

# FUTURE ENGINEERS

## by BRICKS 4 KIDZ®



### DESCRIPTION

- This is a hands-on After School program where students build machines, buildings, vehicles and other structures out of LEGO®, using one-of-a-kind model plans designed by BRICKS 4 KIDZ®
- Each workshop begins with a discussion related to the model of the day. Our instructors will introduce architectural and engineering concepts of scale, torque, friction and gear ratio in these interactive classes
- Students build a new project each week, using LEGO® Technics components such as gears, axles and beams
- While exploring principles of engineering, architecture, physics and more, students will develop problem solving and critical thinking skills
- Once the weekly project is complete, children use the rest of their time to modify their model builds and collaborate with one another

### CURRICULUM AND INSTRUCTIONAL CONTENT

- Instructional content is multi-disciplinary and designed by educators to increase the student's general knowledge and introduce **STEM** (Science, Technology, Engineering and Maths) concepts related to the day's model
- Lessons are designed around students' interests, with themes such as animals, space, inventions, transportation and sports. The material covered in each session will vary depending upon students' age, experience, and skill level
- All materials are provided by BRICKS 4 KIDZ®

### GOALS

- To build problem-solving skills, provide an opportunity for creative expression and foster an appreciation for how things work
- For students to play and socialise with friends while learning the fundamentals of engineering and architecture in a non-competitive setting
- To help students understand that architecture and engineering are viable career choices

### BENEFITS

- When lessons are related to something students enjoy, such as building with LEGO®, students are motivated and retain more of what they learn
- Working with a partner fosters teamwork and cooperation
- Completing a new challenge each week builds self-esteem
- Students already know how to build with LEGO®, however with a little coaching, they can learn about engineering, architecture, physics, and math using specialised components

### DURATION / FREQUENCY / COST

- The program runs throughout the school year and follows the school calendar. Classes meet one hour per week for the term
- Each session is competitively priced per student



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