

Name:

Date:

Year 4 Catch the Apples Lesson 3 (of 3)

Lesson Objective-To create a timer in a game

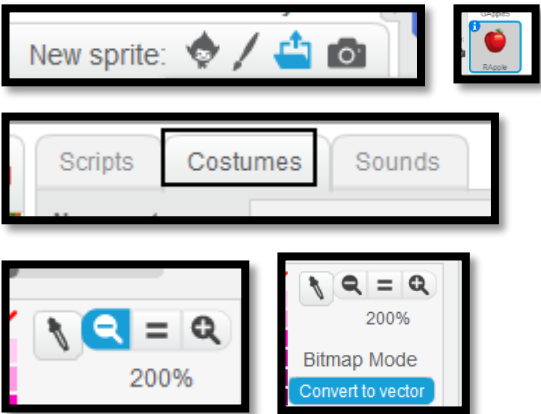
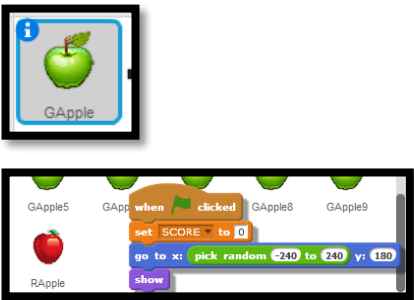
Resources - Scratch 2 application, Y4L3 Pupil S2-0 Folder, containing optional hardcopy of the image tutorial Y4L3 Catch the Apples PR S2.doc for pupils to tick (+ pencil) each completed task as evidence in the their ICT folder or Y4 Self -Assessment SOW document)

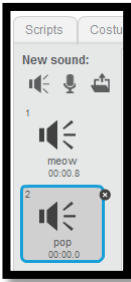
Whiteboard/projector (to show videos and demonstrate the Scratch application)

Vocabulary- Vector image, png, User Interface, Sprite List, Sprite, Stage, Script Area, **Event Palette**-when green flag clicked. **Control Palette**- forever, wait secs, wait until, stop all. **Looks Block**: show, hide. **Operators Palette**- equal to. **Data Palette**- variable, set variable to, change variable by. **Sound Palette**- play sound. Sequence, selection and debug.

Start Scratch 2 offline or online- File open →Navigate to your pupil folder →Y4L3 Apples start → Save as Y4L3 Apples +initials.

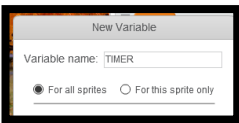
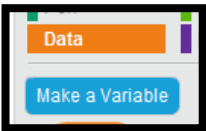
The teacher will show you the demo Y4L3 Catch the Apples Demo to remind you of your objective for the game. In addition this file is used to help you debug your code.

	<p>T1 - Save your file as Y4L3 Apples Start + initials.</p> <p>We are going to create a sprite of a red apple sprite from an image.</p> <p>Select upload sprite from file. Select Rapple.</p> <p>Next we are going to convert the image to a vector image. Png files can sometimes be problematic. You can import an image and suddenly the image disappears. If this happens just delete the sprite and repeat the process again.</p> <p>Select the costumes tab, reduce the visual image by 100% by clicking on the- icon.</p> <p>Select convert to a vector image. Save your file.</p>
	<p>T2 - In computer programming, we can always reuse code.</p> <p>Today we are going to reuse the code from a green apple sprite and copy the green apples code into the red apple sprite.</p> <p>Select the green apple thumbnail. Scroll to find the red apple in the Sprite Area. Drag the top stack on top of the apple. The code will be copied into the red apple.</p> <p>Drag the 2nd stack to the red apple. Save your file.</p>



T3 - Although we have copied the green apple code. We still have to import the pop sound using the Sound Tab. From the **Sounds Palette** I can use a **Play Sound Pop**. We will copy the red sprite 9 times. Again we are reusing code.

Click on the stamp icon, then click on the red apple 9 times. You now have 10 red apples.



T4. Select the stage. We now want to create a countdown timer that will count down from 30 seconds to 0 and then ends the game.

Select the **Data Palette** and make a variable named **TIMER**.

Set the Timer to 30

When the green flag is clicked (the event) will set the timer to 30 seconds.



T5. Next we are going to use a wait until block. We will wait until the time on the timer reaches zero.

When this happens the game will finish.

From the **Control Palette**, drag out a **wait until block**.

Drag out an **equal to block** from the **Operator Palette**. It reports true if two values are equal. It is called a Boolean block.

Select the **Data Palette** and drag the **Timer variable** into the **equal to block**. Make the Timer variable equal 0.



T6. Next we are going to code the Timer to count down in seconds.

The timer will count down by 1 every second until it reaches 0.

When the timer reaches 0, the condition will be true and will stop the game.

From the **Event Palette**, drag out a **when green flag is clicked**.

From the **Control Palette**, drag out a **forever loop** and a **wait secs block**.

From the **Data Palette** and drag out a **change timer variable**. Change it to -1.

Save your file and debug.

The game is now complete.