EV3 Lesson Ideas

Lesson 1

Materials: EV3 robots- 2 students per robot, Core Competency Self Reflection resources and posters, intro videos: https://youtu.be/-k6hL5DTpi8

Objectives: Start to build robots, get students to understand the thinking behind building and following a guide.

Duration: 1hour

Lesson: Intro

- Teacher introduces Robots, what they are, how they work. Teacher can use the "Intro to Robotics" video on Dawn Anderson's YouTube Channel, https://youtu.be/-k6hL5DTpi8 This video explains what is in the kit and provides instructions on how to build with their partner.
- Explain goal of bots (collaboration, build, design and program) and the skills learned will also be designing and programming.
- Get students into pairs, they will work in the same pairs for all sessions.

Activity

- Once students are in pairs you will need to assign them a robot kit. They will get the same kit each week as their programming files will be on the brick.
- Then ask the class to open the kits and lay the parts sheet out in front of the parts tool kit. Ask everyone to open their build guides and together walk them through the build steps as explained in the video
- Again, students will need to pay close attention to the images and placing their bot in the same positions as mistakes are easily made during the build.
- Make sure to point out a few of the parts that can be easily confusing, reviewing video points- axel sizes specifically when at that build point and ports- motors in letters.
- Students will build for the entire block.

Concluding

- Students will pack up their kits- make sure all parts go back in the correct tray!!!
- Robot kits need to be clasped close and the bots will sit on top of their kit; they will use the same bot next class.
- Review the Core Competencies and ask students to make a reflection: verbal with partner, video recorded for portfolio, written…

- Students can do Core Competency (CC) self-reflections at the end of each class, as well, below is the ADST Reflection sheet that includes the CC's, as well, teachers may want to access - SD71 Portal – Learn71- Assessment and Reporting- Self Assessment Core Competencies.

Robotics Criteria and Reflection

	1 emerging	2 developing	3 proficient	4 extending
I can use instructions to build a robot using a Lego Mindstorm EV3 kit				
I can program my robot to move where I want it to move in various ways				
I can program sensors to help move my robot				
Communication: I can communicate with my peers to solve problems as a team.				

My favourite part of doing robotics was: _____

_____

_____

The biggest challenge I faced when doing robotics was: _____

_____

_____

Core Competency Reflection

CRITICAL THINKING

A critical thinker can do the following things:

1. experiment with different ways of doing things
2. monitor their progress and adjust their actions to make sure they achieve their goal

Explain how you used critical thinking skills during the robotics unit. Give specific examples.

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Teacher Comment: