

GEODESIC DOMES

ENGINEERING
CHALLENGE

01

Designed by Hannah,
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The brief

Using gumdrops and toothpicks, make your own geodesic dome.

The method

Follow steps 1 – 6 in the diagram below.

Key for cocktail sticks: — 2.5in — 2in

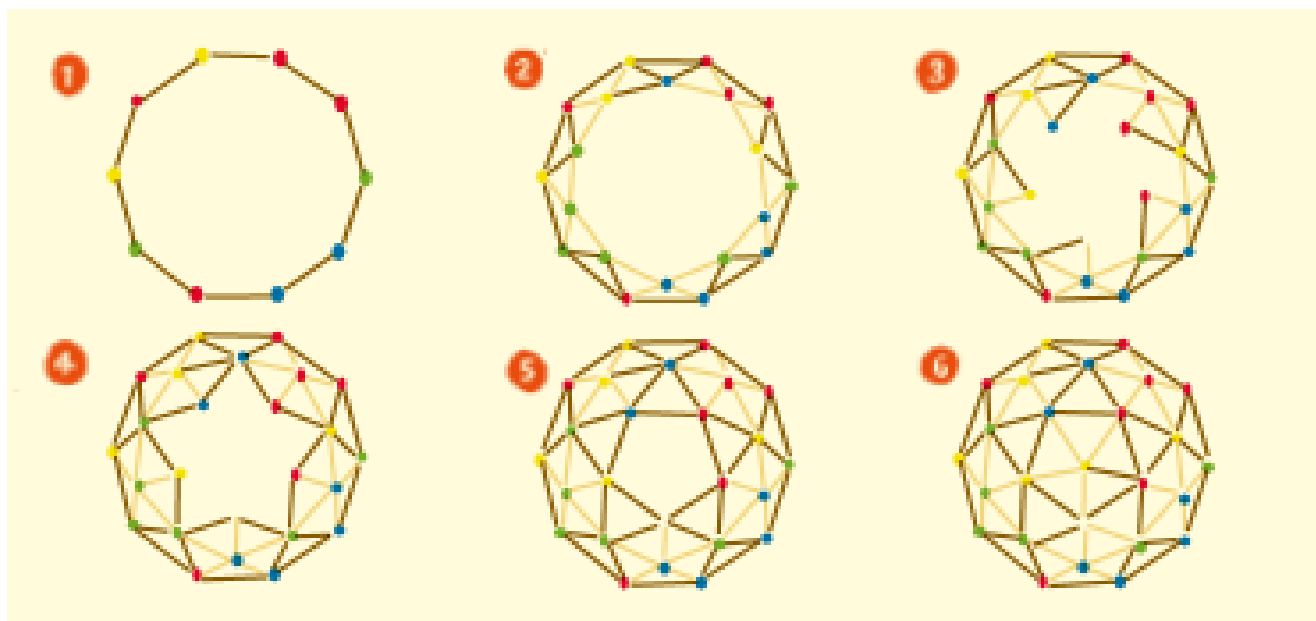
Materials

Toothpicks: 35 at 2.5in
long and 30
cut down to 2in long

Gumdrops

Scissors

(with adult supervision)



How does it work?

Geodesic domes are extremely rigid. Multiple interlocking triangles form incredibly strong structures.

To deform or buckle a triangle you have to compress or stretch the lengths of the sides, which is hard to do as they support each other.

Design icons

Richard Buckminster Fuller,
inventor of the geodesic dome.
He was inspired by beehives,
fishing nets and other 'networks'.

Today there are more than
300,000 geodesic domes
around the world.

