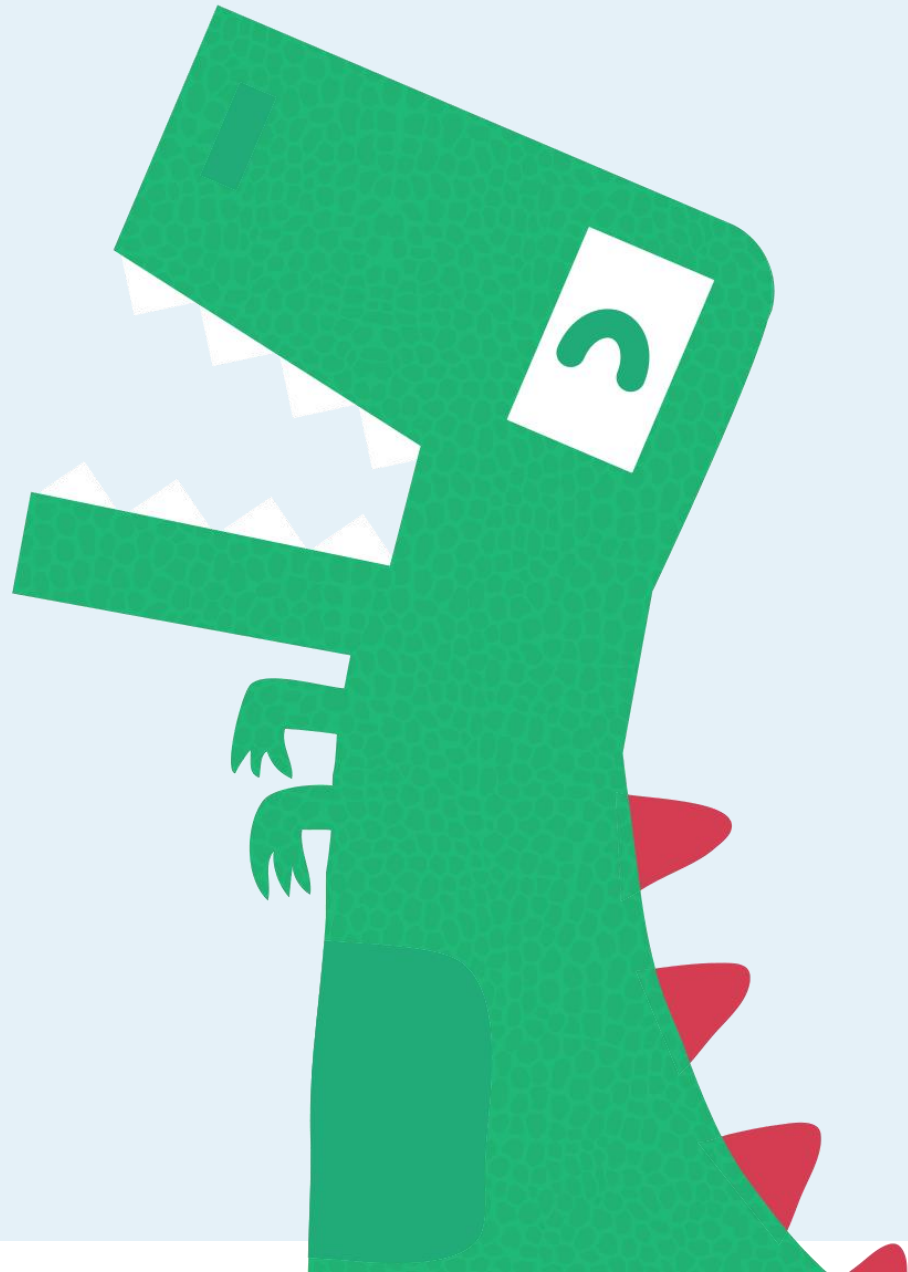


Student workbook

Snowball scramble

Code Playground



Next page ►

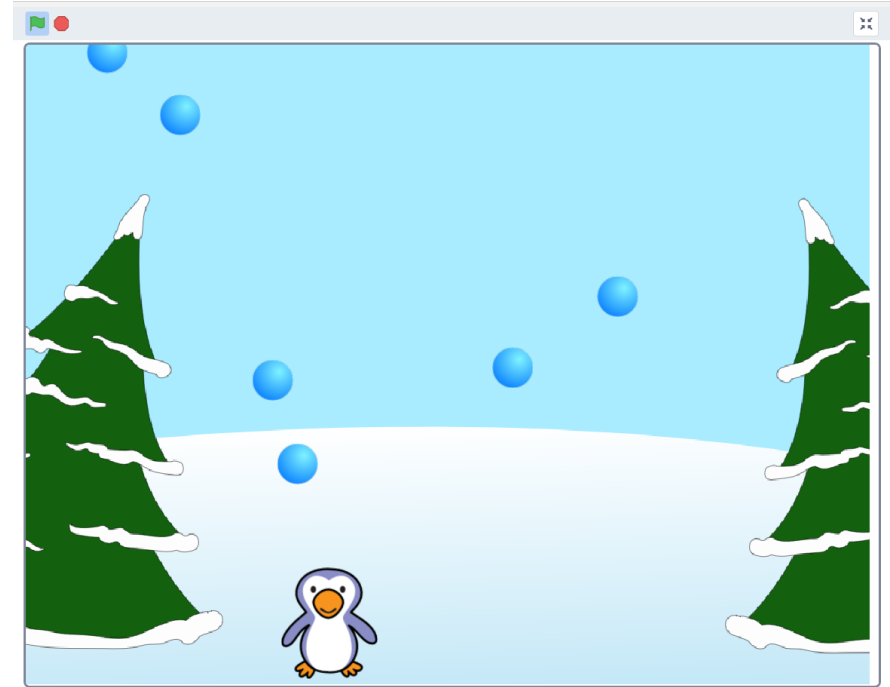
Snowball scramble

Code Playground Live

The penguin is trying to avoid the snowballs being thrown his way, can you help? Stay out of the line of fire and get the chance to throw one back! Search for 'Snowball scramble' on the Scratch website and find the project created by Code Playground to get started.

This project is designed for Scratch 3.0 and will show you how to clone your sprites to keep things neat and tidy.

Hope you enjoy the project!



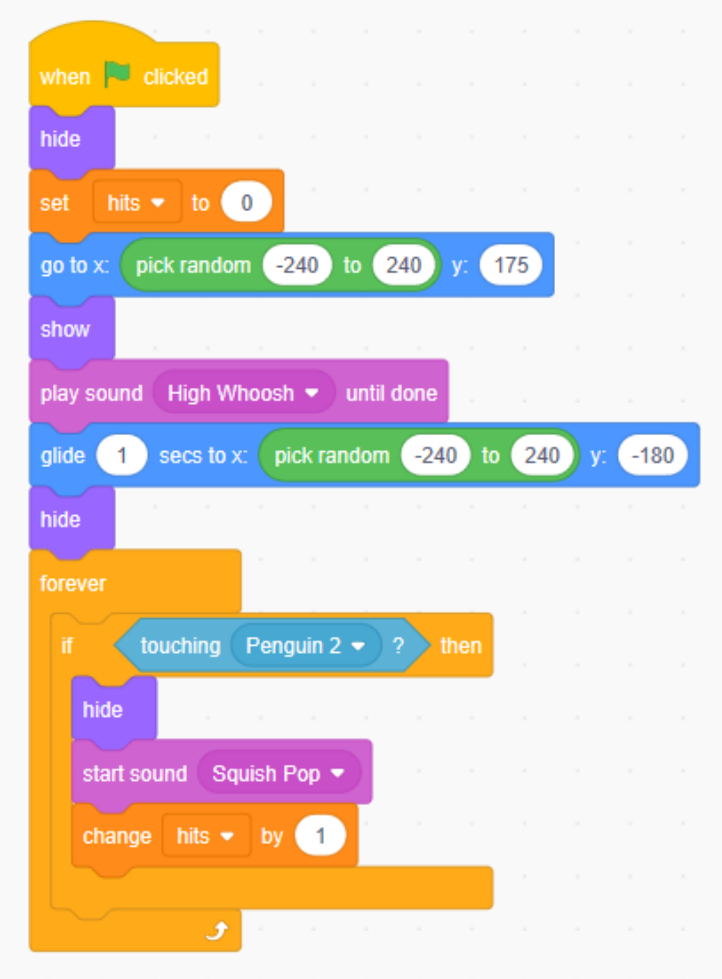
Snowball scramble

Code Playground Live

Step 1

We've already set up most of the game for you, but we need to finish coding the snowball. Click on the snowball in the sprite area to continue coding it.

We've set up this code to control our snowball's movements, and what happens when it hits the penguin. Click on this section of code to see the snowball fly across your screen.



```
when clicked
hide
set hits to 0
go to x: pick random -240 to 240 y: 175
show
play sound High Whoosh until done
glide 1 secs to x: pick random -240 to 240 y: -180
hide
forever
  if touching Penguin 2 ? then
    hide
    start sound Squish Pop
    change hits by 1
```

Snowball scramble

Code Playground Live

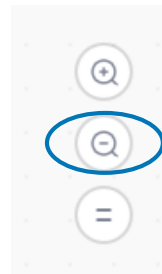
Step 2

But we need 50 snowballs! We need to make some changes to our project to achieve this.

