Global Challenge

Night Sensor

Lesson 3
We need to:

- design a **Night Sensor:**
  - a wearable device that will give an audio and visual reminder to a child to ‘be safe, be seen!’ at night.
Night sensor algorithms

- **START**
- **INPUT** sense darkness level
  - IF dark then
    - OUTPUT musical audio for 5 seconds
    - OUTPUT visual display ‘Be safe, be seen!’
    - **STOP**
  - ELSE, **REPEAT**
Learning objectives:

- To follow an algorithm to write a program to create a ‘Night Sensor’
- To use paired programming and understand why it is helpful
- To test and debug code
Paired programming

- 2 programmers working together to code
  - One types the code (driver)
  - One watched the driver, checks the code, makes suggestions (navigator)
  - Work collaboratively, talking through problems

Why might this be helpful?
- More accurate code written in shorter time
- Can collaboratively work through problems
Sample code for basic Night Sensor

```plaintext
forever
  set light to light level

if light < 100 then
  start melody funk repeating once
  show string "BE SAFE, BE SEEN!"
```
Sample code for Night Sensor with stop & start buttons & audios
Explaining your code

● Talk through the code to explain what each block does.
● Why have you used those particular blocks?
● What alternative ways could you have coded the Night Sensor?
● Why did you choose this way?
● What problems did you encounter and how did you overcome them?
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● To use paired programming and understand why it is helpful
● To test and debug code