

Andrea
Math-Kitecture

Lesson Plan

TITLE: Gumdrop Dome

MATERIALS: Round toothpicks
Gumdrops
Large pictures of domed structures

OBJECTIVES: The students will learn about domes and how they are constructed.
The students will learn how to construct a small dome.
The students will learn why triangles are such a valuable building tool.

DISCUSSION: We will discuss the different types of domes. Pictures will be used to show domes such as Sky dome and Astrodome. We will talk about how they think the domes are made.

As a post-project discussion we will discuss how their structures were made entirely of triangles. How triangles are stable shapes. How when a load is put on a triangle its sides work together to keep the triangle stable. A triangle is the key to building a strong structure. We will also brainstorm to come up with other materials, which can be used (i.e. Mini-marshmallows & toothpicks, large marshmallows & straws, etc.)

ACTIVITY: Form a base by connecting 5 gumdrops in a ring using the toothpicks.
Make a triangle on one side of the base using 2 toothpicks and one gumdrop.
Repeat this procedure all the way around the base.
Connect the gumdrops at the top of the triangles with toothpicks.
Insert a toothpick into each top gumdrop and use one gumdrop to connect them all.
This procedure can be tried with 6 gumdrops also.

VOCABULARY: Dome, triangle, load, stable
M2 Geometry and measurement concepts
M2a give and respond to directions about location.
M2f extend and create geometric patterns using concrete and pictorial models.