

Engineering Activities For Kids

**Created by Lindsey Nelson,
mechanical engineer & engineering educator based in Washington, DC**

Engineering Activities Directions

On the following slides, you will find some engineering activities you can do at home using household items.

Whenever you see **underlined text that is blue**, it is a link. Click on it to watch a video about that activity. Happy Engineering!

Activity #1

Make a boat that can really float.

How can you modify your design so that it would be a fun bath toy?

Activity #2

Create a gap that is about 12 inches across.

Use different materials to create a simple bridge.

How can you determine which bridge is the strongest?

Activity #3

Discover how LEGO bricks are made.

Can you use *your* LEGO to make one really big LEGO brick?

Activity #4

Experiment with freezing different mixtures of water and salt.

What do you notice about the amount of salt and the time it takes to freeze?

Activity #5

Take apart a click-to-write pen
to see if you can

get a closer look at the mechanisms
that make it work.

Activity #6

Fold and fly different styles of paper airplanes.

How can the science of flight help you design a better plane?

Activity #7

Do batteries really power the world?
Go on a scavenger hunt to find
things powered by batteries.

What kind of batteries can you find?

Activity #8

Plan and make [a model playground.](#)

Who will you make a model playground for?

Activity #9

Build a pendulum by tying a weight on a string.

What do you notice about the swing when you change the length?

How can you use this as a timer?

Activity #10

Grab three balls, go outside, and simulate a supernova.

What do you notice about the maximum height?

Activity #11

Look closely at various kitchen tools.

How do you think they work?

How could they be improved?

Activity #12

Transform a sheet of paper into a fan.

How many different designs can you come up with?

How else can you [transform paper](#)?

Activity #13

Did you know that windshield wipers were invented by [Mary Anderson](#)?

Experiment with making a model windshield wiper.

What would you invent for cars?

Activity #14

Find six things that are held together with screws.

Pick one and use a screwdriver to look inside.

Activity #15

Transform a room of your house into a castle!

What features do you think are most important in [real castle designs](#)?

Activity #16

Louis Braille wanted to make reading easier for other blind people so he created a code of raised dots.

Can you write a message in Braille?

Activity #17

Build a car or house entirely out of edible materials.

Consider having [an edible car race](#)

Activity #18

Design a town square for the heart of a healthy community.

What makes a community healthy and strong?

Activity #19

Create a tool that helps you measure 6 feet accurately.

What makes measuring this distance challenging?

Activity #20

Create the ultimate creative rolling car that can go down a ramp.

How many different ideas can you try?

Activity #21

Watch a movie about sports. How would you describe the different forms of motion?

What needs to happen to move *fast*?

Activity #22

Design and build a pair of scissors that can cut through dough.

What can you use for the blades?

Activity #23

Make a building with multiple floors.
What do you need to do to ensure
that the building is stable?

Can you install an elevator?

Activity #24

Using *only* paper or index cards, design a tall tower that can support an object.

What object will you try to support?

Activity #25

FREE CHOICE:

Come up with your own engineering activity.

Share your activity idea with others.