



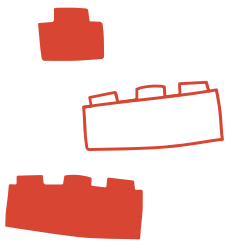
BUILD-A-STRUCTURE

MATERIALS

WHAT YOU'LL NEED

- Paper & pencil
- Assorted building materials (craft supplies you find around your home, ex. popsicle sticks, twigs, printer paper, cardstock paper, etc.)
- Fasteners: Tape, hot glue* and/or stapler
- A toy / figurine (to act as a "load" on your structure)

*Suggested: adult assistance with hot glue



KEY VOCABULARY

Structure: A solid that has a shape, size, and purpose. It holds a load.

Load: A heavy or bulky thing that is being carried or is about to be carried.

What makes a structure strong and stable? Let's build structures using materials found at home and explore material properties!



BIG QUESTION

What makes a strong and stable structure?

LEARNING CORNER

There are lots of different structures all around us!



What forms do structures have?

There are three basic forms of structures:

Shell:
holds liquids or small solids

Frame:
A network or skeleton of materials

Solid:
A solid mass of material

Natural structures:
Structures formed in nature



Man-made structures:
Structures built by humans



Complex structures are often combinations of these forms.



BONUS QUESTIONS!

Look around your home. What structures can you see? What are their functions? What materials are they made out of?



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BUILD-A-STRUCTURE

FIND MATERIALS AT HOME

What building / craft supplies can you find around your home?



DETERMINE YOUR LOAD

Pick an object that will be your **load**. (Suggestion: small toy)



DESIGN YOUR STRUCTURE

Based on your chosen object, sketch out what structure you can build to support its weight.



BUILD YOUR STRUCTURE

Build your structure! Consider what shapes will make it strong.



TEST THE STRENGTH OF YOUR STRUCTURE

Place your object on top of your structure. Can it hold the object's weight **and** stay stable?



How strong was your structure?

What could you do to improve the strength of your structure next time? Make modifications and test your updated structure!





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BUILD-A-STRUCTURE

Design your structure: Use the space below to sketch out your structure. What will it look like? What materials will you use? What shapes will you use?