

If you are new to Scratch 3.0, pick up a copy of the Scratch Basics Sheet to help with screen layout

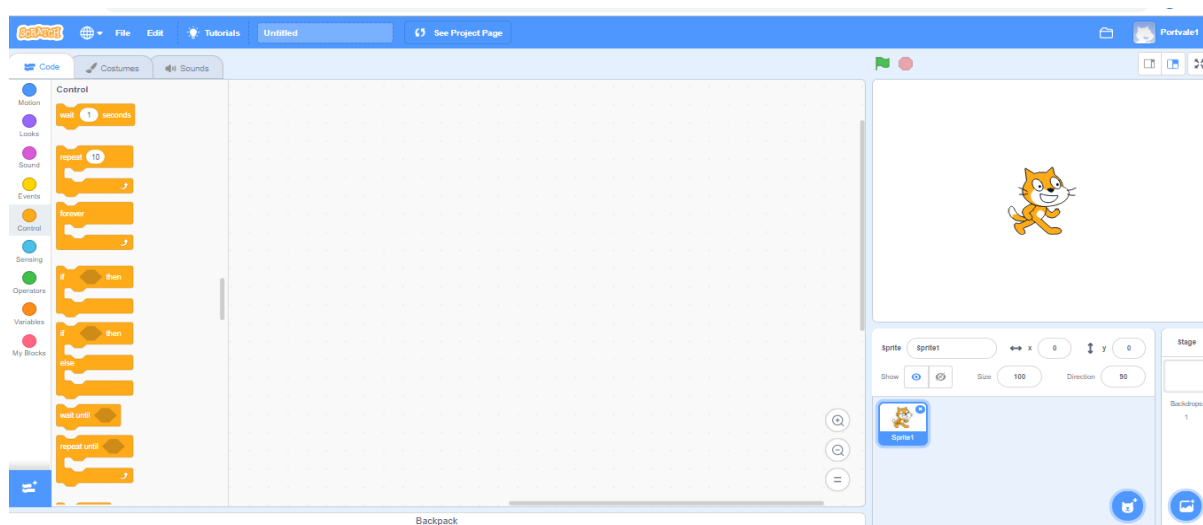
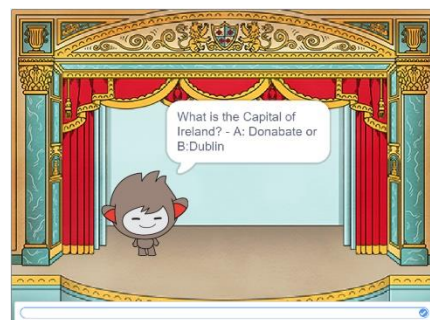
## Start Your Project

### 1. Open Scratch 3.0

For today's project we are going to create a quiz game. I'll show you the first couple of questions and a suggested end, and you can then add as many questions as you like.

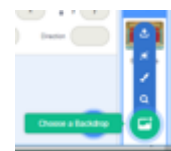
Before we start let's check everything is in the right place.

- Click on the *Code* tab in the top left of the screen.
- Make sure the mini cat (he's called Scratchy!) has a blue highlight around it to show which sprite you are coding. This is useful when you have more than one Sprite. Your screen should look like this.



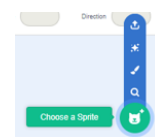
### 2. First thing we are going to do is to create the backdrop.

- Go to the backdrop's icon on the bottom far right of the screen and click on "Choose a Backdrop"
  - This opens the *Backdrops* library
- Select one you are happy with for a quiz game. I've chosen one called *Theatre*. When you click on it, the picture will appear on the stage. You will also notice the *Backdrops* tab is highlighted and your new backdrop is also here
- On the left there is a column showing all of your available backdrops. We only need the *Theatre* one, so you can click on the white screen, and then click on the white x to delete it



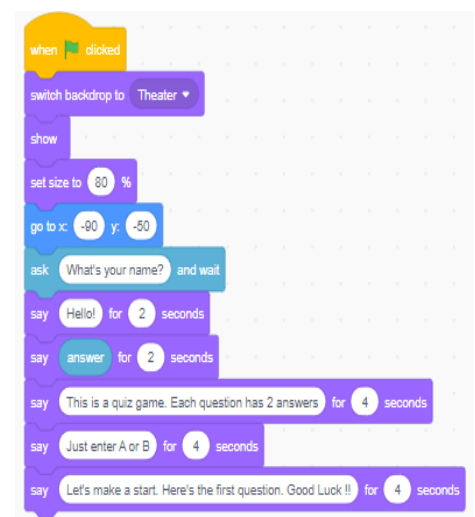
### 3. Next, we need a sprite to ask the questions

