

Phoenix



Llama Snow Globe

In this workshop, we'll explore how to make a snow effect. It's a bit like a snow globe, where you can shake up the snow and watch it settle on the scene within. We've started with a llama, but you can make whatever scene you like.

You will need:

Access to the [Scratch](https://scratch.mit.edu) website, from a computer or laptop.
(It should also work from an ipad or tablet)

This project uses sound, so it's important that the device you are using has a microphone.

If you want to save your project at the end, make sure you have created a Scratch account and are logged in.

Below is the template project. Open it up and start remixing:

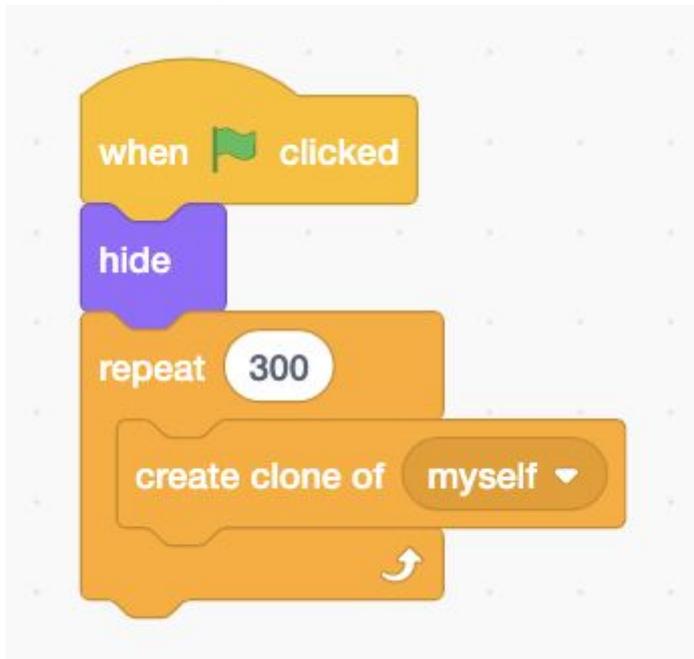
<https://scratch.mit.edu/projects/460564648>

Step 1

First of all click the green flag and have a play with the project. The main thing we will focus on to begin with is the snow.

So let's have a look at the snowflake sprite.

This is the first block of code. As you can see we are create as many clones of the snow as possible. Scratch allows us to create up to 300 clones at a time. If you find your computer is struggling to display all the clones, try to reduce this amount a bit.

