

Adult Guidance: Brilliant Backdrops and Super Sprites

Lesson 3

Children's individual solutions to creating the code may vary but trial and error and experimentation with ideas should be encouraged.

At the end of this lesson, it is recommended that children save their work under a new name that indicates 'Lesson 3 Backdrops and Sprites' or Lesson 3' to allow for assessment against this lesson's success criteria.

The code solutions should incorporate the same algorithms for creating questions for a quiz from lesson 2. This forms the foundation of these activities, with the effects being added in to this code.

Some Potential Debugging

- Ensure the **switch backdrop to** blocks are added directly underneath the **Events** block and at the start of the algorithm. This will ensure that the final backdrop switches back to the original when the green flag is clicked.
- Check two **wait** blocks are added when changing the size of the sprite. This will ensure a smoother transition between the increase and decrease of size.
- Check that the **clear graphic effects** block is added when changing the colour of the sprite.
- Check that when snapping all three questions together to create the complete algorithm, that no parts of the code snap inside the previous **if...then...else** blocks.

Possible solutions for **changing a sprite's size**:

```
when green flag clicked
repeat 4
  set size to 80 %
  wait 0.3 seconds
  set size to 100 %
  wait 0.3 seconds
```

```
when space key pressed
repeat 4
  set size to 20
  wait 0.3 seconds
  set size to -20
  wait 0.3 seconds
```

Possible solutions for **changing a sprite's colour**:

```
when green flag clicked
repeat 4
  set color effect to 12
  wait 0.3 seconds
  set color effect to -12
  wait 0.3 seconds
```

```
when space key pressed
repeat 4
  change color effect by 25
  wait 0.3 seconds
```

Possible solutions for the **Backdrops and Sprite Activity**:

```

when clicked
  switch backdrop to Jurassic
  ask "What is 6 x 7?" and wait
  if answer = 42 then
    say "Well done!"
    repeat 8
      change color effect by 25
      wait 0.3 seconds
    clear graphic effects
  else
    change color effect by 50
    say "Oh no!" for 2 seconds
    clear graphic effects


ask "What is 7 x 8?" and wait
if answer = 56 then
  say "Well done!"
  repeat 4
    change size by 25
    wait 0.2 seconds
    change size by -25
    wait 0.2 seconds
else
  change size by -30
  say "Oh no!" for 2 seconds
  wait 1 seconds
  change size by 30
  wait 0.2 seconds

ask "What is 11 x 12?" and wait
if answer = 132 then
  switch costume to dinosaur2-d
  say "Well done!" for 1 seconds
  switch costume to dinosaur2-a
else
  switch costume to dinosaur2-c
  say "Oh no!" for 1 seconds
  switch costume to dinosaur2-a
switch backdrop to Rays
  
```

All sections of code are connected to make the complete algorithm.











There are many different solutions, which involve finding alternative ways to changing the size and colour as explored in the presentation.









Coding with Scratch: Questions and Quizzes: Brilliant Backdrops and Super Sprites

National Curriculum Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Aim To make a quiz more visually appealing by adding backdrops and changing sprites.		Lesson Duration It is estimated that this lesson will take approximately 60 minutes.	 60 mins Approx.
Success Criteria I can add and switch backdrops. I can explore different ways to change backdrops. I can select sprites. I can change a sprite's Costume.	Key Vocabulary Algorithm, executed, backdrop, costume, debugging, filters, sprite.		
Resources Lesson Pack PC devices, such as laptops, Chromebooks and/or tablets Scratch Online version accessed via	Preparation Differentiated Backdrop and Sprites Activity Sheet - one per child How to Add a Sprite - one per pair How to Add a Backdrop Guidance Sheets - one per pair Please access Lesson 2 (Teacher Example) - Questions and Quizzes, Lesson 3 (Teacher Example) - Questions and Quizzes, Lesson 3 (Changing Sprite Colour Teacher Example), Lesson 3 (Changing Sprite Size Teacher Example) and Lesson 3 (Final Quiz Teacher Example) - Questions and Quizzes Scratch files within the		

Prior Learning: In the previous lesson, the children will have looked at how to use blocks in Scratch to create a simple algorithm for asking a mathematical question. They will have explored how to use the if...then...else... blocks as well as how to duplicate sections of code to create a sequence of questions for their quiz.

Learning Sequence

	Remember It: Debugging: Using the Lesson Presentation , show the four slides with incorrect algorithms displayed. Ask the children to work in pairs to identify the errors and how they can be corrected. Reveal the correct answers.	
	Adding Effects: Using the Lesson Presentation , show the children Lesson 2 (Teacher Example) - Questions and Quizzes and then show them Lesson 3 (Teacher Example) - Questions and Quizzes. Ask the children to compare what is different. Then, discuss that in order to make a quiz more appealing, a backdrop needs to be added and a change of sprite.	
	Adding a Backdrop: Using the Lesson Presentation , show the children the different options for adding a backdrop. Discuss how backdrops can be duplicated, how the paint tools can be used to edit and create backdrops and show possible algorithms that could be used to switch backdrops. Can you think why you might want to change a backdrop at any point during a quiz?	
	Changing a Sprite: Using the Lesson Presentation , show the children the different options for selecting and editing sprites. Demonstrate how to change the size and colour of a sprite and possible algorithms that could be used to change Costumes. Access Lesson 3 (Changing Sprite Colour Teacher Example) and Lesson 3 (Changing Sprite Size Teacher Example) to help you with your demonstrations. What do you think would happen if the wait blocks weren't added to the above code?	
	Clear Graphic Effects: Using the Lesson Presentation , explain to the children why the clear graphic effect block is useful and how it can be used.	

 	<p>Let's Get Started: Using the Programming a Question Activity Sheet, introduce the children to the differentiated Backdrop and Sprites Activity Sheet. Access Lesson 3 (Final Quiz Answers Teacher Example) to show what the final quiz could look like.</p> <div style="display: flex; justify-content: space-between;"> <div> <p> Children are given a breakdown of relevant code and prompts to change the size, colour and Costume of a sprite, as well as adding a backdrop switch at the end of their quiz.</p> </div> <div> <p> Children are given prompts which help them to slot blocks into programmed maths questions. They will change the size, colour and Costume of the sprite as well as switch a backdrop. Helpful hints and useful blocks are provided to help.</p> </div> <div> <p> Children are given instructions without useful blocks. They are asked to change the colour and size of sprites, using different methods and to switch a backdrop. The children are encouraged to create their own backdrops. Useful hints are provided.</p> </div> </div>	
	<p>Let's Explore: Using the Lesson Presentation, inform the children that they will have the opportunity to explore other children's Scratch quizzes around the class. Use the questions on this slide for the children to think about what they enjoyed and where possible improvements could be made.</p>	

Exploreit

Catchphraseit: Explain to the children that many quizzes have catchphrases. These are catchy phrases which can be connected to presenters or quizzes/gameshows. Ask the children to come up with as many different catchphrases as they can for their quiz. Can they then use a Looks block to make their sprite say this catchphrase? Where could this catchphrase be inserted?

Practiseit: Ask the children to use Scratch to explore adding their own backdrops as opposed to using ones already in the Scratch library. You could ask them to search for images and import them as a backdrop, recapping on how to make safe searches online through the choice of safe websites and keyword searches. You could also ask the children to have a go at drawing their own, as this would be particularly useful for a final backdrop when a sprite has won or lost a quiz.