- This time go to the cat's head (next to where you chose your backdrop) and click on "Choose a Sprite" - This opens the *Sprites* library
- Select one you are happy with as your quiz master. I've chosen one called *Nano*. When you click on it, the picture will appear on the stage. You will also notice the *Code* tab is highlighted and the coding blocks are showing.
  - Under the stage there is a section showing all of your available sprites. We only need Nano, so you can click on the cat, and then click on the white x to delete it



4. Let's place Nano on the stage so he can ask the questions. I also want to shrink him in size so he's not taking up all of the space.
- Click on the Nano sprite, then click on the Code tab
  - From *Events* add a "when (green flag) clicked"
  - First, we need to add the starting backdrop. This is important as the backdrop changes as we progress through the questions.
  - From *Looks* add a "switch backdrop to" block and change the drop down to *Theatre*
  - From *Looks* add a "show" block
  - Also from *Looks* add a "set size to" block and change the number to 80
  - Drag your sprite to a suitable place on the screen. From *Motion* add a "go to x: y:" block
    - The x and y co-ordinates have adjusted to the chosen location. In my case this is x -90, y -50. Yours maybe different
  - Next, we are going to ask the player their name.
    - From *Sensing* add a "ask and wait" block. This is already populated with "what's your name" so we don't need to add this bit. If you want to ask the question differently, just type over this bit
    - This will make Nano ask "What's your name?" and then wait for a response
  - Once we have a response, we need to do something with it, so let's say *hello*
    - From *Looks*, add a "say for seconds" block.
    - Again, this is already populated with Hello and 2, which is fine for what we need, however you can change if you want to
    - From *Sensing*, add in the "answer" oval into the say block. 2 seconds is also good here too.
    - Remember this bit, you'll need it again later
    - Now let's add a quick explanation of how the game works.
    - Add another "say for seconds" block and type in "This is a quiz game. Each question has 2 answers". Change the number to 4, if you want a longer or short delay, simply change the number.
    - Repeat this step, but this time add "Just enter A or B" again for 4 seconds
    - I've then added one further block with "Let's make a start. Here's the first question. Good Luck!!" also for 4 seconds
  - Your code should look like something like this

**Did you know?** If you drag your sprite anywhere on the screen, the x, y co-ordinates in all the various blocks adjust to this location.



Save your project so you don't lose all of your hard work. If you're not sure how to do this, refer to the [Scratch 3.0 Basics](#) sheet

*Now time to test your work*

- ✓ Click on the green flag and follow the prompts
- ✓ Does your sprite say "hello" when you enter your name?
- ✓ Can you change the question in your code? Can you change the reply in your code?
- ✓ Can you change the location and size of Nano or move him around by using the code?
- ✓ Don't forget to put all of the values back to the code above so I know where you are up to

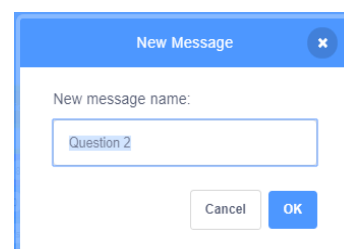
## Question ... And Answer

5. Let's start the quiz. I'll use a few questions, but feel free to use your own. It's your game!!

- Add a "forever" loop from the *Control* section
- Now ask a question in the same way you asked the name earlier
  - Change the default question to your own question, providing 2 options - A & B. I'm using "What is the Capital of Ireland? – A: Donabate or B: Dublin"
  - "What is the Capital of Ireland? – A: Donabate or B: Dublin"
- Using an A or B makes the game easier as you are not relying on the player being able to spell correctly!! 😊
- From *Control* add an "if then else" loop
  - In the diamond, from *Operators* add a block
  - In the first oval of the green block add "answer" as we did earlier from *Sensing*
  - In the second oval replace the number with "B"

This is the correct answer, so we want to celebrate it. Try adding this.

