

Name:

Date:

# Year 5 Lesson 3- Pacman3



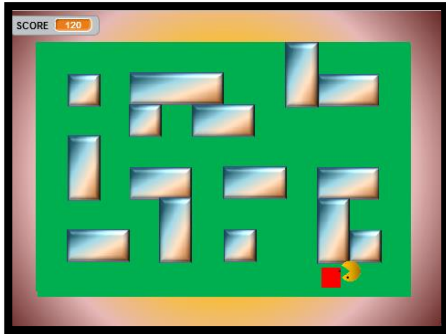
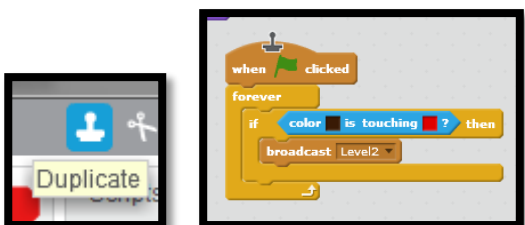
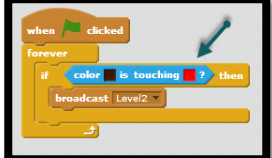
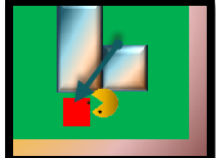
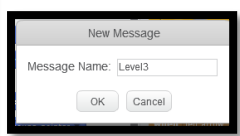
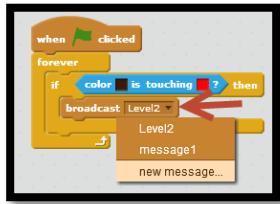
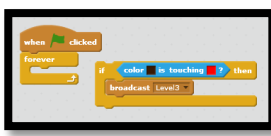
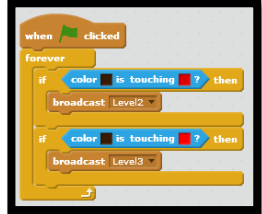
2.0

*Resources - Scratch 2 application; Y5L3 Pacman3 S2-0 folder, which contains Y5L3 Pacman3 Help Tutorial PR.pdf (hardcopy) to be used as pupil evidence inside their ICT folder; pencil, to tick off each task on the Y5L3 Pacman3 Help Tutorial PR, pupil videos Tasks 1-6 for independent progression and debugging. A whiteboard/projector (to show videos Task 1-6 and for the teacher demonstration of the Scratch application)*

*Vocabulary-User Interface, Sprite List, Stage, Script Area, Shrink Tool, Crosshair, Duplicate Tool, Thumbnail, Motion Palette-move 10 steps, go to x: y, point in the direction 90, Looks Palette-switch costume to; Event Palette- key space pressed, when green flag clicked, broadcast message, when I receive Level2; Control Palette wait, forever, stop all, if ....then; Sensing Palette-if touching ....?, f touching colour; Data Palette make a Variable selection statements, set score to 0, change score by .....*

## Lesson Objective-To develop Level2 and Level3 of a Pacman game

**Starter** - Navigate to your named pupil folder on the school network. Open Y5L3 Pacman3 Demo Debug T1-6.sb2 file found inside Y5L3 Pacman3 S2-0 Folder. This Scratch file will show the objectives (Tasks1-6) for the lesson and will be used to help you debug your own Scratch project.

|   |  |
|---|--|
|    | <p><b>T1.</b> Open Y5L3 Pacman3 Start.sb2 and save your file with your initial (or initials if working with a partner). Maximise the screen.<br/>Click the green flag, eat all the sprites (gaining a score of 120) and touch the red square to go to Level 2.<br/><b><u>Pacman to progress to Level3</u></b></p> <p>When Pacman touches the red square on Level2, he will send a message (broadcast) that he wants to go to Level3. The stage will hear (receive) the message Level3 and change the backdrop to Level3.</p> <p>Select the Pacman thumbnail. Select the Stamp (duplicate) Tool and click on the stack as shown. We are reusing code.</p> <p>Drag the duplicated stack underneath the original stack.</p> |
|       | <p><b>T2.</b> On the duplicated stack, click the red square of the <b>color .. is touching ..?</b> Then click immediately on the red square of Level2 on the stage. The red will change to a slightly different shade of red.<br/>Select the drop down arrow on the broadcast block. Select new message. Type Level3 and click OK.<br/>Drag out the <b>if then block</b> and slot into the <b>forever loop</b> of the above stack as shown.</p>  |



