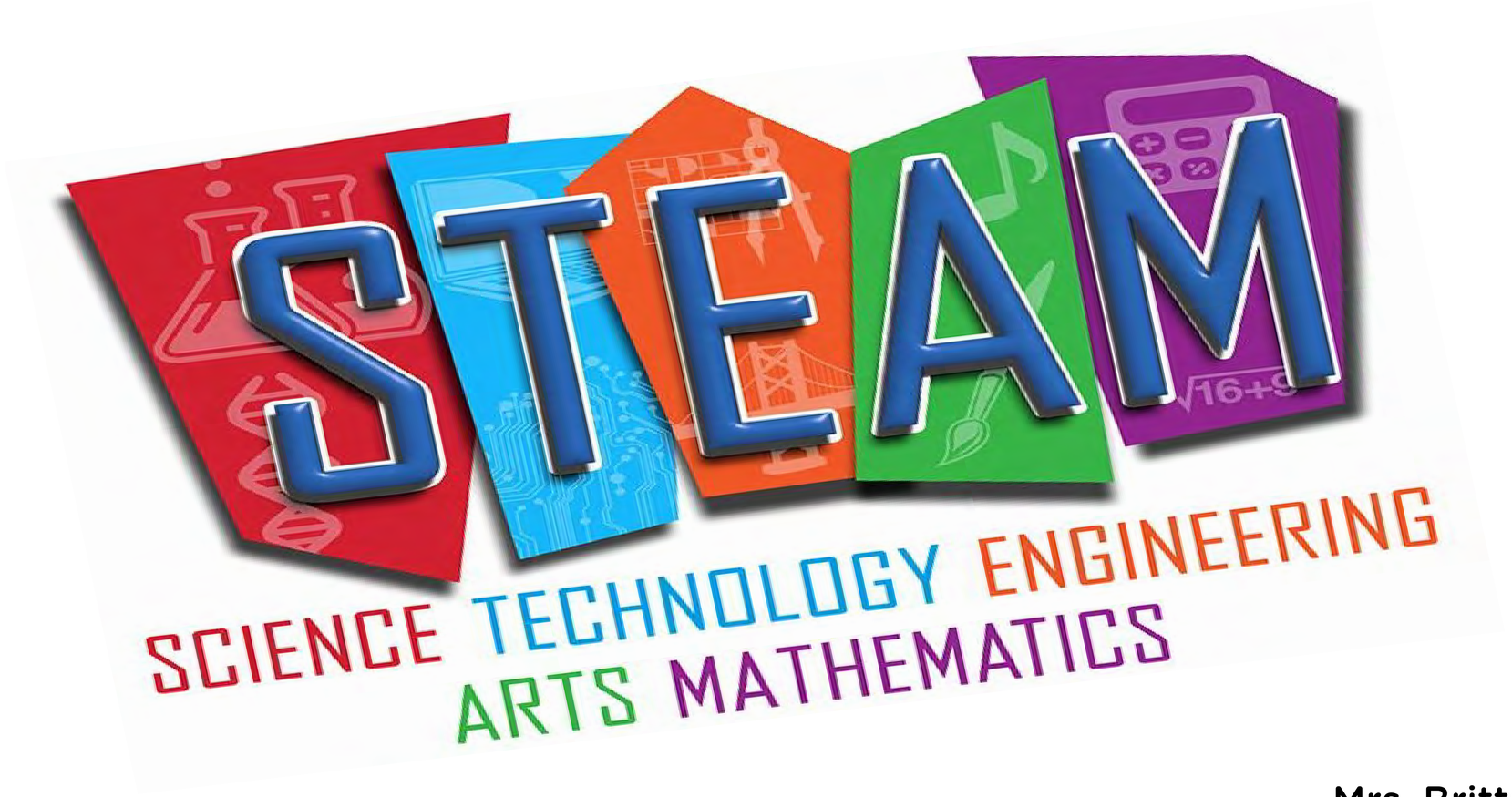
3Doodler EDU



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