



Investigate Selection

Program Aim Can the user investigate different ways to use selection in games programming?

Computer Science Concepts

- if else selection
- if selection
- Many depending on user

Computing Program of Study

design, write and debug programs that accomplish specific goals, use sequence, selection, and repetition in programs; work with variables and various forms of input and output

1, Import a simple transport sprite

Ask pupils to import a simple transport sprite.

Scratch 1.4 Choose new sprite from file, transportation folder

Scratch 2.0 Choose sprite from library, Category Transportation

2, Make it move

Drag out these blocks or challenge pupils to make it move themselves if they have completed the slug trail game.

3, If or else steering

Show pupils how to create this simple if or else steering block.

When you have created the if part ask them where you can put it (inside forever loop) so it gets checked over and over again?

In Scratch 2.0 turn 3 degrees works better than 5 degrees.

4, Coloured blobs background

Show pupils how to create coloured blobs on plain background.

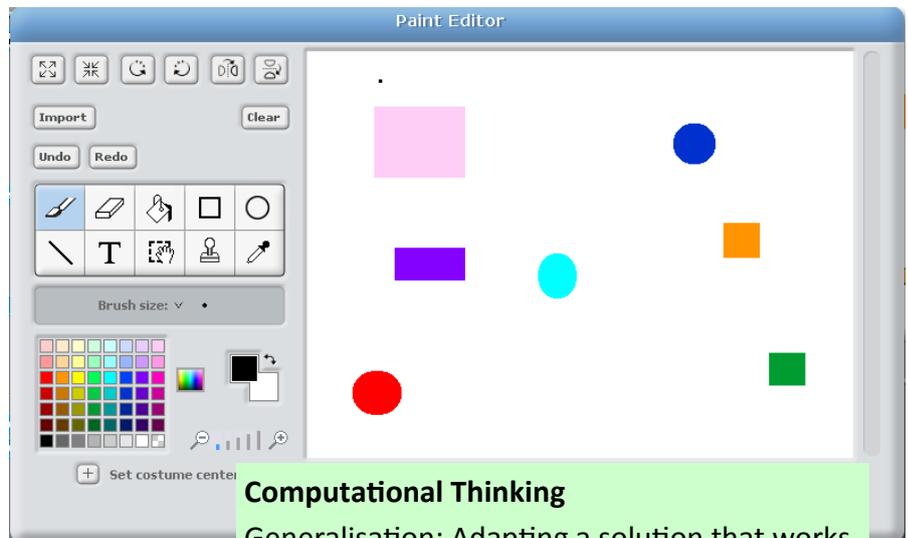
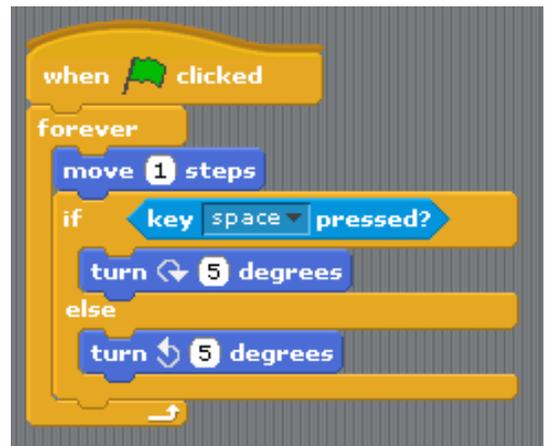
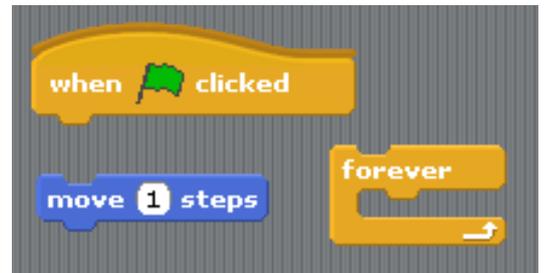
Ask them to leave gaps the sprite can travel through.

Scratch 1.4 Stage, Background, Edit, rectangle and ellipse tools

Scratch 2.0 Stage, Paint new backdrop, rectangle and ellipse tool make solid (bottom left)

5, Explain Challenge

Explain that their challenge is to investigate how many different ways they can use selection either in single form or in if else form to respond to the colours. You may want to demonstrate this once first.



Computational Thinking

Generalisation: Adapting a solution that works for one problem to solve others.



Investigate Selection P2

5, Explain Challenge Continued

See demo ideas

Make sure pupils know to build each new selection block in its own code not adding it into move and steer loop. This way if it doesn't work as they want they haven't stopped base program. PS wait commands can do this very easily. You may want to use the help sheet provided for SEN or all pupils.

PS If you haven't got headphones ban sound blocks as these can be distracting for others.

6, Move pupils on

It is very easy to get stuck investigating just looks blocks or movement blocks. Periodically ask pupils to move on to investigating other types of programming blocks using selection. Draw out generalisation computational thinking skill.

7, Share discoveries

This is a great module for sharing what everyone has learnt through setting screens on presentation mode.

8, Extra Challenges

Add extra challenges for those that think they have finished there is a pdf version or PowerPoint version to display on the screen or a print version if you wish.

NOTES I have had Y4 pupils investigate what happens to variables if you have used variables previously in the quiz or elsewhere. I don't mention this but encourage it if they ask.

Demo Selection Ideas

```
when green flag clicked
  forever loop
    if touching color purple?
      change color effect by 25
```

```
when green flag clicked
  forever loop
    if touching color red?
      say Hello!
    else
      think Hmm...
```