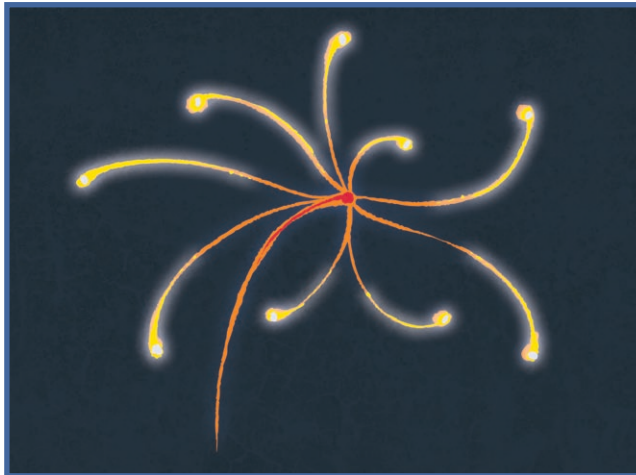


Creative Coding with Scratch

Fireworks!



Getting Started

Select the **Stars** backdrop.

In the **Choose a Sprite** menu, select the **Paint** option. In the **Costumes** tab, draw a firework using bright colours and name it **Firework**.

In the **Sounds** tab, use the **Choose a Sound** menu to add the **Cymbal** sound to your **Firework** sprite.

Challenge 1

Can you make the **Firework** appear and make a sound, then disappear?

Challenge 2

Can you make the **Firework** appear in different places?

Challenge 3

Can you make the **Firework** different sizes and colours?

Challenge 4

Can you make the **Firework** appear and disappear repeatedly?

Challenge 5

Can you make several duplicate **Firework** sprites appear to create a display?

I can:

select a background;

draw a sprite;

add a sound effect to a sprite;

make a sprite appear in different places;

change the size and colour of a sprite;

make a sprite appear and disappear repeatedly;

duplicate a sprite.

Helpful Hints

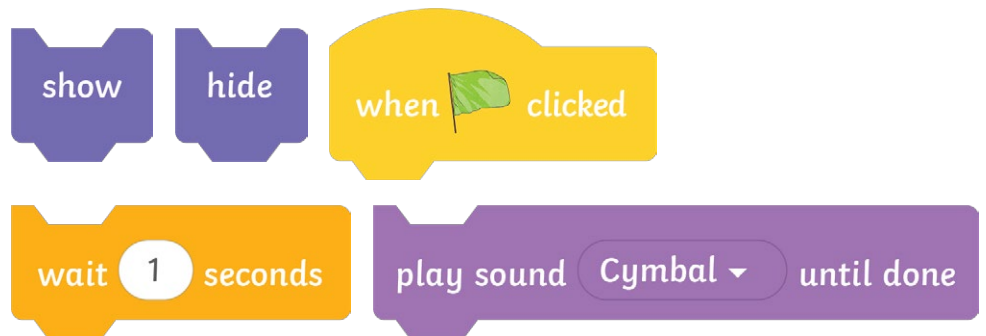
Fireworks!

Use these hints to help you complete the challenges. They will not give you the complete solution to the algorithm but should help you on your way.

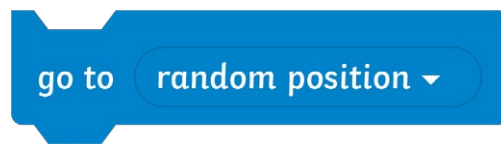
For each challenge, you will need to add to the code that you have already created.

The following code belongs on the **Firework** sprite:

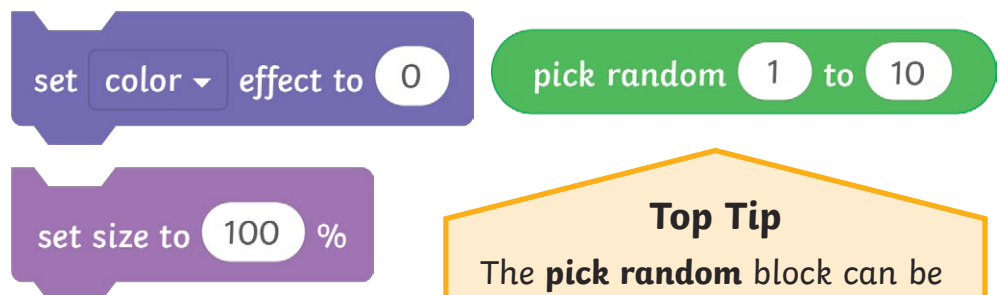
To make the **Firework** appear and make a sound, then disappear:



To make the **Firework** appear in different places:



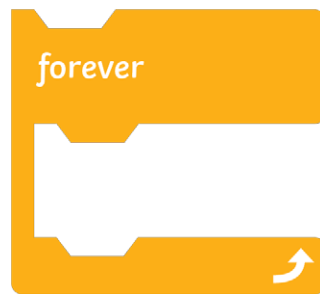
To make the **Firework** different sizes and colours:



Top Tip

The **pick random** block can be combined with other blocks to create various different effects.