- As before, add a "say for seconds" block in the first gap in the loop
- In the first oval, type your message for a correct answer.
- I've used "Congratulations". 2 seconds is fine here
- The player can then move onto question 2 so we to add in a piece of code called a "broadcast" which tells the computer something is about to happen and to be ready. Here's how we do it
  - From *Events*, add a "broadcast" block. Click on the drop down, and select "New message". A blue box appears.
  - Type in "Question 2" and click OK
- As we are then moving onto question 2, we need to stop this loop. So, from *Control* add a "stop" block. Change the drop down to "this script"

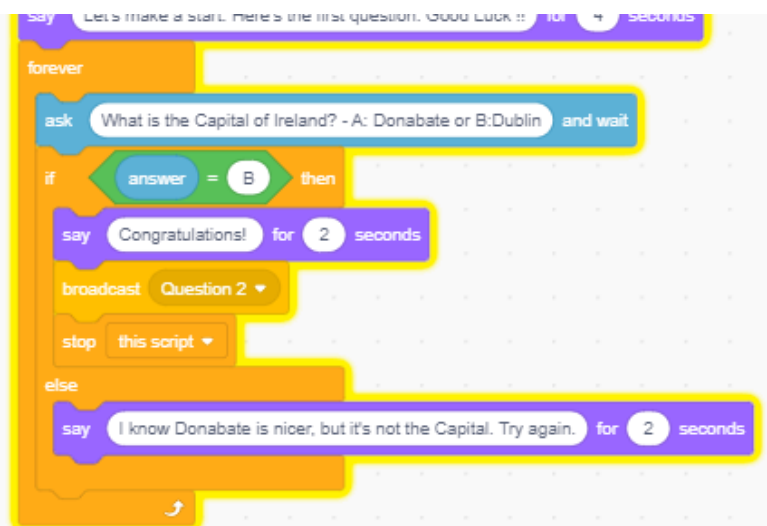


6. Do the same for the second oval, but this time enter the message for an incorrect answer.

- I've used "I know Donabate is nicer, but it's not the Capital. Try Again".
- 2 seconds is Ok here too.

The player cannot progress until there is a correct answer, so no need for the broadcast message.

- Your new piece of code should now look like this:

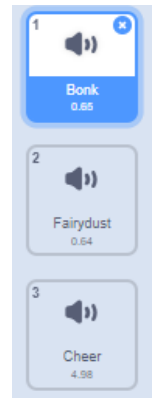


### 7. Let's add sound to create an atmosphere

- Click on *Nano* and then click on the *Sounds* tab.
- Click on the speaker icon in the bottom left of the screen and click *"Choose a Sound"*.

