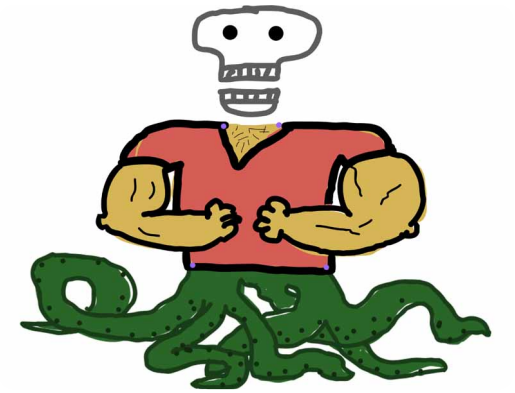


Monster generator

Program a monster generator.

AGE
7+ yrs

TIME
30-60 min

coding

sprite (hoofd.svg): scan the QR code

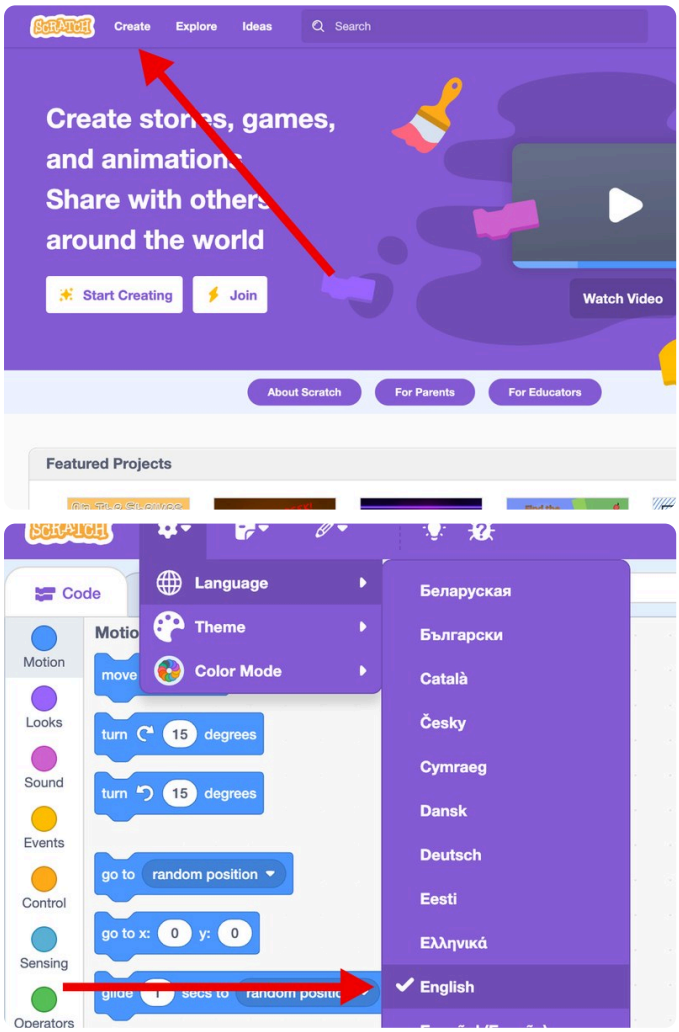
Scan for the online version

What do you need?

