

<b>Theme:</b> Programming in Python
<b>Developed by:</b> Matt Coles and Cole Zmurchok
<b>Date:</b> January 28, 2017
<b>Location:</b> Innovation Lab at Science World or other destination
<b>Objectives</b>
<ol style="list-style-type: none"> <li>1. By the end of the session students should be comfortable writing simple programs involving some of: strings/numbers/conditional statement/loops</li> <li>2. By the end of the session students should produce a program solving one of the activities/challenge problems</li> </ol>
<b>Preparation for students</b>
<p>Students should complete Python Syntax and Tip Calculator here:  <a href="https://www.codecademy.com/en/tracks/python">https://www.codecademy.com/en/tracks/python</a></p> <p>Although the more codecademy the better! It is recommended that students bring a laptop. One laptop per 3 students would work but the more the better.</p>
<b>Timeline</b>
<ul style="list-style-type: none"> <li>• 4:30-4:35 (5 mins): Short discussion about the usefulness/transferability of programming as related to science/data.</li> <li>• 4:35-5:30 (55 mins): Students who are not familiar with programming will work through the core activities. Students who know some programming can `test out` and proceed directly to the activities/challenge problems</li> <li>• 6:00-7:00 (60 mins): Students who completed the core activities (or at least if/then) can proceed to activities/challenge problems (less experienced students may want to stick to choose your own adventure game). Students who have solved 1 or more of activities can solve more activities. Students are encouraged to play each other's games and try out their friends' programs.</li> </ul> <p>Detailed list of activities will be posted here: <a href="http://www.math.ubc.ca/~colesmp/FSL/">http://www.math.ubc.ca/~colesmp/FSL/</a> for all the students (world) to see.</p>
<b>Homework</b>
<p>Each partnership/group of three should make a blog post where they include some of the code they wrote and an explanation of what it does. Other students should then be able to copy/paste the code and play with the program in python. Share your games with each other and play them!</p>

**Resources needed (separate into different activities)**

- We will use the science world computers. Students are encouraged to bring their own. We'll want at least one computer per three students

**Volunteer roles**

Feel free to participate or circulate and help with the debugging!

**Set up needed**

Just the computers and students working in small groups.