

Everyday Computing Concepts Input

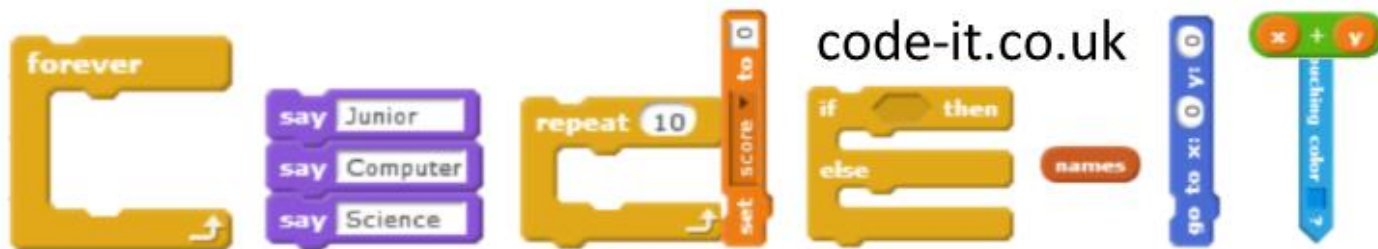


By Phil Bagge

[HIAS](#) Computing
Inspector / Advisor

[CAS](#) Community Leader

Author of the
[code-it](#) resources



Menu

- **Everyday Input**

Develop one concept at a time.

Start with the everyday understanding of the concept using this resource

Then roleplay the concept using the concept before coding resource

Finally create a programming project that uses the concept

Everyday Input

Input – Put in information into a digital device

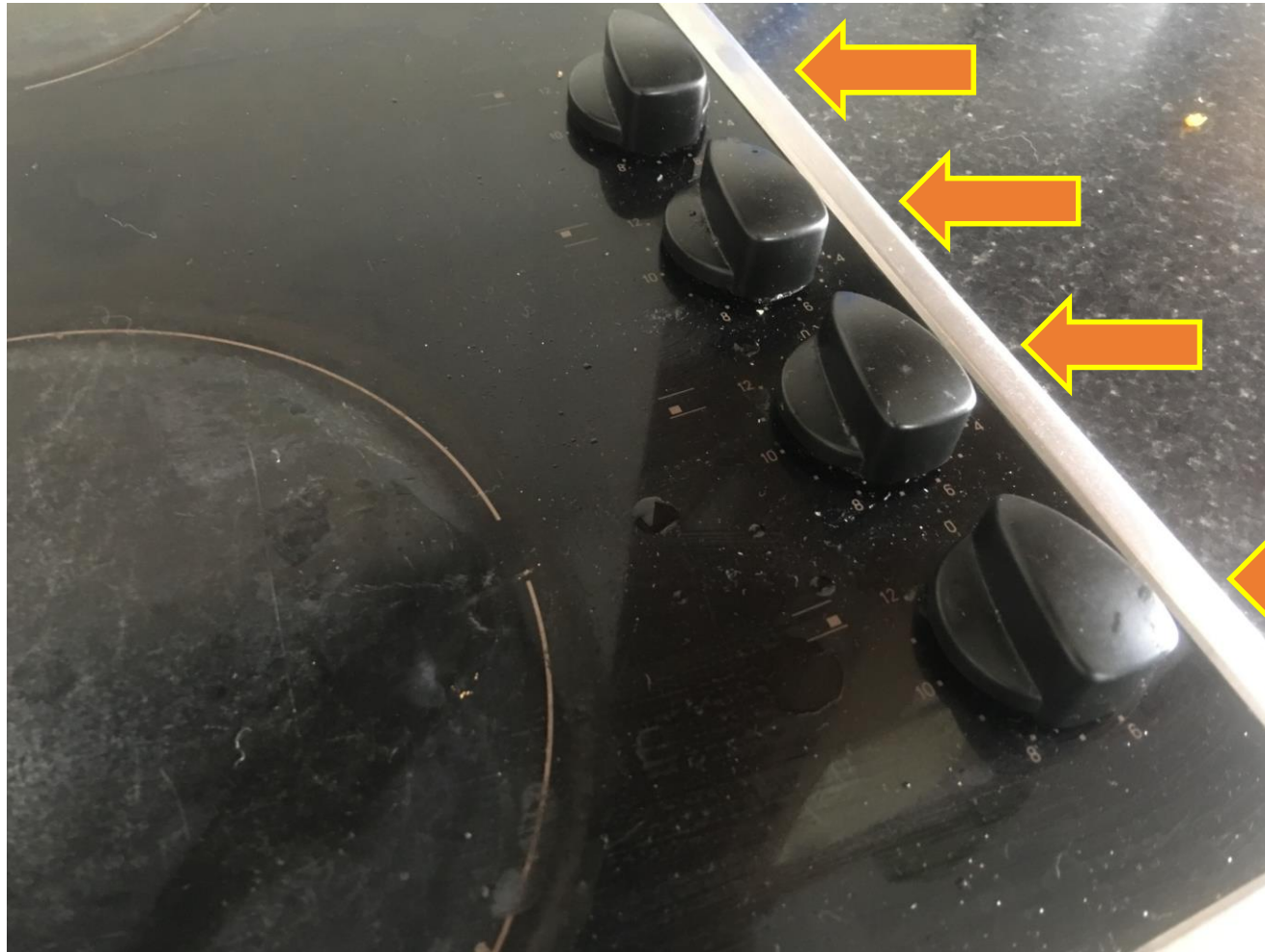
Input – Can you spot the everyday inputs?