TOOLS

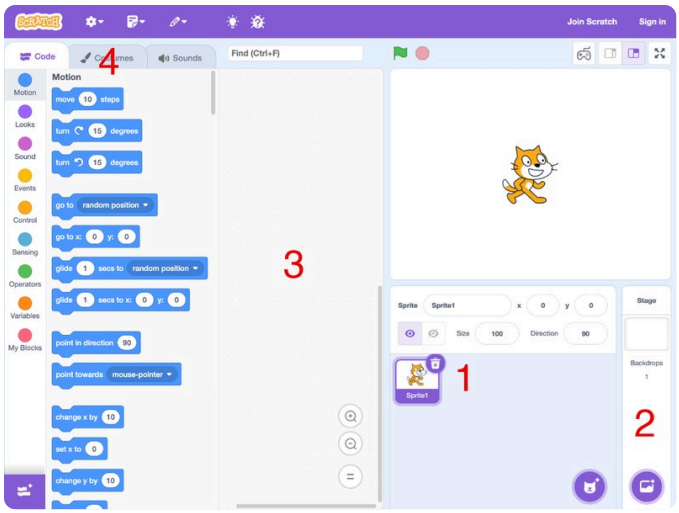
- [ ] Laptop

Steps



1 Open the Scratch webpage

- Open a web browser and go to https://scratch.mit.edu/
- Click on the ‘create’ button
- If needed, set the language to English.

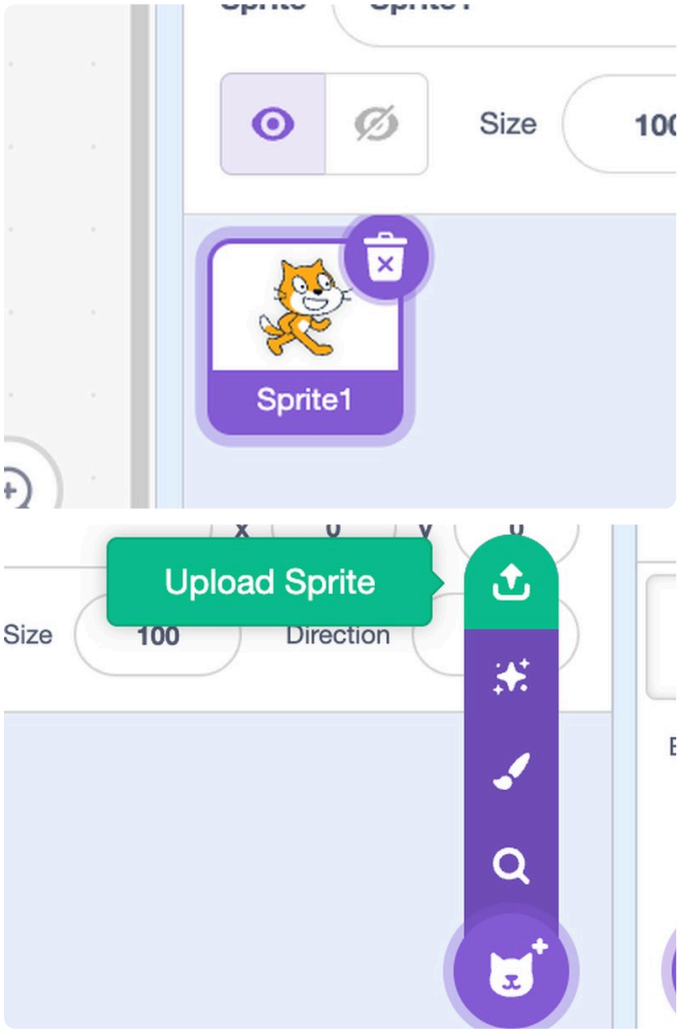


2 Sprites, play area and code blocks

GOOD TO KNOW
In Scratch, we work with sprites (images, see number 1 in the screenshot) and the stage (where you move the images around, number 2 in the screenshot).

