

Middle-level CTE Learning Experience Title: Robot Winter Olympics
Educator: Tonya Lackey, Westport Centre (p)2.3 :SM:

	who writes code to control a robot?		
Do-now/Hook	Day 1 (cont.) Show clips from the Winter Olympics of curling, slalom, biathlon, and bobsled. https://www.olympic.org/videos/pyeongchang-2018 Discuss Olympic athlete preparation practices. Describe what a computer programmer does.	Day 1 (cont.) Students watch the videos taking notes as to what each event is and how to complete the task. Take notes	

description of event and rules)

Lead class discussion to create a list
of questions to be researched. (i.e.
What information do

Idea/Plan of the three your group created last class.

Give students suggestions and options on how to build the robot, adding motors and sensors to build a contraption for the robot to compete in the Olympic game. Help students write an algorithm for their Olympic sport and then transfer it to the programming language.
Help each group stay on task and make appropriate progress toward the end goal.

Day 8-9

Present the goal: Test and refine your program and robot on course:

Just as an Olympic athlete would practice.

Just as an engineer builds a prototype and tests in order to tweak a design to make it better.

Help each group stay on task and make appropriate progress toward the end goal.

Day 10-11

Competition Day

Prior to class set-up an area for each Olympic Event. Invite the school to be the audience. Organize a time, if possible, to have all the students compete at the same time. If possible gather other adults to act as event judges.

Congratulate the students for

Students work in groups to build and write a program for the robot to compete in Olympic game of their choice. The student athletes will use sensors (the 2017-2018 season) to

the 2017-2018 season) to

Writes Clearly	Consistently writes clearly, uses correct grammar, and understands the intended audience of documents that are produced.	Writes clearly, generally using correct grammar, and understands the intended audience of the document produced.	Produces a document that is mostly well written but, sometimes uses incorrect grammar; shows general understanding of the intended audience.	Produces a document that is
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Shows Willingness to Take Risks	Embraces the idea that attempting/experimenting is an important part of success and approaches opportunities with an understanding that failed attempts are likely.	Understands that attempting/experimenting is an important part of success and approaches opportunities with an understanding that failed attempts are likely.
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