



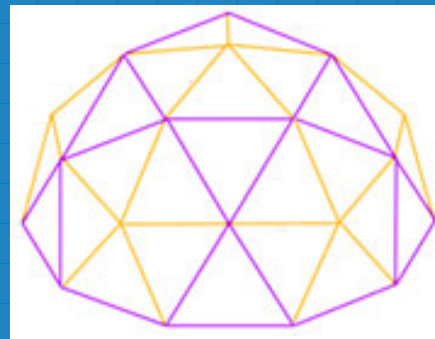
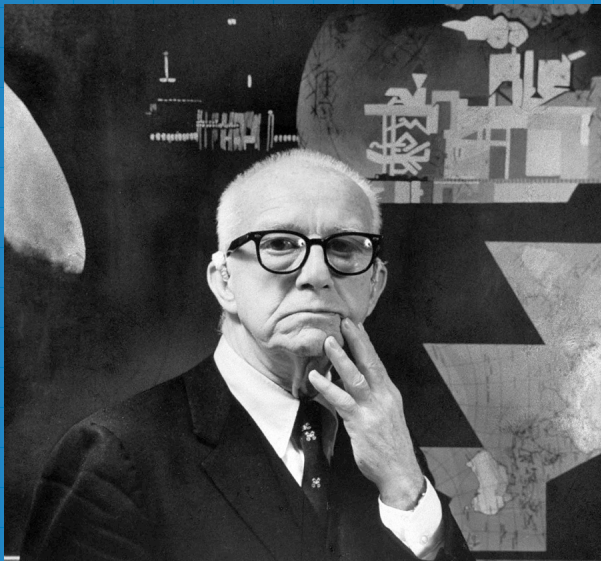
Make your own Geodesic Dome!



Buckminster Fuller,
Inventions: Twelve Around Once
October 23 – December 9, 2012
Joel and Lila Harnett Museum of Art
University of Richmond Museums

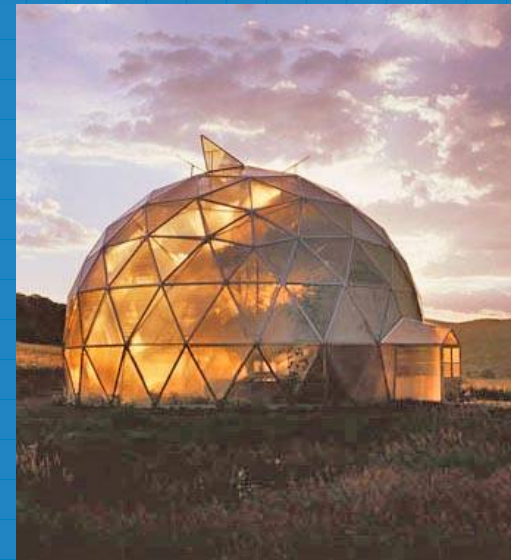
Buckminster Fuller

- 1895-1983
- An architect, engineer, author, designer, inventor, and futurist
- Held 28 patents, authored 28 books, and received 47 honorary degrees
- His most famous invention is the Geodesic Dome.



What is a Geodesic Dome?

- ✓ a sphere-like structure composed of a complex network of triangles
- ✓ This shape is used in jungle gyms, homes, and Spaceship Earth at Disney World Resort's EPCOT!