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Electric Cooker Hob

Input – Can you spot the everyday inputs?



Electric Cooker Hob

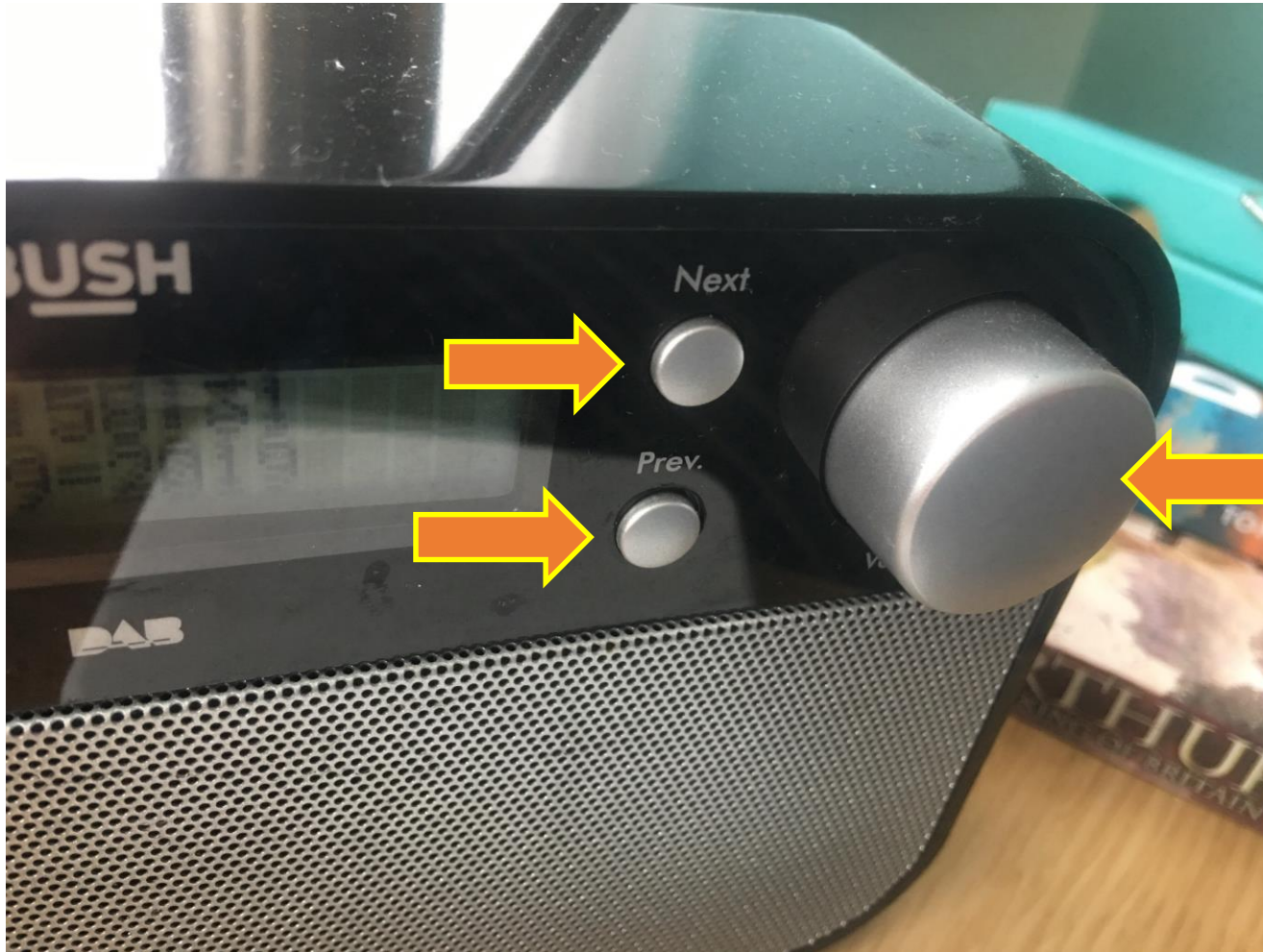
Dials input how hot hobs should be and turn them on and off

