

Unit	Time Frame	Unit Name	Knowledge and Skills
1	1st Six Weeks	Engineering & Robotics Overview	- Classroom Expectations - How to collaborate in groups and teams - How to follow Kit rules and review
2	1st Six Weeks	Engineering Notebook	Students will be introduced to the engineering and design process.
3	1st Six Weeks	Hardware & Technology Overview	- Organization and Inventory of EV3 kits - Proper Vocabulary for EV3 Lego Mindstorm Kit - Identification of parts (Electronic, Mechanical, Structural)
4	1st Six Weeks	Building, Connecting & Downloads	- Students will be able to follow detailed instructions without deviation. - Students will be able to build the Driving Base. - Students will be able to run the programs that control the robot's behavior.
5	2nd Six Weeks	Pre-Programmed Paths/Curved Moves	- Students will be able to directly program a robot movement. - Students will be able to use rotations to understand how far the robot will travel using the circumference of the tire/wheel.
6	2nd Six Weeks	Object Detection/ Loops & Switches	Students will use the new sensors to assist with touch, color, proximity, and gyroscopic movements combined with previous programming knowledge.
7	2nd Six Weeks	Gears Overview	Students will understand the overview of gearing and how to calculate gearing
8	3rd Six Weeks	Gears Application	Students will apply the knowledge from the previous unit.
9	3rd Six Weeks	Sumo Bot Challenge	Students will build a robot using all of the knowledge from previous units that attempts to push another student's robot out of a ring.
10	3rd Six Weeks	Re-inventory Kits	Students will demonstrate responsibility and knowledge of parts through re-inventorying EV3 kits.

Unit	Time Frame	Unit Name	Knowledge and Skills
11	4th Six Weeks	3D Printing and Design	- Know how to manipulate simple shapes using tinkercad.com - Understand how 3D printers work
12	4th Six Weeks	Introduction to Drones	Students will be introduced to drones, drone coding, and aviation safety
13	5th Six Weeks	Programming/Coding	Students will be allowed to complete self-paced Computer Science/ coding courses that are adapted to students current coding level
14	6th Six Weeks	Podcast Innovation	Students will create a podcast over a topic of their choice