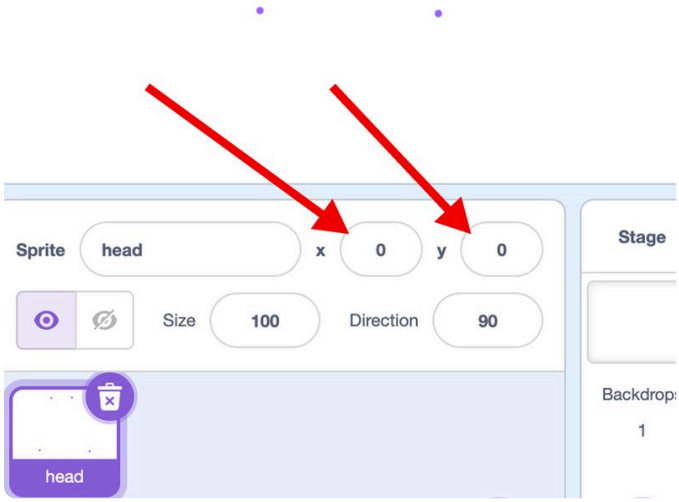
GOOD TO KNOW
Both the sprites and the playing field can have different appearances. They can also each have their own pieces of code (as shown in number 3 in the screenshot).

GOOD TO KNOW
Using the tabs at the top, you can switch between the appearance and the code of a sprite or the play area.

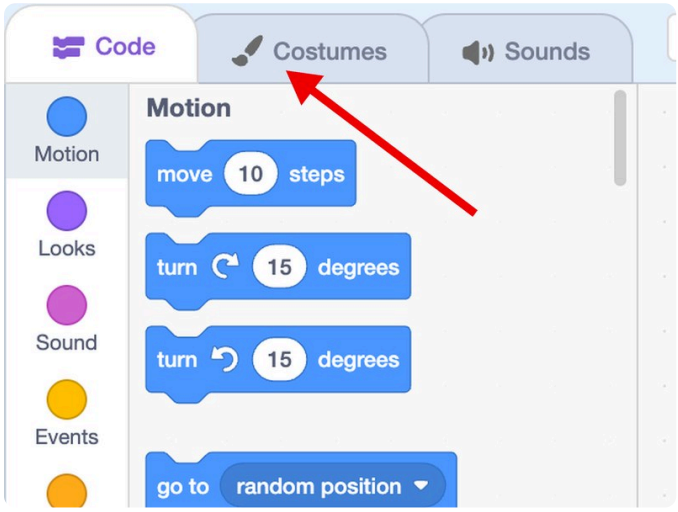


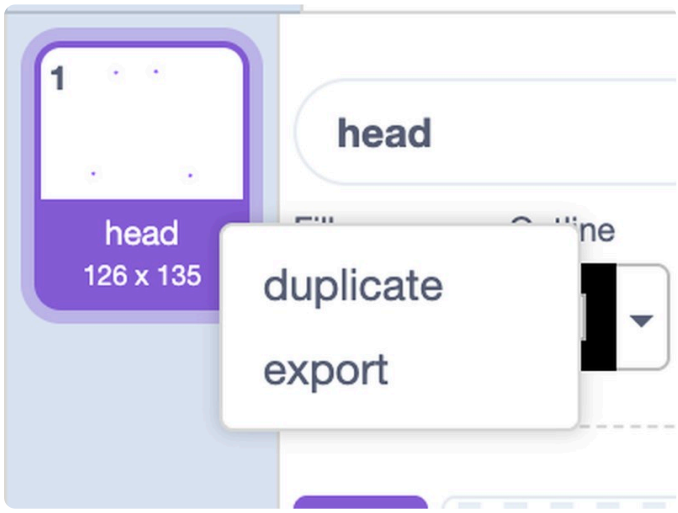
3 Create a new sprite

- Delete the existing sprite by clicking on the bin icon
- Download the sprite file linked at the top of these instructions. (via makermanuals.com if you've printed this out)
- Use the 'upload sprite' option to import the downloaded file as a sprite into your programme. Four dots will now appear on your screen.
- Place the new sprite in the centre of your screen by setting both the X and Y values to 0.



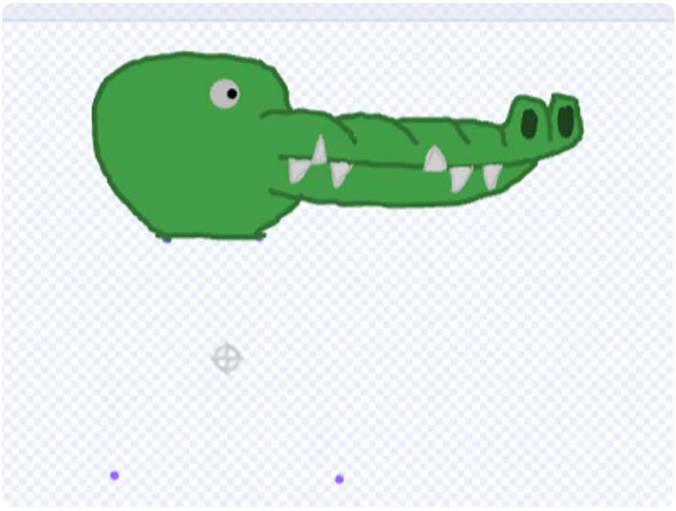
3 Create a new sprite — *continued*

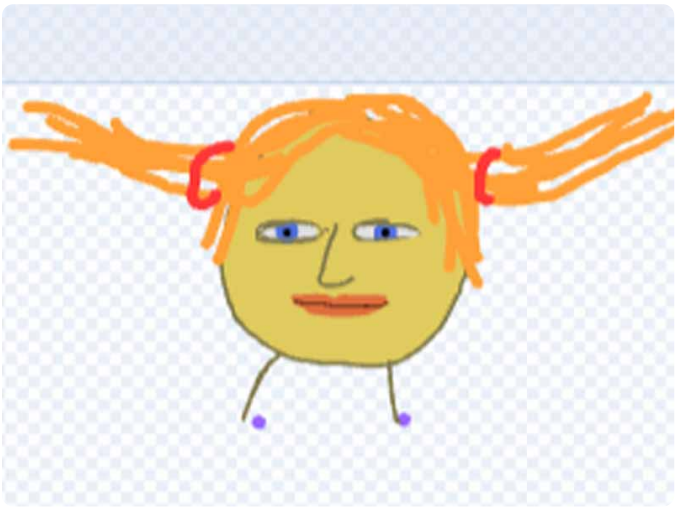


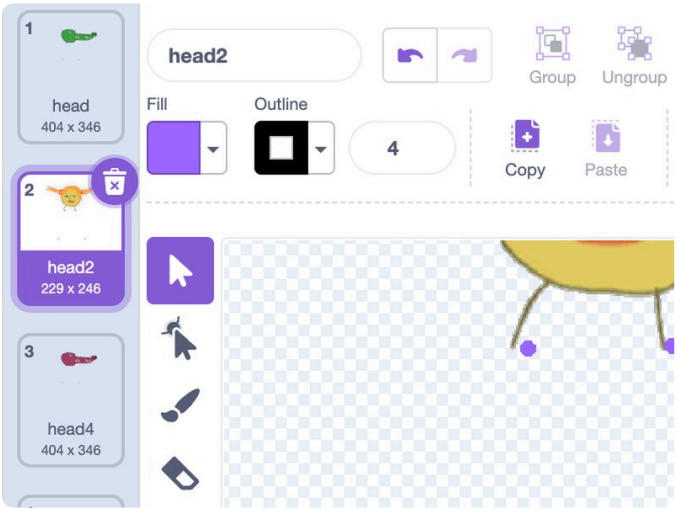


4 Duplicate appearance

- Click on the ‘Appearance’ tab.
- You can now see the outline of your sprite on the left. There’s only one at the moment.
- Right-click and select ‘Duplicate’ to make a copy of the design. Do this three times so that you have four designs.