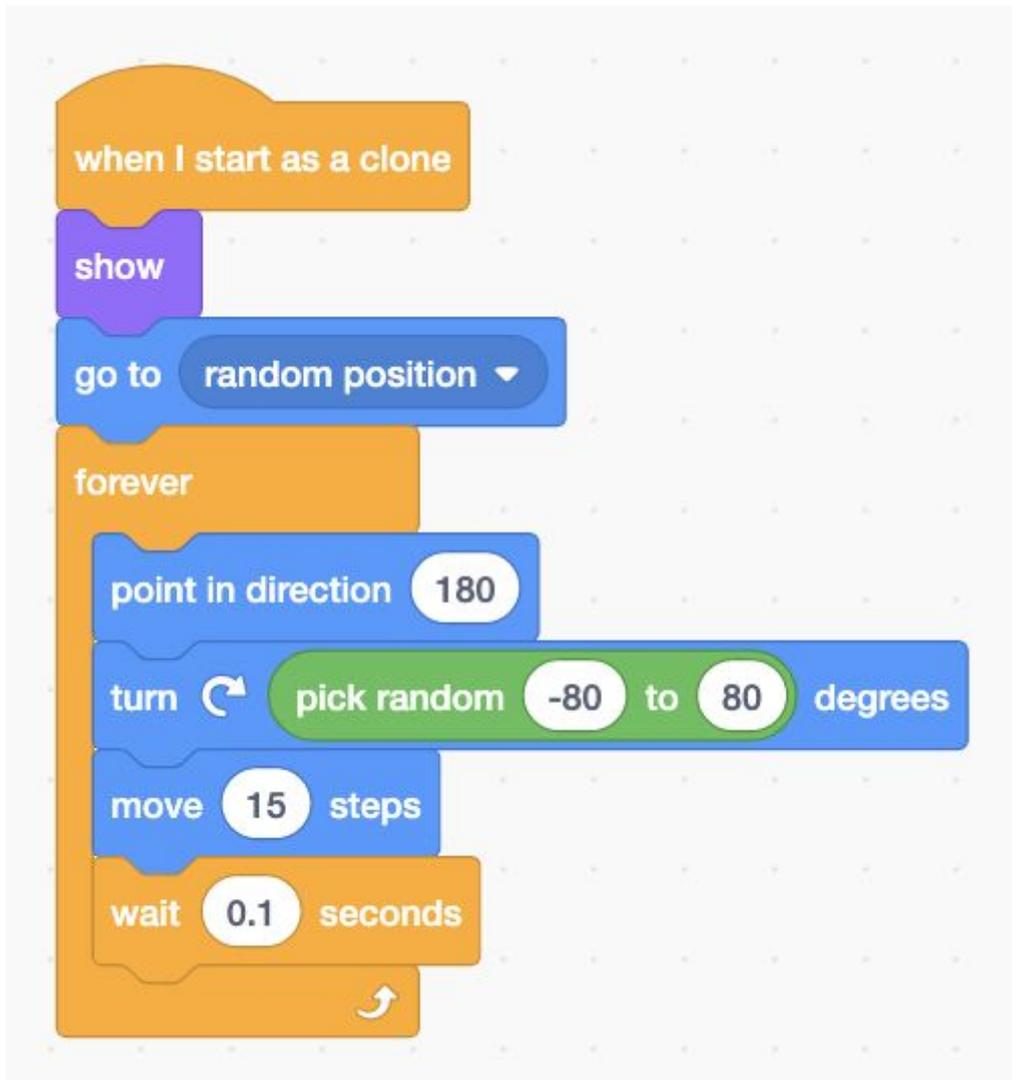


Step 2

Ok, so now we have our 300 snowflakes, they need to be able to move, like snow.

First of all, let's think about how snow would fall normally. It kind of floats gently down to the ground.

Connect the simple snowfall block shown below.



Direction 180 makes the sprite point downwards. It doesn't look very exciting though if snow is just falling straight down so then we use the **pick random** block to make some changes.

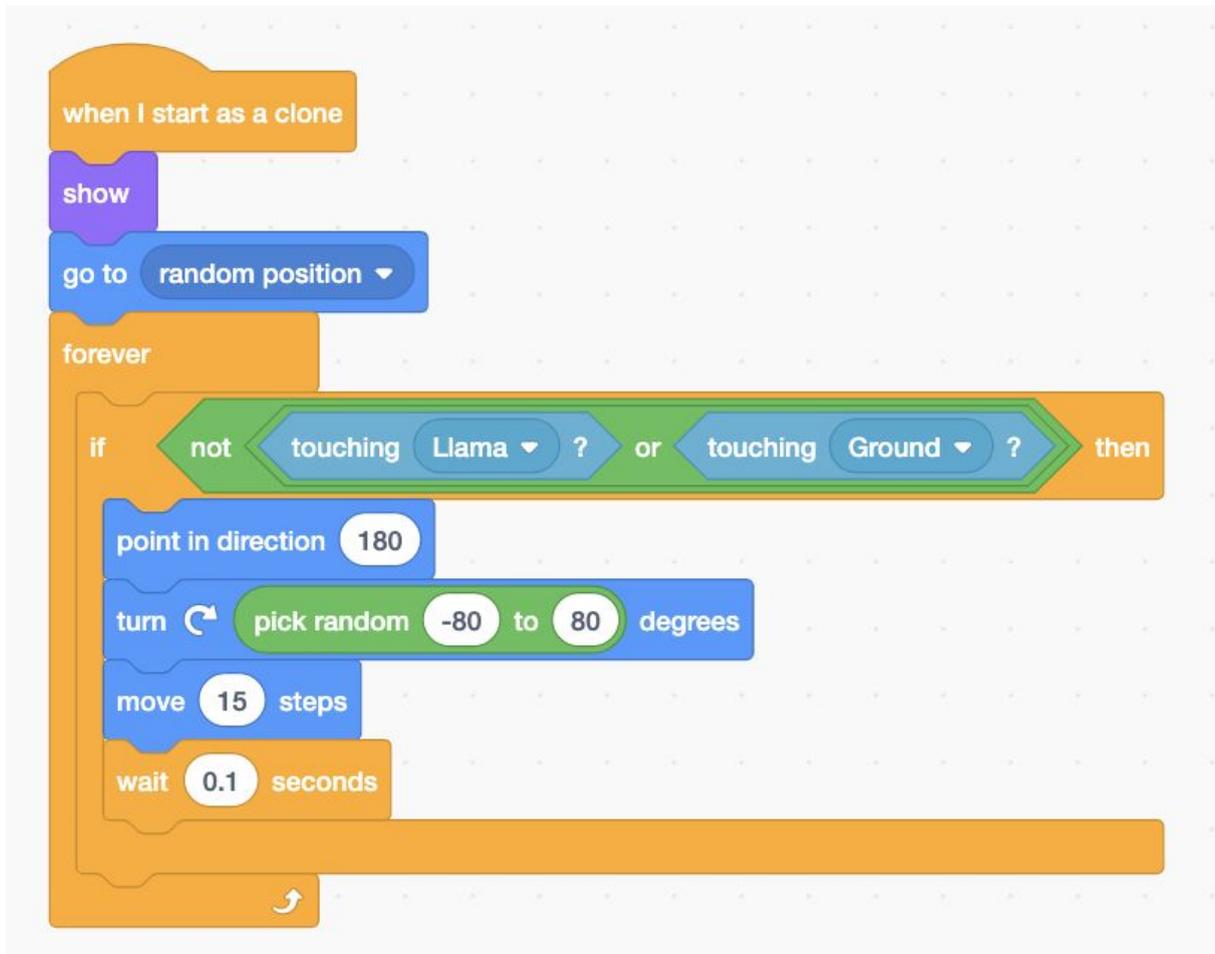
When we have the direction sorted we then move the snowflake a few steps.

Try adjusting these values and making different kinds of snowfall.

Step 3

Did you notice that the snowflakes just fell off the bottom of the screen and disappeared?

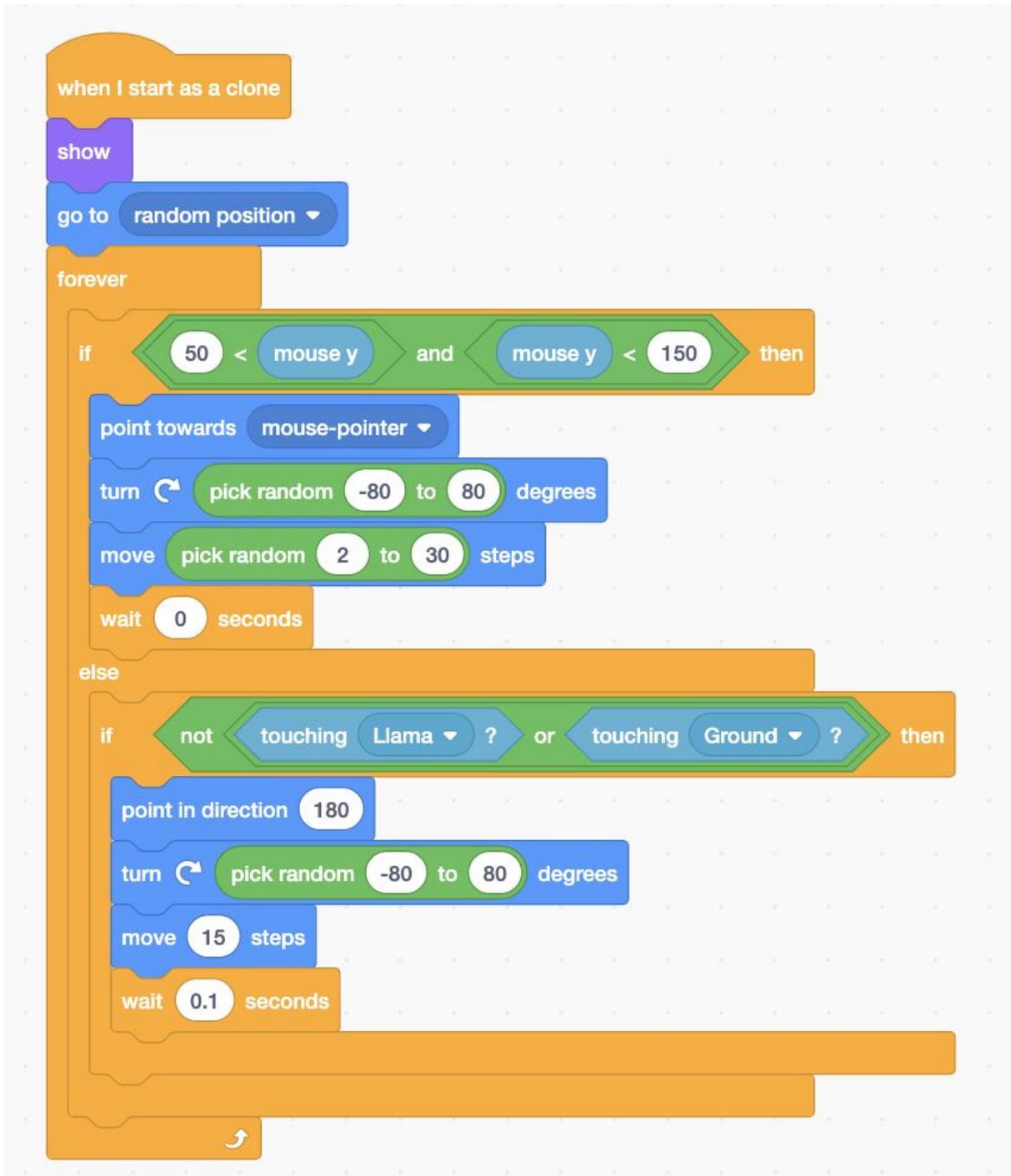
Let's fix that, by only moving the snowflake if it isn't touching the Llama or the Ground.



Now see how the snow starts to land on things.

Step 4

If you've ever played with a snow globe, you'll know that the best bit is getting to shake the snow up. So our Scratch Snow Globe wouldn't be great if we couldn't do that. For now let's try doing that using the mouse. Build a block that looks like this one.



Can you see how this is working?

