

Year 6 - Lesson 3: I'm sleepy

Learning Intention

- I can write a program that uses a variable to make Ohbot appear sleepy



Introduction

This week we are going to build on the skills we learnt in Year 4, using variables. We will *Make a Variable* and use this to control how sleepy or wide awake Ohbot acts.

Teacher Input

We will build up the project in stages. Each stage will build upon the code we have written in the previous stage.

Activity 1: In the first stage we need to *Make a Variable* called sleepy which will count up in ones starting from 0.

```
when clicked
set sleepy to 0
forever
change sleepy by 1
wait 3 secs
```

Activity 2: We will add an if-then-else condition instruction and sense when the value of sleepy is greater than 10. Whenever it is it will make Ohbot go to sleep. We can put what we want Ohbot to do when it sleeps into the *then* part of the conditional. Here we make it nod its head, close its eyelids and say 'Snore Snore Snore'. Encourage children to choose code to show Ohbot sleeping.

```
when clicked
forever
if sleepy > 10 then
set LidBlink to 0
set HeadNod to 0
say snore snore snore until done
else
```

Activity 3: We need to think about what happens to Ohbot when Ohbot is not asleep. We can put the code to make Ohbot awake in the Else part of the conditional. In this case we've made Ohbot open its eyes, nod its head up and say that it's wide awake. Challenge children to think about how they can show Ohbot is awake and add their code to the *Else* condition.

```
when clicked
forever
if sleepy > 10 then
set LidBlink to 0
set HeadNod to 0
say snore snore snore until done
else
set LidBlink to 10
set HeadNod to 5
say I'm wide awake until done
```

Activity 4: What if we wanted to wake Ohbot up. Can you think of how you could use a keyboard event to wake Ohbot up. Children might want to play a sound to 'wake' Ohbot up. Perhaps children can program Ohbot to look surprised when it wakes up?

```
when space key pressed
set sleepy to 0
```

Extension

1. Can you write code to make Ohbot appear a bit tired when the sleepy variable has a value between 5 and 10?

Plenary

Take a look at the children's own projects. Were they successful?



```
when clicked
  forever
    if sleepy > 10 then
      set LidBlink to 0
      set HeadNod to 0
      say snore snore snore until done
    else
      if sleepy < 4 then
        set LidBlink to 10
        set HeadNod to 5
        say I'm wide awake until done
      else
        say I'm feeling a little sleepy until done
        set LidBlink to 0
        wait 1 secs
        set LidBlink to 10
```

The image shows a Scratch script for Ohbot. It starts with a 'when clicked' event block. A 'forever' loop contains two 'if' statements. The first 'if' statement checks if the 'sleepy' variable is greater than 10. If true, it sets 'LidBlink' to 0, 'HeadNod' to 0, and says 'snore snore snore' until done. The second 'if' statement checks if 'sleepy' is less than 4. If true, it sets 'LidBlink' to 10, 'HeadNod' to 5, and says 'I'm wide awake' until done. If neither condition is met, it says 'I'm feeling a little sleepy' until done, sets 'LidBlink' to 0, waits for 1 second, and then sets 'LidBlink' to 10.