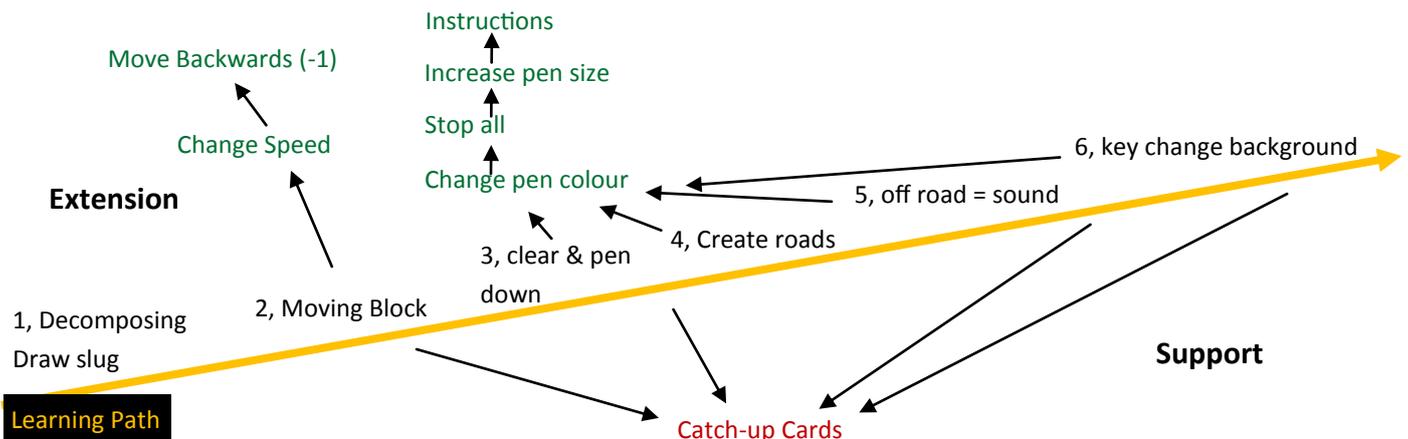# Slug Trail

Computer Science Concepts

-Using a keyboard inputs to control a aspects of the game

-Simple forever loops

-Simple Colour Conditional operator

-Sprite moving towards mouse

Game Aim Designed as a simple moving game for initial Scratch use. Pupils create a slug that travels round a roadway leaving a trail behind. Can the user keep the slug on the road.

Differentiation and Assessment for Learning This planning should be used alongside the *catch-up cards* supporting SEN pupils and the *extension cards* supporting the more able. At the beginning of each session the *learning intention sheet* is shared and the learning journey expanded through success criteria. Pupils feed their progress back to the teacher through annotating this sheet with smiley faces at the end of the lesson. Teachers can also annotate the sheet to indicate those who need more or less help in future lessons. These extra resources can be found on the code-it.co.uk website.

Instructions

Increase pen size

Move Backwards (-1)

Stop all

Change Speed

6, key change background

Change pen colour

Extension

5, off road = sound

4, Create roads

3, clear & pen down

2, Moving Block

1, Decomposing Draw slug

Support

Learning Path

Catch-up Cards

1, Decomposing the key elements of the game

Load Slug Trail Example File on Scratch 1.4

Play the game without looking at the code

Ask pupils to work in pairs to identify (decompose) all the features of the game (Moving, follow mouse, leave trail, make sound if leave road, roads, instructions etc.)

Record on whiteboard

Computing NC POS
write and debug programs that accomplish specific goals, solve problems by decomposing them into smaller parts use sequence and repetition in programs

Draw slug from ellipse, line and pen tools

Make sure you draw it facing right or it will travel in the wrong direction
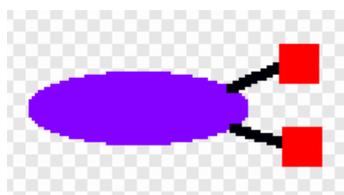
Common Problems
Line is not drawing from underneath the slug
Common cause
Pupils have included a dot away from spite when painting it
Fix
Edit sprite delete dot and then re centre sprite using button at bottom of paint editor in Scratch 1.4
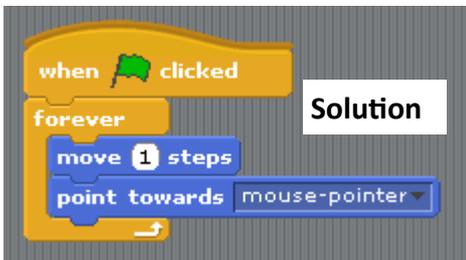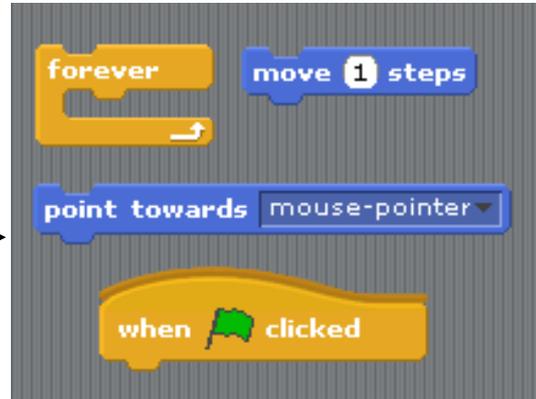
# Junior Computer Science

Slug Trail P2

2, Moving Block

If this is first time pupils have encountered forever loop show them everyday examples. Then show them blocks of code and encourage them to snap these together and click the green flag, when they get it right the slug will move **EXT Change Speed Move Backwards (-1)**

Solution

3, Clear and pen down

Explain that when the game starts we would like the last line to be cleared and then the pen to be put down. Drag out these blocks like this

Can pupils find the right place to put these and then test the code?

