



Cube Cat, Cone Cat

Activity Sheet for Students

letsread.asia/CubeCatConeCat



Did you like the story? You sure seem to have learned a lot about different shapes. Now let's make something out of paper that you might not have played with before.

Have you ever heard about a flexagon? It's a shape with two faces that if you turn a certain way, it will reveal more of its faces to you. What you are about to make is a hexaflexagon, which has six sides and six faces. But that's a pretty long name for it. Here's how you can remember it:

- Hexa - because it has six sides (like a hexagon)
- Flexagon - because you can "flex" it a certain way to reveal all its sides.



Before we start making,
Make sure to have these:

1. A4 Paper
2. Scale
3. Pen/pencil





Let's make a Hexaflexagon



Step 1

Cut two strips of A4 paper 3 cm wide.



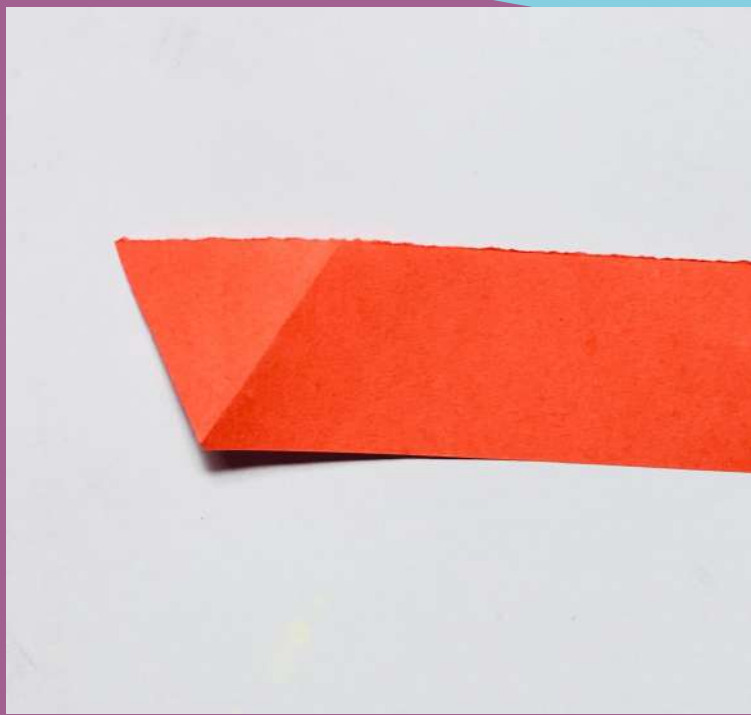
Step 2

Paste the strips together to make one long strip.



Step 3

Cut one end of the strip as above.



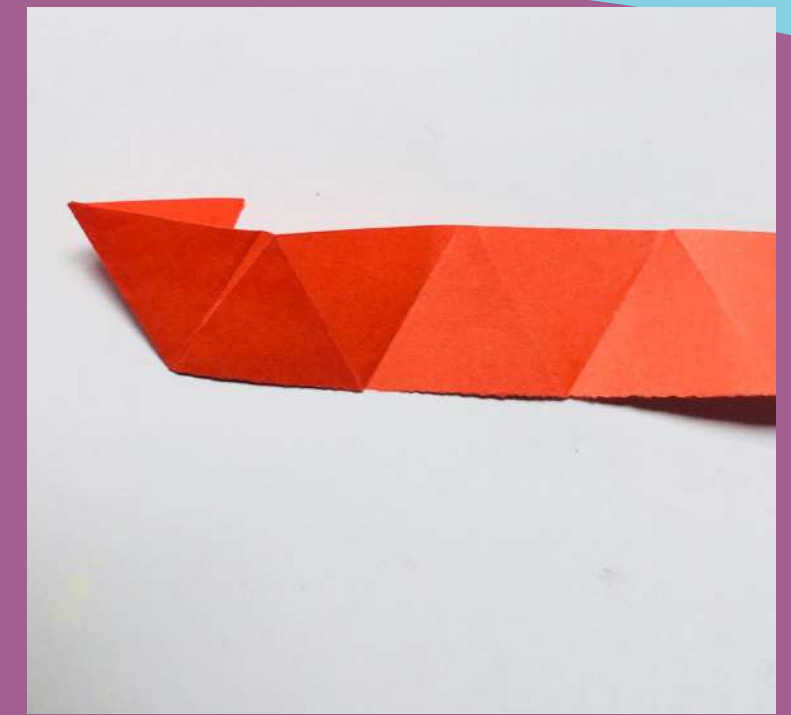
Step 4

Start folding the strip into triangular shapes with a nice crease on the paper.
Note: one fold backwards and next fold forward.



When you open the paper, it should have creases as above.

Note: you will need 18 triangles in total. You can cut out any extra bit remaining.