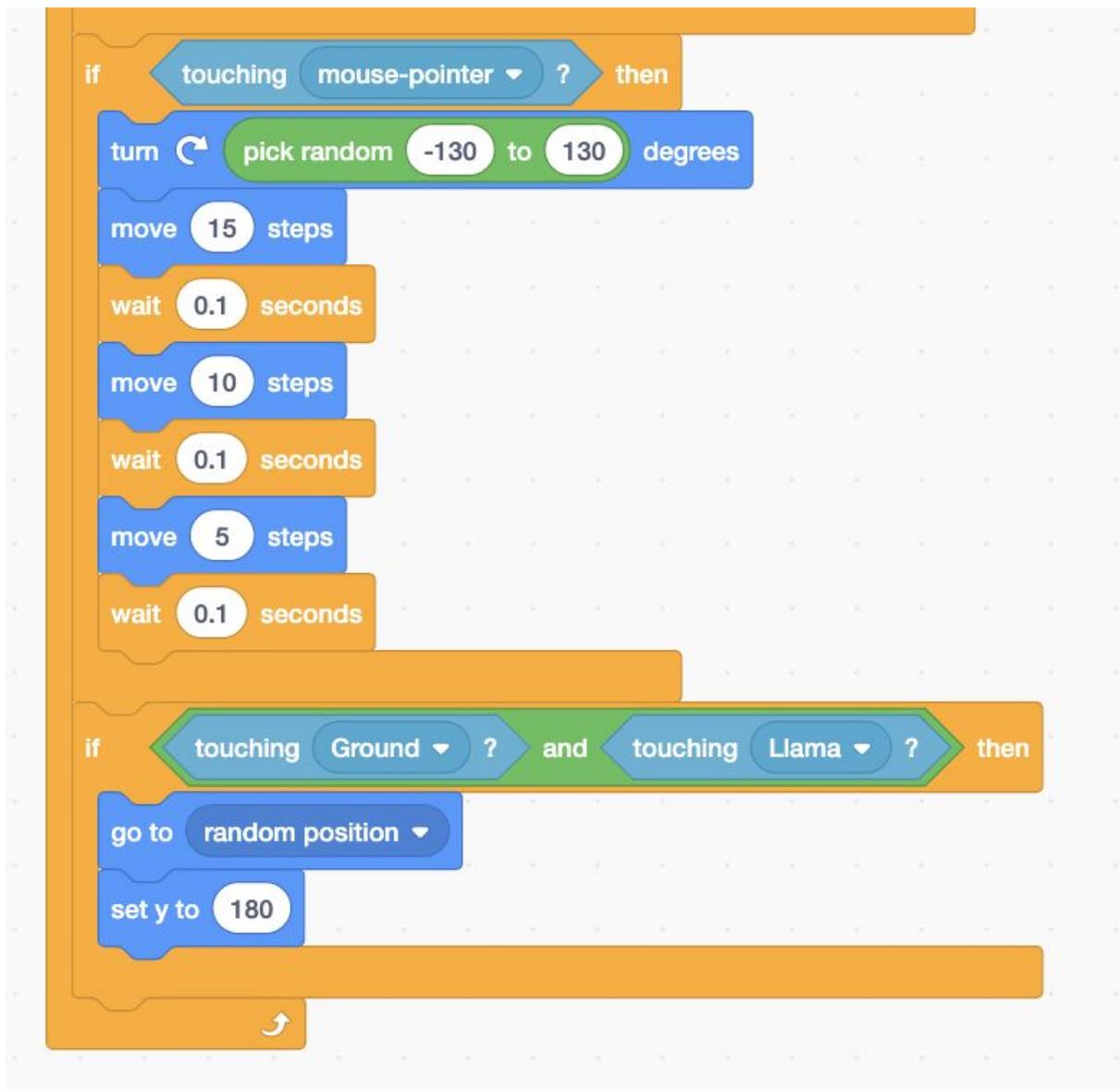
When the mouse is over a certain part of the project the snow will be attracted to it.

We've included the **pick random** block again so that the snow doesn't get too bunched together.

Limiting the space when the snow is attracted to the pointer means it is easier to make the snow fall in interesting ways.

Step 5

The last step to get our snow moving is to add in some movement when the mouse touches it and when the llama steps on it!



If the mouse hovers over the snow then it will blow out of the way.

