BRIXOLOGY

Mad SCIENCE

ENGINEERS SHAPE THE WORLD!

8 Class STEM After-School Program
allows kids to step into the shoes of an engineer!

- Using LEGO® bricks, build a different engineering-themed project in each class.
- Explore engineering fields including mechanical, structural, aerospace, nautical, and bioengineering.
- Use critical thinking, cooperation, and creative problem-solving to test and improve creations.
- Experience extended learning with a take home toy to reinforce each concept.

BUILD

LEARN

TAKE HOME

8 CLASSES FEATURING LEGO®

AEROSPACE

Launch your imagination to new heights as you explore **aerospace engineering**! Discover the secrets of working in space – efficiency and compact design. Create a trussed space station module, then connect it with others to create a massive modular spacecraft.

TOWERS

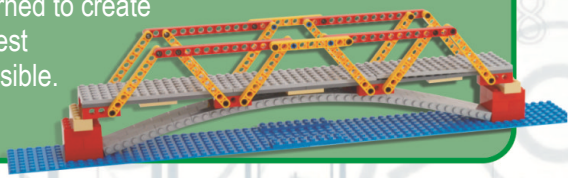
Reach for the sky! Find out how **structural engineers** use ideas from physics to solve problems. Work together to build a structurally sound tower with a working elevator, then test and improve your design for strength and stability.

CARNIVALS

Feel the thrill as you build a spinning swing ride! Learn about the forces and **mechanical engineering** concepts behind some of your favorite amusement park rides. Then improve and test the design to create an even wilder ride.

BRIDGES

How can you build the strongest bridge? Work together with your fellow **civil engineers** to build and test different bridge designs. Then use what you've learned to create the strongest bridge possible.



CREATURES

Discover nature's engineering secrets as we investigate **biomimicry**! We can learn a lot about efficient design from observing plants and animals. Build a walking insect machine then test different ways to help it climb up the steepest branch.

BOATS

Create a sea-worthy vessel as you set sail with **nautical engineering**! Build and test a boat powered by potential and kinetic energy. Then try changing specific variables to improve speed, buoyancy, and stability.

VEHICLES

Get in gear as an **automotive engineer**! Build a motorized vehicle and learn how to optimize it. Use wheels, axles and gears to reduce friction and make it work better. Then shift things into a higher gear to get a hands-on understanding of transmissions and gear ratios.

MACHINES

Engineering is creative! Learn how gears, levers, and pulleys are useful tools for **mechanical engineers** then combine them with art and design to create and test a motorized drawing machine.

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Mad Science of Greater Vancouver
604-591-9115
vancouver.madscience.org

Sparking Imaginative Learning

Mad SCIENCE

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