Unit 1 - EV3 Robotics

Content Area: **Unified Arts**
Course(s): **Tech Apps 8**
Time Period: **September**
Length: **10 Days**
Status: **Published**

Unit Summary

Students will construct and program an EV3 Robot to perform certain tasks.

Standards

CAEP.9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.
TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
TECH.8.1.5.C.CS4	Contribute to project teams to produce original works or solve problems
TECH.8.1.5.D.4	Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
TECH.8.1.5.D.CS1	Advocate and practice safe, legal, and responsible use of information and technology.
TECH.8.1.5.D.CS2	Demonstrate personal responsibility for lifelong learning
TECH.8.1.5.D.CS3	Exhibit leadership for digital citizenship.
TECH.8.1.5.F.CS4	Use multiple processes and diverse perspectives to explore alternative solutions
TECH.8.2.5.D.3	Follow step by step directions to assemble a product or solve a problem.
TECH.8.2.5.E.1	Identify how computer programming impacts our everyday lives.
TECH.8.2.5.E.3	Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.
TECH.8.2.5.E.4	Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).
TECH.8.2.5.E.CS1	Computational thinking and computer programming as tools used in design and engineering.

Student Learning Objectives

- Students will learn to use simple visual program language to create a program using loops, events and procedures to generate a specific output.
- Students will learn to construct an EV3 Rover robot.
- Students will learn to use the action palette to write a program to make a robot display pictures, produce sounds, and display blicking lights.
- Students will learn to use the move steering block to move their robot move forward, backward, speed up, slow down, and turn. Students are also use move steering block for # rotations, time, and degrees.

Essential Questions

- How can programing be used to make a robot follow a set of directions?

Enduring Understandings

- Students will understand that...

Application

- Students will be able to independently use their learning...

Skills

Students will be skilled at:

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