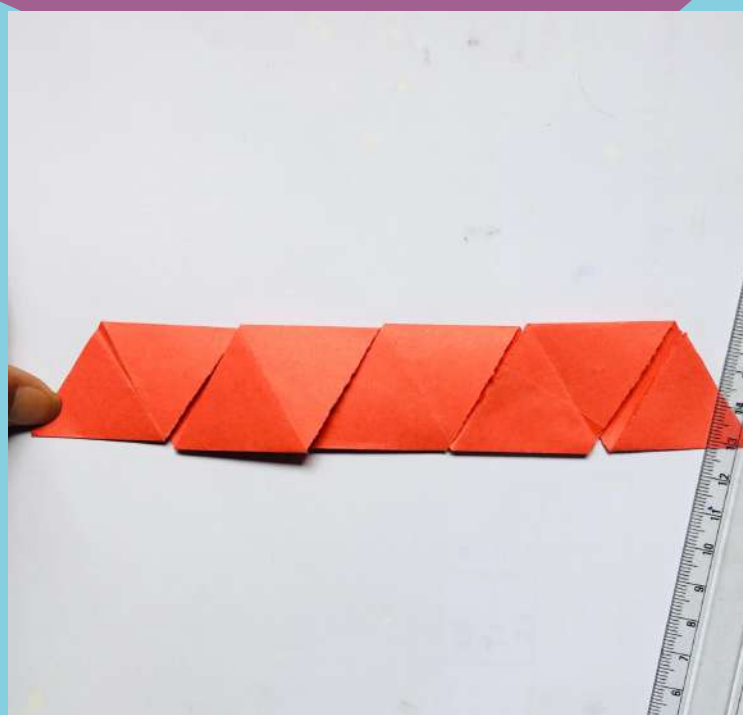
Step 5

Now, fold the first triangle backwards.



Step 6

Now leave one crease, and fold the next crease like before.



Step 7

Continue wrapping the paper around itself in the same way.
Note: Once it is fully wrapped up, you will see nine triangles and a snake shape.



Step 8

Take the first three triangles and fold them backwards.



Step 9

Take the last three triangles and fold them forward. Your hexaflexagon will look like this.



Step 10

Glue the first and last triangle together.



(Final View)

Your hexaflexagon is ready.



Challenge Your Skills

1. Figure out how to fold the hexaflexagon to get different shapes.
2. Use the hexaflexagon to present a story by making drawings on the different faces.



Challenge Your Mind

1. Find out how many different faces are there in your hexaflexagon.
2. What would happen if the triangles on your hexaflexagon were not of the same size?



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WORKSHEET

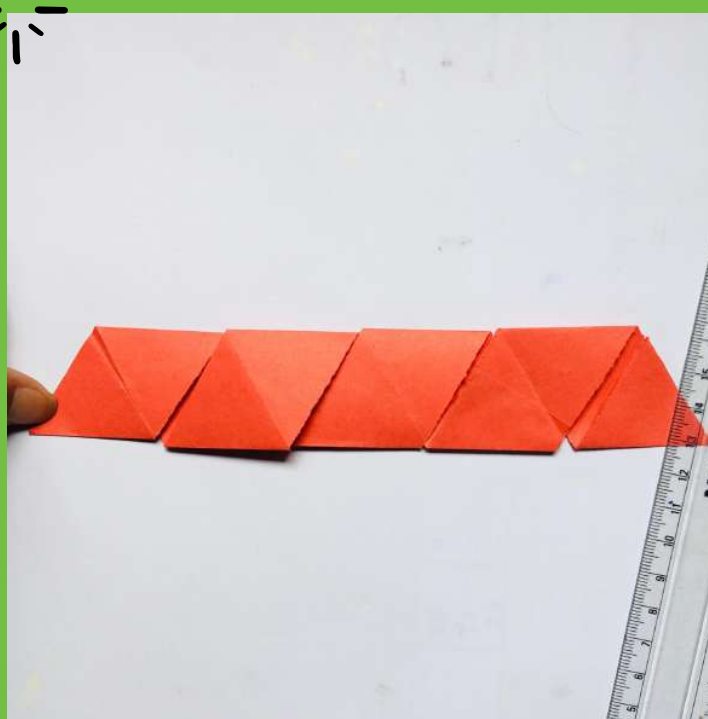


You worked with a lot of different shapes to make your hexaflexagon.

Let's review all the different shapes that you used.

In the table write the names of the shapes that you saw while making the hexaflexagon.

The Steps



The shapes that you can see

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HANDOUT

The simple machine behind the Catapult



The catapult that you made today is a kind of a lever. A lever has a bar and three points. They are the load, the effort, and the fulcrum through which the lever moves. Levers can be of three types, depending on which one of those three points is in the middle of the bar. Find out what type of level your catapult is by discussing with your friends and your teacher.

