Geometry in Architecture

Part 1: Research

Step 1: Find a structure that piques your interest. This is a good resource to browse: https://www.architecturaldigest.com/story/most-iconic-buildings-around-the-world

Step 2: Research using available resources (probably internet) to respond to the questions below. Keep track of where you are collecting your information from and make note of it in "Sources" (pg. 3 below).

Possible resources: https://learn.burnabyschools.ca/index.php/staff-resources/elementary-web-resources

Questions:

What is the structure called?

Where is it located?

When was it built?

Who was the architect?

How long did it take to build?

Why was the structure built? What is its function or cultural significance?

Describe the structure using words

Sources(websites, books, encyclopedia):

Part 2: Planning

You will be using materials in your home to recreate the structure you have researched.

Materials you will be using (list below):

Illustrate your blueprint (plan of what you will do):

*This is a **scientific drawing** of your plan. Be sure to:*

1. *Include a lot of **detail** in your work*
2. ***Label** all parts of your structure and what materials you will be using*

Blueprint of my structure:

Part 3: Creating

Use materials around your home to create your structure!

Please document your structure **(take a photo and send it to me!)**
What shapes did you notice in your structure?

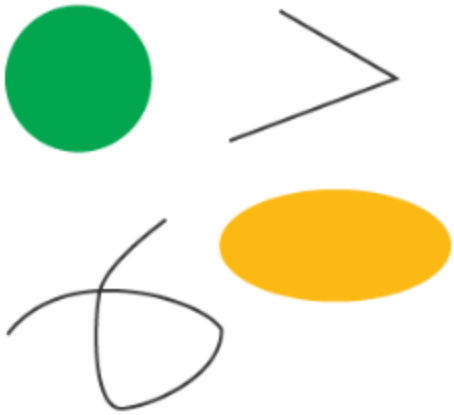
Part 4: Reflection

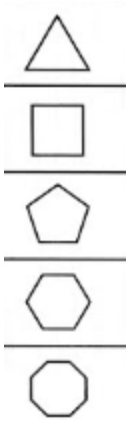
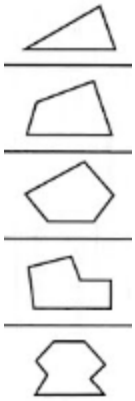
What part of your structure design are you most proud of?

What did you find challenging in the design?

Did you follow your blueprint design exactly? What did you keep? What did you change?

Geometry Connection:

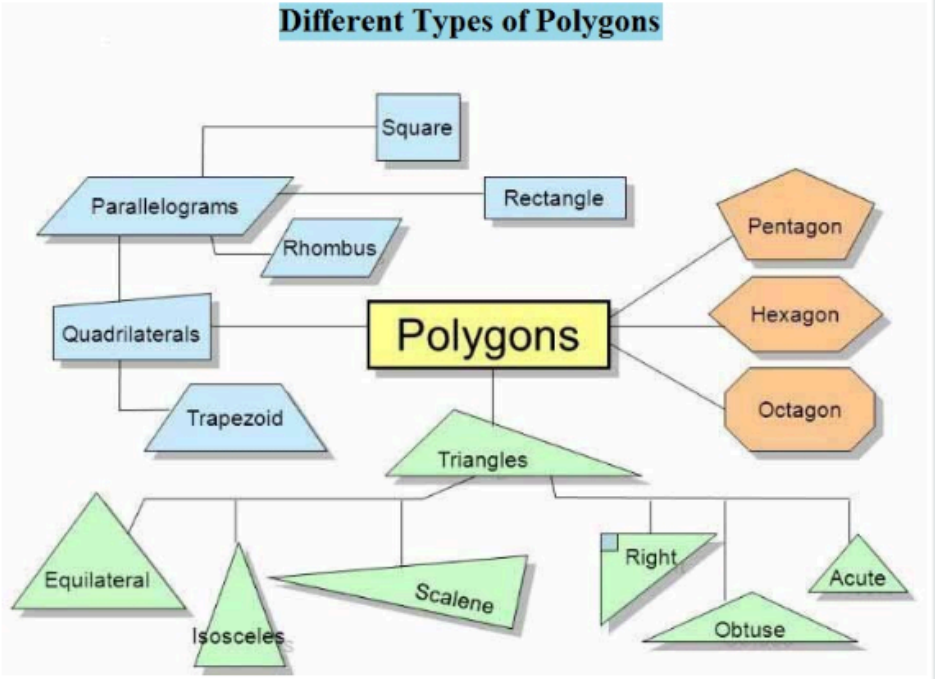
Polygons (a closed shape with straight edges)	**Non-Polygons**
	

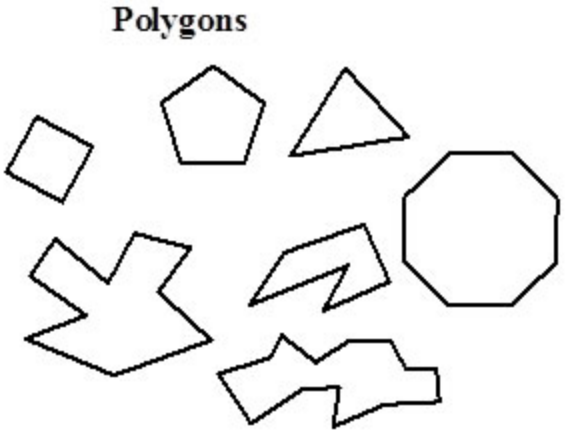
Regular Polygons (closed shape with equal sides)	**Irregular Polygons** (closed shape with sides that are not all equal)
	

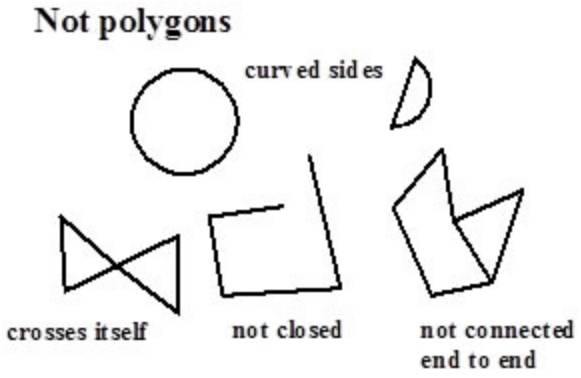
Good to know:

Polygons

A polygon is a closed shape with similar attributes. They are 2-d shape with straight sides



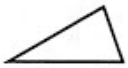
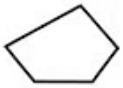




Regular polygons: all sides of the closed shape are equal

Irregular polygons: sides of the closed shape are not equal

Regular and Irregular Polygons

Name	Regular	Irregular
Triangle		
Quadrilateral		
Pentagon		
Hexagon		
Octagon		

Math Prefixes

poly- = many
tri- = 3
quad- = 4
penta- = 5
hexa- = 6
hepta- = 7
octa- = 8
nona- = 9
deca- = 10
dodeca- = 12

Math Suffix

-gon = angle