

Strand: C and E	Expectations: C2.2 create code by decomposing situations into computational steps in order to represent mathematical concepts and relationships, and to solve problems C2.3 read code to predict its outcome, and alter code to adjust constraints, parameters, and outcomes to represent a similar or new mathematical situation E1.3 solve problems involving different units within a measurement system and between measurement systems, including those from various cultures or communities, using various representations and technology, when appropriate
Learnings Goals: <i>Use Code to convert between various units of measure.</i>	
Success Criteria: <i>Determine the final ticket type and price in both CAD and USD.</i>	
Lesson Summary: <i>Students will be incrementally working through the process of converting from feet and inches to inches to cm to meters then using boolean logic (an if statement) to determine the correct ticket to purchase. The next step will be to determine (using code) the price of the ticket in both CAD and USD based on the current exchange rate.</i> (Suggested Time: ~40 min)	
Prior Knowledge: No prior experience in coding necessary. Use of basic multiplication and division as well as comparing numbers on a number line will be applied. The TNS file is highly scaffolded to take students through each step incrementally.	
Materials List: TI Nspire Handheld or Software Emulator; Water Park.tns file; Pseudo Code Handout	

Engaging/Activating the Learning: The Pseudo Code Handout is a list of logical steps that will take place in the code in order to arrive at the success criteria. This activity will be offline and without technology. It can be done in groups or partners or at the whiteboard.
Learning Focus: Students will work their way through the TNS file replacing ??? blocks with either values or variables according to the requirements of the problem. Teachers could post or display the results of the Python Shell pages so that students can see what the desired output should look like. There is one place on page 1.6 where students are reading and interpreting the code to answer a question. This could be done as a whole group. There is one other place where students are called upon to recall past learning of how many cm are in 1m (page 1.11).
Consolidating the Learning: Students could calculate the cost of a ticket for both themselves and the character “Lee” in the problem. They could also calculate the total cost with taxes as an extension activity in coding or finance.

For information on transferring files to handhelds, please visit <https://www.stemsupports.ca/file-transfers>