Assessment Notes:

Disclaimers:

External Links:

This resource contains links to external websites and/or external apps. Please be aware that the inclusion of any link in this resource should not be taken as an endorsement of any kind by Twinkl of the linked website and/or app, or any association with its operators. You should also be aware that we have no control over the availability of the linked pages and/or apps. If the link is not working, please let us know by contacting TwinklCares and we will try to fix it although we can assume no responsibility if this is the case. We are not responsible for the content of external sites and/or external apps.

Scratch Safety:

Showing or creating the flashing sprite effect could be problematic for children with conditions such as epilepsy. Discretion is advised.

Safe Searching:

This task involves children searching on the Internet. Please be mindful of search terms/topics used and connotations that could result in inappropriate links and pages. Child-friendly search engines are advised. Ensure your firewall settings are set at the appropriate levels necessary and your antivirus software is up to date. It is good practice to ensure screen content can be seen at all times and that children know what to do if they see something on the Internet that makes them feel uncomfortable.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



You will be adding sprite and backdrop changes to your quiz questions.

Getting Started:

Choose an existing backdrop from the backdrop library.

Choose an existing sprite from the sprite library.

Position your sprite in the middle of the **Stage**. Change the size of the sprite, if needed.

Top Tip:

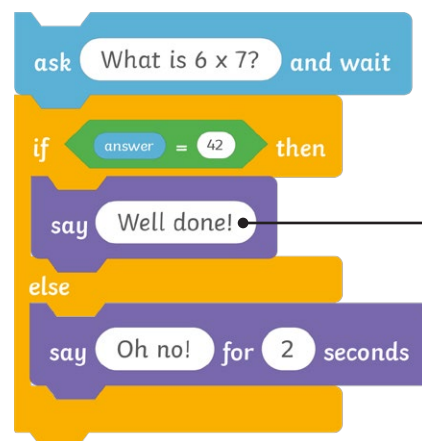
To resize a sprite, click on the sprite, then increase or decrease the size in the **Size** space below the **Stage** area.

1. How do I start my quiz?

- Start with an **Events** block so that when the green flag is clicked, the quiz can start.



- Then, add the same blocks used to create a question from lesson 2. Make sure that the first **Looks** block does not have a seconds section.



Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



2. How do I change the colour of the sprite when there is a correct or incorrect answer?

```
say Well done!  
repeat 8  
  change color effect by 25  
  wait 0.3 seconds
```

- Underneath the **say Well done!** block add a **repeat** loop. Then, insert a **change color effect by** block into the **repeat** loop and type in '25' in the blank space.
- Add a **wait** block and type '0.3' in the space provided.

```
when clicked  
ask What is 6 x 7? and wait  
if answer = 42 then  
  repeat 8  
    say Well done!  
    change color effect by 25  
    wait 0.3 seconds  
  clear graphic effects  
else  
  change color effect by 50  
  say Oh no! for 2 seconds  
  clear graphic effects
```

- Add a **clear graphic effects** block outside of the **repeat** block.

- Add another **change color effect by** block after the **else** section of the **if...then...else...** block and just before the **say** block. Set this amount to '50'.
- Snap in a **clear graphic effects** block underneath the **say** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



3. How do I change a sprite's size?

```
ask What is 7 x 8? and wait
if answer = 56 then
  say Well done!
else
  say Oh no!
```

- Create a new question section for your maths quiz and type a new multiplication question and answer.

```
ask What is 7 x 8? and wait
if answer = 56 then
  say Well done!
  repeat 4
    change size by 25
    wait 0.2 seconds
    change size by -25
    wait 0.2 seconds
else
  change size by -30
  say Oh no! for 2 seconds
  wait 1 seconds
  change size by 30
  wait 0.2 seconds
```

- Add a **repeat** loop underneath the **say Well done!** block.
- Snap a **change size by 25** block under the say block.
- Add a **wait 0.2 seconds** block underneath.
- Then, snap in another **change size by** block but type in '-25'.
- Then, add another **wait** block.
- Inside the **else** section of the **if...then... else...** block, snap a **change size by -30** block underneath the **say** block.
- Add a **wait 1 seconds** block.
- Then, snap in another **change size by** block but type in '30'.
- Then, add another **wait** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

```
ask What is 11 x 12? andwait
if answer = 132 then
  say Well done! for 1 seconds
else
  say Oh no! for 1 seconds
```

- Create your last mathematical question.
Top Tip: Remember to change the question and answer.

```
ask What is 11 x 12? andwait
if answer = 132 then
  switch costume to dinosaur2-d
  say Well done! for 1 seconds
  switch costume to dinosaur2-a
else
  switch costume to dinosaur2-c
  say Oh no! for 1 seconds
  switch costume to dinosaur2-a
```

- Add a **switch costume to** block before the **say** block.
- Snap in a **switch costume to** block after the **say** block.
- Add a **switch costume to** block before the **say** block.
- Snap in a **switch costume to** block after the **say** block.

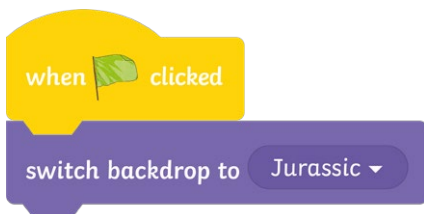
Top Tip: Remember to choose a different **Costume** first and then switch back to the original **Costume** afterwards.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



5. How do I make a background switch at the beginning and end of the quiz?



- Add a **switch backdrop** to block after the **Control** block. This should be your starting backdrop.



- Add a **switch backdrop** to block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Top Tip: Remember to save your work with a new file name, such as 'Lesson 3 Backdrops and Sprites'.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



Use the blocks below to create algorithms for adding sprites and creating backdrop changes. Look how some sprites and backdrops could be edited when inputting timings, colour preferences and size.

Getting Started:

Choose an existing backdrop from the backdrop library.

Choose an existing sprite from the sprite library.

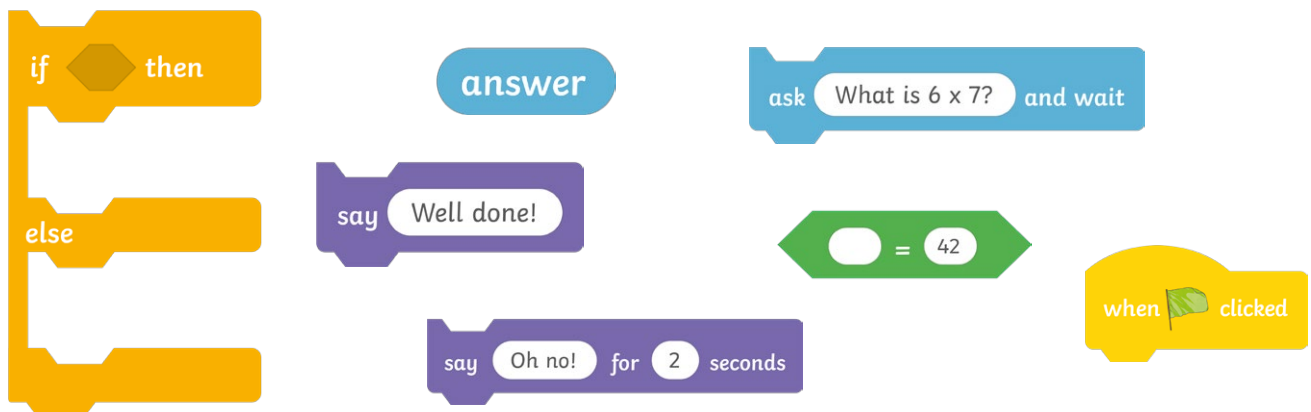
Position your sprite in the middle of the **Stage**. Change the size of the sprite if needed.