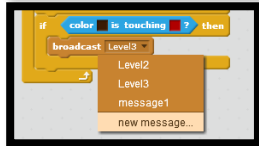
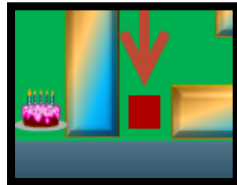
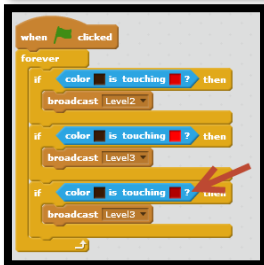
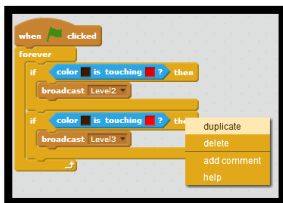
**T3.** Select the Stage thumbnail in the Sprite Area.  
Using the Stamp Tool, duplicate the **when I receive Level 2 control** and select Level3 from the dropdown arrow.

Select **Level3** on the **switch to background Level3**.

**Test your program and debug**

Click the green flag. This time take Pacman to the red square immediately on Level1 to progress to Level2.

Go immediately to the red square on Level2 and see if Pacman goes to Level3



**T4. Pacman progresses from Level3 to the End**

When Pacman touches the red square on Level3 he will shout (broadcast) End to the stage.

Select the Pacman thumbnail, duplicate the **if then block** and slot inside the **forever loop**.

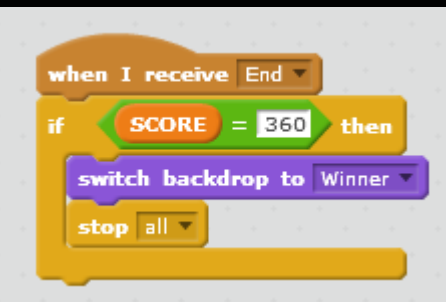
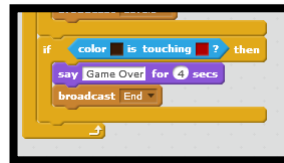
Click the red square on the **color .. is touching ..?** and immediately click the red square on Level3

Select the dropdown arrow and select New message. Type End

Drag a **say hello for 2 second block** from the **Looks Block**.

Change hello to **Game Over**. Change to 2 sec.

Snap the block to the stack as shown.



**T5.** Select the Stage Thumbnail.

From the **Event Palette**, drag out a **when I receive block**. Select **End**.

From the **Control Block**, drag an **if then block**

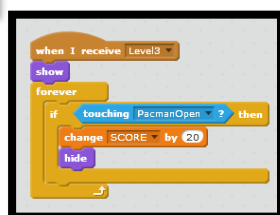
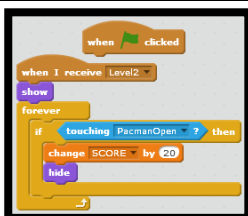
From the **Operators block** drag an **equal block** and snap to the **if then block**.

From the **Data Palette** drag the **score**. Score = 360

From the **Control Block**, drag an **stop all statement**

If you score less than 360 points the game will just end and you will not see the winning screen.

From the Control Block select stop all and snap as shown.



**T6. Adding Sprites to Level2 and Level 3**

Pacman broadcast a message (Level2) to the stage when he touched the red square on Level1. He is, however, shouting this message out to everyone who can hear him, not just the stage. When the apple hears (receives) Pacman broadcasting the message **Level2** the apple will show itself on the maze and hide again when it is eaten by Pacman.

Again we will reuse code.

Duplicate the apple code stack → discard the when green flag is clicked and substitute with when I receive Level2.

Duplicate the Level2 stack and change Level2 to Level3.

The apple will now appear on all 3 levels