

Computing

Lesson 5: Drawing Designs

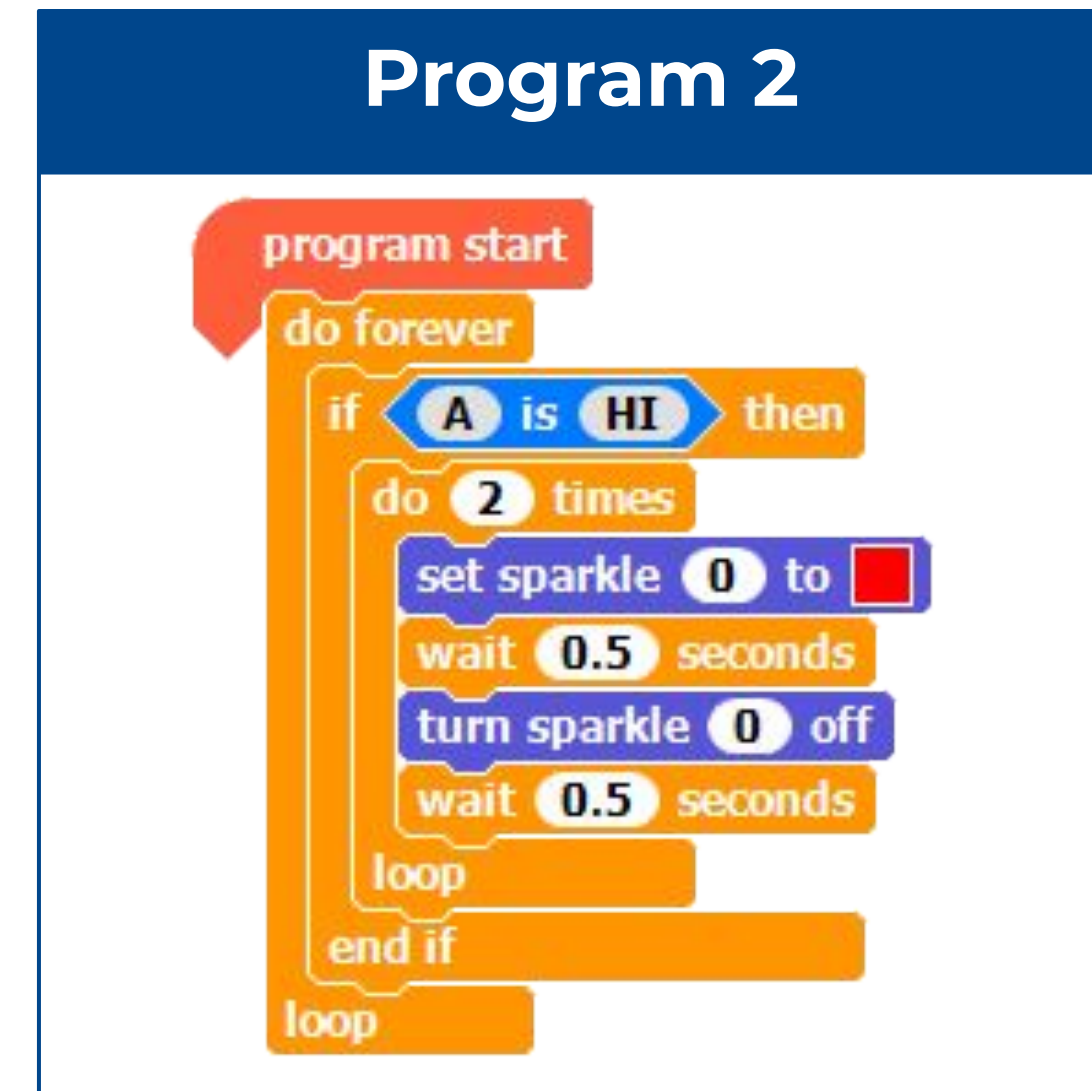
