

Email Home - VEXcode VR

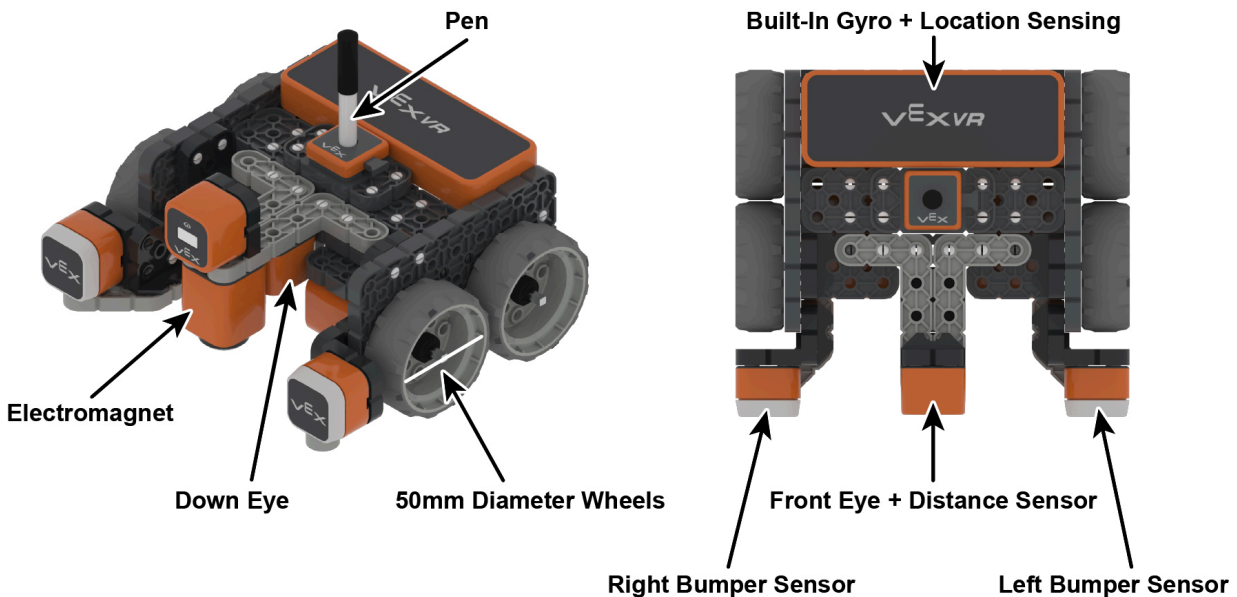
Introduction

VEXcode VR lets you code a virtual robot using a block-based coding environment powered by Scratch Blocks. VEXcode VR is based on VEXcode, the same programming environment used for [VEX 123](#), [GO](#), [IQ](#), and [V5](#) robots. We all know that robots make Computer Science (CS) come to life with real-world applications. Now CS learning can continue while at home for students, teachers, and mentors with no access to their VEX robots. Go to vr.vex.com and begin learning.