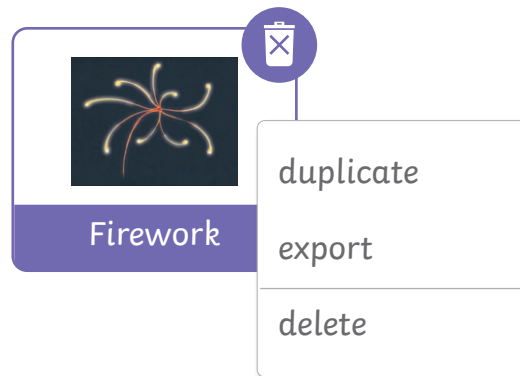
To make the **Firework** appear and disappear repeatedly:



Top Tip

The **forever** block will continuously repeat a script.

To make several duplicate **Firework** sprites appear to create a display:



Top Tip

Create multiple **Firework** sprites by right-clicking on the sprite and selecting duplicate. This will not only copy the costume but also all of the scripts for that sprite.

Creative Coding with Scratch

Fireworks! Answers

Each Creative Coding Challenge is an open-ended task, which can be approached in many different ways. Pupils should be encouraged to have a go and tackle these tasks independently. The helpful hints are not intended to provide complete solutions but may serve as useful cues for supporting less-confident coders.

The following algorithms are just one possible solution to each challenge.

Challenge 1

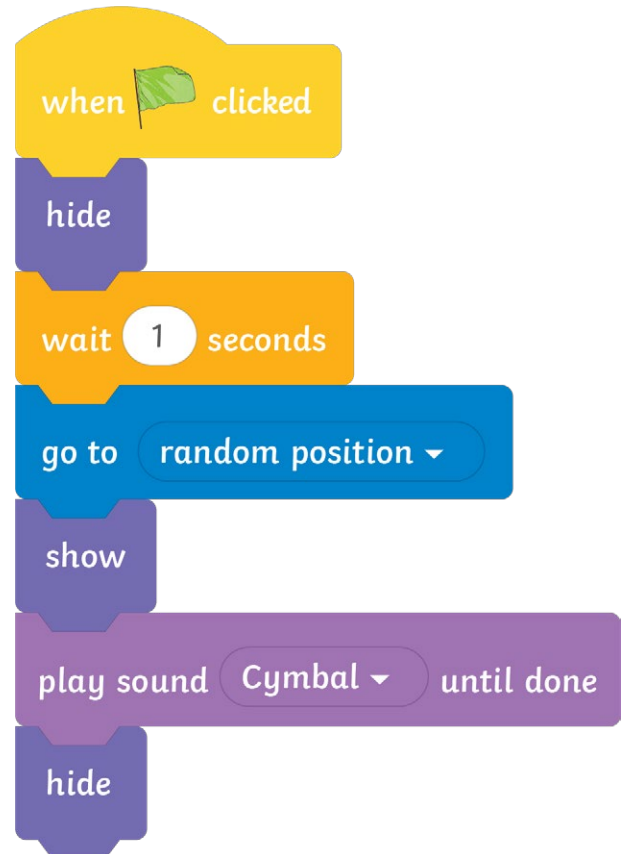
The following code belongs on the **Firework** sprite:



```
when clicked
hide
wait 1 seconds
show
play sound Cymbal until done
hide
```

Challenge 2

The following code belongs on the **Firework** sprite:



```
when clicked
hide
wait 1 seconds
go to random position
show
play sound Cymbal until done
hide
```

Challenge 3

The following code belongs on the **Firework** sprite:

```

when clicked
hide
wait 1 seconds
go to random position
set size to pick random 50 to 100 %
set color effect to pick random 0 to 300
show
play sound Cymbal until done
hide
    
```

Challenge 4

The following code belongs on the **Firework** sprite:

```

when clicked
hide
wait 1 seconds
forever
go to random position
set size to pick random 50 to 100 %
set color effect to pick random 0 to 300
show
play sound Cymbal until done
hide
    
```

Challenge 5

The children will have to duplicate their **Firework** sprite to complete this challenge. Included in the **Helpful Hints** section is the following support in order for this to be done in the most efficient way:

