



# Oide

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Supporting the Professional  
Learning of School Leaders  
and Teachers

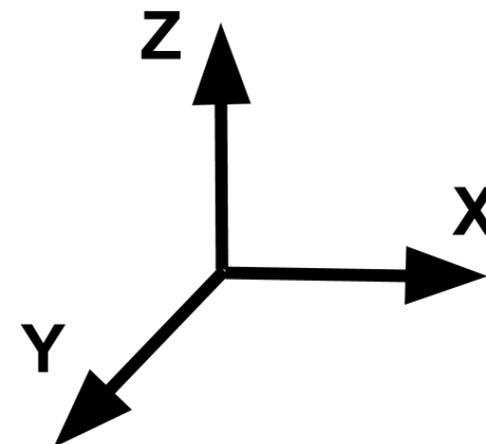
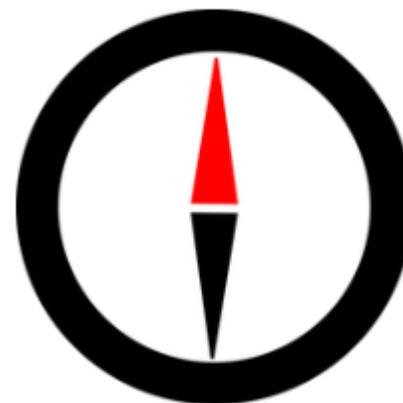
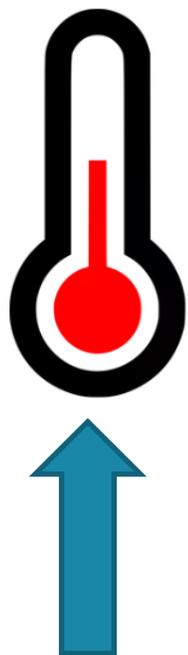
## Session 2

Branching out





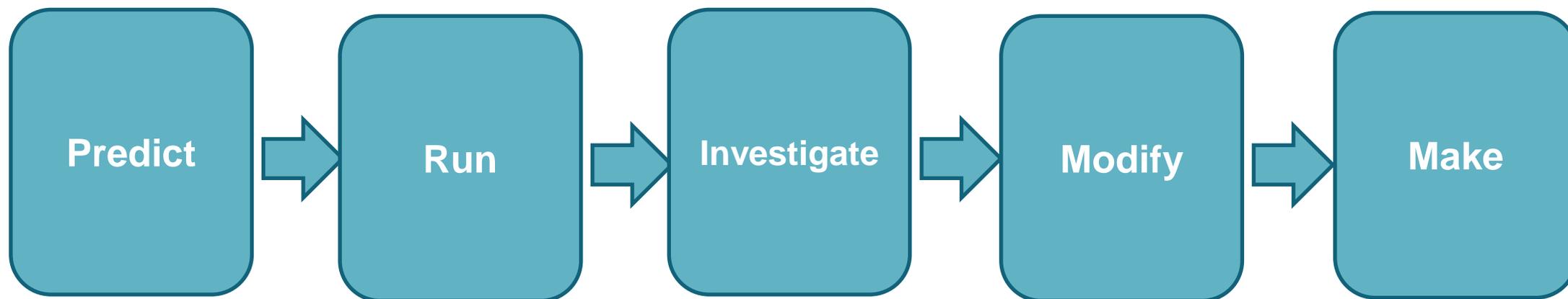
# Sensors



Today



# PRIMM





# Exercise 1 - Predict, Run, Investigate

The image shows a Scratch environment with a micro:bit board on the left and a Scratch script on the right. The micro:bit board displays a temperature of 21°C and has a blue arrow labeled 'A' pointing to a sensor component. The Scratch script consists of an 'on start' block containing a 'show icon' block (with a grid icon) and a 'pause (ms)' block (set to 1000). Below this is a 'forever' loop containing a 'show number' block (with 'temperature (°C)' selected).

Search...