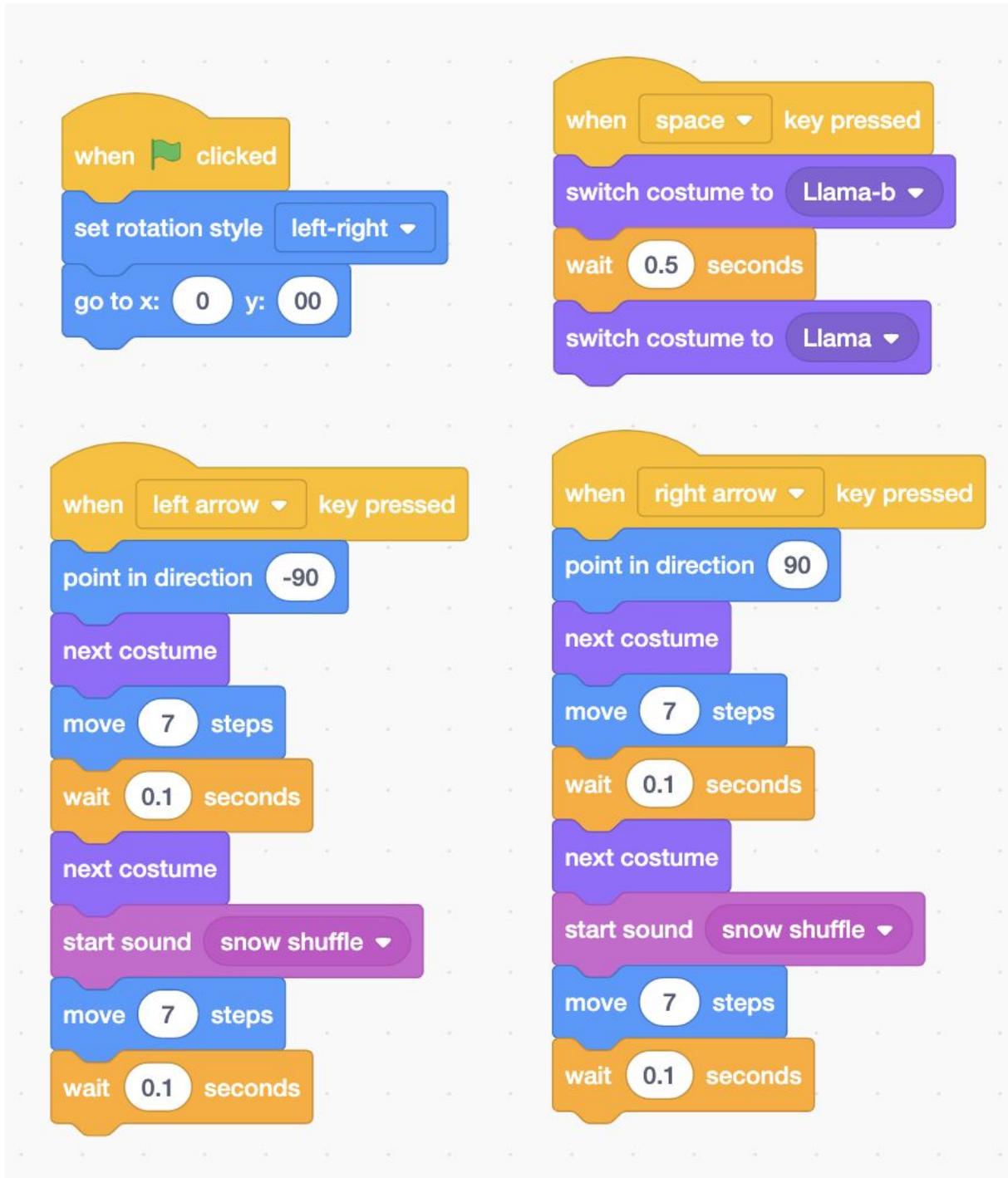
If the llama steps on snow that is already touching the ground then the snow will reset to the top of the screen.

Can you think of any other interesting ways to make the snow move?

If you have used variables before, you could try setting up an extra factor like wind.