Input – Can you spot the everyday inputs?



Digital Radio

Input – Can you spot the everyday inputs?



Digital Radio

Buttons change radio stations

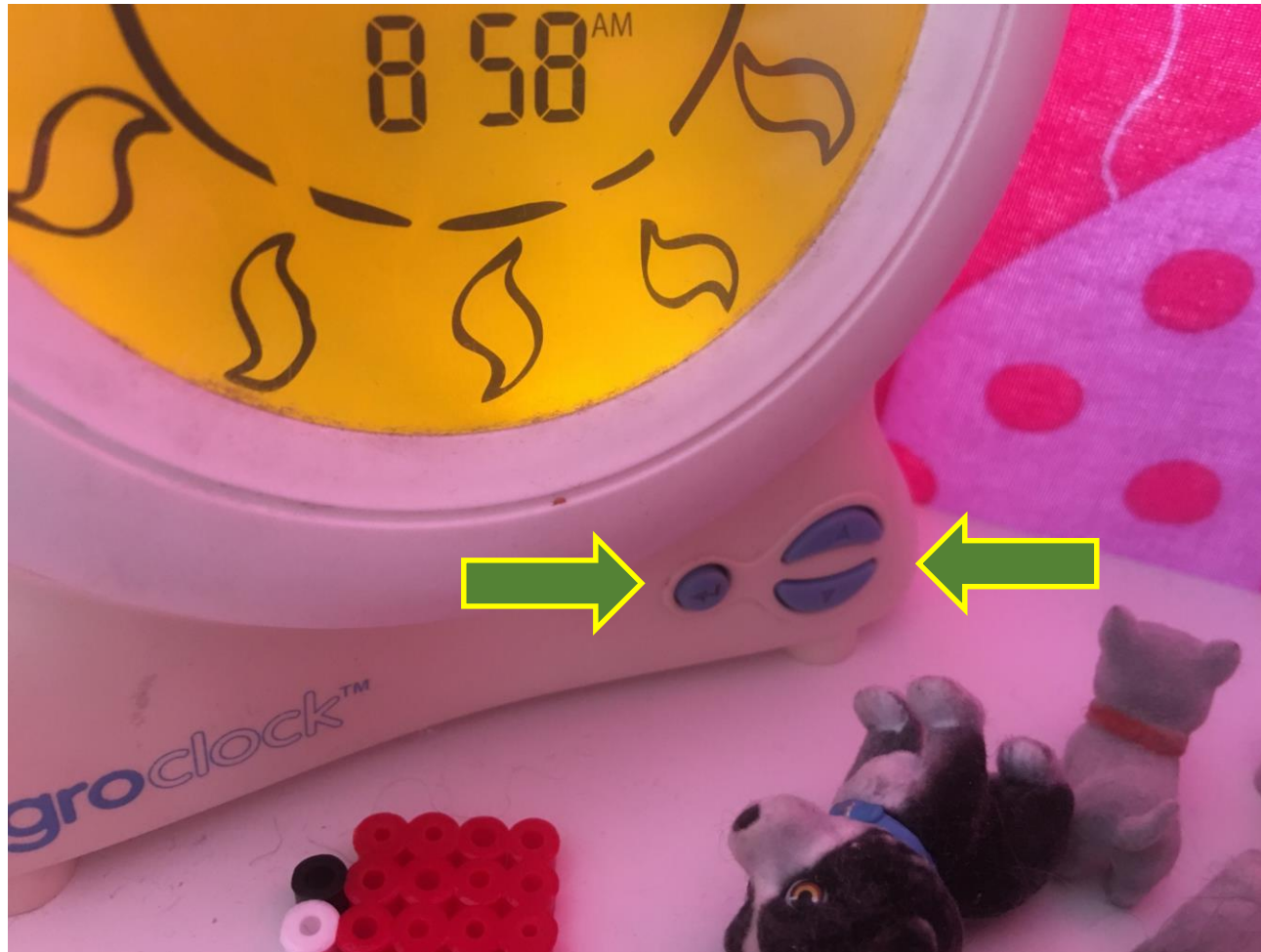
Dial changes volume

Input – Can you spot the everyday inputs?