Top Tip:

To resize a sprite, click on the sprite, then increase or decrease the size in the **Size** space below the **Stage** area.

1. How do I start my quiz?

- Start with an **Events** block so that when the green flag is clicked, the quiz can start.



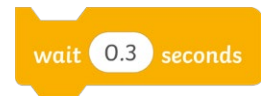
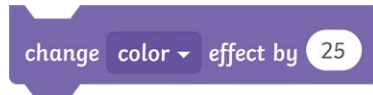
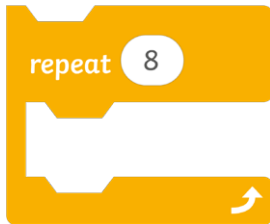
- Then, add the same blocks used to create the quiz questions in lesson 2. Make sure that the first **Looks** block does not have a seconds section.

Backdrops and Sprites

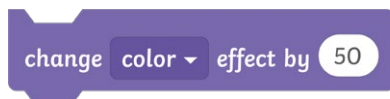
To make a quiz more visually appealing by adding backdrops and changing sprites.



2. How do I change the colour of the sprite when there is a correct or incorrect answer?



- Using the maths question you have just created, add a **repeat** block underneath the **say** block.
- Then, insert a **change color effect by** block underneath and type in '25' in the blank space.
- Add a **wait** block and type '0.3' in the space provided.
- Add a **clear graphic effects** block outside of the **repeat** block.



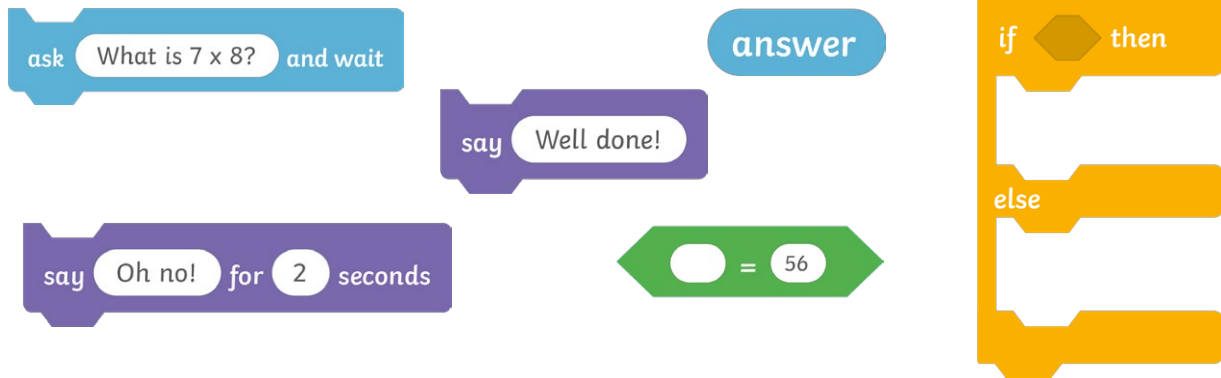
- Add another **change color effect by** block inside the **else** section of the **if...then...else...** block and just before the **say** block. Set this amount to '50'.
- Snap in a **clear graphic effects** block underneath the **say** block.

Backdrops and Sprites

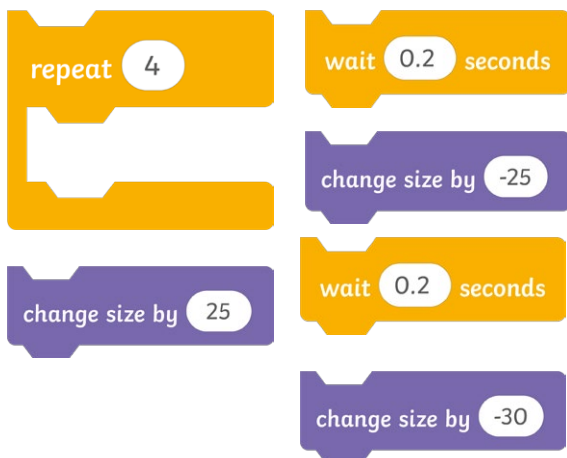
To make a quiz more visually appealing by adding backdrops and changing sprites.



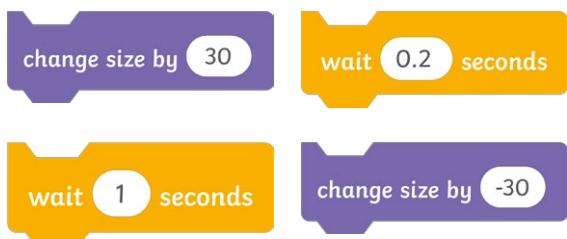
3. How do I change a sprite's size?



- Create a new question section for your maths quiz and type a new multiplication question and answer. Snap this underneath the **clear graphic effects** block.



- Add a **repeat** 4 block underneath the first **say** block.
- Snap a **change size by** block under the **say** block.
- Add a **wait** block underneath.
- Then, snap in another **change size by** block but type in '-25'.
- Add another **wait** block.



- Inside the **else** section of the **if... then... else...** block, snap a **change size by** -30 block underneath the **say** block.
- Add a **wait** block underneath.
- Then, snap in another **change size by** 30 block.
- Add another **wait** block underneath.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

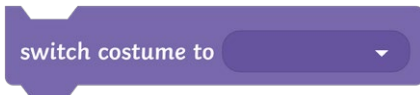


4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

- Create your last mathematical question.

Top Tip:

Remember to change the question and answer.



Top Tip: Remember to choose a different **Costume** first and choose a different option to switch back to the original **Costume** afterwards.

- Add a **switch costume to** block before the **say Well done! for 2 second** block.
- Snap in another **switch costume to** block after the **say** block.
- Add a third **switch costume to** block before the **say Oh no! for 2 seconds** block.
- Snap in a fourth **switch costume to** block after the **say** block.

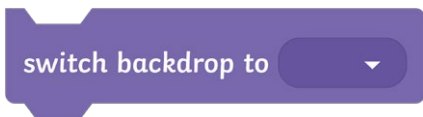
Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

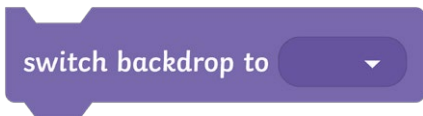


5. How do I make a background switch at the beginning and end of the quiz?

- You should now have **three** separate questions with algorithms to change the sprite's colour, size and **Costume**. Snap all of these three questions together, one underneath the other, to create your completed algorithm.



- Add a **switch backdrop to** block after the **when green flag clicked** block at the very start of your quiz. This should be your starting backdrop.



- Add a **switch backdrop to** block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Challenge

Can you experiment with different sizes, colours and wait times?

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



Use the instructions below to create algorithms for adding sprites and creating backdrop changes. Look how some sprites and backdrops could be edited when inputting timings, colour preferences and size.