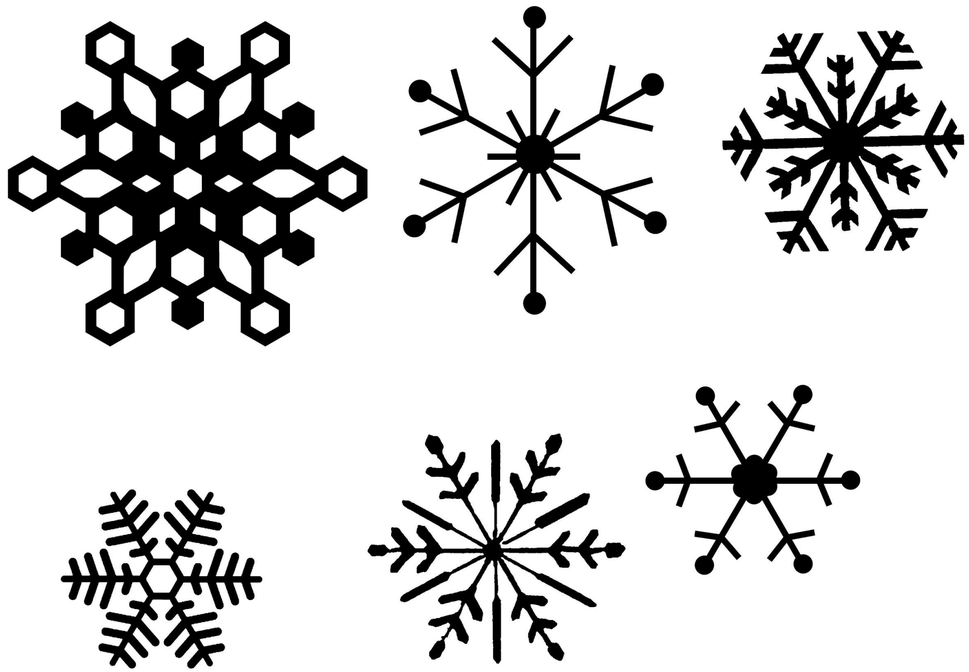
Week 1

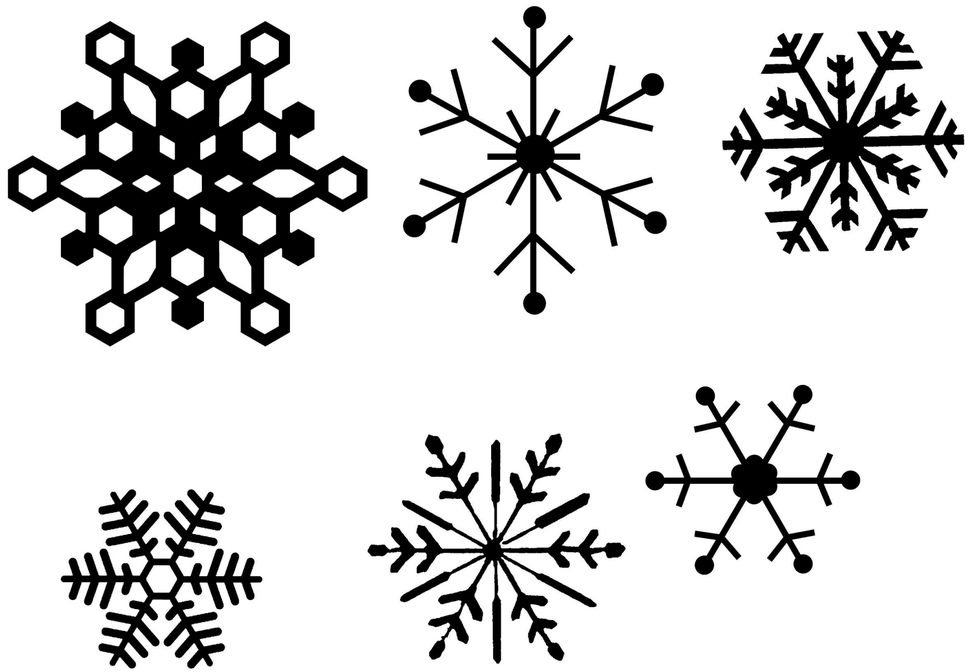
Learn / Plan



What is a pattern?

