

AT-HOME ENGINEERING ACTIVITIES

Fun ideas to keep Engineers of all ages busy during self-isolation

The COVID-19 pandemic has brought about a rapid shift in the way we live our lives. As our offices are replaced by our kitchen tables and schools shut down for weeks or months, working parents are faced with the incredible challenge of balancing work with full time childcare. To help we've put together some Engineering-focused activities and resources to keep your kids (and yourself!) occupied and engaged during self-isolation.



ACTIVITY: PARACHUTE DESIGN CHALLENGE

For fans of the egg drop challenge who want to avoid an indoor-mess, why not experiment with parachute designs with materials you already have around the house? The [NASA website](#) provides a great resource with background on real-life parachute testing and design, as well as detailed activity steps.



ACTIVITY: SHOEBOX HOUSE WIRING

Does your child have what it takes to be a master electrical Engineer? Maybe before setting them loose on the wiring in your home, they can test their skills on a scaled-down version. Your kids might have hours of fun building a cardboard house, learning about circuits, and applying their knowledge to wire their dream home! Some great interactive resources to learn about circuits can be found [here](#) and [here](#).

ACTIVITY: SWEET SCIENCE - ROCK CANDY

Stir up some interest with your budding Chemical Engineer by growing some rock candy! [Here](#) is a great site to give some background on how crystals are formed. After this, check out [this site](#) with instructions on how to make your own rock candy!



INTERACTIVE ONLINE ENGINEERING GAMES / TOOLS

[PBS Learning Media](#) is a great resource for tons of interactive tools and lessons. Some of our favorites include the [lens and mirror lab](#), the [melting and boiling simulation](#), and the [Building Big Bridge Design Lab](#)

[Scratch](#) is a free online block coding software. This is a great introductory program for kids interested in programming, and comes with a number of free lessons for beginners.

TVO Kids hosts a huge library of games and activities geared towards the Ontario elementary school curriculum. Some great STEM games include the [interactive machine design activity](#) and the [catapult challenge](#)

For kids who are out of this world, the [NASA Kids' Club](#) provides great resources, activities and games to provide information about the solar system, current missions, and design of spacecraft