

# STEMbotics Spring 2020

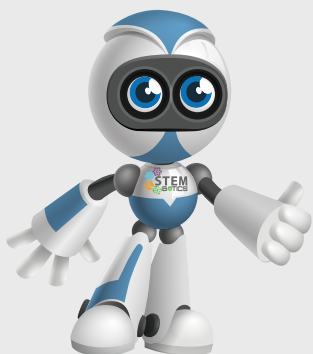
## Aldrich School

### Robotics and Coding Class

#### 3rd-5th grades

## Benefits

- ♦ Each lesson is taught by a STEMbotics's instructor. The curriculum is designed to inspire and teach. Using pictures and animations, instructors will spark energetic discussion about the working principles and inspiration behind the coding design.
- ♦ STEMbotics instructors will provide an overview of each project and provide 1:1 assistance as needed.
- ♦ Students will work in teams of 2 and be paired based on their age and grade.
- ♦ Students will design, program and automate their robotic creations. Students will use LEGO® Education Programming.
- ♦ Each class will be unique and advance as students master Engineering concepts and curriculum.
- ♦ Robotics Projects are based on a combination of 3 themes; CITYbotics, ANIMALbotics and SPACEbotics.
- ♦ Parents will receive access to our \*NEW Parent Portal\* for registration, scheduling, billing and communication.



## Overview

- ♦ STEMbotics is proud to offer our Spring 2020 STEMbotics Lego® Robotics after school program. STEMbotics combines STEM enriched coding with state of the art software and equipment to build & program robotic models. Each week we will be using LEGO® Education's STEM Robotics equipment & software to build **\*NEW\*** models each class. The students will build LEGO® models featuring working motors and sensors; program their models; & explore a series of cross-curricular, theme-based activities while developing their skills in science, technology, engineering, & mathematics as well as language, literacy, & social studies.
- ♦ 8 week After School Program held on Thursday:  
3/19, 3/26, 4/2, 4/9, 4/23, 4/30, 5/7, 5/14
- ♦ **Student Price \$160. "A portion of each registration is donated to the Aldrich PTO"**
- ♦ Program begins immediately after school and runs 3:00 pm-4:15 pm. Parents are required to pick up their child(ren) at the side parking lot cafeteria door promptly at 4:15 pm.
- ♦ STEMbotics may select up to 3 parent volunteers per session depending on the level of student enrollment. Each selected parent volunteer will receive reimbursement of tuition for one student. Parent volunteers must be able to commit to attend all classes in the session. **If you are interested in becoming a volunteer, please let us know.**
- ♦ **Registration Deadline: 3/13/20 or when the class is full, whichever occurs sooner.**  
"STEMbotics reserves the right to cancel a class if the 15 student minimum is not met."
- ♦ Register online at [www.STEMbotics.net/aldrich](http://www.STEMbotics.net/aldrich)
- ♦ For questions regarding the program contact our Administration Team at [admin@stembotics.net](mailto:admin@stembotics.net); 732-908-1042.

## STEMBOTICS

- ♦ CITYbotics teaches young engineers how new technologies and robots can improve life in a modern city. We build, program, and explore robots found in a metropolitan city.  
[www.STEMbotics.net/citybotics](http://www.STEMbotics.net/citybotics)
- ♦ ANIMALbotics introduces the work of the most ingenious engineer of all time – Mother Nature! We build, program, and explore clever robot models of different animals.  
[www.STEMbotics.net/animalbotics](http://www.STEMbotics.net/animalbotics)
- ♦ SPACEbotics is a unique lesson plan that takes us into outer space. Constructing and then programming futuristic robot models is a great introduction to physics and astronomy.  
[www.STEMbotics.net/spacebotics](http://www.STEMbotics.net/spacebotics)



## About STEMbotics

- ♦ STEMbotics combines STEM enriched coding with state of the art software and equipment to build and program robotic models and video games. STEMbotics's focus is to promote the advancement of Science, Technology, Engineering and Math. By exposing students to STEM and giving them opportunities to explore STEM-related concepts, they will develop a passion for it and use that passion to develop key life skills. Science is everywhere in the world around us. Technology is continuously expanding into every aspect of our lives. Engineering is the basic designs of roads and bridges, but also tackles the challenges of changing global weather and environmentally-friendly changes to our home. Mathematics is in every occupation, every activity we do in our lives. Our STEM based curriculum ties in real-life situations to concepts that students can relate to by using LEGO® kits and coding software from LEGO® Education.

In the 21st century, scientific and

- ♦ technological innovations have become increasingly important as we face the benefits and challenges of both globalization and a knowledge-based economy. To succeed in this new information-based and highly technological society, students need to develop their capabilities in STEM to levels much beyond what was considered acceptable in the past (National Science Foundation)

## What Your Child Will Learn With STEMbotics

	CITYbotics	ANIMALbotics	SPACEbotics
Science	✓	✓	✓
Technology	✓	✓	✓
Engineering	✓	✓	✓
Mathematics	✓	✓	✓
Language	✓	✓	✓
Literacy	✓	✓	✓
Social Studies	✓	✓	✓
Computational Thinking	✓	✓	✓
Arts	✓	✓	✓

## 4 Steps to Success

### ♦ LEARN

It's the beginning of an adventure! Every educator knows how important it is to get classes off to a great start. By introducing a unique design in each STEMbotics lesson, you'll always have an answer for the recurring question of 'What are we going to build today? Interesting and engaging lessons are guaranteed!

### ♦ BUILD

Step-by-step instructions for building each robot are available to students through the STEMbotics online learning platform. Teams will access the building instructions and other materials shared by the teacher.

### ♦ CODE

Complete and detailed instructions for programming each robot are available on the STEMbotics online learning platform. Students will use Block Level programming to control and animate their projects.

### ♦ RUN

Teams will take their completed Robots in conjunction with the corresponding program and execute their program. Teams will then analyze their findings and make appropriate modifications as needed.

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