1. How do I start my quiz?

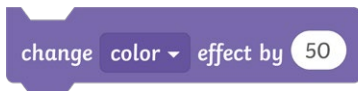
- Choose an existing backdrop.
- Choose an existing sprite and position it in the middle of the Stage.
- Start with an **Events** block so that when the green flag is clicked, the quiz can start.
- Then add the same blocks used to create a question from lesson 2. Make sure that the first **Looks** block does not have an editable **for _____ seconds** section.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



2. How do I change the colour of the sprite when there is a correct or incorrect answer?



- Using the maths question you have just created, add a **repeat** block underneath the **say** block.
- Then, insert a **change color effect by** block in the **repeat** loop and type in a number in the blank space.
- Add a **wait** block and type a time in the space provided.
- Add a **clear graphic effects** block outside of the repeat block.
- Add another **change color effect by** block inside the **else** section of the **if... then... else** block and just before the **say Oh no!** block. Set a new number that works well with the number entered in the above piece of code.
- Snap in a **clear graphic effects** block underneath the **say Oh no! for 2 seconds** block.

3. How do I change a sprite's size?

- Create a new question section for your maths quiz and type a new multiplication question and answer. Snap this underneath the **clear graphic effects** block.



- Add a **repeat** block underneath the first **say Well Done!** block. Choose how many times you wish this action to repeat.
- Snap a **change size by** block under the **say** block.
- Add a **wait** block underneath.
- Then, snap in another **change size by** block but type in a new amount here. You may wish for this to be a negative number.
- Add another **wait** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

- Create your last mathematical question.

Top Tip: Remember to change the question and answer block.

-
- Add a **switch costume to** block before the **say Well done! for 1 seconds** block.
 - Snap in another **switch costume to** block after the **say** block.
 - Add a third **switch costume to** block before the **say Oh no! for 1 seconds** block.
 - Snap in a fourth **switch costume to** block after the **say** block.

Top Tip: Remember to choose a different **Costume** first and choose a different option to switch back to the original **Costume** afterwards.

5. How do I make a background switch at the beginning and end of the quiz?

- You should now have **three** separate questions with algorithms to change the sprite's colour, size and costume. Snap all of these three questions together, one underneath the other, to create your completed algorithm.
- Add a **switch backdrop to** block after the **when green flag clicked** block at the very start of your quiz. This should be you starting backdrop.
- Add a **switch backdrop to** block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Top Tip:

Remember to save you work with a new file name, such as 'Lesson 3 Backdrops and Sprites'.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



Challenge

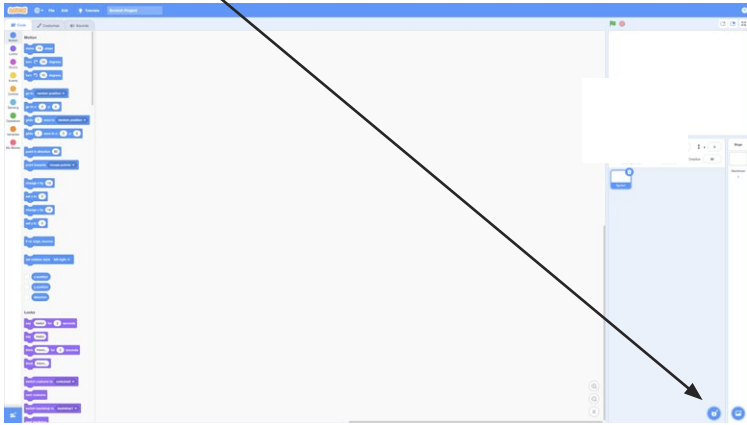
Can you draw your own backdrop for the background switch at the end?

Could you add another sprite, such as a shape, that appears and changes size or colour when a question is answered correctly?

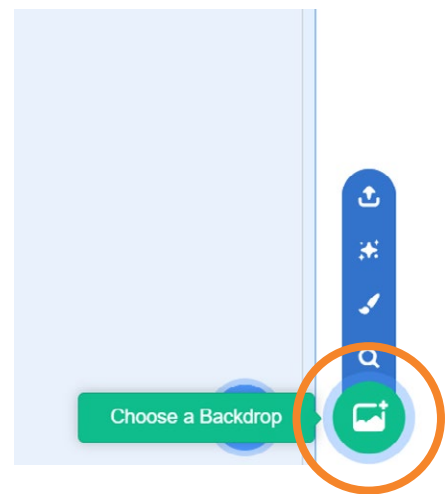
How to Add a New Backdrop

Use this help sheet when adding an existing backdrop from the backdrop library in Scratch.

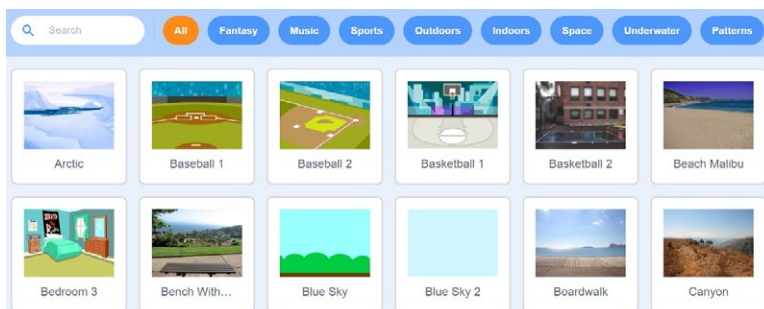
- 1 To add a new backdrop, click on this button here.



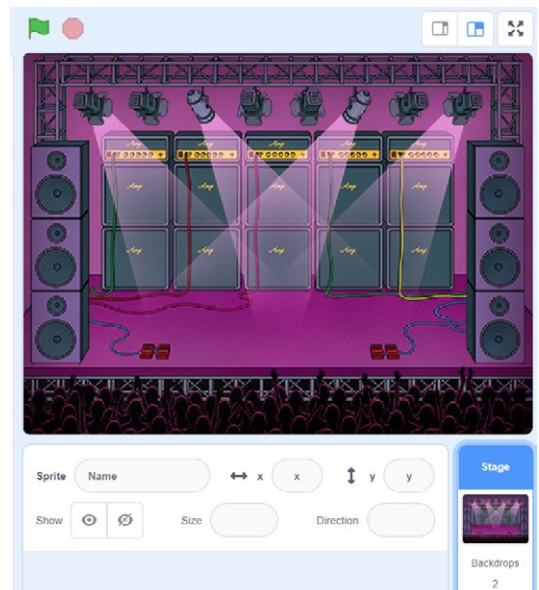
- 2 There are four selections you can make when choosing a backdrop. **Choose a Backdrop** is the option needed to choose an existing backdrop from the backdrops library.



- 3 When you have clicked **Choose a Backdrop**, you can use some of the filters along the top to narrow down your search.