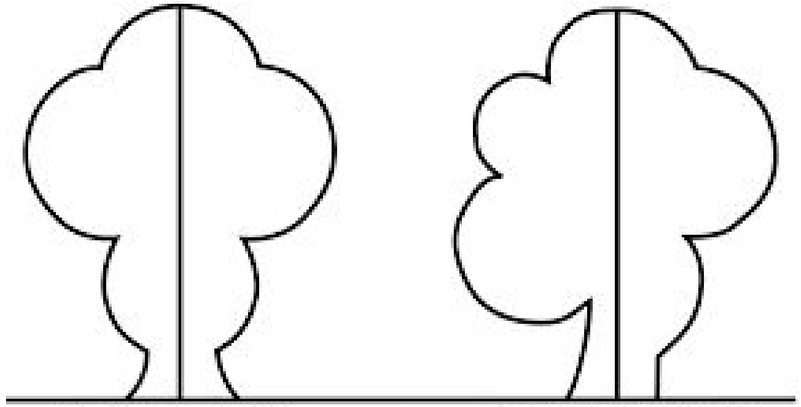
Let's read Snowflake Bentley

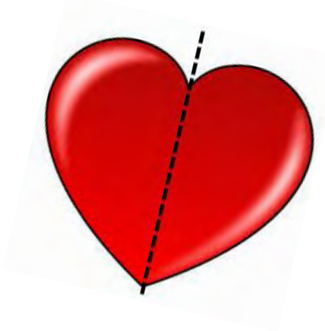
Link: https://www.brainpop.com/science/energy/electriccircuits/

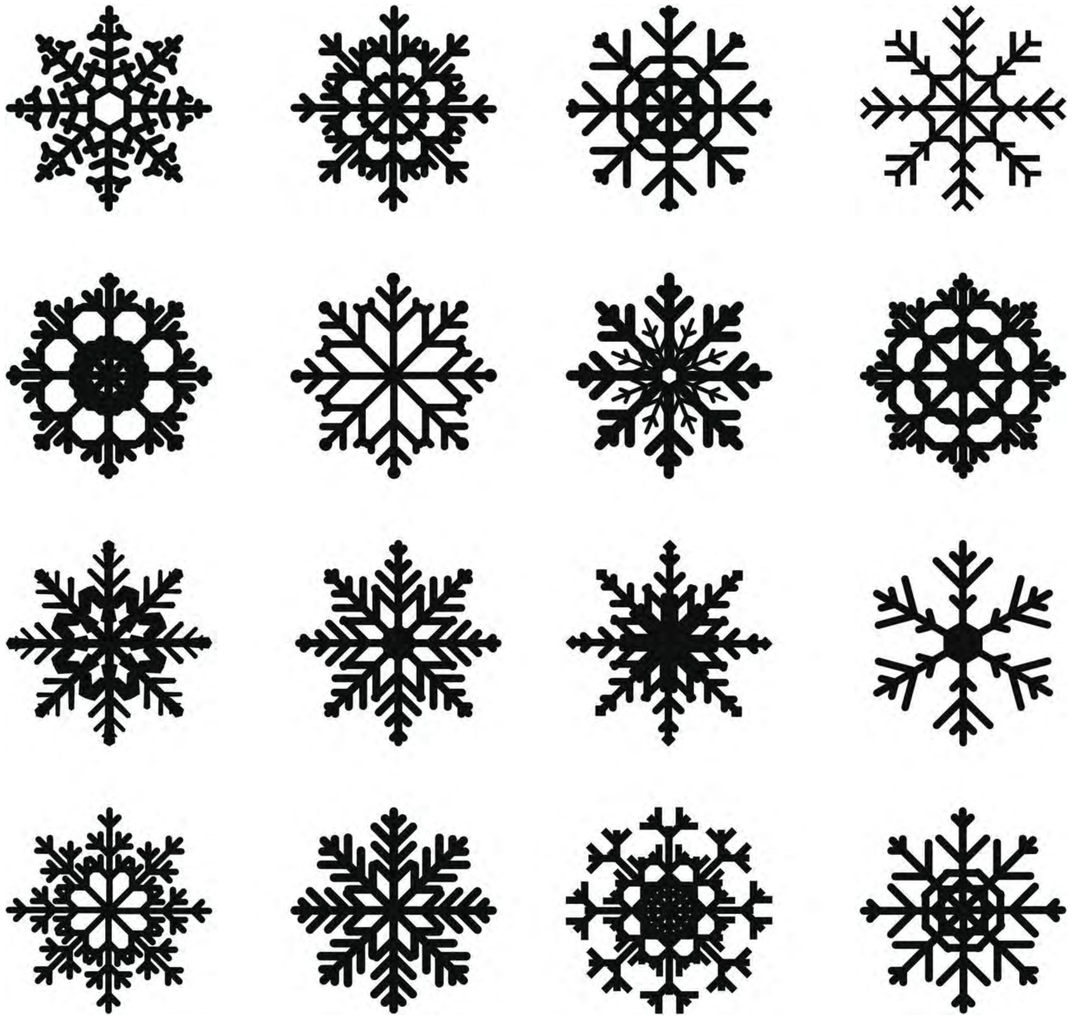


After learning about how snowflakes are made, do you see any mathematical concepts in these snowflakes?