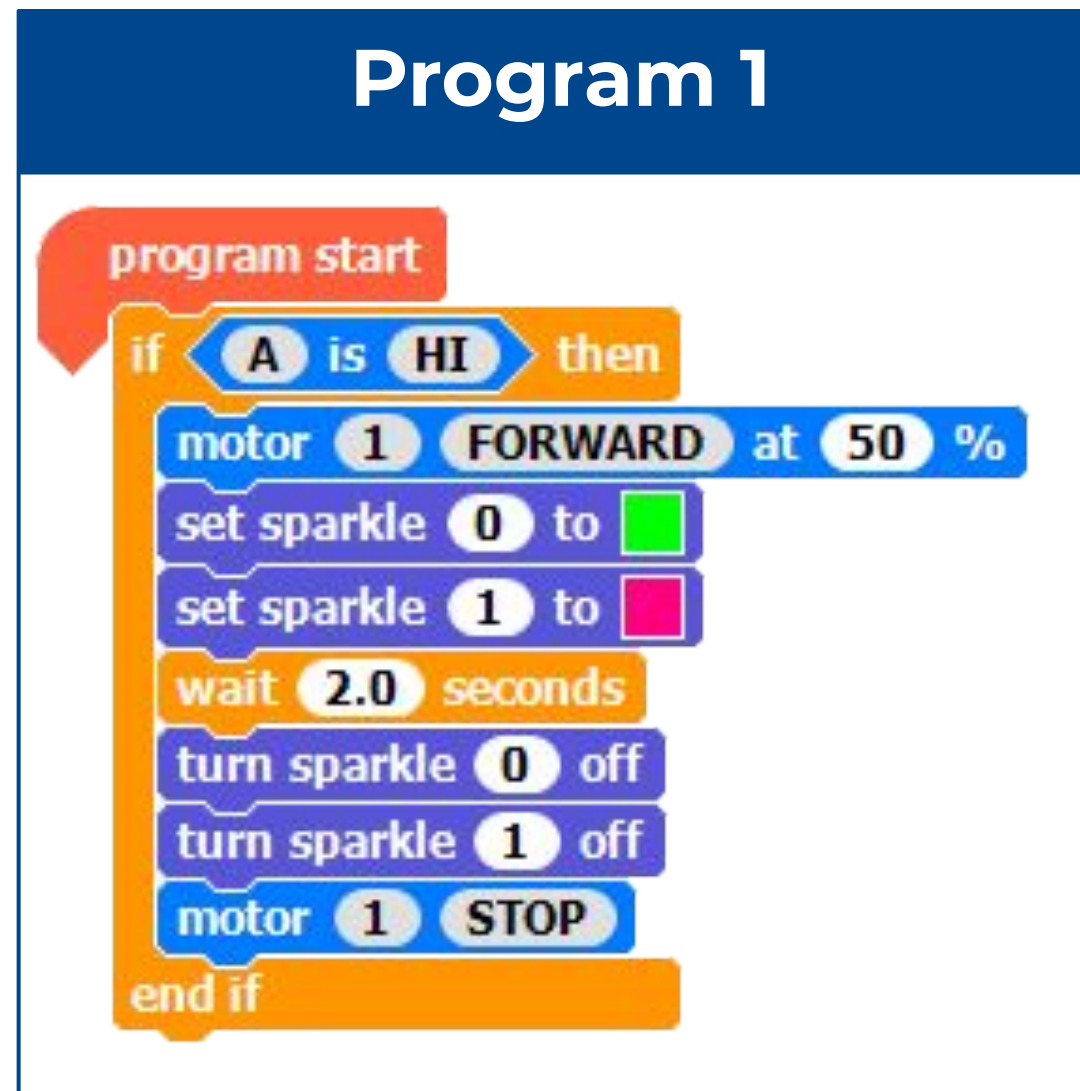
Selection In Physical Computing

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¹ Materials from the Teach Computing Curriculum created by the National Centre for Computing Education



Task 1 - Review



Source:
Crumble software

Does one or both of the programs above:

Use three output devices?



Task 1 - Review


Program 1

program start

if A is HI then

motor 1 FORWARD at 50 %

set sparkle 0 to 

set sparkle 1 to 

wait 2.0 seconds

turn sparkle 0 off

turn sparkle 1 off

motor 1 STOP

end if


Program 2

program start

do forever

if A is HI then

do 2 times

set sparkle 0 to 

wait 0.5 seconds

turn sparkle 0 off

wait 0.5 seconds

loop

end if

loop

Source:
Crumble software

Does one or both of the programs above:

Use a count-controlled loop?



Task 1 - Review

Program 1

```
program start
  if A is HI then
    motor 1 FORWARD at 50 %
    set sparkle 0 to green
    set sparkle 1 to pink
    wait 2.0 seconds
    turn sparkle 0 off
    turn sparkle 1 off
    motor 1 STOP
  end if
```

Program 2

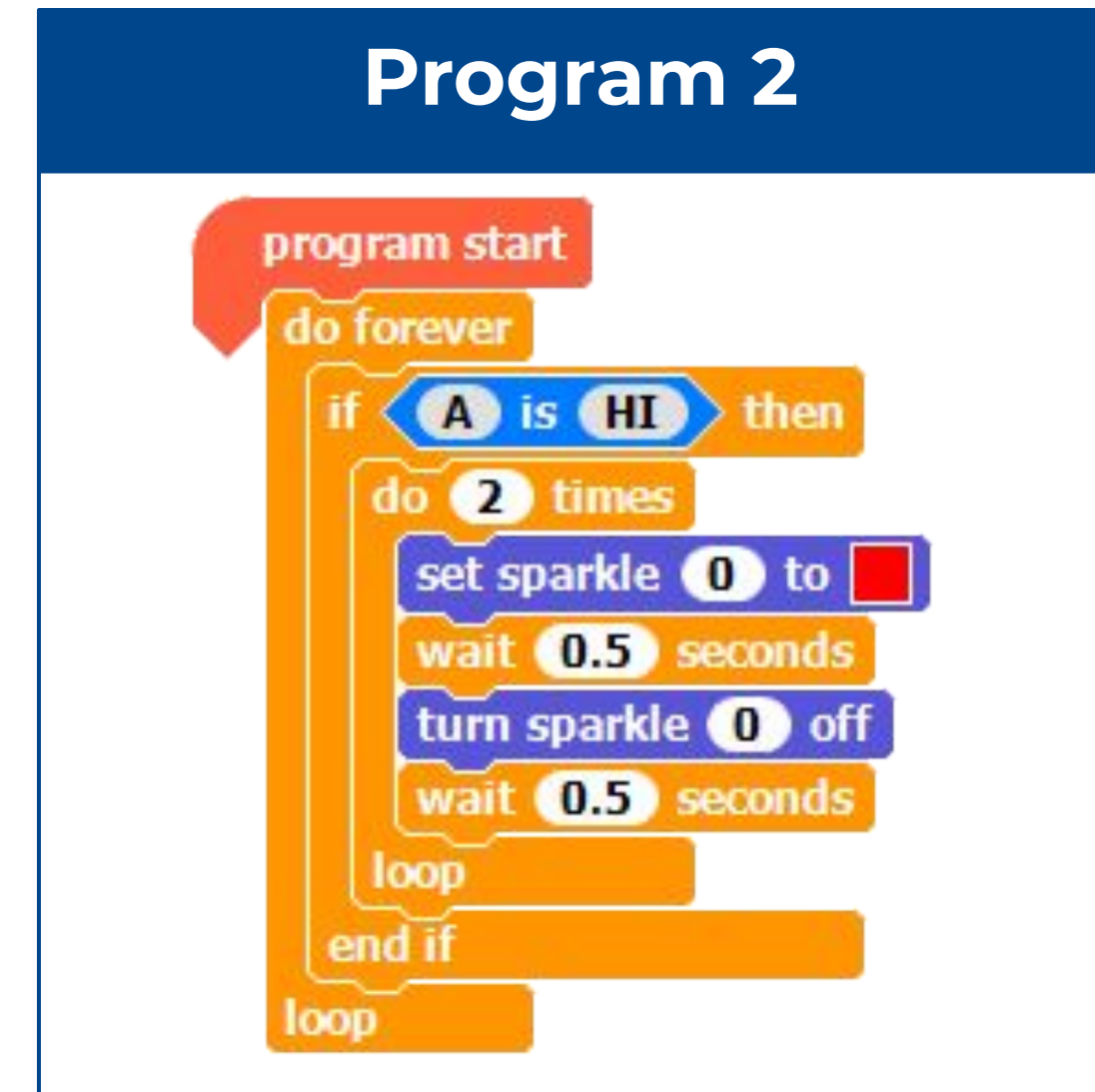
```
program start
  do forever
    if A is HI then
      do 2 times
        set sparkle 0 to red
        wait 0.5 seconds
        turn sparkle 0 off
        wait 0.5 seconds
      loop
    end if
  loop
```

Source:
Crumble software

Does one or both of the programs above:
Use selection?



Task 1 - Review



Source:
Crumble software

Does one or both of the programs above:

Use a loop to repeatedly check if a condition is met?



Task 2 - If... Then...

Use the If... Then... structure to write an algorithm to show how selection might be used in an automated house.

- Identify the condition
- Identify the action(s)
- Identify the number of times the condition will be checked



Source: Pixabay



Task 3 - Design

Use selection to control a model of a carousel that uses at least two output devices

- What materials and equipment do you need?
- Which two output devices will you use? sparkle sparkle motor
- How will your model use selection?

Draw a labelled diagram of your model.

Construct a wiring diagram showing how the Crumble and output devices will be connected



Task 4 - Build you model

Follow your design and build a model carousel.

Add in the Crumble components as shown in your design.