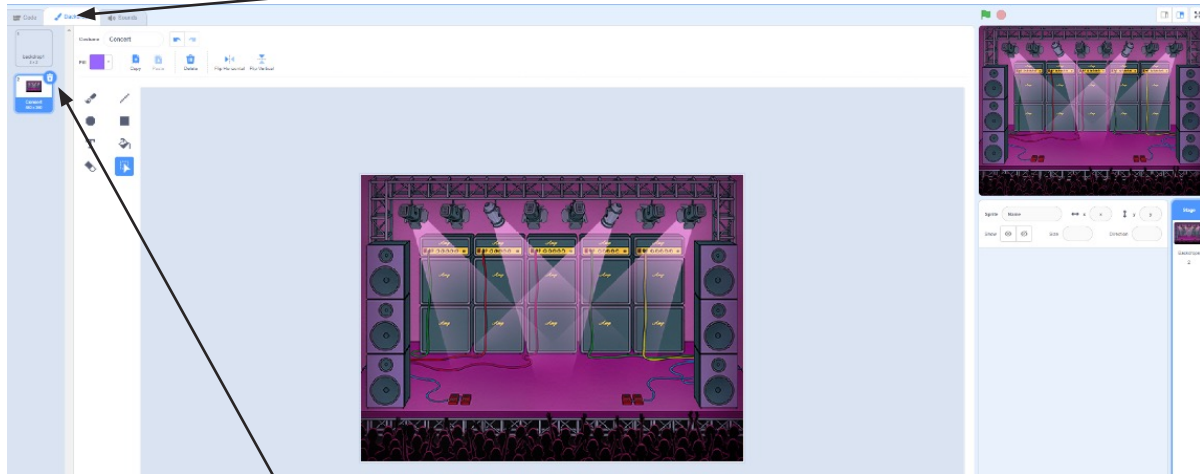
- 4 Click on your chosen backdrop and this will appear in the **Stage** area.



How to Add a New Backdrop

Use this help sheet when adding an existing backdrop from the backdrop library in Scratch.

- 5 You can click on the **Backdrops** tab to see your selected backdrops down the left-hand side. Click on the backdrop you would like to use in your **Stage** area.



- 6 If you decide you want to delete a backdrop, select the backdrop you no longer need and click on the x.

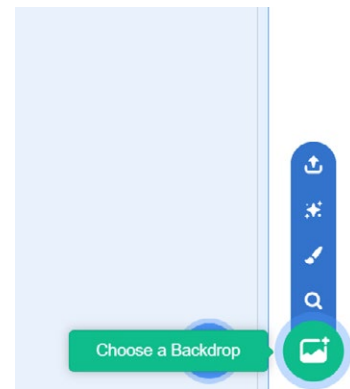
How to Add a New Sprite

Use this help sheet when choosing an existing sprite from the sprite library in Scratch.

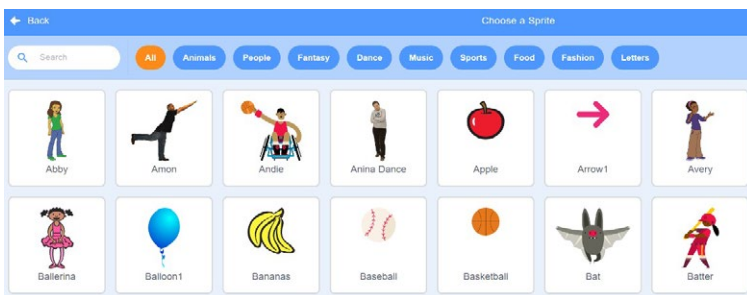
- 1 To add a new sprite, click on this button here.



- 2 There are four selections you can make when choosing a sprite. **Choose a Sprite** is the option needed to choose an existing sprite from the sprite library.

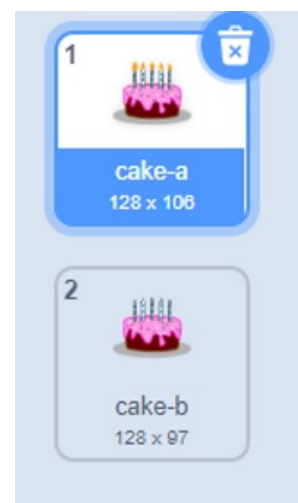
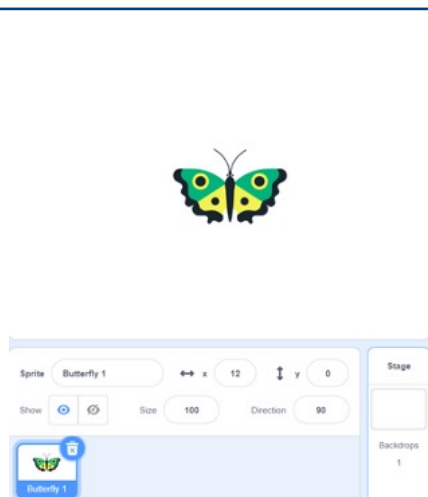


- 3 Click on **Choose a Sprite** and select from the sprite library.



- 4 If you hover over the sprites in the sprite library, the sprite will start changing to show you the different costumes available. The **switch costumes to** blocks can be used to apply these **Costume** changes in an algorithm.

- 5 Your sprite will now be displayed in the **Stage** area.



Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

You will be adding sprite and backdrop changes to your quiz questions.

Getting Started:

Choose an existing backdrop from the backdrop library.

Choose an existing sprite from the sprite library.

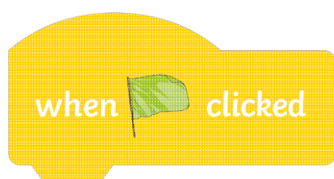
Position your sprite in the middle of the **Stage**. Change the size of the sprite, if needed.

Top Tip:

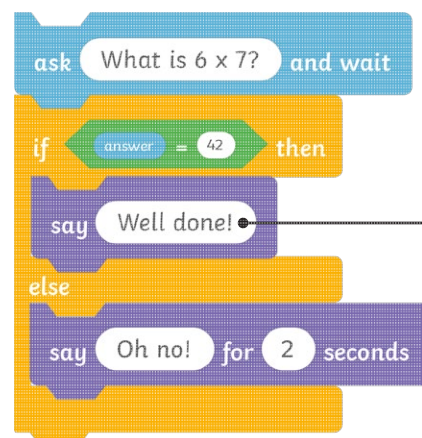
To resize a sprite, click on the sprite, then increase or decrease the size in the **Size** space below the **Stage** area.

1. How do I start my quiz?

- Start with an **Events** block so that when the green flag is clicked, the quiz can start.



- Then, add the same blocks used to create a question from lesson 2. Make sure that the first **Looks** block does not have a seconds section.



Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



2. How do I change the colour of the sprite when there is a correct or incorrect answer?

```
say Well done!  
repeat 8  
  change color effect by 25  
  wait 0.3 seconds
```

- Underneath the **say Well done!** block add a **repeat** loop. Then, insert a **change color effect by** block into the **repeat** loop and type in '25' in the blank space.
- Add a **wait** block and type '0.3' in the space provided.

```
when clicked  
ask What is 6 x 7? and wait  
if answer = 42 then  
  repeat 8  
    say Well done!  
    change color effect by 25  
    wait 0.3 seconds  
  clear graphic effects  
else  
  change color effect by 50  
  say Oh no! for 2 seconds  
  clear graphic effects
```

- Add a **clear graphic effects** block outside of the **repeat** block.