Solution
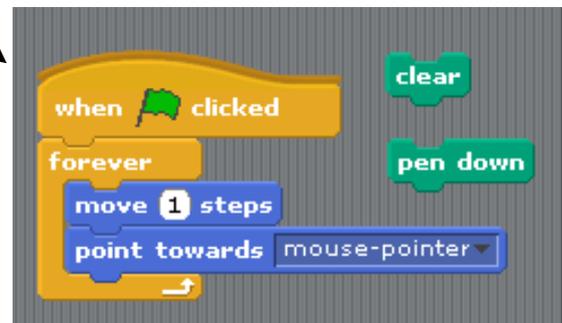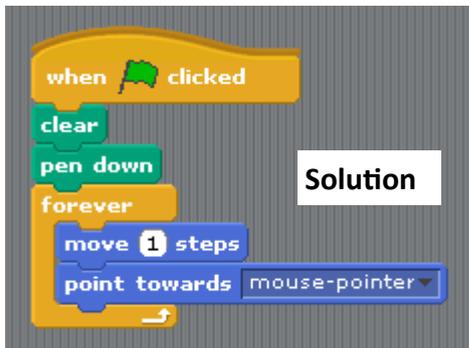
A great way to model this is to have a child play the mouse pointer and move around. You then model the sprite move one step then point towards mouse then move one step and then point towards mouse

4, Create Roads

As pupils will have created roads before only specify that they create as many as they can with same colour background and road for all.

Warn pupils that sprite should not be same colour as road or background to avoid slug looking like it has disappeared
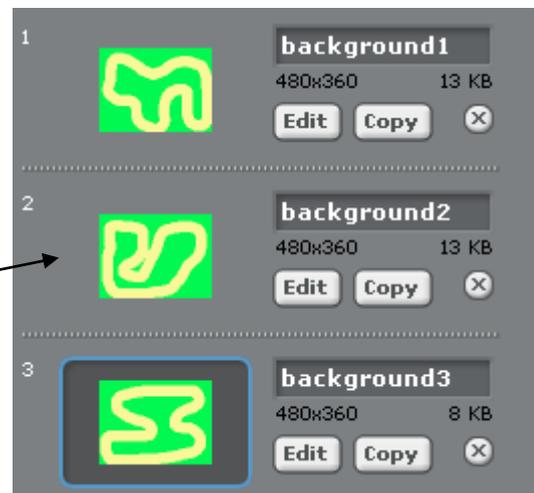
Junior Computer Science

Slug Trail P3

5, Off road leads to sound

Give pupils 2 minutes to import an annoying sound such as screech

Now build the code and explain that only if the sprite is touching the colour will the sound be played. It is checked over and over by the forever loop, is it touching colour, is it touching colour etc

```
when [green flag] clicked
forever
    if < touching color [green]? >
        play sound [Screech v]
```

```
when [x v] key pressed
next background
```
Solution

6, X Key change background

Challenge pupils to see if they can work out right code to make x key change background. Code must go in stage.

```
when [g v] key pressed
set pen color to [green]
```

```
when [r v] key pressed
set pen color to [red]
```

```
when [b v] key pressed
set pen color to [black]
```

Change Pen Colour

Card challenge and solution available

Encourage pupils to attempt from front info only

```
when [space v] key pressed
stop all [stop]
```

Stop All

Card challenge and solution available

Encourage pupils to attempt from front info only

Increase Pen Size

Harder Extension

Card challenge and solution available

Encourage pupils to attempt from front info only

```
when [green flag] clicked
set pen size to (1)
forever
    change pen size by (1)
    wait (5) secs
```

Junior Computer Science

code-it.co.uk

Slug Trail P4

Instructions

Card challenge and solution available

Encourage pupils to attempt from front info only

You could teach this extension
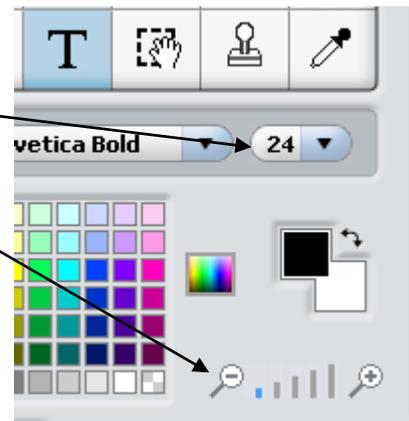
Create new Sprite

Text Size 24

Zoom Out

Type out instructions

Add code to show when game starts or i is pressed

Instructions
x=change background
r=red line
b=black line
g=green line
Space=stop game
i=instructions

```
when [green flag] clicked
show
wait 10 secs
hide

when [i] key pressed
show
wait 10 secs
hide
```