- Basic
- Input
- more
- Music
- Led
- Radio
- Loops
- Logic
- Variables
- Math

on start

- show icon
- pause (ms) 1000

forever

- show number temperature (°C)



# Exercise 1 – Modify, Make

Modify your code so that

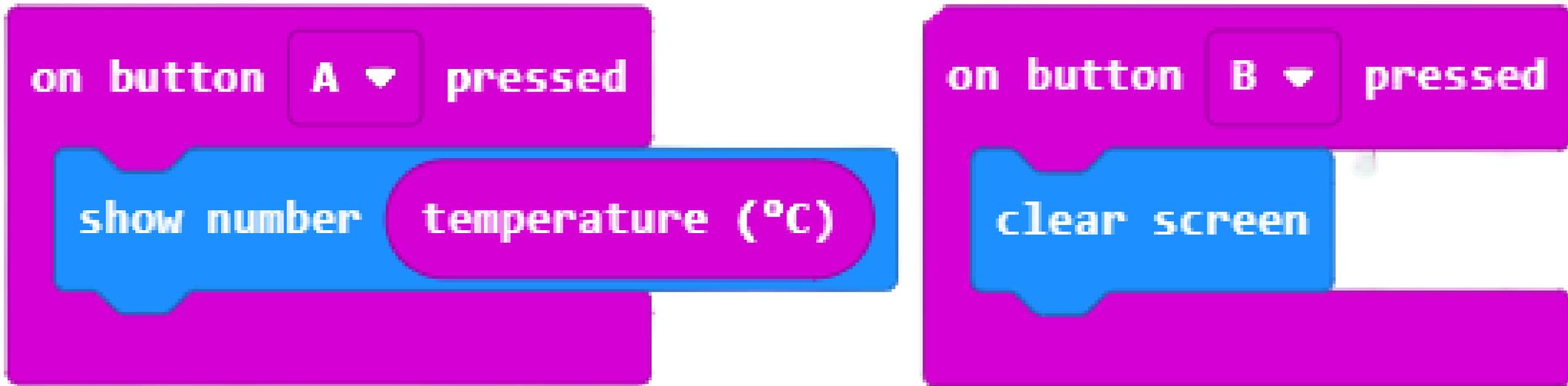
- the temperature is displayed when Button A is clicked
- the LED display area is cleared when Button B is clicked

Extension task:

- Write code to work out the average temperature



# Exercise 1 – Modify (sample solution)





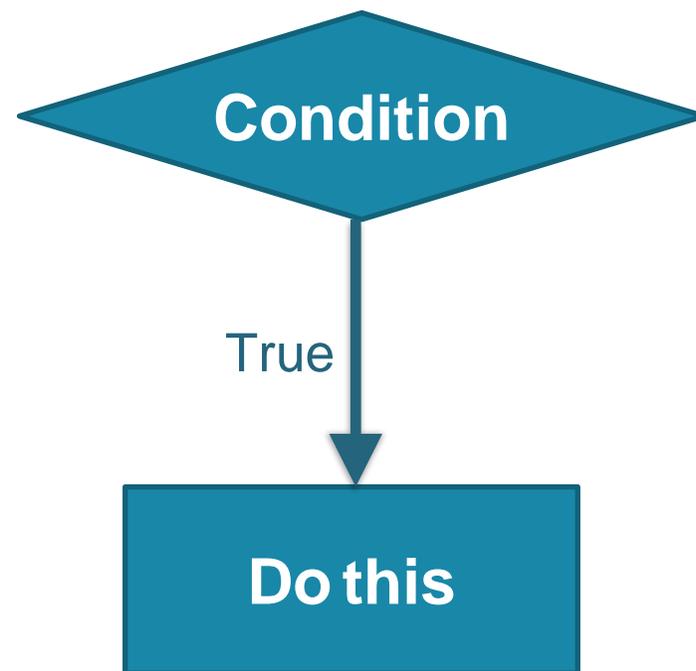
# Exercise 1 – Make (sample solution)

```
on button A pressed
  change temp by temperature (°C)
  change count by 1
```

```
on button B pressed
  show number temp ÷ count
```