- Add another **change color effect by** block after the **else** section of the **if...then...else...** block and just before the **say** block. Set this amount to '50'.
- Snap in a **clear graphic effects** block underneath the **say** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

3. How do I change a sprite's size?

```
ask [What is 7 x 8?] and wait
if [answer = 56] then
  say [Well done!]
else
  say [Oh no!]
```

- Create a new question section for your maths quiz and type a new multiplication question and answer.

```
ask [What is 7 x 8?] and wait
if [answer = 56] then
  repeat (4)
    change size by 25
    wait 0.2 seconds
    change size by -25
    wait 0.2 seconds
  else
    change size by -30
    say [Oh no!] for 2 seconds
    wait 1 seconds
    change size by 30
    wait 0.2 seconds
```

- Add a **repeat** loop underneath the **say Well done!** block.
- Snap a **change size by 25** block under the say block.
- Add a **wait 0.2 seconds** block underneath.
- Then, snap in another **change size by** block but type in '-25'.
- Then, add another **wait** block.
- Inside the **else** section of the **if...then...else...** block, snap a **change size by -30** block underneath the **say** block.
- Add a **wait 1 seconds** block.
- Then, snap in another **change size by** block but type in '30'.
- Then, add another **wait** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

```
ask What is 11 x 12? andwait
if answer = 132 then
  say Well done! for 1 seconds
else
  say Oh no! for 1 seconds
```

- Create your last mathematical question.
Top Tip: Remember to change the question and answer.

```
ask What is 11 x 12? andwait
if answer = 132 then
  switch costume to dinosaur2-d
  say Well done! for 1 seconds
  switch costume to dinosaur2-a
else
  switch costume to dinosaur2-c
  say Oh no! for 1 seconds
  switch costume to dinosaur2-a
```

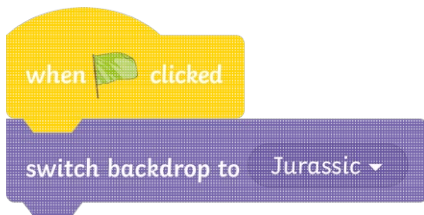
- Add a **switch costume to** block before the **say** block.
- Snap in a **switch costume to** block after the **say** block.
- Add a **switch costume to** block before the **say** block.
- Snap in a **switch costume to** block after the **say** block.

Top Tip: Remember to choose a different **Costume** first and then switch back to the original **Costume** afterwards.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

5. How do I make a background switch at the beginning and end of the quiz?



- Add a **switch backdrop** to block after the **Control** block. This should be your starting backdrop.



- Add a **switch backdrop** to block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Top Tip: Remember to save you work with a new file name, such as 'Lesson 3 Backdrops and Sprites'.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

Use the blocks below to create algorithms for adding sprites and creating backdrop changes. Look how some sprites and backdrops could be edited when inputting timings, colour preferences and size.

Getting Started:

Choose an existing backdrop from the backdrop library.

Choose an existing sprite from the sprite library.

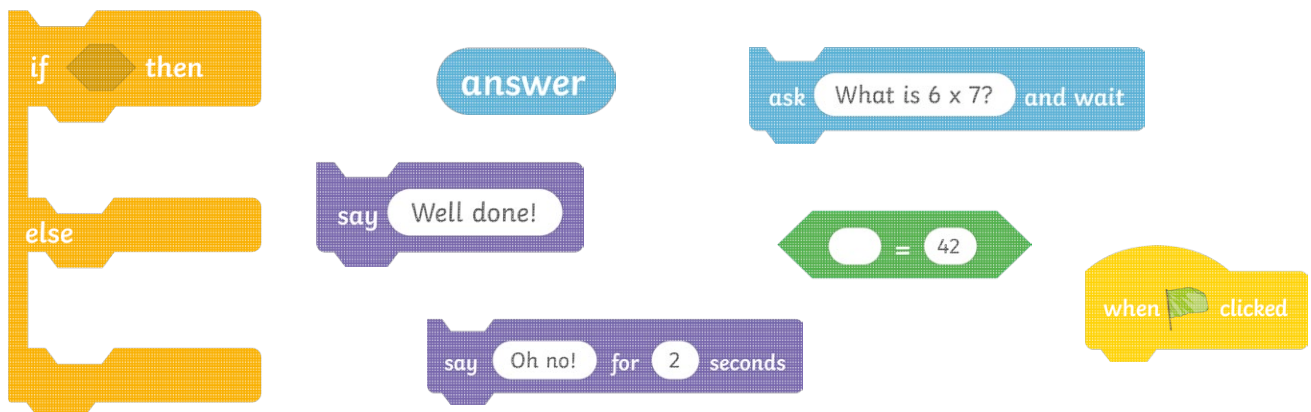
Position your sprite in the middle of the **Stage**. Change the size of the sprite if needed.

Top Tip:

To resize a sprite, click on the sprite, then increase or decrease the size in the **Size** space below the **Stage** area.

1. How do I start my quiz?

- Start with an **Events** block so that when the green flag is clicked, the quiz can start.



- Then, add the same blocks used to create the quiz questions in lesson 2. Make sure that the first **Looks** block does not have a seconds section.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

2. How do I change the colour of the sprite when there is a correct or incorrect answer?



- Using the maths question you have just created, add a **repeat** block underneath the **say** block.
- Then, insert a **change color effect by** block underneath and type in '25' in the blank space.
- Add a **wait** block and type '0.3' in the space provided.
- Add a **clear graphic effects** block outside of the **repeat** block.

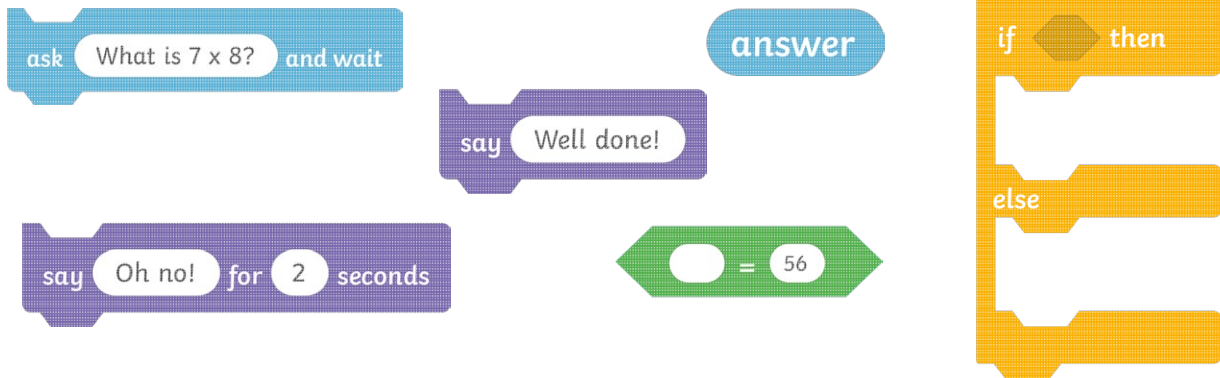


- Add another **change color effect by** block inside the **else** section of the **if...then...else...** block and just before the **say** block. Set this amount to '50'.
- Snap in a **clear graphic effects** block underneath the **say** block.

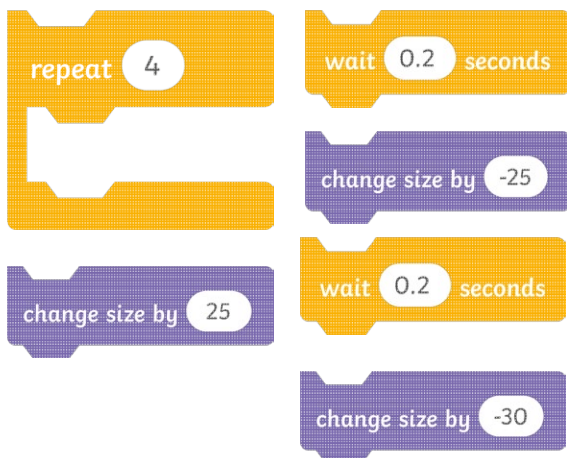
Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

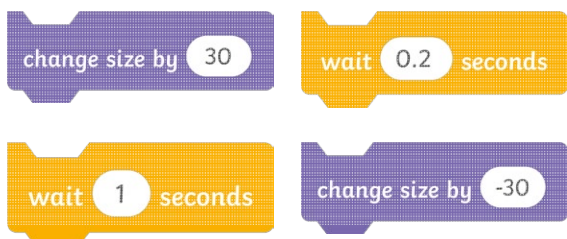
3. How do I change a sprite's size?



