

Felix and Herbert

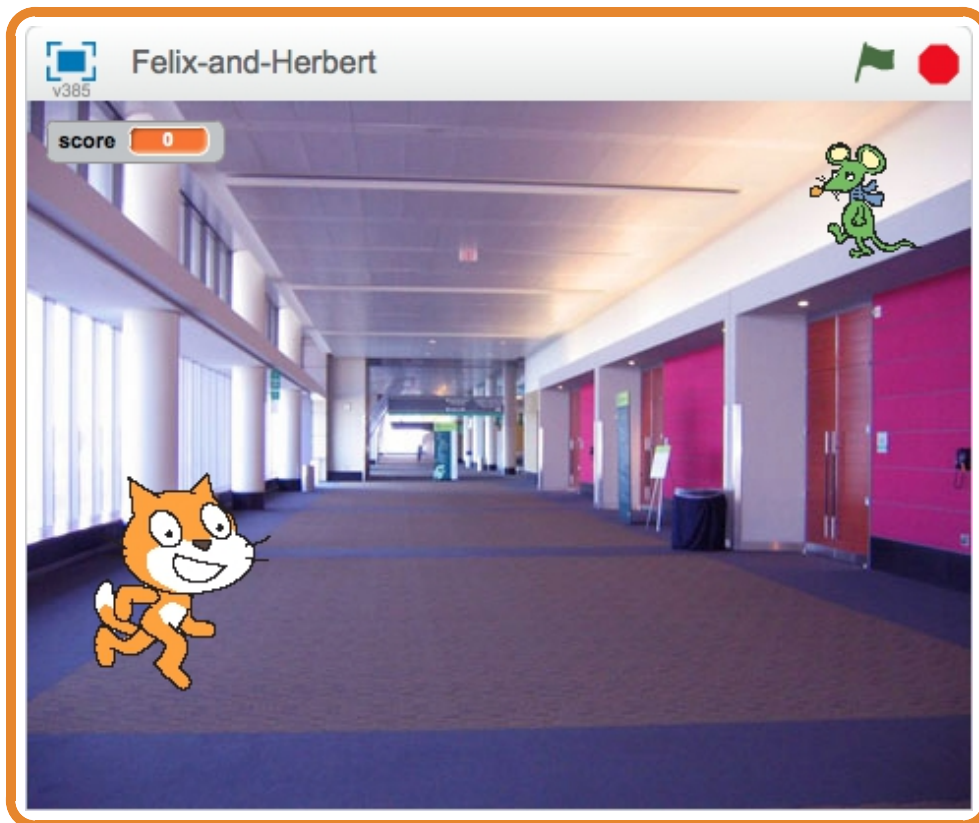
Level 1

These projects are for use outside the UK only. More information is available on our website at <http://www.codeclub.org.uk/>. This coursework is developed in the open on GitHub, <https://github.com/CodeClub/> come and join us!

Languages > English > Beginner Scratch > Felix and Herbert

Introduction

We are going to make a game of catch with Felix the cat and Herbert the mouse. You control Herbert with the mouse and try to avoid getting caught by Felix. The longer you avoid him the more points you score, but don't get caught because your score will go down!

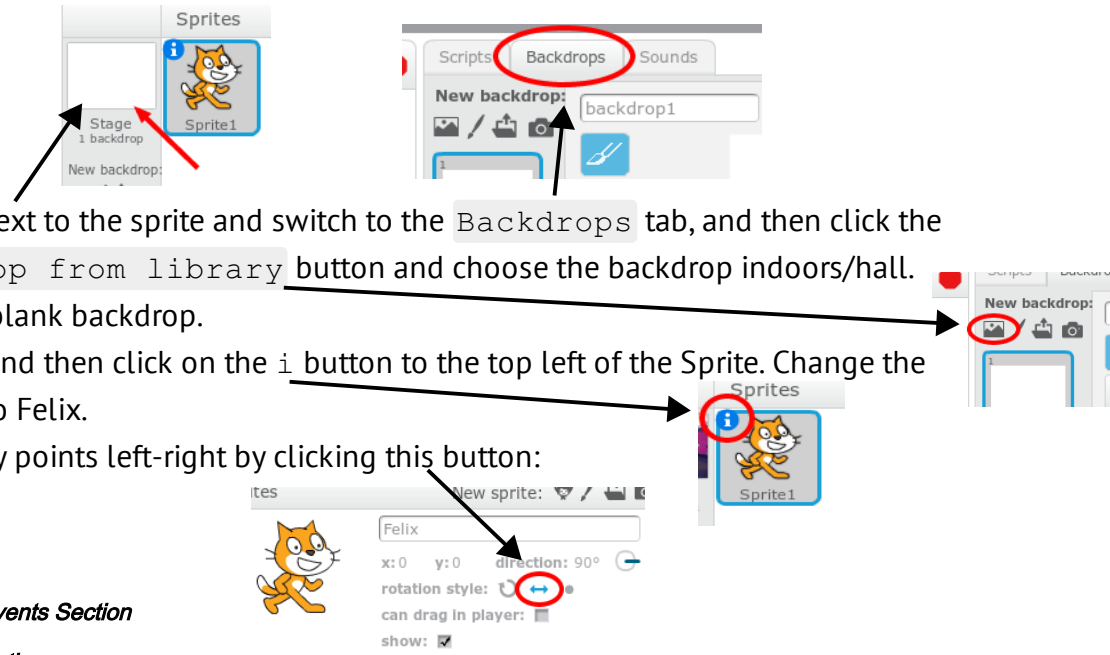


STEP 1: Felix follows the mouse pointer

Activity Checklist

- Start a new project.
- Click on the stage next to the sprite and switch to the Backdrops tab, and then click the Choose Backdrop from library button and choose the backdrop indoors/hall.
- Delete the original blank backdrop.
- Click on the sprite, and then click on the **i** button to the top left of the Sprite. Change the name of the sprite to Felix.
- Make sure Felix only points left-right by clicking this button:
- Create this script:

```
when green flag clicked In Events Section  
  forever loop In Control Section  
    point towards mouse-pointer In Motion Section  
    move 10 steps In Motion Section  
    next costume In Looks Section  
    play drum 3 for 0.3 beats In Sound Section
```



Test your project

Click the green flag.

Does Felix follow the mouse pointer? Does it look like he's walking when he moves? Does he move at the right speed?

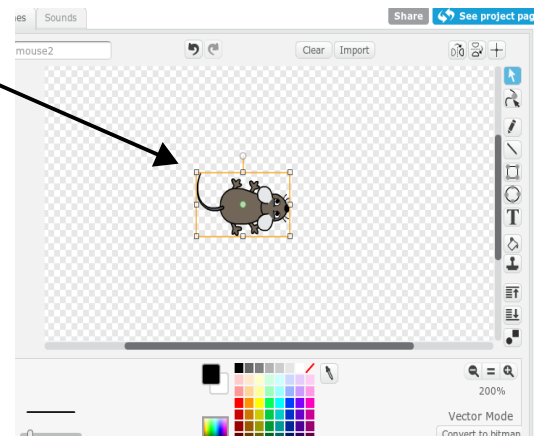
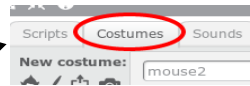
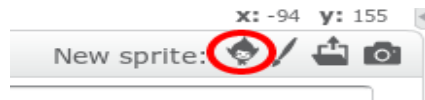
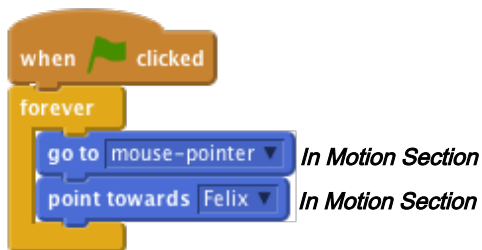
Save your project

Step 2: Felix chases Herbert

Next, we want Felix to chase Herbert the mouse, rather than the mouse pointer.

✓ Activity Checklist

- Create another sprite using the `choose sprite from library` button and selecting animals/mouse1.
- Change the name of the sprite to Herbert.
- Switch to the Costumes tab, then click on the costume in the Paint Editor. A box will appear around the costume. Drag a corner of the box to make Herbert smaller than Felix.
- Make sure Herbert only points left-right.
- Give Herbert this script: *(Look at Step 1 for how to do this)*



🚩 Test your project

Click the green flag.

Does Herbert move with the mouse pointer? Does Felix chase Herbert?

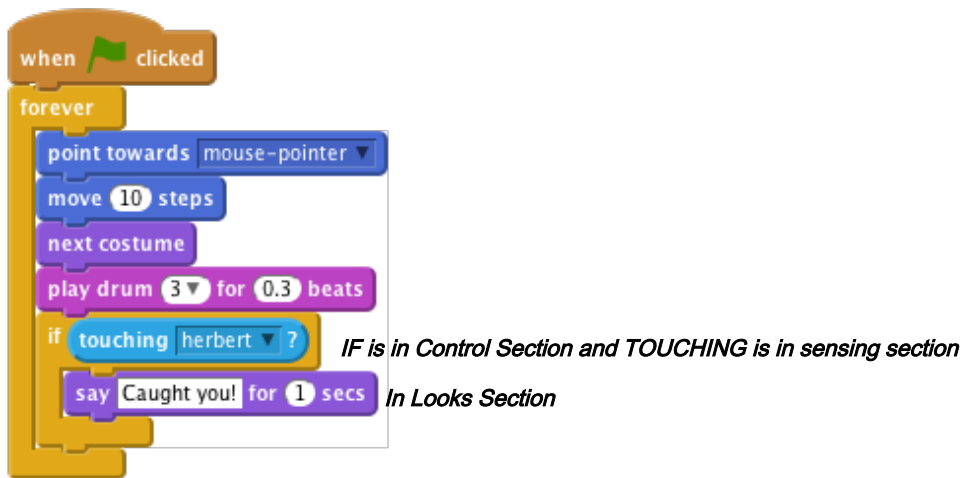
📁 Save your project

Step 3: Felix says when he's caught Herbert

We want Felix to know when he's caught Herbert, and tell us.

