

STEM@CGI AT HOME

STEM-based activities for kids that can be done at home

Staying active. Learning together. #STEMatHome

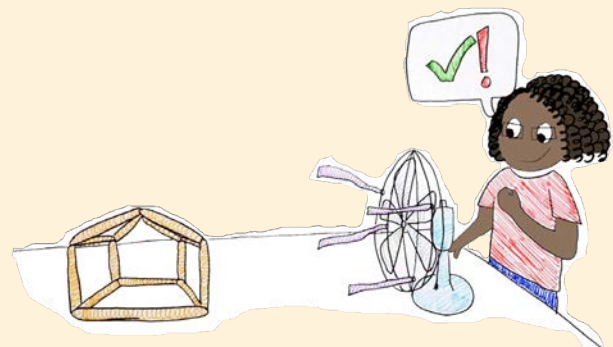
“STEM@CGI at Home” offers weekly STEM-based activity packets for children, including practical STEM activities and competitions. Get your family involved, share pictures, learn and have fun!

Activity 1 – Building structures

In this activity, you will learn to build a structure and test it! Building structures is a basic form of engineering. These careers help create a large portion of the things we use every day. From the bridges we drive on to the homes we live in, an engineer’s design is what makes these things safe for everyday life. What problems can you solve with an engineering design?

Recommended ages: 8 and older (younger with assistance)

You can **access this activity here**. Thank you to CGI member Ellie Spain for the great lesson and super sweet illustrations. Want to see the fan test in action? Watch the building structures video **here**.



What you will need

Paper, pencils/pens, markers, chalk, yarn / string straws, popsicle sticks, straws, twigs, glue / tape, fan, garden hose or running water, decorative material etc.



What you will learn

- How to create a structure or building.
- How to test your structure for safety.
- How different materials may or may not work.

Activity 2 – Draw your own cityscape

Think like an engineer and draw your own cityscape! Take it outside or get creative indoors. All ages can participate in this challenge.

Here are some ideas - design your city as:

- Driveway art - draw out your neighborhood and add some helpful/fun features.
- Draw indoors on cardboard boxes using chalk, markers, paint, or yarn –anything you can think of!
- Sketch on paper and use crayons to color in your design.
- Use different materials like straws or yarn to model your city on paper.



Activity 3 – Build an airplane!

Now that you have learned about building like an engineer, create an airplane out of something other than paper! Be creative with your airplane and let's see them fly!

Here are some ideas of materials you could use:

- Craft sticks
- Cardboard
- Twigs or branches
- Clothes pins

What other materials can you think of?



Bonus activities

These activities are designed for students aged 8 and older but everyone can get involved!

Toilet Paper Tower

In this game, the goal is to stack the rolls as high as you can on command. Test how high you can go or remix your own version of the game!

Build a Tablet / Phone Stand

Using Legos, build your own smart device stand.

Accessibility Maze

Accessibility is an important consideration when designing buildings. Play this game, designed by Ryerson University in Canada to get you thinking more about accessibility.

**Watch for more STEM@CGI at Home ideas next week.
Stay healthy and safe!**

For more information or additional support with STEM activities when working remotely, please contact us here.

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