. Discuss the different types of jobs that involve using STEM skills we have used today (e.g., architects, engineers, scientists, mathematicians).

Assessment

Observe students' engagement, participation, and ability to create and identify shapes and structures. Listen to their explanations and discussions during the reflection portion of the lesson. Take note of their creativity and problem-solving skills.