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Matchstick Shapes
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Different Polygons
3 - matchsticks

+ 

3 - valve tubes

Equilateral Triangle
Square

Square easily distorts becomes a rhombus
Pentagon

Pentagon easily changes shape becomes boat shaped
Pentagon easily distorts into a house shape

Pentagon easily becomes an Isosceles Triangle
Hexagon

Hexagon distorts into a rectangle

Hexagon easily becomes a parallelogram
PYRAMID

Joint - of - Four

4 - Tetrahedrons and 1 - Octahedron
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Busy Building!
MATCHSTICK MODELS

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6. PENTAGONAL BOX

7. In a similar manner two separate isosceles triangles can be joined together using matchsticks to make a PRISMA.

8. Two separate squares can be joined with four matchsticks to make a CUBE.

9. Several of these three-dimensional models can be put together to make different kinds of houses and other structures.

Steps:

4. This structure is called a TETRAHEDRON.

5. All its surfaces are equilateral triangles. Triangles are rigid.

6. This triangular house is very strong.

1. Place a hole in the value tube.

2. Insert a third match.

3. Take the equilateral triangle.

4. Simply a T-Joint.

5. This is a joint of three sticks (slightly sharpened).

6. Now insert the three matchsticks with a short stick and poke holes in its value tube.

7. This is a joint of four.

8. So this triangular house is very strong.

SURFACES:

There are 4 corners, 6 edges and 4 triangular faces. Tetrahedron is a 3-dimensional model of a triangle.

THREE DIMENSIONAL MODELS
10. Assemble twelve joints-of-five and thirty matchsticks to make an ICOSAHEDRON.

With joints-of-five, one pentagonal face of the icosahedron can be fitted in to make an IGLOO.

One of the legs of the 'H.'

1. Take two pieces of valve tube about 2 cms. long. Weave a thorn through the hole of one. Then place the thorn through the centre of the other valve tube.

2. Pull both ends of the second valve tube and slide it over the first one. Gently make a joint-of-four from the other end of the second valve tube.

3. Use these joints to make a PYRAMID.

5. The second and the third tubes are at right angles to the first. Insert a small piece of a matchstick in any of the four free legs of the 'H.'

6. Weave the matchstick through the centre of the other leg of the 'H.'

9. You can attach six matchsticks to the star joint.

7. Now remove the six valve tube legs to form a star.

4. Make a joint-of-four but do not remove it from the thorn. Just like the second, insert a third valve tube.

8. This is a joint-of-six. For a joint-of-six, simply cut one of the legs of the 'H.'

2. This is a joint of five. For a joint of five, simply cut one of the legs of the 'H.'

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