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.

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

**Draw slug**
Draw slug from ellipse, line and pen tools
Make sure you draw it facing right or it will travel in the wrong direction

**Extension**
1. Decomposing
   Draw slug
2. Moving Block
   Move Backwards (-1)
   Change Speed
3. clear & pen down
   Change pen colour
4. Create roads
5. off road = sound
6. key change background

**Support**

**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

**Common Problems**
Line is not drawing from underneath the slug
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

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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)

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

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

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 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.

**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.

- **Change Pen Colour**
  Card challenge and solution available
  Encourage pupils to attempt from front info only

- **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

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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

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