

Date: _____

Name: _____

Build your own structure!

This activity was created by Zoe.

Many structures on Earth are built using common materials such as wood, metal, plastic, glass, cement and clay.

In this activity, you will learn the design process of structures and design your own dream pool and cabin.

When building a structure, it is important to remember a few things:

1. Different materials can be combined to make a structure stronger and last a long time.
2. A certain material can be more useful than another when building different structures.

For example, concrete is sturdy and strong so it is good for building houses, but wouldn't be useful for making a cup.

3. The shapes you use in your structure are important, because some shapes are stronger than others.

For example, a triangle is much stronger than a square, but it can still be used inside of your square shape to strengthen it.

4. Make your structure as strong and as sturdy as possible. Will it fall over by a strong wind? Will rain or snow on top of it make it crumble/collapse?

Before you start building, think about the types of materials that are used in structures and what similar materials you can use around your home and outside.

Sketch a drawing of what you want your dream pool and cabin to look like. Try to add details on the drawing such as what materials you will use for each structure.

Engineers and Architects create a lot of drawings for a structure before building it and use it as a plan on how it should look like after it's completed.

Sketch your pool here!

Date: _____

Name: _____

Sketch your cabin here!

It's time to build!

Build your pool, think about if it will be above the ground, have a water slide or even a diving board and how you will construct it.

Next, build your cabin, you can have as many walls you want and don't forget about a roof. You can add in windows, a door, steps, chimney or more if you would like to. It can be as big as you want it to be and in what ever shape you want.

Materials we suggest for your structure:

(Use what you have around the house. It does not have to be on this list and ask an adult first if you can use it)

- Popsicle sticks (use the sticks from your popsicles or ice cream treats!)
- Glue
- Cardboard
- Lego or other types of building blocks
- Sticks
- Toilet paper rolls or paper towel rolls
- Plastic Bottles
- Tape
- Straws
- Clay
- Long strands of grass to tie things together
- Bottle caps
- Spaghetti noodles (ask for permission to use this)
- Rocks