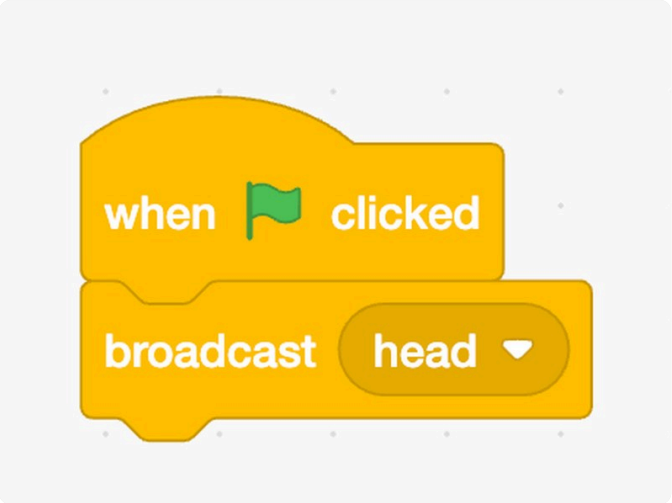






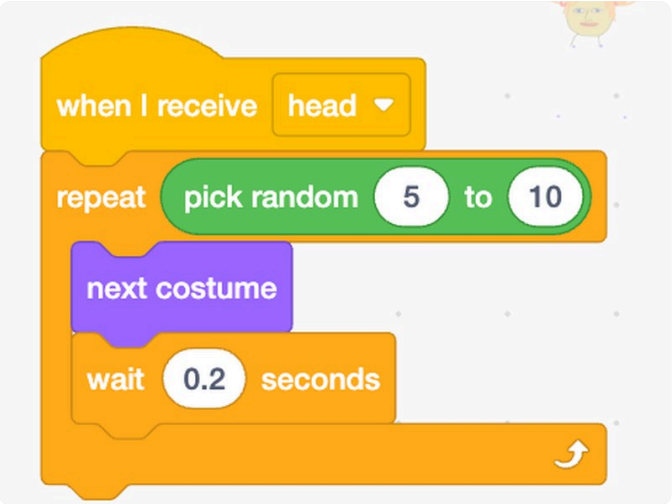
5 Drawing heads

- Draw a head inside each of the outlines. Make sure the neck ends neatly at the top two dots.



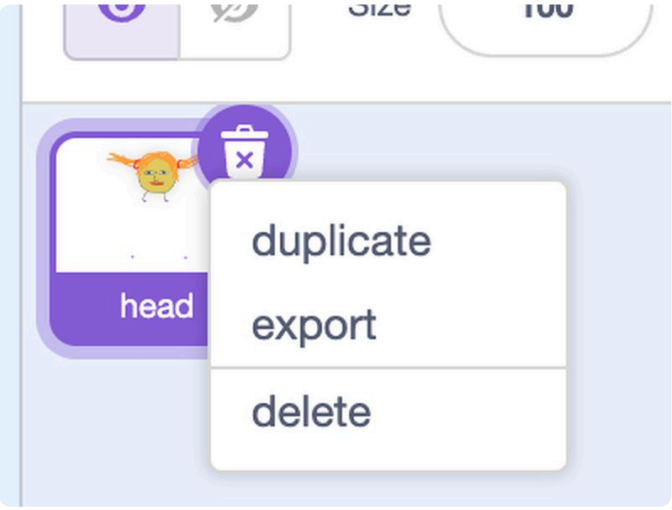
6 Add code to the play area

- We want to start all the animations from the play area (head, torso and legs). Click on the play area and go to the ‘Code’ tab. Add the following code.
- From the play area, we can send a message to the ‘head’ sprite like this.