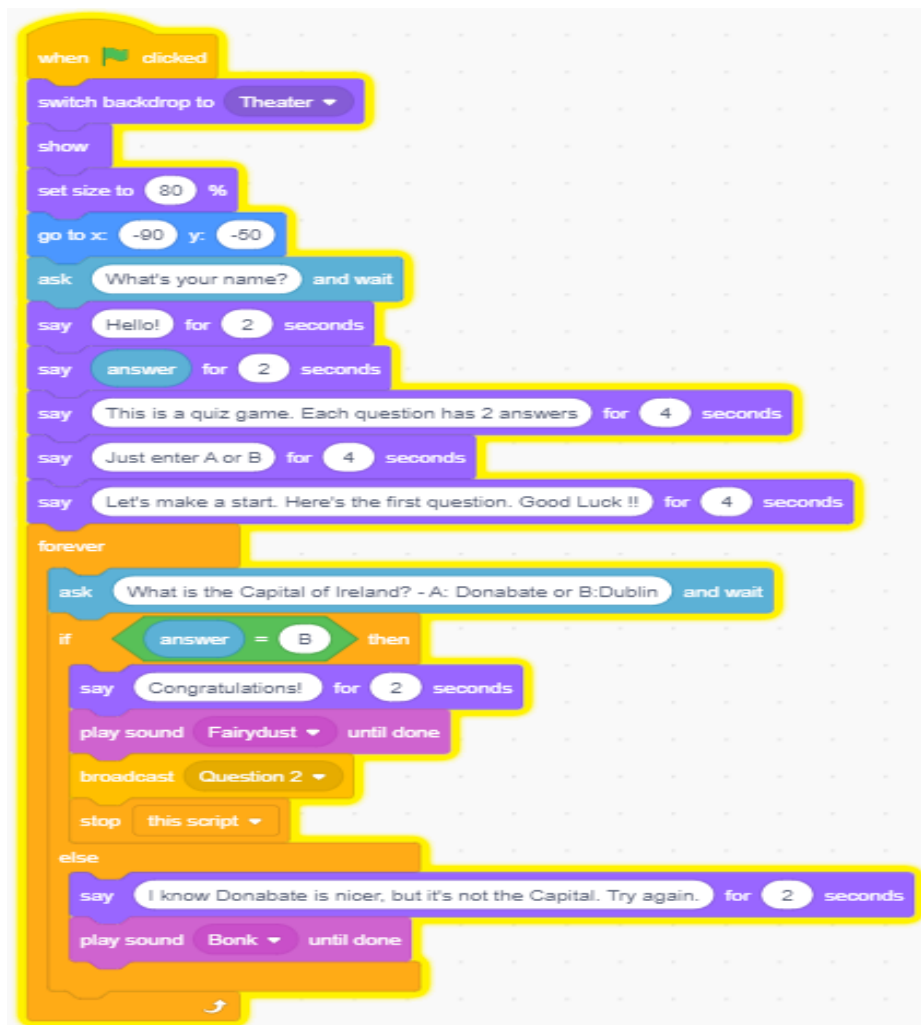
This opens the sound library

- Find some sounds you like and click on them to add them to your game.
- I've picked:
  - *"Bonk"* for when I get a question wrong,
  - *"Fairydust"*, for when I get a question correct,
  - *"Cheer"* for the end of the game
- I've also deleted *"Pop"* which was already there, and I don't need



### 8. Now let's add our sounds to the game by adding some coding blocks. Still on our Nano sprite, click back on the *Code* tab to continue coding our game

- From Sound, drag in a *"play sound until done"* block. Change the drop down to *"Fairydust"*, and insert it after your *"say Congratulations for 2 seconds"* block
- Add another of the same block, this time change the sound to *Bonk*, and insert this after the *"say I know Donabate is nicer, but it's not the Capital. Try again for 2 seconds"* block
- Your full code should now look like this.



Time to save and test. Check everything is working as you want. If not check the code above – we've done a lot of work there!!

## More Questions ... And Answers

9. Now let's create Question 2. We will change the backdrop for each question to keep the game interesting.
- First, we need to create some new backdrops. So, click on your backdrops, and make sure you have the *Backdrops* tab open.
  - Do the same as you did in step 2 to add the new backdrops. If you need help and have returned the first sheet, go grab another copy.
  - I've added *Theatre 2*. I've also added one called *Spotlight* for use later. You can add as many or as few as you like.

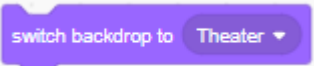
10. Ok now to the code. Click on Nano and onto the Code tab. To start we need to use the broadcast bit.
- We start this piece of code called "when I receive " from the *Events* section. Change the drop down to "Question 2" which is the broadcast message you created earlier.

There are also a lot of similarities to the first question, so I'll show a short-cut.


- Most of the code we used in the first question we need again, so rather than recreate it, we can simply duplicate and change the bits we need.
  - Position your mouse pointer on the "switch backdrops to" block at top of the code
  - Right click, and select Duplicate
  - Now drag all of the duplicated code and attach it to the "when I receive " block

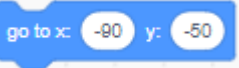
**Did you know?** If you position your pointer anywhere on a batch of code, right click, and select "duplicate", Scratch will duplicate all of the connected blocks from that point down.

11. We don't need all of the code, so will need to delete some blocks and change others.
- To delete a block, right click on it, and select "Delete Block"
  - Here's what we need to do to each section

 Change this drop down to "Theatre 2"

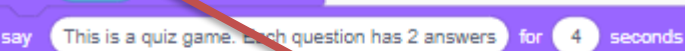
 Keep this bit

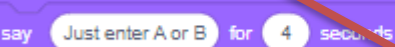
 We only need this bit if you want to change the size of your sprite. If so, change the number, if not, it can be deleted

 If you need to change the position of your sprite, change the code to the right numbers.