Materials

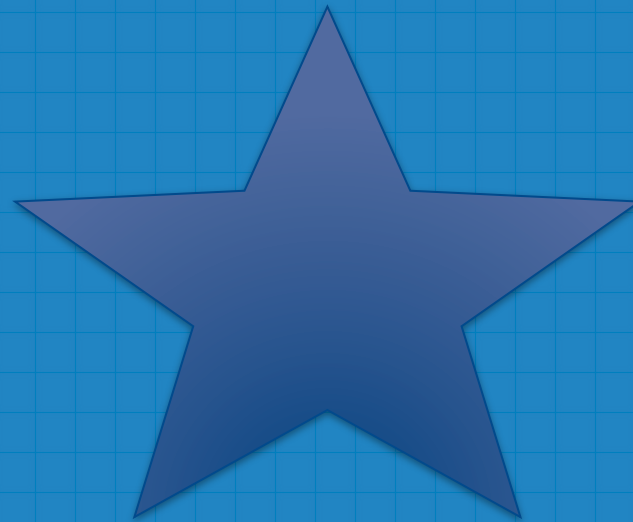
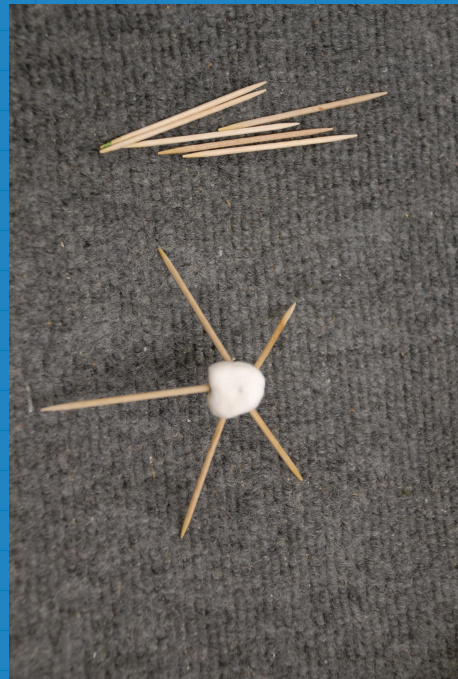
- ✓ Toothpicks (about 25)
- ✓ At least 11 Gumdrops

(You could also use marshmallows or clay. We used Model Magic!)



Step 1

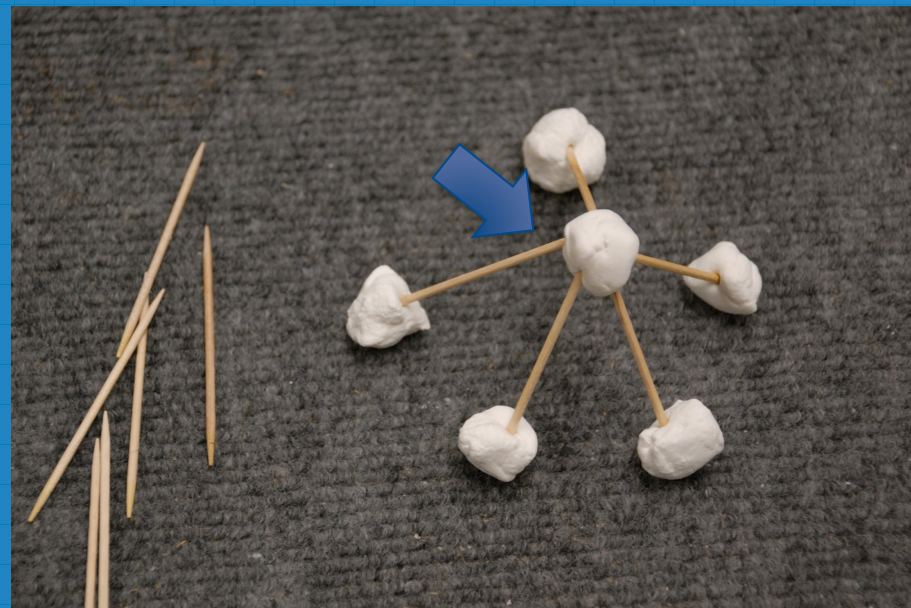
- ✓ Select a gumdrop. Insert five toothpicks into the gumdrop to form a star pattern.