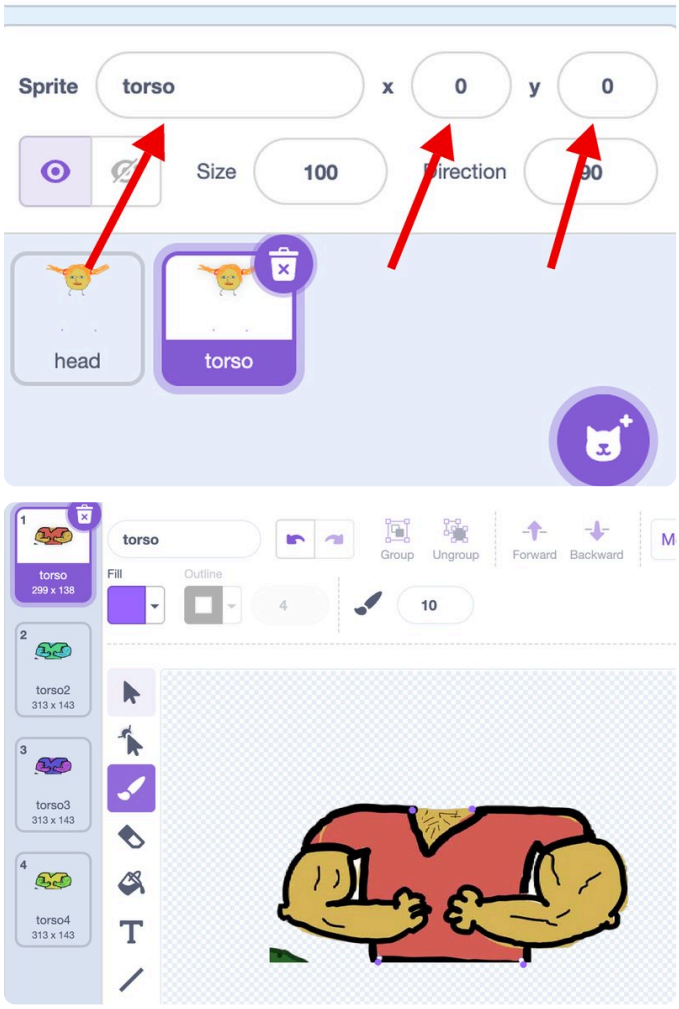
7 Add code to the ‘head’ sprite

- Click on the ‘head’ sprite.
- Copy the code shown in the image.
- Test your code by clicking on the flag.

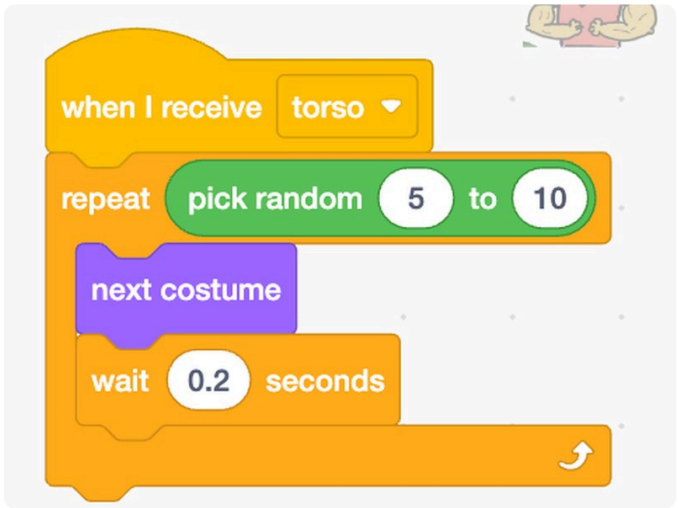


8 Add a body

- Right-click on the ‘head’ sprite and select ‘duplicate’.
- Name the new sprite “torso”.
- Set both the X and Y values back to 0, so that it is positioned in exactly the same place as the ‘head’ sprite.
- Adjust all the skins for the ‘torso’ sprite. Remove the drawn heads and draw a torso for each skin. Make sure the top and bottom align with the dots.

