



Automation & Robotics Virtual Learning

7th & 8th Virtual Robots

Vex VR - STEM LAB CODing a Vex Robot

May 19, 2020



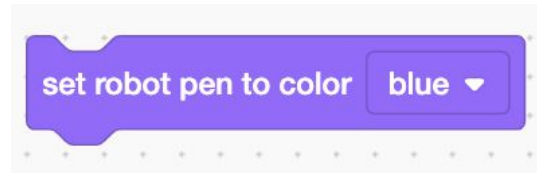
PLTW: Automation & Robotics
Lesson: May 19, 2020

Objective/Learning Target:
Learn & practice Algorithms & Loops in VEXcode VR

Warm-up

IDENTIFY WHAT YOU KNOW SO FAR:

What does this block do?



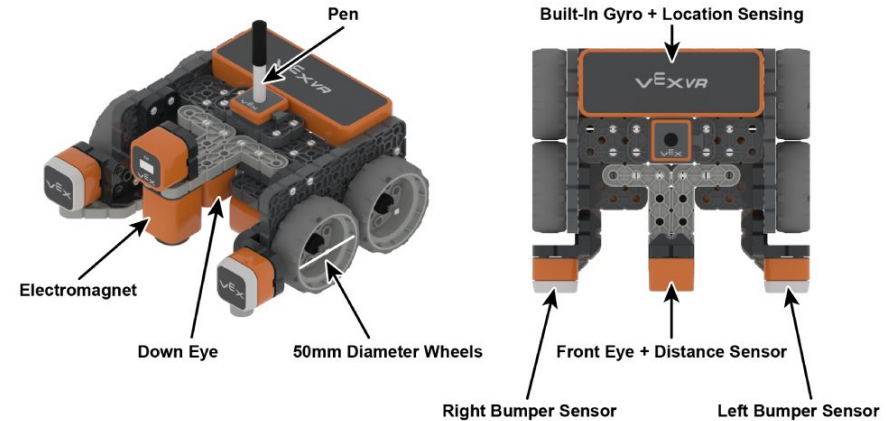
What does the magnetic Sensor do?

Did you use a loop in the protect the castle program? Describe what it was?

Lesson/Background:

Remember your Virtual Bot can...

Navigate, use sensors to solve maze and a Pen that can be coded for creative drawing.



Make sure you have your navigation blocks knowledge!

With each lesson you will learn more about how to code your VEX VR bot.

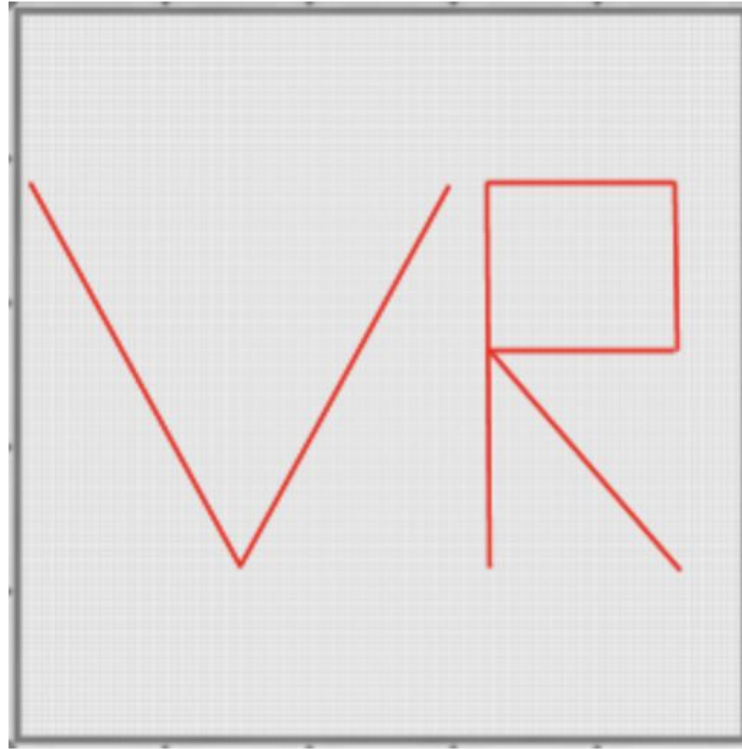
For today's lessons you will need:

TO:

Go to [VEXcode VR](#)

In today's practice you will:

Lesson/Background



You will use your knowledge so far and plan out your algorithm ahead of time to draw your initials, your first name, then your full name on the Playground!

Practice/Challenge:

Answer ALL questions below in your focused notes. Question on the left, answers on the right.

Sensors

Draw Your Name!

Playground: Art Canvas

Challenges:

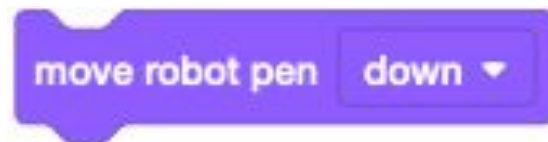
Level 1: Create an algorithm for each letter of your initials. Use the Pen on the VR Robot to draw those letters onto the Art Canvas

Level 2: Create an algorithm for each letter of your first name. Use the Pen on the VR Robot to draw those letters onto the Art Canvas.

Level 3: Create a project where the VR Robot writes out your first and last name.

Helpful Hints:

- Each square in the Art Canvas measures 20mm by 20mm.
- Select the Top Camera on the VEXcode VR Dashboard for a better view of the Art Canvas.
- Use the Set Pen position block from the Looks category to move the up and down.

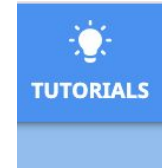


Assessment:

Save and download the program you make today and share it with me.
I would love to see your progress.

Don't know how to name, save or download your files?

While in VexCode VR - go to tutorials ---->



At the top row of tutorials, the last one is How to Name & Save



Extend Your Learning:

What other Drawn creation can you make?
Try some other plans & explore. Send me the files if you choose.