We need to separate the code from page three into three separate sections as shown below



**Top Tip – Running out of space in your coding area?
Zoom out using the magnifying glass to create more room



Snowball scramble

Code Playground Live

Step 3

Let's take the middle section of our separated code. This controls the way our snowball moves across the screen in a random direction.

We need to add in a few more blocks to make sure it controls all of our new clones, not just the original snowball sprite. We will use the 'when I start as a clone' event.

Add these four extra blocks to your code.



Snowball scramble

Code Playground Live

Step 4

Now let's look at the bottom section from our separated script. This controls what happens if the penguin gets hit by a snowball.

We need to use a 'when I start as a clone' block here too, so that the code applies to all 50 of our cloned snowballs.

Add it here now.



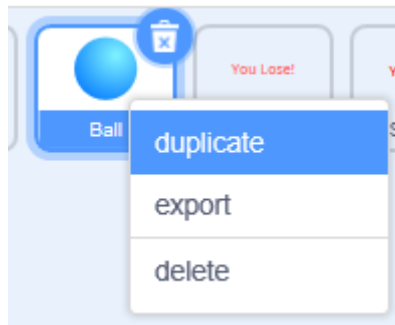
Snowball scramble

Code Playground Live

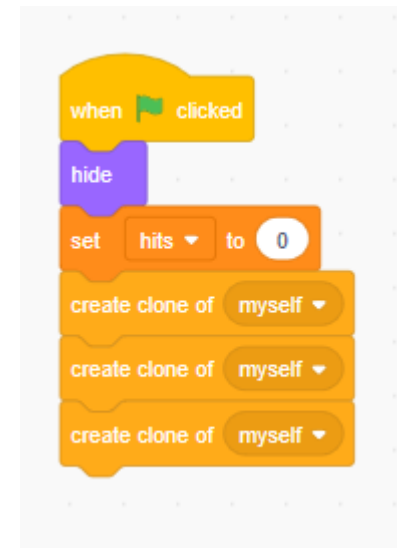
Step 5

To create 50 snowballs, we could duplicate the sprite 50 times...

But the sprite area would start to look a bit busy, and if we had to make any changes to our code, we would have to repeat this 50 times.



To make things easier, we could clone our snowball 50 times by adding this code to the top section of separated code. We've added 3 clone blocks here – see what happens when you click the green flag now. How many snowballs fly towards the penguin?



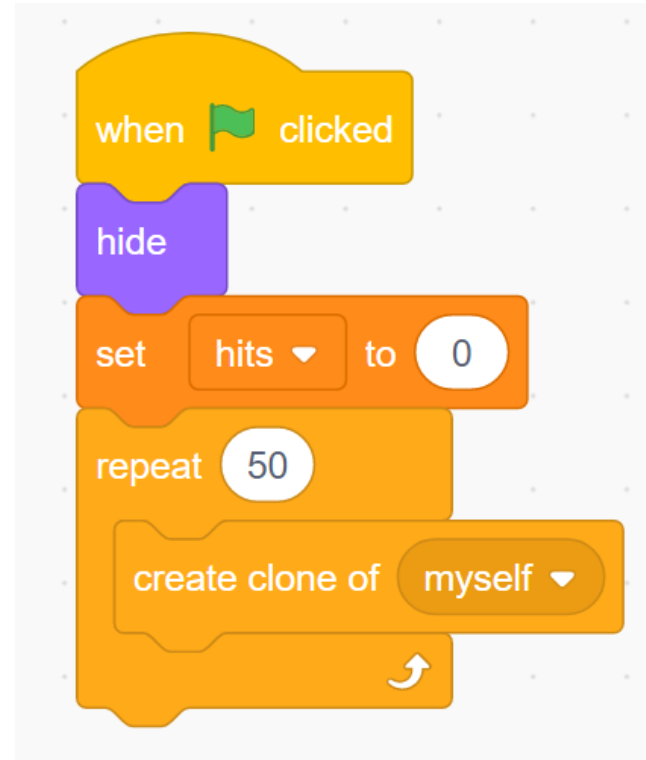
Snowball scramble

Code Playground Live

Step 6

Instead of adding 50 clone blocks, we can keep our code even neater by looping the instruction 50 times. We do this by adding in a repeat block and typing the number 50, so that all of the code inside the loop is repeated 50 times

Now our game is ready to play!



Snowball scramble

Code Playground Live

Level up!

- Can you create a countdown timer so you can see how long the penguin needs to dodge the snowballs?
- Can you add a special snowball that the penguin needs to catch?
- Can you create an introduction to the game complete with instructions?
- Can you add in a beginner or expert level?

Notes

Code Playground