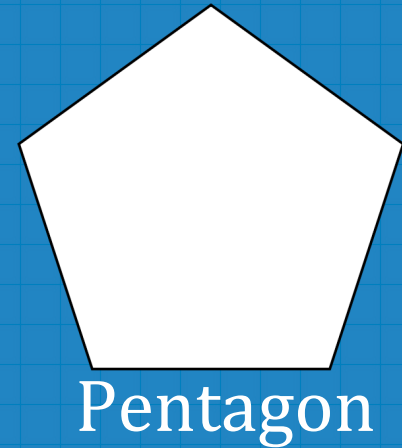
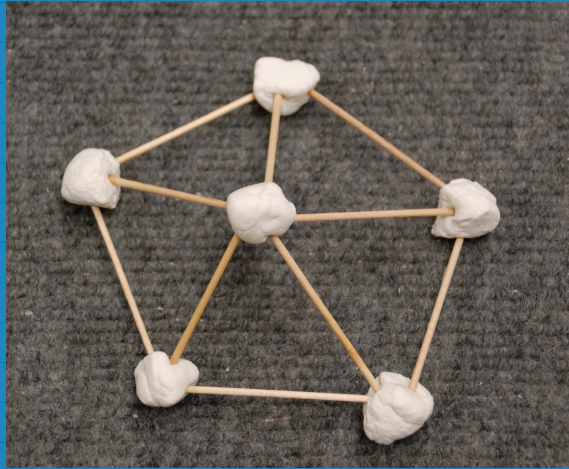
Step 2

- ✓ Add a gumdrop to the end of each of the five toothpicks. The center gumdrop is the apex, or highest point, of this geodesic dome.

Apex: The highest point of anything, such as the peak of a mountain or a pyramid.



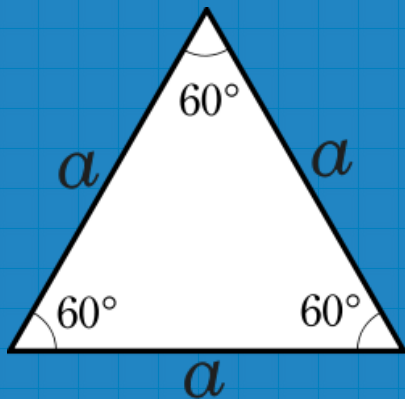
Step 3



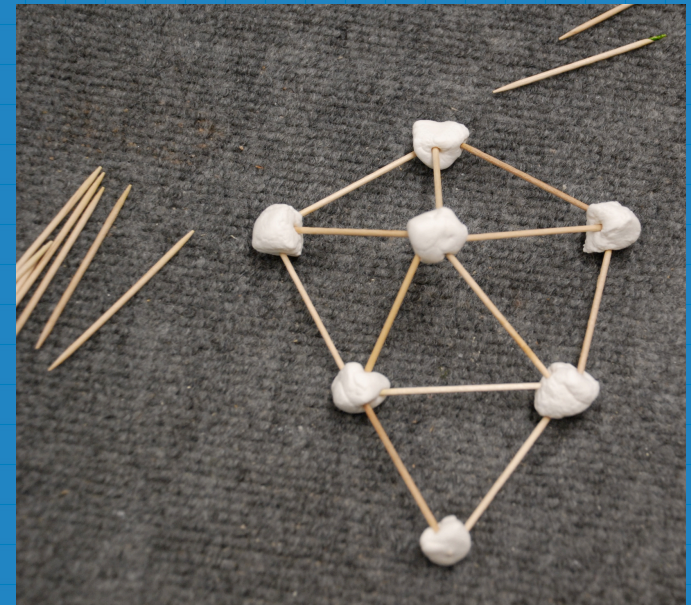
- ✓ Connect the five gumdrops that are on the ends of the star pattern together with toothpicks to form what looks like a pentagon. This makes up the top of the geodesic dome. The sides of the pentagon will serve as the base for five equilateral triangles.

Step 4

- ✓ Construct an equilateral triangle on one of the pentagon sides using two toothpicks and a gumdrop.

