

Name:

Date:



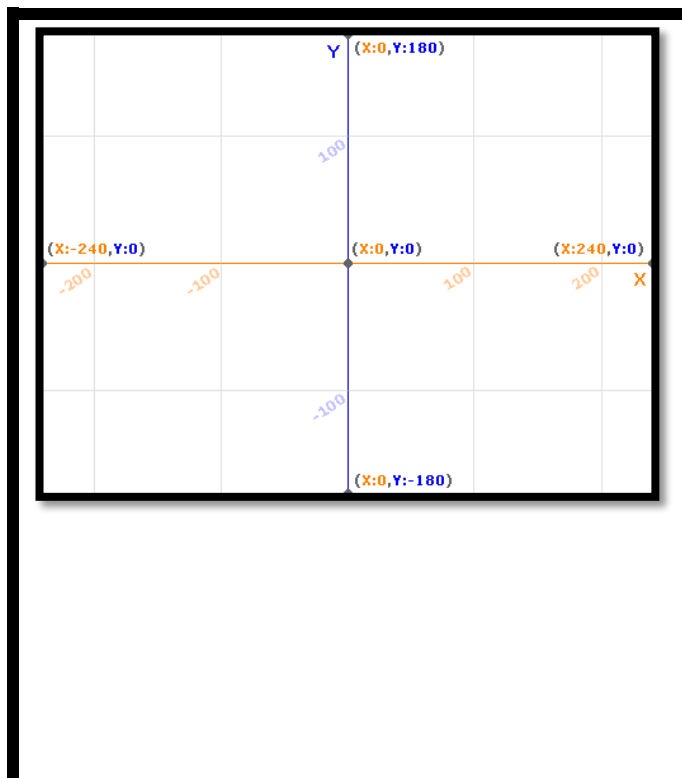
Year 4 Catch the Apples Lesson 2 (of 3)

Lesson Objectives -To use operators, variables and sound controls

Resources - Scratch 2 application, Y4L2 Pupil S2-0 Folder, containing optional hardcopy of the image tutorial Y4L2 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 if available)

Vocabulary-User Interface, Sprite List, Stage, Script Area, Stage coordinates. **Motion Palette**-move 10 steps, go to x: y:. **Event Palette**-when green flag clicked. **Control Palette**-key space pressed, forever, wait, stop all. **Sensing Palette**-key spaced pressed, touching. **Looks Block**: show, hide. **Operators Palette**- pick random. **Data Palette**- variable, set variable to, change variable by. **Sound Palette**- play sound. Sequence, selection and debug.



T1. Open the file Y4L2 Apples Start.sb2 inside your pupil folder. Save the file immediately as Y4L2 Apples + initials.sb2
We want the apple to drop from the top of the stage in any position along the x axis.

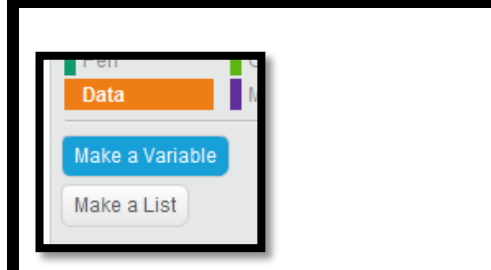
We want the position of the apple to be chosen at random along the x axis.

From the **Motion Commands** select **go to x: 0 y: 0**

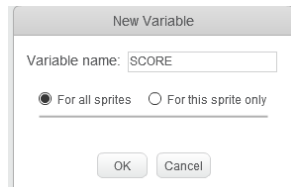
Always check that the apple is centre stage at x:0 and y:0. From the **Operators Palette** select **pick random (change the values)**. The apples will now start anywhere along the x axis. Click the



and watch the apple jump across the stage



T2. Select Data- Make a variable - **SCORE**



Variables contain values that change. Variables can contain text (strings), numbers, or booleans (true/false values).

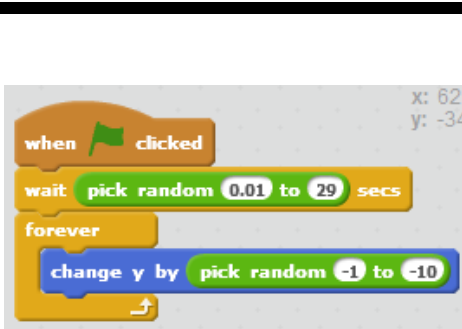


T3. Drag **When green flag clicked** from the **Events Palette**

From the **Data palette** drag select **set SCORE to 0**

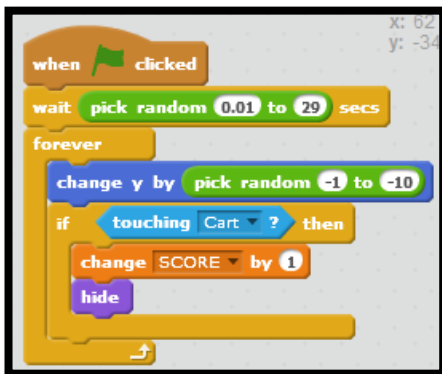
Drag from the **Looks Palette** a **show** block

Click the Green flag and watch the apple jump around the screen at the top.



T4. Select the **Gapple** thumbnail. Make sure the Script Tab is selected. Drag **When green flag clicked** from the **Event Palette**. Select a **forever loop** from the **Control Palette** Select a **wait block** from the **Control Palette**. From the **Operators block** select **pick random a 0-0** and change the seconds to **0.01 - 29 secs**. The apple will now fall anytime from 0.01 second right up to 29 secs. Select from the **Motion Block** **change y by pick random a -1 to -10**

The number changes the speed the apple falls to the ground. Click the green flag and watch the apple fall (try to catch it)

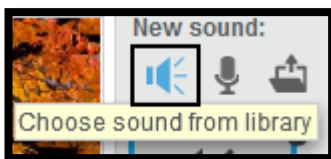
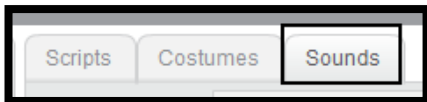


T5- If the apple falls into the cart, you score 1 point. From **Control Block** select an **if then** block

From the **Sensing Block** select **touching** and Select **Cart**

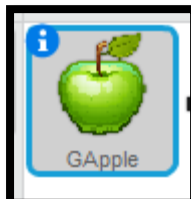
From the **Data Block** select a **change Score by 1**
From the **Looks block** drag a **hide** block

(If you don't put the **hide** block in then the score will continue to accumulate by 1. The apple will be continuously touching the cart and the score will keep going up until you stop the game)



T6. We are now going to add a popping sound every time you catch an apple in the cart.

Select the **Sound Tab** → **Import** → **Effects** → **Pop**
From the **Sounds Palette** drag **Play Sound Pop**
Slot under the **change Score by 1**



We need to create 9 copies of the apple to make 10. Select the thumbnail. Click the stamp icon in the Toolbar and click on the apple thumbnail



Repeat this action 9 times.

Test your program and debug.
Save your file.