What does it mean for an object to be symmetrical?

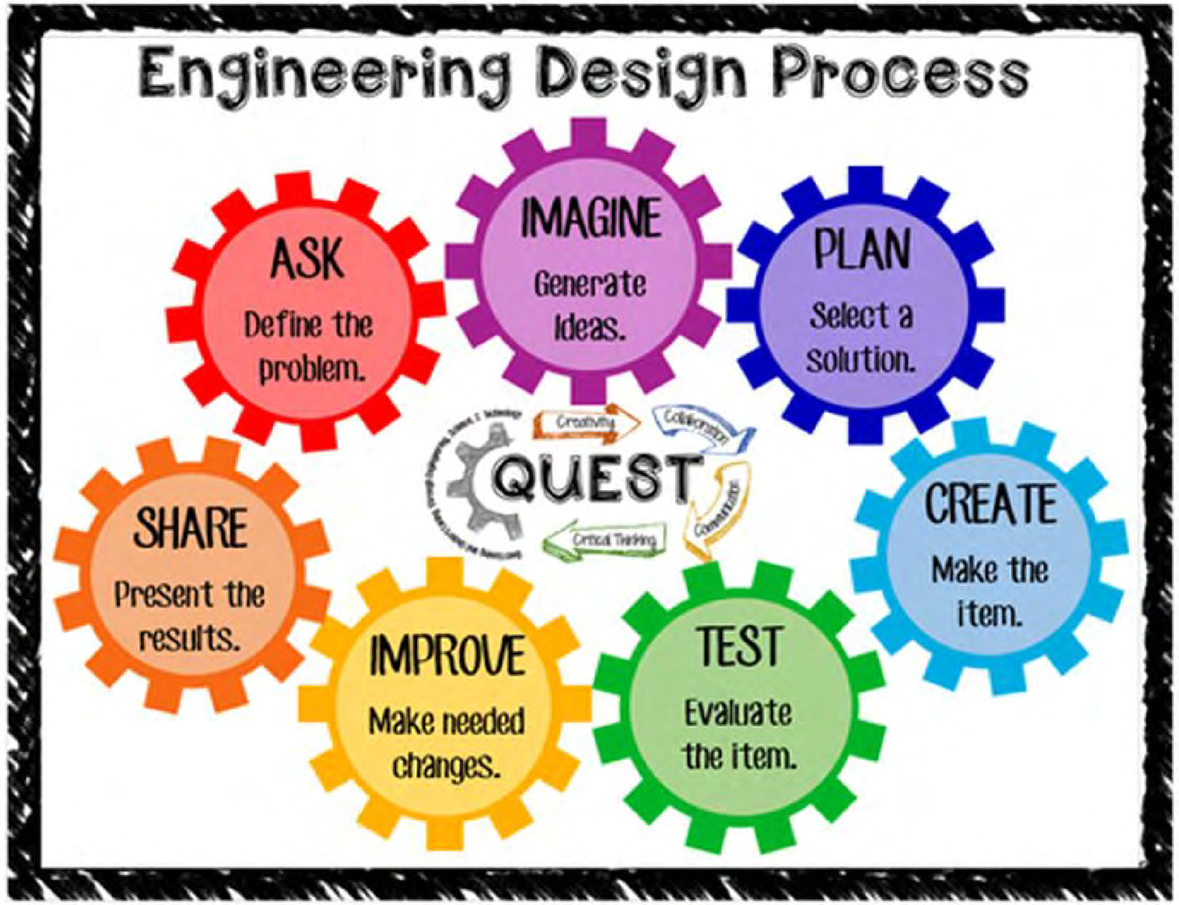






What are some examples of polygons that you see in these snowflakes?

The Design Process



It’s Challenge Time!

CHALLENGE

Let’s help Bentley study more snowflakes. Using pattern blocks, can you create a snowflake out of a variety of shapes that create a pattern and is symmetrical?

