

Start Scratching Session 9

Description

The goal of this session is for the students to both improve and individualise the game that they created in the last session. Although it is not essential that every student starts from exactly the game place, having a basically 'working' game is the assumed starting point. Various techniques to modify the game will be described, including adding sound, creating and adding costume changes.

What is covered

- Application of graphic effect (fisheye)
- Application of sound
- Cloning

Steps

1. Open the game from last week

The game created last week involved two balls that bounced around the screen. The goal of the game was to click one of the balls; this makes the score go up by one. Clicking the other ball makes the score go down by one. Clicking the green flag resets the score to zero.



2. Make each ball bounce around the whole screen

Ensure that each student has completed the extra task from the previous session, namely to have the balls bounce all around the screen rather than just going along a horizontal line. A simple way to accomplish this is to add a 'turn' statement after the green flag (but not within the forever block).



3. Make the balls look like they are being pressed when they are clicked

Explain to the students that it is a little annoying to have to look at the 'score' every time to know that they have actually clicked the ball. Say that it would be nice if the ball looked like it was being pressed when we click it. Ask the students to go to the 'Looks' category, and choose the 'change color effect by 25' block. Now ask them to change the 'color' option to 'fisheye', and place the block underneath the 'When this sprite clicked' top hat block.

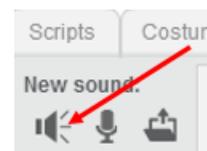
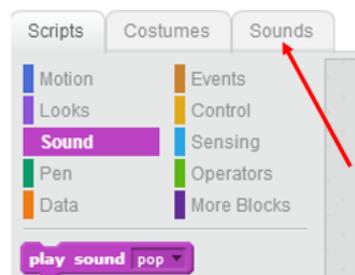


Ask the students to try this out. Show that the ball now looks like it is being pressed more and more when we click. Explain that we would instead like it to only change when we click, wait for a short time, and change back to normal. Ask how this could be done.



4. Add sound

Point out to the students that the Motion category is where we have taken 'move' and 'turn' blocks from, and the Looks category is where we have taken the 'change fisheye' block from. Point out the category just below called 'Sound', and ask the students to find the 'play sound' block at the top. Note that for all of the ball sprites except the basketball, the 'pop' sound is available by default. Ask the students to click the 'Sounds' tab, and then the Choose sound from library button to select the sound pop if needed.



Have the students bring the 'play sound pop' block under the 'when this sprite clicked' top hat. Explain that now it is much easier to recognize when we successfully click on the ball. Not only do we squash it a little, but we also hear a sound.



5. Simple Cloning

Explain that we would like to make our game a little harder. **Ask for suggestions on how to do this. Simple examples include making the ball we want to click smaller, the ball we don't want to click bigger, or both balls faster.** Say that there is another fun way to make the game harder by using a special trick called making a 'clone'. Explain that 'clone' is a word in Scratch for a copy of a sprite that we can make during a game. Ask the students to select the sprite that makes their score go down when it is clicked. Now ask the students to go to the 'Control' category of blocks, and find the one called 'create clone of myself'. Add this block under the 'when this sprite is clicked' top hat block.



Ask the students to click the green flag, start the game, and then click on the ball that makes their score go down. Show that a copy of this sprite is created each time it is clicked. Explain that this makes the game harder, as you now have to avoid clicking on the clones as well as the normal ball. Show that the clones all disappear once the stop button is pressed.

6. Make the clones move

Ask the students to click on the 'Control' category of blocks. **Ask if they can find the one block in this category that is a top hat block, reminding them that all of the other top hat blocks are in the 'Events' category.** Ask the students to drag the 'when I start as a clone' top hat block into their program. Explain that

whatever we put under this block is what the clones will do when we create them by clicking on the ball. Say that we would like the clone to do exactly the same as the normal sprite does when it starts.

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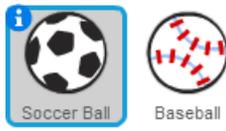
when green flag clicked
  turn 15 degrees
  forever loop
    move 3 steps
    if on edge, bounce
  
```

```

when I start as a clone
  turn 15 degrees
  forever loop
    move 3 steps
    if on edge, bounce
  
```

7. Review the whole game

Walk block by block through the whole game. Offer stickers to any student who can explain what a block does, and also why we want it in our game.

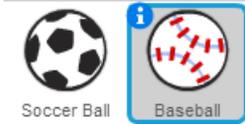


```

when this sprite clicked
  change score by 1
  play sound pop
  change fisheye effect by 25
  wait 0.2 secs
  set fisheye effect to 0
  
```

```

when green flag clicked
  set score to 0
  forever loop
    move 3 steps
    if on edge, bounce
  
```



```

when this sprite clicked
  change score by -1
  create clone of myself
  
```

```

when green flag clicked
  turn 15 degrees
  forever loop
    move 3 steps
    if on edge, bounce
  
```

```

when I start as a clone
  turn 15 degrees
  forever loop
    move 3 steps
    if on edge, bounce
  
```