

## Lesson plan: Session 2

### Looking After Ourselves



#### Overview

In this lesson learners will revisit the Good Health and Well-being SDG and explore how their micro:bit can be coded to help them become more aware of regular exercise.

60 minutes

#### Learning Outcomes

- Revisit UN SDG 3 Good Health and Well-being considering the Canadian context
- Code and create a Fitness Circuit
- Connect to speakers
- Code step counter
- Debug and remix
- Use Design Thinking to create a holder for the step counter

#### Disciplines

- Computer Science, Health and Physical Education, Social Emotional Learning, Mathematics, Social Studies/Geography

#### Transferable skills

- Critical Thinking
- Communication
- Collaboration
- Creative Thinking
- Computational Thinking
- Design Thinking.

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## Resources

- CodingChange\_S2\_teacher powerpoint
- Infographics – one per group of students, or for use with projection unit, or online links
  - UN SDG 3 <https://www.un.org/sustainabledevelopment/health/>
  - Canadian Health Statistics  
<https://infographicze.blogspot.com/2015/10/healthdocca-publishes-infographic-of.html>
- micro:bits, 1 per pair m:b & :b
- m:b speaker or headphones
- alligator clips 2 or 3 per m:b depending on the speaker
- craft materials for step counter
  - scissors, glue
  - duct tape, Velcro fasteners, bedazzlers

## Activities

### Minds On – Infographics Comparison

- Slide 2 – Clara Hughes quote
  - teachers may wish to start the class with having students share how they're feeling using the newly coded SEL micro:bit from last session
  - a discussion around mental health and Clara Hughes advocacy may be appropriate for your students
- Slide 7 – Guide a discussion around the 2 infographics and their content.
  - Lead with prompts such as “What do you notice? and What do you wonder?”
  - If students have limited experience with infographics, you may need to take a step back and discuss what infographics are, their purpose etc.
  - You may wish to spend more time on this and developing a world view, however, our purpose is to lead the discussion around personal health conditions in Canada and what we, the class, could do about it.
- Slides 8 – 12 – Coding a fitness circuit
  - Teachers may wish to go live to MakeCode and develop the code with their students highlighting variables and conditionals, or unhide the slides to guide students.
    - Teachers may wish to alter the animations and activities suggested to better meet your and student needs. A chart may need to be developed to help students remember what each animation represents.
    - The on button B pressed and A + B music is an opportunity to level up the activity

- Teachers may wish to access the Hacking your headphones [link](#) in lieu of having students connect to the speakers. There are also lots of supporting videos online.
- Slide 13 offers some remixing ideas.

## Action – Step Counting

- Slide 14 – Teachers may wish to have students investigate where the step counting craze started, determine optimal steps, various apps and devices that count steps etc prior to this coding activity
- Slide 15 – 16 – Coding the step counter. Again the code is scaffolded to meet your student needs.
  - While coding the step counter, challenge students to think about:
    - why we put “step counter” into the on start input?
    - which input would meet the needs of a step counter?
    - why A+b are used for the reset inputs
    - why start with small number in our conditional statements?
- Slide 17 reviews the elements of the code

## Reflect and Extend

- Slide 18 asks for remix ideas. Creating a “holder” for the step counter is a great place to drive a Design Challenge.
- Debrief the lesson by having students share their:
  - Their thoughts around Good Health and Well-Being
  - experiences with coding a fitness circuit and step counter
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- To dive further into this SDG, teachers may wish to access the micro:bit Being Active Design Challenge <https://microbit.org/projects/design-challenges/being-active/> which highlights the following activities
  - **Fitness friend** where students create a simple wearable device to give regular reminders to do some exercise.
  - **Heart rate monitor** where students learn how to measure their heart rate and create a prototype of a heart rate monitor.
  - **Walking for water** where students learn how some children have a daily walk for water and create a step counter to track their steps
    - Note - the Walking for Water activity may be something teachers do prior to creating the step counter.