Algorithms

Pelican crossings are controlled by algorithms

Algorithms

**Outputs** are ways that a system gives out information

Inputs are ways that information is put in to a system

Pelican crossing - Exercise 1

a) What outputs are there from a Pelican crossing system?

b) What inputs are there?

c) Write out a rough sequence of instructions for a Pelican crossing system

d) What data might be need to be stored using a variable in a Pelican crossing system?

Algorithms
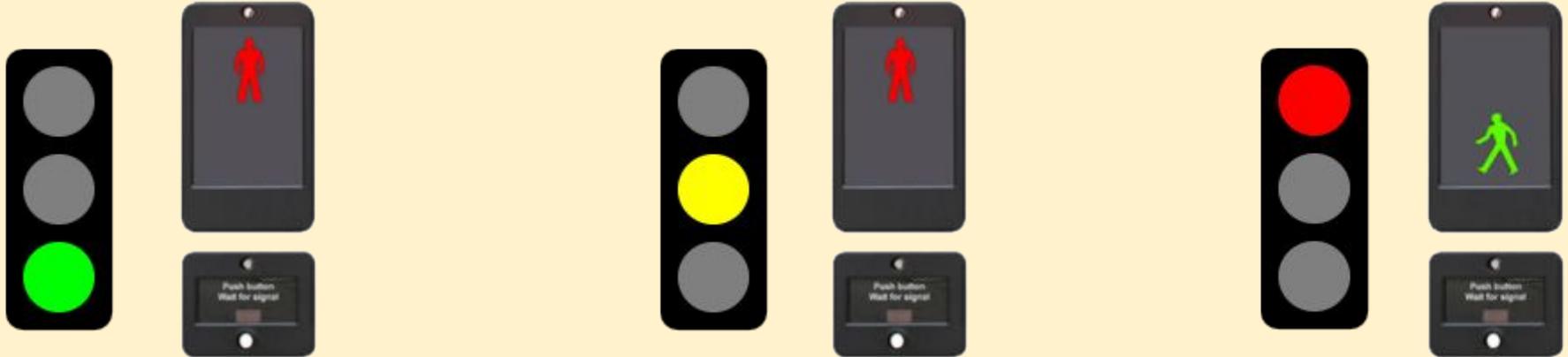
The amount of delay (waiting time) built into the system is important

Algorithms

You actually get both lights red for 1 to 3 seconds just in case…

Algorithms

FLASHING

Usually green man stays for around 7 seconds

On the way back to green light, usually flashing amber and flashing green man for 6-12 seconds

Algorithms

Algorithms can be written using **pseudocode**.

Pseudocode is a set of commands similar to computer code

This code is written on paper as a way of working out the way that a set of computer code will work

Pelican crossing - Exercise 2

Use the pseudocode commands **on the next slide** to write a complete algorithm for the pelican crossing lights sequence

There is a set of rules to follow. These are **important**

Algorithms

```
WAIT(time)              red

LIGHT_ON(light)         amber

LIGHT_OFF(light)        green

NOISE_ON(noise)         greenman

NOISE_OFF(noise)        redman

IF                      beep

REPEAT
```

Algorithms - Extension

How does face ID on a phone work?

This is a research task. Write a **short report** to find out how exactly your phone knows that it's your face and not someone else's.

How does it know it's not a photo?

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