A Look Inside the VEXcode Platform

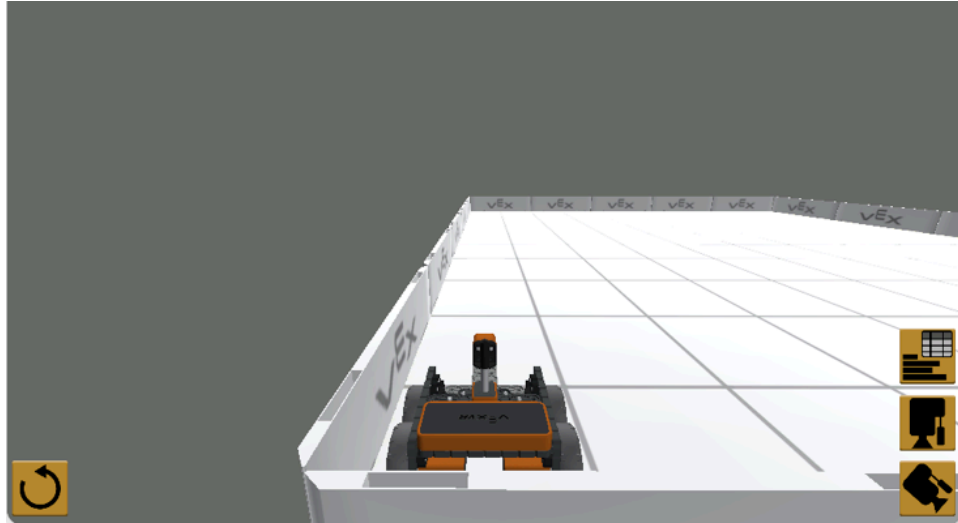
Virtual Robot

VEXcode VR utilizes a pre-built virtual robot. The VR Robot makes navigation easy and has sensors that can be used to solve mazes. It also has a pen that allows students to code a creative drawing. To learn more about the features of the VR Robot, you can read this [Knowledge Base article](#).



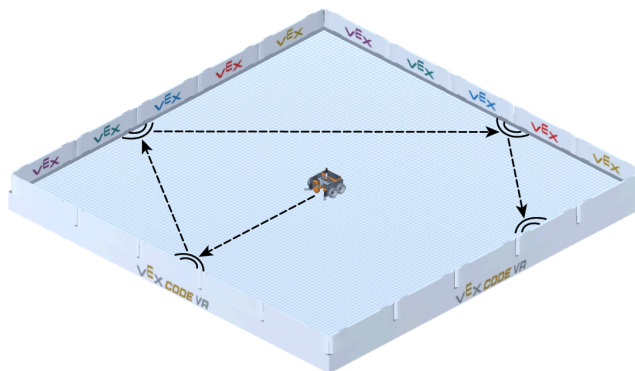
Virtual Playgrounds

Students can choose from different, virtual 3D playgrounds to use the virtual robot's features. Playgrounds include a grid map, an art canvas, and a walled maze with more to be included. There is more information about the Virtual Playgrounds in this VEXcode VR [Knowledge Base article](#).



VEXcode VR Activities

VEX has also provided teachers and students with activities that can be utilized while students are learning from home. These activities are geared toward new users, as well as experienced programmers. Each activity provides an opportunity for students to expand their Computer Science knowledge. Activities cover the basic movements of the VR Robot, the sensors, and build to more advanced challenges. All of the VEXcode VR activities are Google docs, which allows parents and teachers to edit or modify them. Read [here](#) for more tips on how to use VEXcode VR activities.



Get Help When and Where You Need It

VEXcode VR contains tutorial videos that can guide students to get started with VEXcode VR. There is help available for each block. Just select the **help icon** and choose a block to read about the features and see examples of how the block can be used. If you want to see how the blocks can be combined to perform certain robot behaviors, then you can explore the **example projects**. Finally, the [VEX Robotics Knowledge Base](#) is a library of information about all things VEX.

Why VEXcode VR?

Educational robotics serves Computer Science education in many ways. First, robots are fun. Students are naturally motivated to work with robots. Additionally, robots can help bring Computer Science to life. The everyday relevance of robots in the lives of students provides an authentic hook for student learning.



The process of developing coding solutions with a robot provides a relevant context for engaging students in Computer Science. Robots utilize physics and sensors in addition to Computer Science. The challenges in the Virtual Playgrounds help to contextualize Computer Science and provide the authentic inquiry that best promotes student learning.

Please keep this email for your reference as your student works through VEXcode VR platform. It contains information that you can use to keep up to date on what students

are learning and to spark discussions about Computer Science at home.

Vocabulary

- **Drivetrain** - moves the robot.
- **Sensors** - detect or measure physical properties in the environment.
- **Algorithm** - a list of steps to complete a task.
- **Sequence** - the order in which commands are executed -one after the other.
- **Behavior** - actions performed by a robot.
- **Programming language** - a type of written language programmers create and use to tell a computer what to do.
- **Command** - instructions given to a computer. Multiple commands strung together to make up algorithms and computer programs.
- **Decompose** - breaking down a complex problem into smaller parts that are more manageable and easier to understand.

Follow-up questions to ask at home:

1. What are the main parts of the VR Robot?
2. Which VEXcode VR activity is your favorite and why?
3. Which of the Playgrounds is your favorite and why?
4. How do the sensors work?
5. Where do we find robots in daily life?