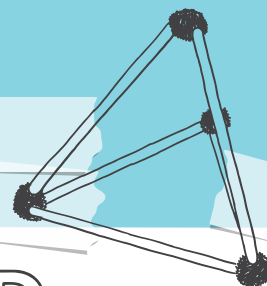


ACTIVITY 1

If you look around at the structures in your home and outside, you'll see that structures are made up of shapes, or polygons. In this activity, we're going to explore some ways to make different kinds of shapes using the chenille stems.

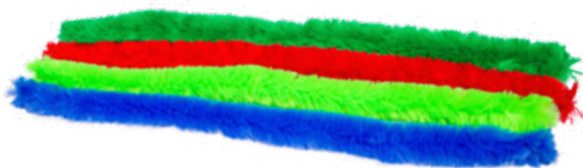
LET'S MAKE



WHAT YOU'LL NEED

INCLUDED

CHENILLE STEMS



NOT INCLUDED

PENCIL

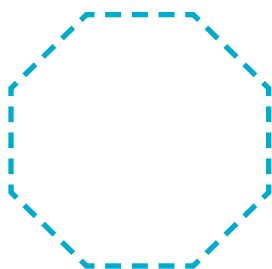


STEP 1

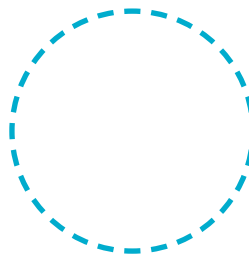
Let's start off with some riddles! Answer each in the following spaces.



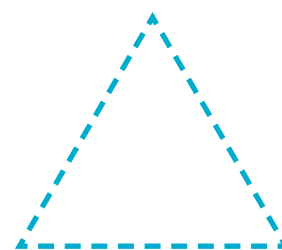
RECTANGLE



OCTAGON



CIRCLE



TRIANGLE

- 1 I have four sides and four corners. Two of my sides are longer than my other two sides. What am I?

ANSWER	DRAW A PICTURE OF IT

- 2 I have eight equal sides and you often see me when I ask you to STOP. What am I?

ANSWER	DRAW A PICTURE OF IT

- 3 I'm not a **polygon** because I have curved sides. I just keep going around and around and around. What am I?

ANSWER	DRAW A PICTURE OF IT

Polygons, or shapes, are closed figures (there are no gaps in the shape) with straight sides and angles (there are no curved lines).



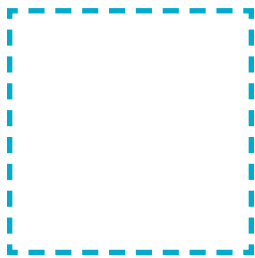
STEP 2

Your turn. Write a riddle where the answer would be a shape.
Ask someone else to solve it!

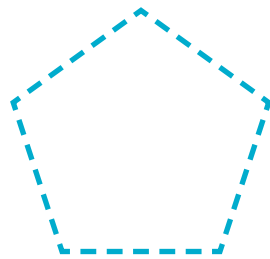


Riddle: _____

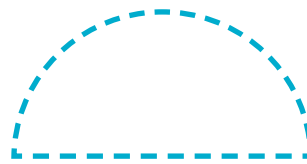
ANSWER	DRAW A PICTURE OF IT



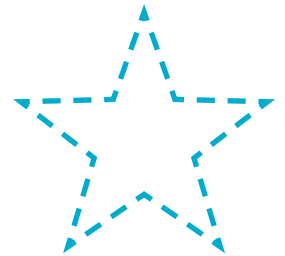
SQUARE



PENTAGON



SEMICIRCLE



STAR

Angles are made when two lines meet – like a corner.

STEP 3

Now, let's see what polygons we can make using the chenille stems. Using one chenille stem, make a square. Notice how many **angles** and edges (lines) it has.

ANGLES _____

EDGES _____

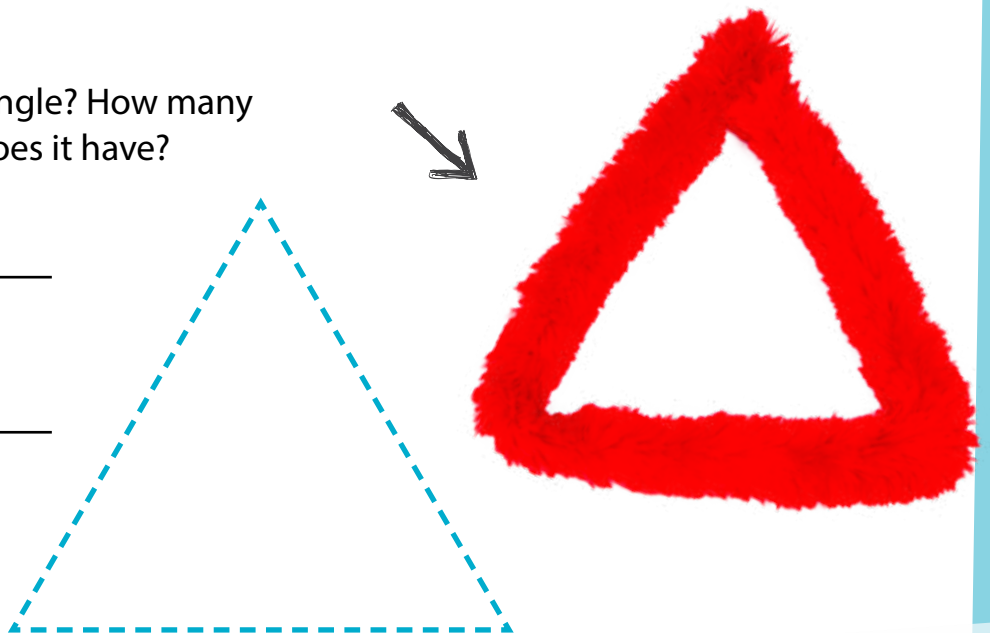


STEP 4

Can you make a triangle? How many angles and edges does it have?

ANGLES _____

EDGES _____



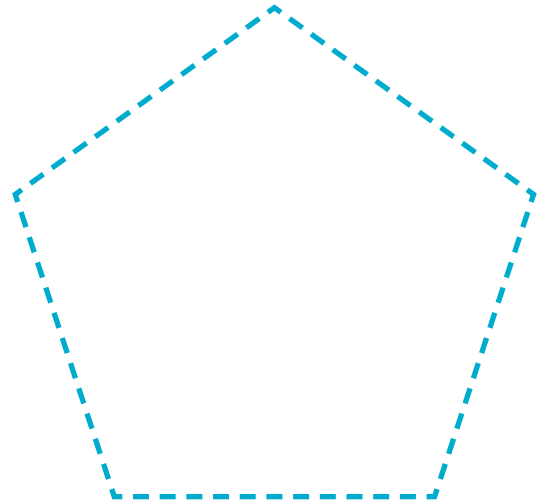


STEP 5

Can you make a polygon with five equal sides? This is a pentagon. You might have heard about the US government building called The Pentagon. Can you guess why it's called that?

ANGLES _____

EDGES _____



THINK ABOUT IT

How many different polygons can you make from one chenille stem? Can you increase that number if you use two or three chenille stems?

Explain to a friend why learning about polygons would help you build better structures.