Materials: Pattern blocks

CHALLENGE

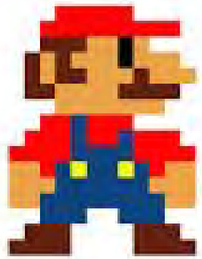
Now that you know how to create a symmetrical snowflake with a pattern, can you draw your own? Using a patty paper, can you draw your own snowflake that contains at least 3 different polygons that create a pattern and is symmetrical?

Tip: Try folding your patty paper in half to help with symmetry.

Materials: Patty Paper

Week 2

Build



VS.

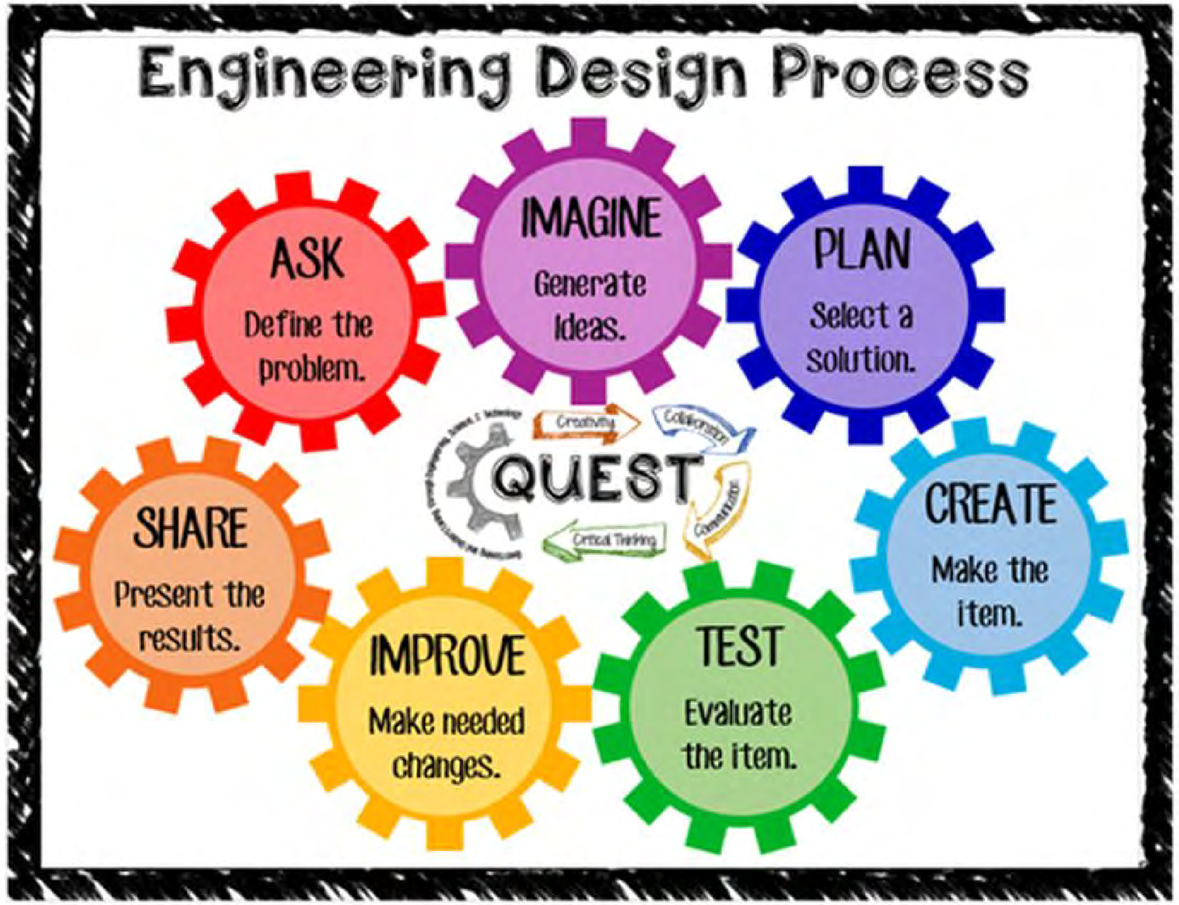
What is the difference between an object that is 2D vs. 3D?

What is 3D printing? What types of things do you think can be 3D printed?

Let’s watch 3Doodler in Action

Link: https://www.youtube.com/watch?v=QYGfZGm5jRo

The Design Process



It’s Challenge Time!

CHALLENGE

Last week you drew your snowflakes plans. This week, can you take your 2D plans and turn them into 3D snowflakes by printing with the 3Doodler pens?

Materials: Snowflake plan, 3Doodler Pen