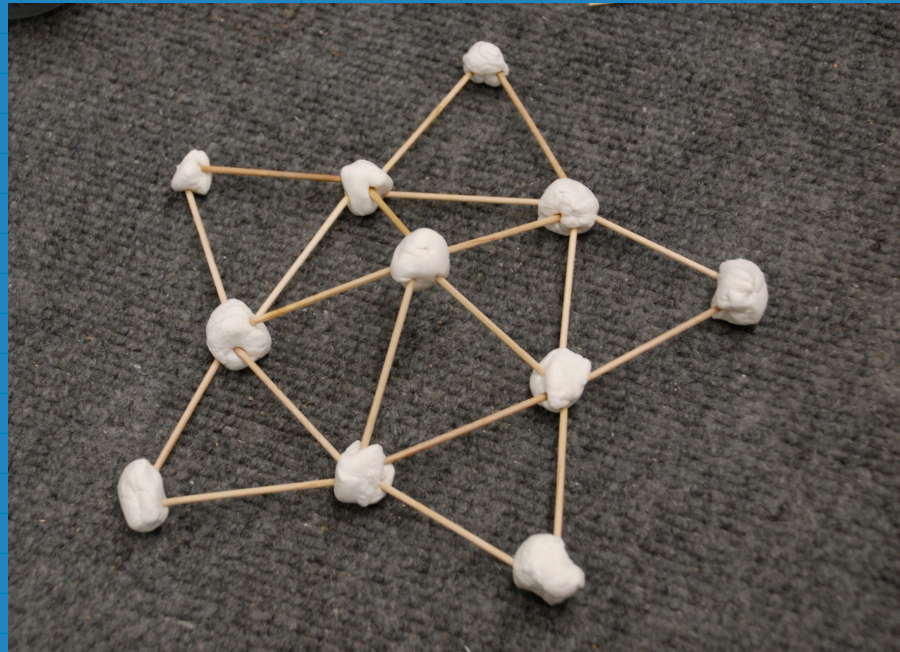


Equilateral Triangle: triangle with all three sides of equal length



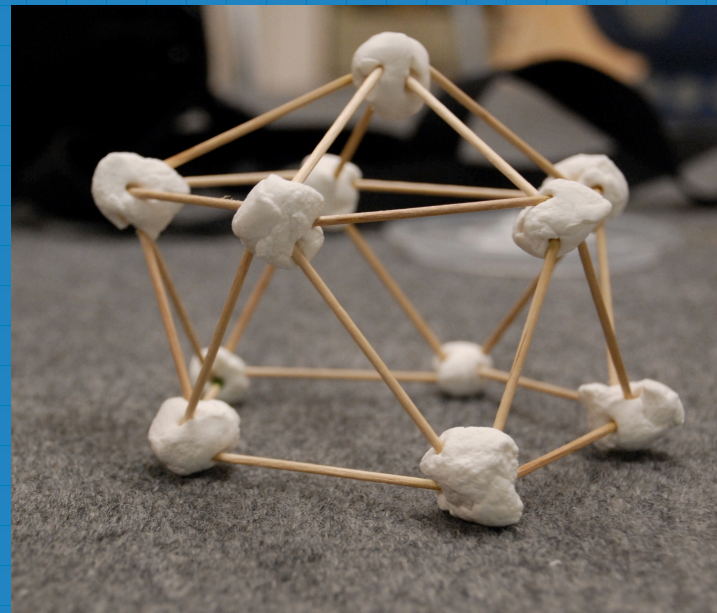
Step 5

- ✓ Construct four more equilateral triangles in the same way on the four remaining sides of the pentagon.



Step 6

- ✓ Connect the gumdrop tops of the five triangles with the five remaining toothpicks. This is the base of the geodesic dome. The sides of the pentagon will serve as the base for five equilateral triangles.





DOME COMPLETE!

*Send us a picture of your geodesic dome to
ddeleon@richmond.edu
and we'll post it on our Facebook, Tumblr, and Twitter!*

*Buckminster Fuller,
Inventions: Twelve around One
October 23 – December 9, 2012
Joel and Lila Harnett Museum of Art
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For more information check out: museums.richmond.edu*



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