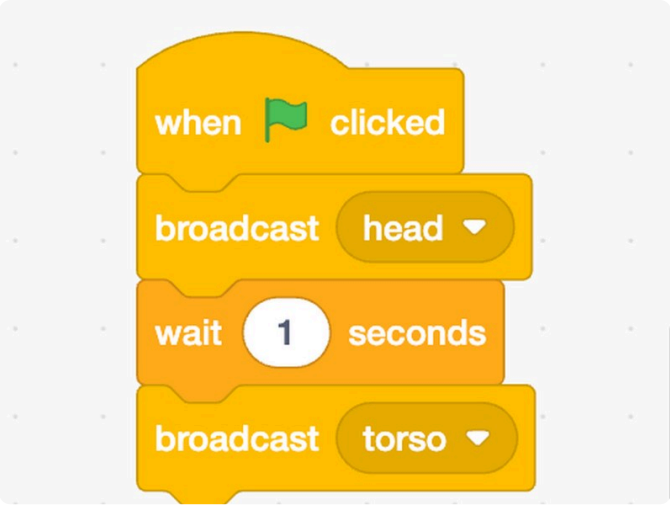


8 Add a body — *continued*

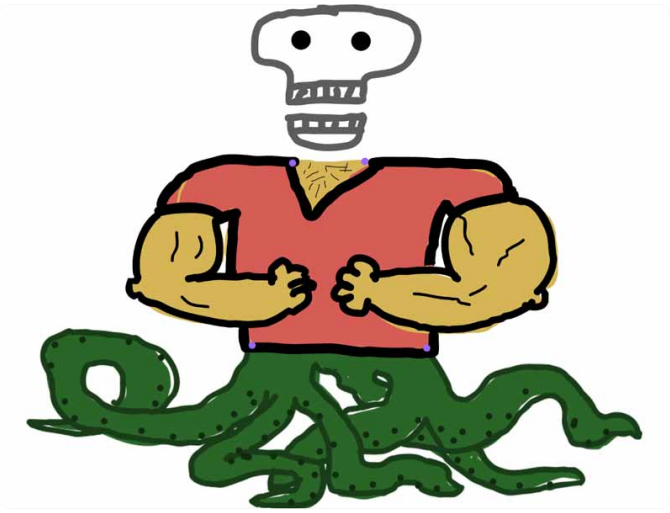


9 Customise the code for the body

- Click on the ‘Code’ tab of the ‘torso’ sprite. Here you’ll see the code copied from the head sprite.
- Adjust the code so that it responds to the ‘torso’ signal instead of ‘head’.
- No ‘torso’ signal is being sent yet. We’re now going to add that to the code for the play area. Click on the play area and, after a short pause, add a ‘torso’ signal below the ‘head’ signal.
- Test your code by clicking on the flag.

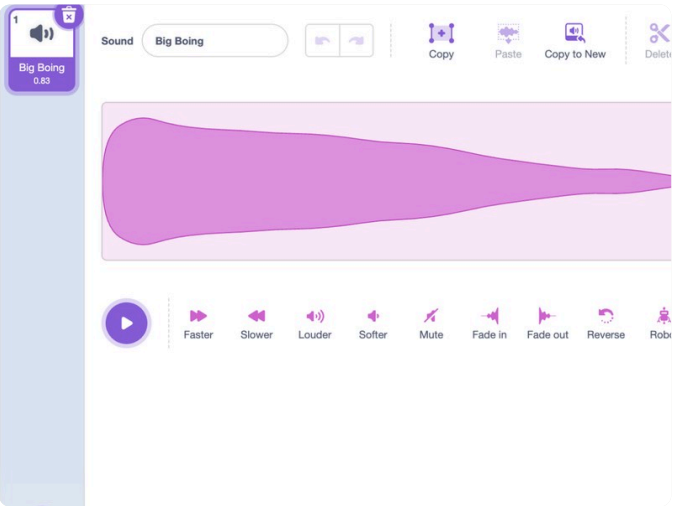


9 Customise the code for the body — *co...*



10 Add legs

- See if you can add the legs yourself now. If you're not sure, you can have a look at how we did it with the 'torso' sprite.



11 Add extras

- Once you've finished and have some time to spare, see if you can add this yourself
- A sound when the animation is finished.
- Start by changing the appearance quickly, then gradually slow it down.
- A different sound depending on which creature is generated.