Digital Clock

Input – Can you spot the everyday inputs?



Digital Clock

Buttons set the time
Set the alarm
Make the face light up

Input – Can you spot the everyday inputs?



Toilet

Input – Can you spot the everyday inputs?



Toilet

NOT an input as
toilet is mechanical
not digital

(no chip containing
programmed instructions)

Input – Putting in information

Pair up, one to act out the algorithm as a programmed digital device one to input information. Swap over after every slide.

When I **shout go** start this sequence

Stand



Input

Sit

Stand

Bow

sit

Input – Putting in information

When I **tap shoulder gently** do this
smile



Input

Input – Putting in information

When I **tap head gently** do this

Stand

Bow

Bow

Bow

Sit

Input – Putting in information

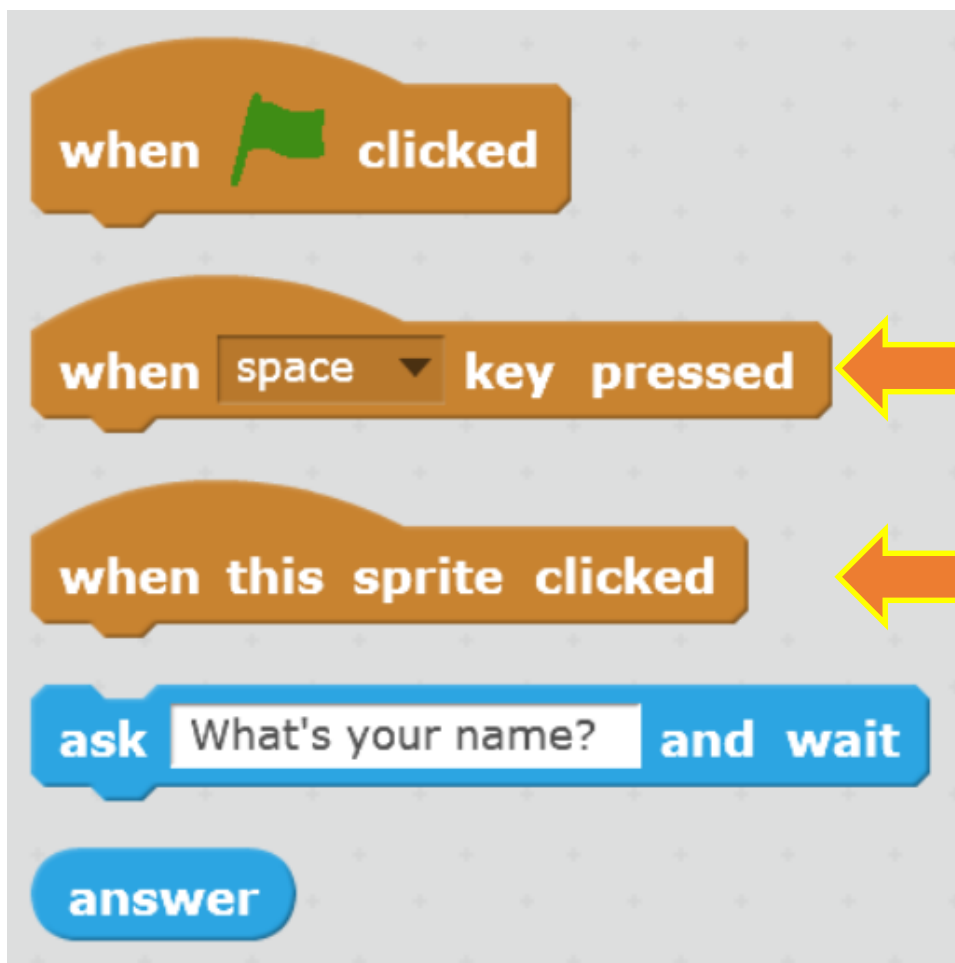
Arm slider

Input person touches the arm and slides hand up and down between elbow and hand

Algorithm person hums louder if input hand is nearer the elbow and quieter if nearer the finger tips