Step 6

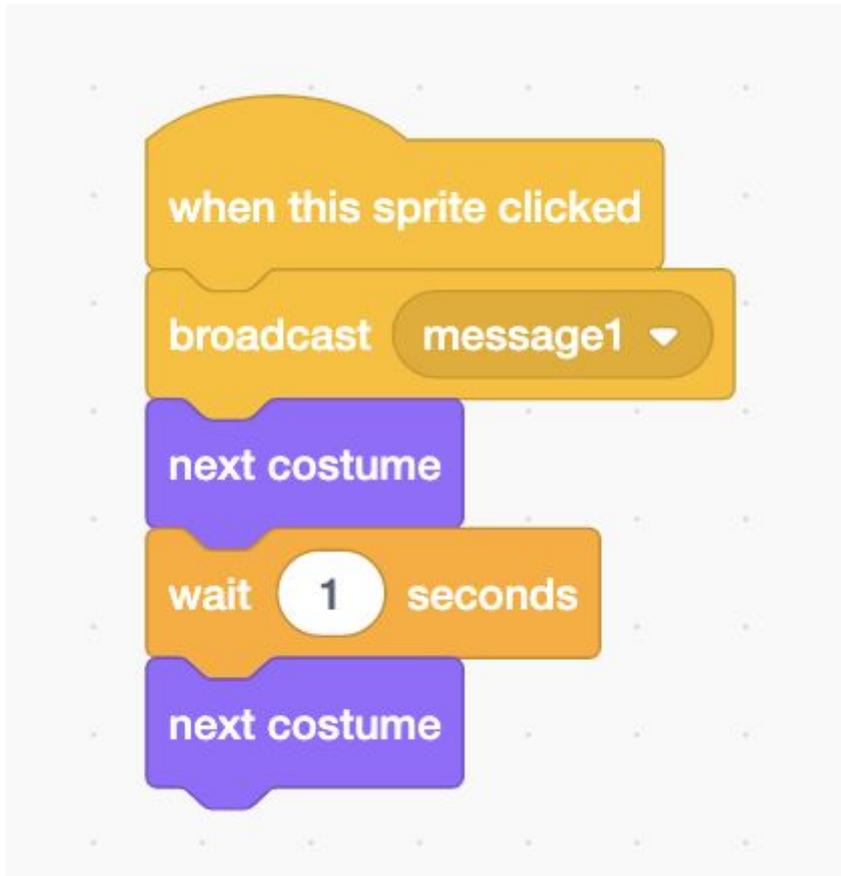
Now we'll have a look at the llama. The code for the llama is quite simple, as the snow is already doing most of the work.



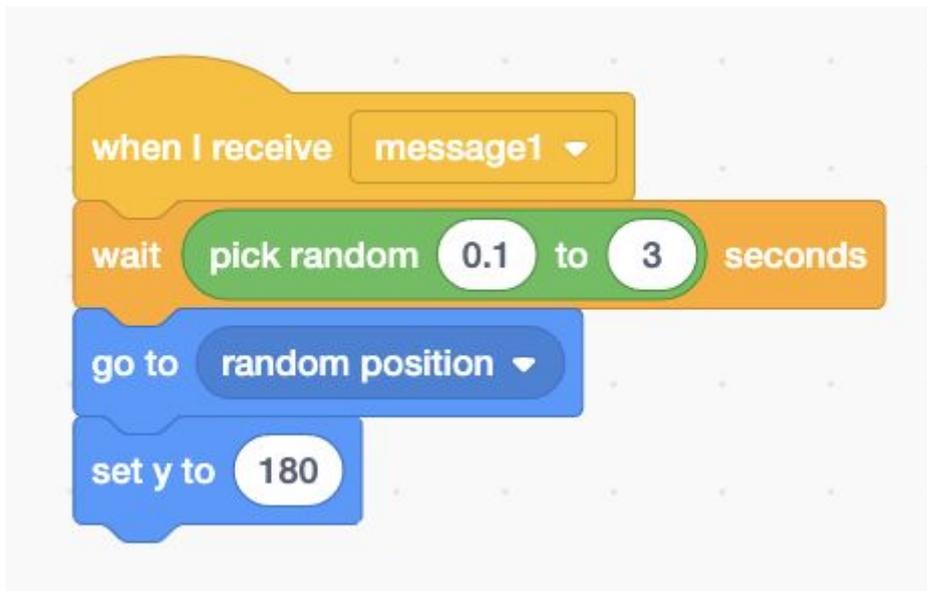
Play with the llama costumes, to see if you can change the llama into something else or make it move in a different way.

Step 7

Finally we have a little button sprite. This just allows us to make the snow fall again from the top. It is a bit like a reset button.



And if you switch back to the snowflake sprite you can see the way the snowflakes respond.



Step 8

So that's the basics of making your own snow globe scratch scene.

- What other blocks can you use to interact with the snow?
- Can you swap the llama for something else?
- Can you add some extra decorations?

(We've already hidden a few in the project!)

Remember to share your project to the [Phoenix Scratch studio!](#)

We hope you enjoyed this animation activity and can't wait to see what you create.

Phoenix.org.uk

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