Activity Checklist

Change Felix's script to be this:



Test your project

Click the green flag.

Does Felix say when he's caught Herbert?

Save your project

Step 4: Herbert turns into a ghost when he's caught

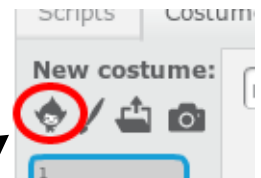
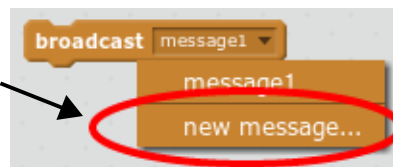
Instead of Felix saying something, we want Herbert to turn into a ghost when he's caught.

✓ Activity Checklist

- Change Felix's script to send this message when he catches Herbert:

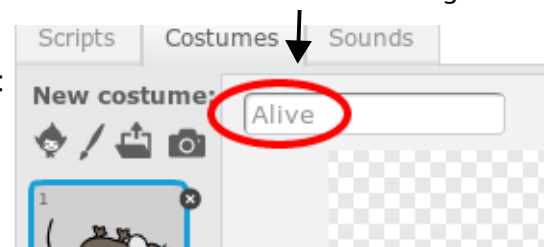
```
when green flag clicked
  forever loop
    point towards mouse-pointer
    move 10 steps
    move 20 steps
    next costume
    play drum 3 for 0.3 beats
    if touching herbert?
      broadcast caught
      play drum 17 for 0.2 beats
      wait 1 secs
```

Broadcast blocks let one sprite tell all the other sprites that an event has happened.




- Add a new costume into Herbert by selecting Herbert, going into the Costumes section, and clicking the `Choose costume from Library` button. Select the fantasy/ghost2-a costume. THIS IS NOT A NEW SPRITE - it is a new COSTUME for the Herbert sprite.
- Make the costume smaller by clicking on it in the Paint Editor, and dragging the box that appears, to resize it. *(Look at Step 2 for how to do this)*
- Change the names of Herbert's costumes so the mouse costume is called 'alive' and the ghost costume is called 'dead'.
- Create a new script for Herbert to turn him into a ghost:

```
when I receive caught
  switch costume to dead
  wait 1 secs
  switch costume to alive
```



🚩 Test your project

Click the green flag.

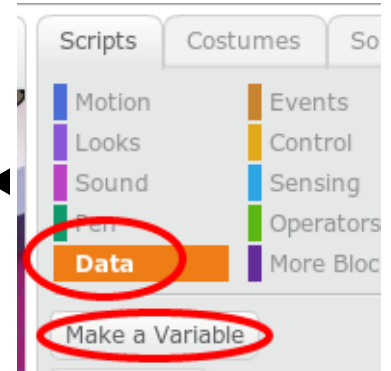
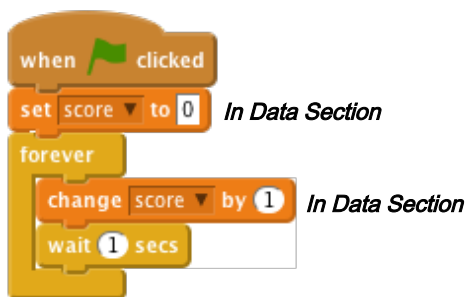
 Save your project

Step 5: Keep score

Let's add a score so we know how well we do at keeping Herbert alive. We'll start the score at zero and increase it by one every second. If Felix catches Herbert, we'll reduce the score by one hundred.

✓ Activity Checklist

- Make a variable, for all sprites, called Score. Click on **Data** in the top menu, make a variable and name it **score**, ensuring that "For all sprites" is selected.
- On the STAGE, create these two scripts:



🚩 Test your project

Click the green flag.

Does the score go up by one every second?

Does the score go down by one hundred when Herbert is caught?

What happens when Herbert is caught before score reaches one hundred? Does the score go back to zero when you start a new game?

📁 Save your project

Challenges:

MANDATORY (-30 if missing): Change the sprites images to be different characters

OPTIONAL: Add background sounds to make the game more interesting.
What else can you add to make the game more fun?