Scratch 2 Programming Inputs

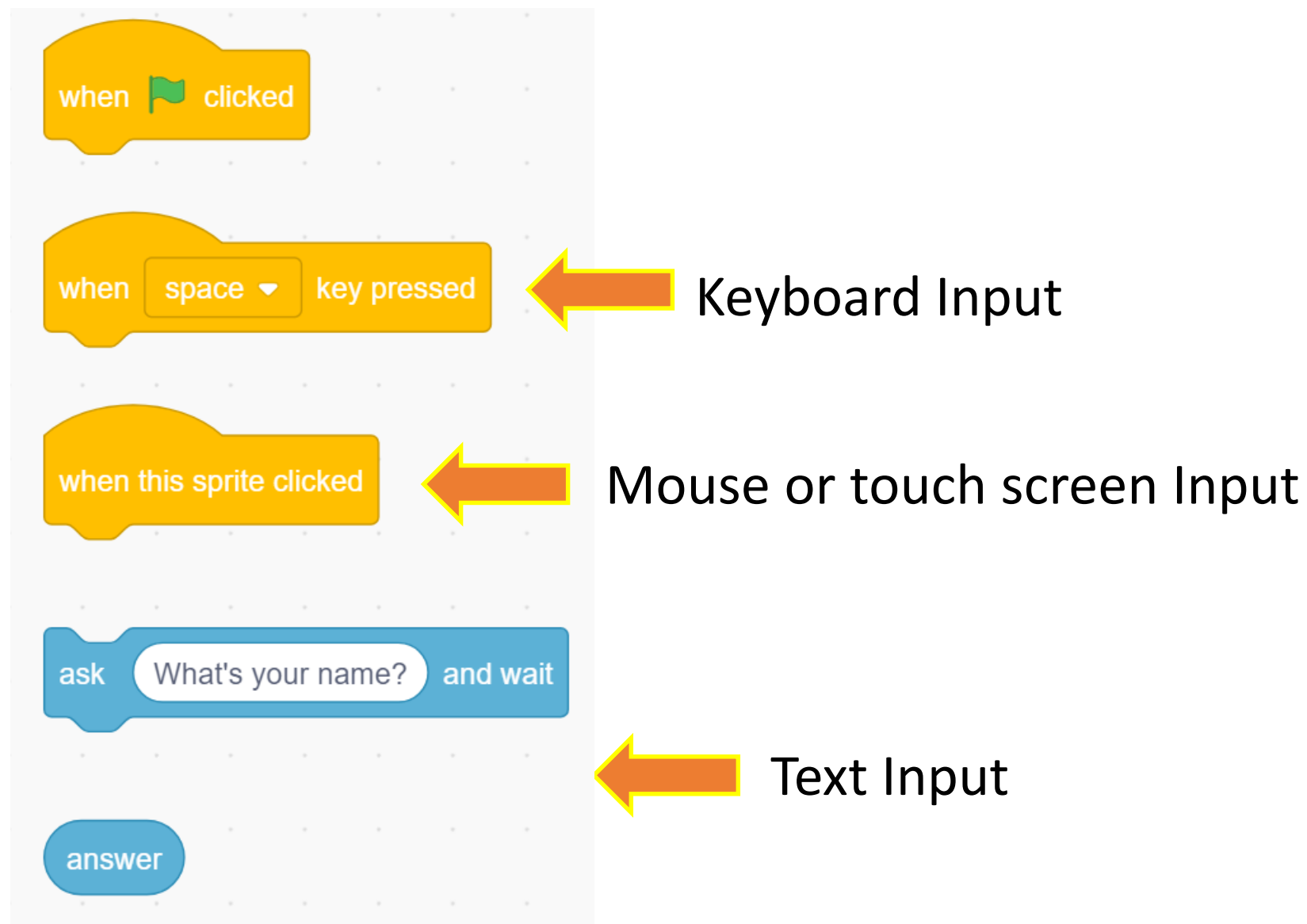


← Keyboard Input

← Mouse or touch screen Input

← Text Input

Scratch 3 Programming Inputs



Humans are not digital!

Exception

You can have an input into an algorithm even if it is designed for something that is not digital

Computing Theory

- Developing key concepts before coding reduces cognitive load and develops an understanding separate from code making an idea more portable between algorithm and different programming languages.
- This resource has been developed for block based programming and you will notice that it often uses slightly different language from Scratch which helps pupils to develop an idea separate from code.
- Supporting Articles with research links
 - [Review of cognitive load theory for computing](#)
 - [Difference between algorithm and programming](#)
 - [Does writing algorithms improve pupils understanding of concepts?](#)
 - [Introducing variables to novice programmers](#)