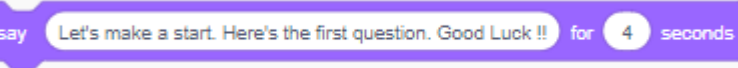
 If you are happy with the same position, leave everything as it is







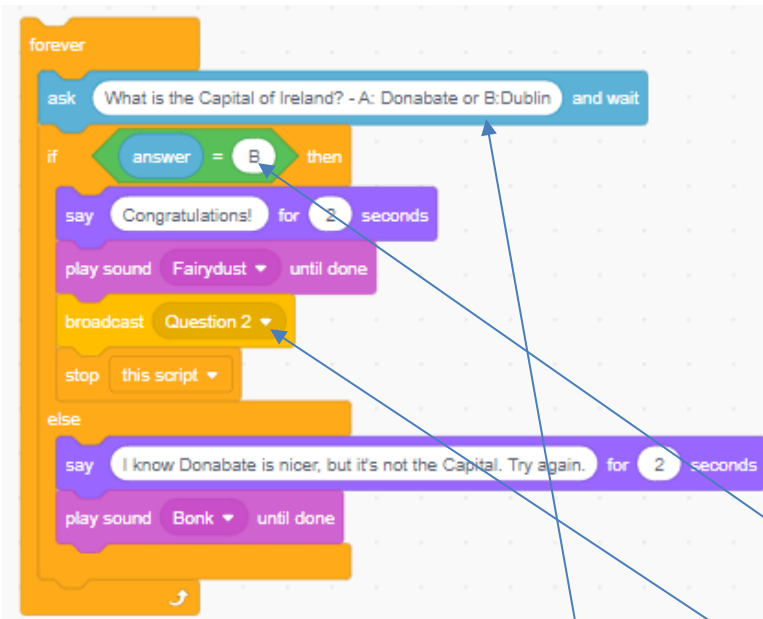
This section can all be deleted



I've used this block to introduce the next question, so I have changed the text to read

"Well Done. Let's move onto Question 2"

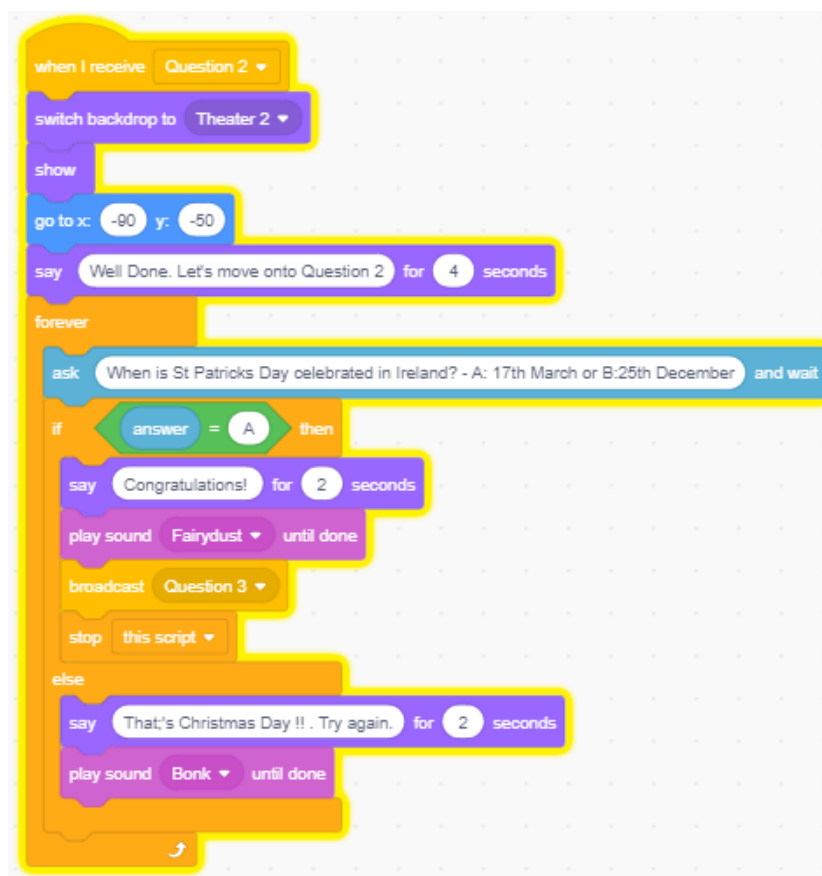
Now let's have a look at the *forever loop*