- Create a new question section for your maths quiz and type a new multiplication question and answer. Snap this underneath the **clear graphic effects** block.



- Add a **repeat 4** block underneath the first **say** block.
- Snap a **change size by** block under the **say** block.
- Add a **wait** block underneath.
- Then, snap in another **change size by** block but type in '-25'.
- Add another **wait** block.



- Inside the **else** section of the **if... then... else** block, snap a **change size by -30** block underneath the **say** block.
- Add a **wait** block underneath.
- Then, snap in another **change size by 30** block.
- Add another **wait** block underneath.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

- Create your last mathematical question.

Top Tip:

Remember to change the question and answer.



Top Tip: Remember to choose a different **Costume** first and choose a different option to switch back to the original **Costume** afterwards.

- Add a **switch costume to** block before the **say Well done! for 2 second** block.
- Snap in another **switch costume to** block after the **say** block.
- Add a third **switch costume to** block before the **say Oh no! for 2 seconds** block.
- Snap in a fourth **switch costume to** block after the **say** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.

5. How do I make a background switch at the beginning and end of the quiz?

- You should now have **three** separate questions with algorithms to change the sprite's colour, size and **Costume**. Snap all of these three questions together, one underneath the other, to create your completed algorithm.



- Add a **switch backdrop to** block after the **when green flag clicked** block at the very start of your quiz. This should be you starting backdrop.



- Add a **switch backdrop to** block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Challenge

Can you experiment with different sizes, colours and wait times?

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



Use the instructions below to create algorithms for adding sprites and creating backdrop changes. Look how some sprites and backdrops could be edited when inputting timings, colour preferences and size.

1. How do I start my quiz?

- Choose an existing backdrop.
- Choose an existing sprite and position it in the middle of the Stage.
- Start with an **Events** block so that when the green flag is clicked, the quiz can start.
- Then add the same blocks used to create a question from lesson 2. Make sure that the first **Looks** block does not have an editable **for _____ seconds** section.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



2. How do I change the colour of the sprite when there is a correct or incorrect answer?



- Using the maths question you have just created, add a **repeat** block underneath the **say** block.
- Then, insert a **change color effect by** block in the **repeat** loop and type in a number in the blank space.
- Add a **wait** block and type a time in the space provided.
- Add a **clear graphic effects** block outside of the repeat block.
- Add another **change color effect by** block inside the **else** section of the **if... then... else** block and just before the **say Oh no!** block. Set a new number that works well with the number entered in the above piece of code.
- Snap in a **clear graphic effects** block underneath the **say Oh no! for 2 seconds** block.

3. How do I change a sprite's size?

- Create a new question section for your maths quiz and type a new multiplication question and answer. Snap this underneath the **clear graphic effects** block.



-
- Add a **repeat** block underneath the first **say Well Done!** block. Choose how many times you wish this action to repeat.
 - Snap a **change size by** block under the **say** block.
 - Add a **wait** block underneath.
 - Then, snap in another **change size by** block but type in a new amount here. You may wish for this to be a negative number.
 - Add another **wait** block.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



4. How do I change a sprite's Costume when a question is answered correctly or incorrectly?

- Create your last mathematical question.

Top Tip: Remember to change the question and answer block.

-
- Add a **switch costume to** block before the **say Well done! for 1 seconds** block.
 - Snap in another **switch costume to** block after the **say** block.
 - Add a third **switch costume to** block before the **say Oh no! for 1 seconds** block.
 - Snap in a fourth **switch costume to** block after the **say** block.

Top Tip: Remember to choose a different Costume first and choose a different option to switch back to the original Costume afterwards.

5. How do I make a background switch at the beginning and end of the quiz?

- You should now have **three** separate questions with algorithms to change the sprite's colour, size and costume. Snap all of these three questions together, one underneath the other, to create your completed algorithm.
- Add a **switch backdrop to** block after the **when green flag clicked** block at the very start of your quiz. This should be you starting backdrop.
- Add a **switch backdrop to** block at the very end of your algorithm. This should be the backdrop you wish to change to when the quiz finishes.

Top Tip:

Remember to save you work with a new file name, such as 'Lesson 3 Backdrops and Sprites'.

Backdrops and Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.



Challenge

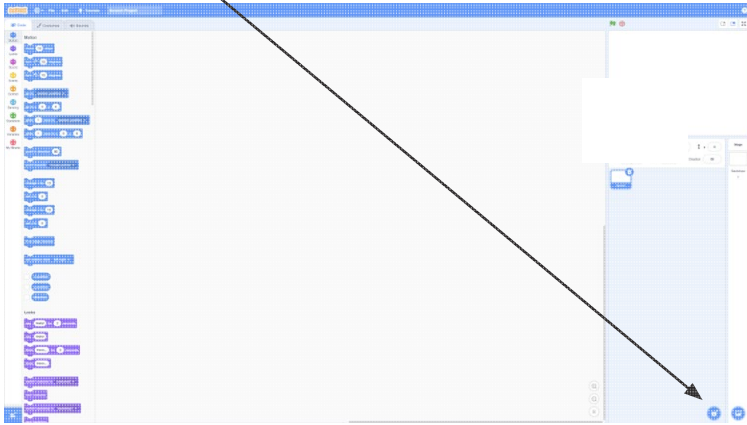
Can you draw your own backdrop for the background switch at the end?

Could you add another sprite, such as a shape, that appears and changes size or colour when a question is answered correctly?

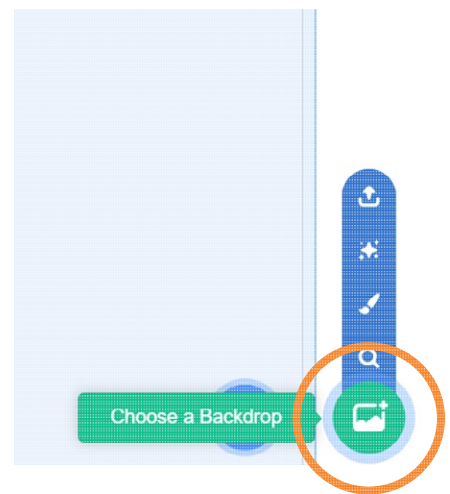
How to Add a New Backdrop

Use this help sheet when adding an existing backdrop from the backdrop library in Scratch.

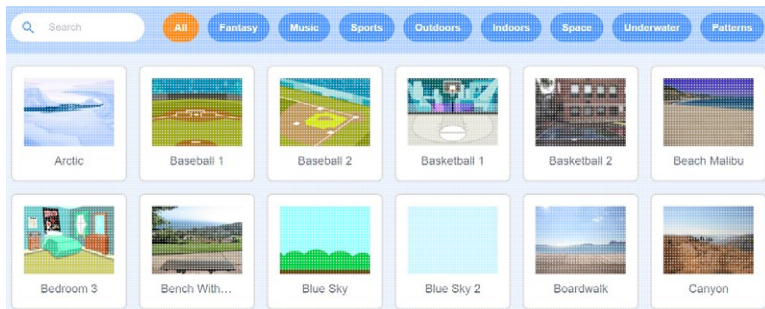
- 1 To add a new backdrop, click on this button here.



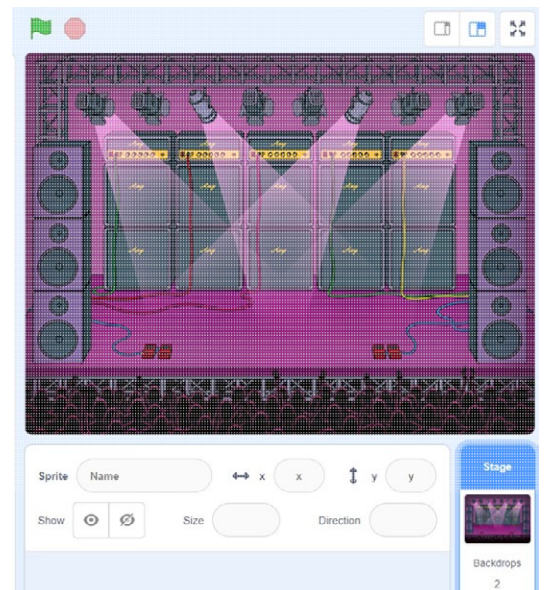
- 2 There are four selections you can make when choosing a backdrop. **Choose a Backdrop** is the option needed to choose an existing backdrop from the backdrops library.



- 3 When you have clicked **Choose a Backdrop**, you can use some of the filters along the top to narrow down your search.



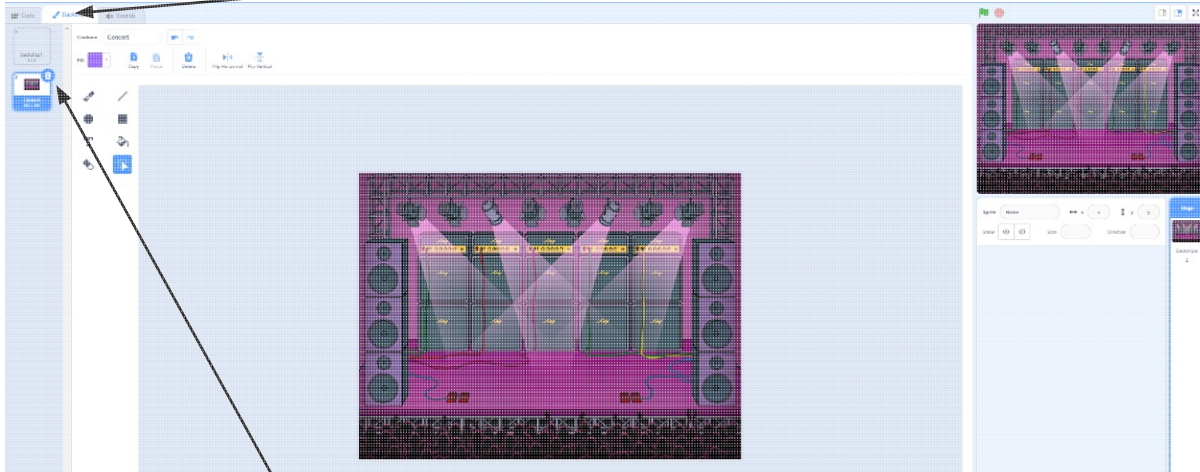
- 4 Click on your chosen backdrop and this will appear in the **Stage** area.



How to Add a New Backdrop

Use this help sheet when adding an existing backdrop from the backdrop library in Scratch.

- 5 You can click on the **Backdrops** tab to see your selected backdrops down the left-hand side. Click on the backdrop you would like to use in your **Stage** area.



- 6 If you decide you want to delete a backdrop, select the backdrop you no longer need and click on the x.

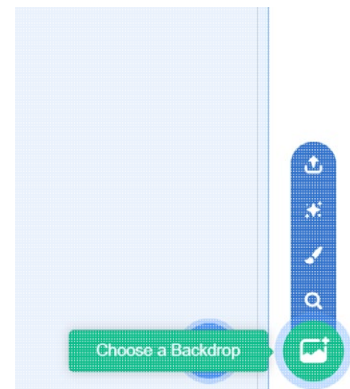
How to Add a New Sprite

Use this help sheet when choosing an existing sprite from the sprite library in Scratch.

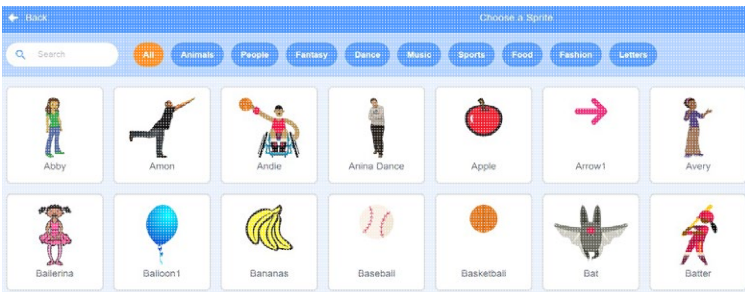
1 To add a new sprite, click on this button here.



2 There are four selections you can make when choosing a sprite. **Choose a Sprite** is the option needed to choose an existing sprite from the sprite library.

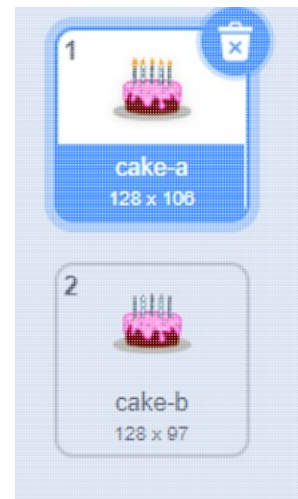
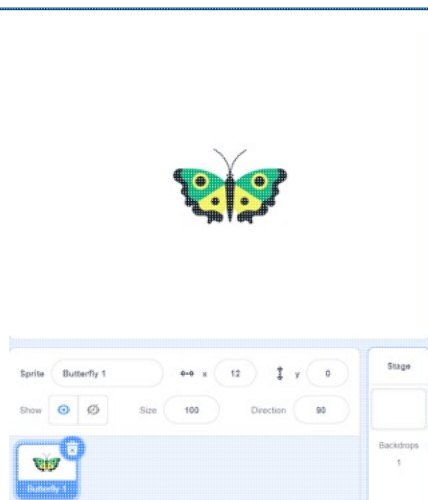


3 Click on **Choose a Sprite** and select from the sprite library.



4 If you hover over the sprites in the sprite library, the sprite will start changing to show you the different costumes available. The **switch costumes to** blocks can be used to apply these **Costume** changes in an algorithm.

5 Your sprite will now be displayed in the **Stage** area.



Coding with Scratch: Questions and Quizzes | Brilliant Backdrops and Super Sprites

To make a quiz more visually appealing by adding backdrops and changing sprites.		
I can add and switch backdrops.		
I can explore different ways to change backdrops.		
I can select sprites.		
I can change a sprite's Costume.		

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