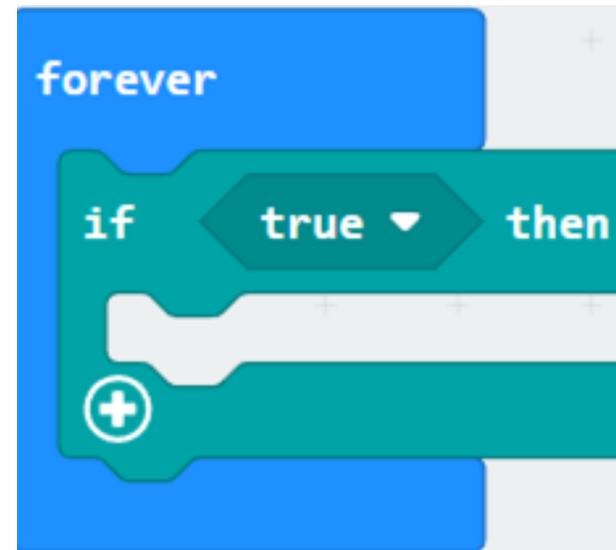
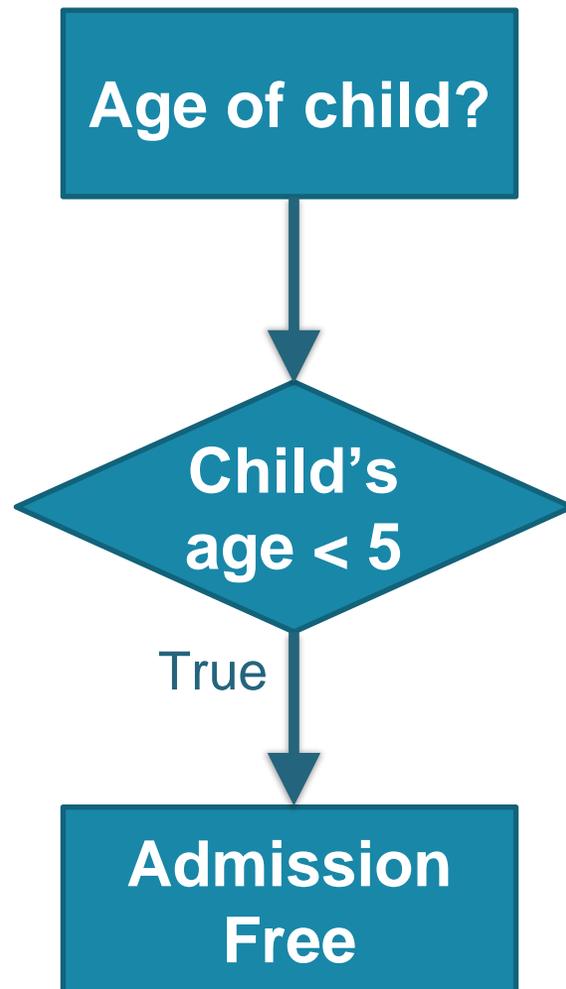


# Conditional statements





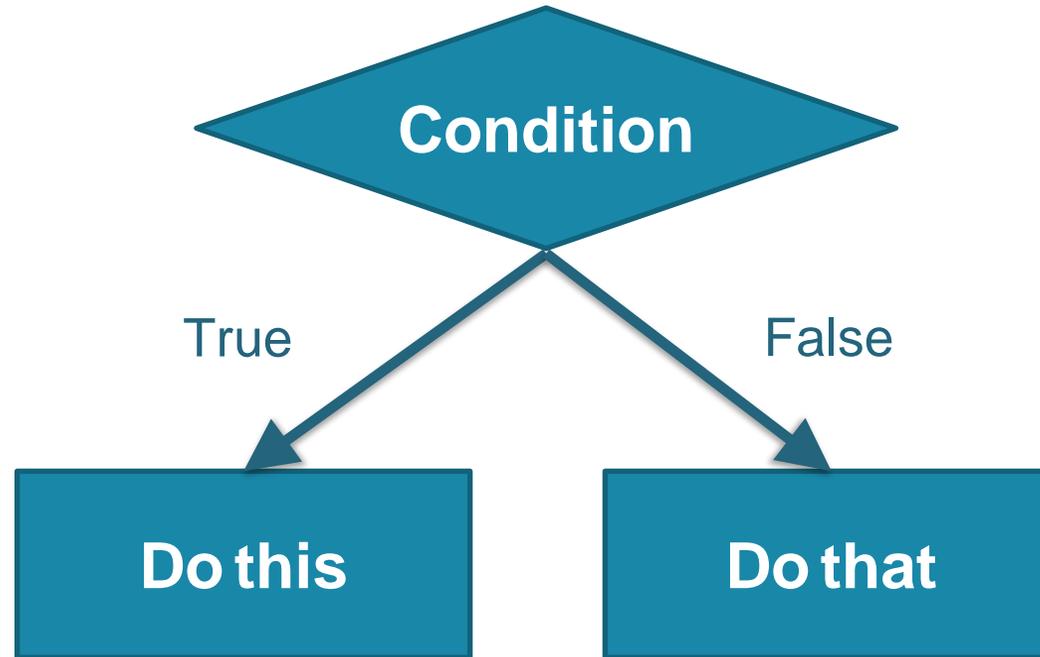
# Conditional statements



What block do you think the conditional block should sit inside?

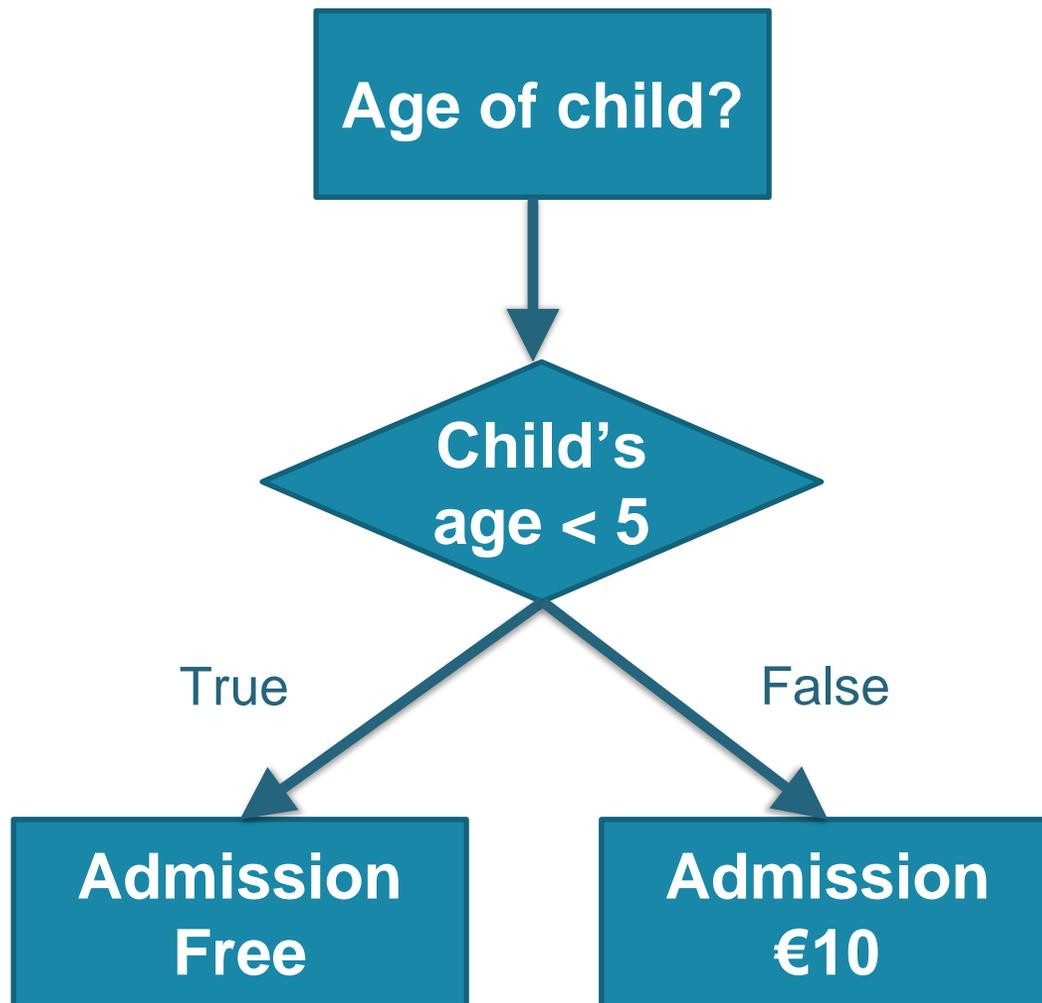


# Conditional statements





# Conditional statements





# Challenge task

On start set age

If less than 5, display “FREE”

Else, display “10euro”

Make a Variable...

set age to 0

change age by 1

Your Variables

age

Logic

Variables

Math

Extensions

Advanced

Comparison

less than

```
on start
  set age to 6

forever
  if age < 5 then
    show string FREE
  else
    show string 10euro
```

*Extension: Can you set the age to be a random number?*



## Exercise 2



If the temperature is above a certain value

- micro:bit should indicate that the room is hot
- otherwise it should indicate that the room is cold





# Exercise #2 – sample solution snippets

```
forever
  if temperature (°C) < 25 then
    show string "COLD"
  else
    show string "HOT"
  +

forever
  if temperature (°C) < 25 then
    show leds
  else
    show leds
  +
```



# Feedback





Oide



An Roinn Oideachais  
Department of Education



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