This is all the same apart from asking a different question, making sure the correct letter is used for the correct answer in the “*if then*” block, and changing the text for the incorrect answer

You will also need to create a new broadcast message – I’ve called it “*Question 3*”

Here’s my amended code for question 2

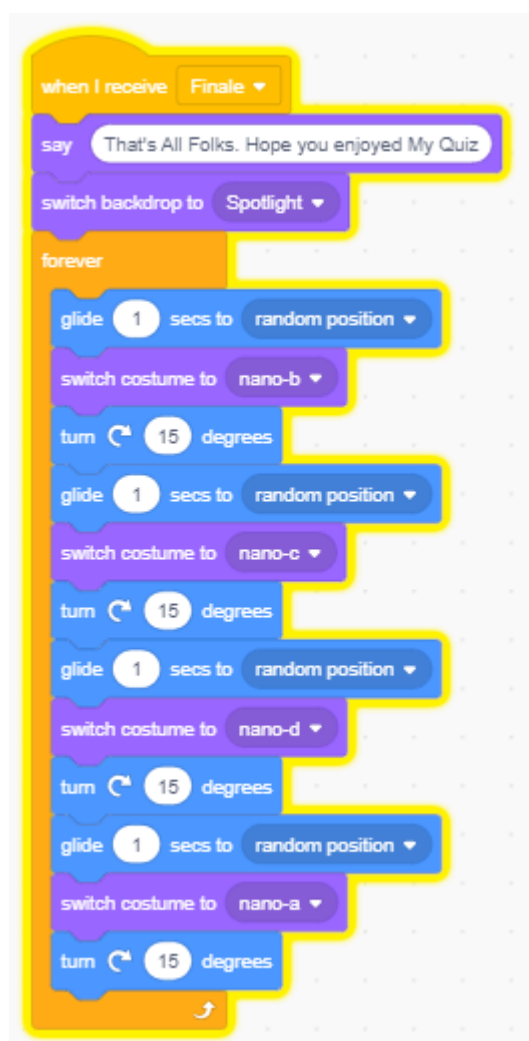


Time to save and test

- ✓ Is everything working as you would expect?
- ✓ Can you move your sprite around the page, so it is standing in different places when asking questions?
- ✓ Can you create your own sounds?
- ✓ Don't forget to put the values back to the code above, so I know where you are.

## Even More Questions ... And Answers

12. You've seen how we create new questions. It's now up to you to create 8 more questions so we have 10 in total. Try and make them harder as you progress to make it more of a challenge
13. When you get to your last question, make sure your final broadcast message is called "*Finale*", we can then get your sprite to do a little dance to finish the game. Try this
- From *Events* start with a "*When I receive*" block and change the drop down to "*Finale*"
  - Make sure you have selected a suitable back-drop for your finale. I've chosen "*Spotlight*"
  - From *Looks* add a "*switch backdrop to*" block and change the drop down to "*Spotlight*"
  - Add a *forever loop*
  - Add the following and see what happens



- ✓ Try removing the second, third and fourth "*glide secs to random position*". Does Nano still glide around the page in different directions?
- ✓ Do the same with the second, third and fourth "*turn 15 degrees*". Does Nano turn still turn as he glides around the screen.
- ✓ We do this to simplify the code.

#### 14. The game is finished

Or should I say, that's *MY* game finished. But this is **YOUR** game not mine. Time to put your own stamp on it and really show off what you have learned

Here are some ideas

- ✓ Add more than 1 wrong answer
- ✓ Add a score if you get a question right first time
- ✓ Add categories and change your backdrops based on the category
- ✓ Change your sprite so you have different images asking the questions
- ✓ Find a better way to end the game
- ✓ Can you make it a multiple player game?

Ask your friends or the leaders for other ideas

This game is based on this video

<https://www.youtube.com/watch?v=9ehLebO6S2Q>

Here's another way to create a quiz in Scratch using a different technique

<https://www.youtube.com/watch?v=FoJfIssZZek&t=708s>