

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

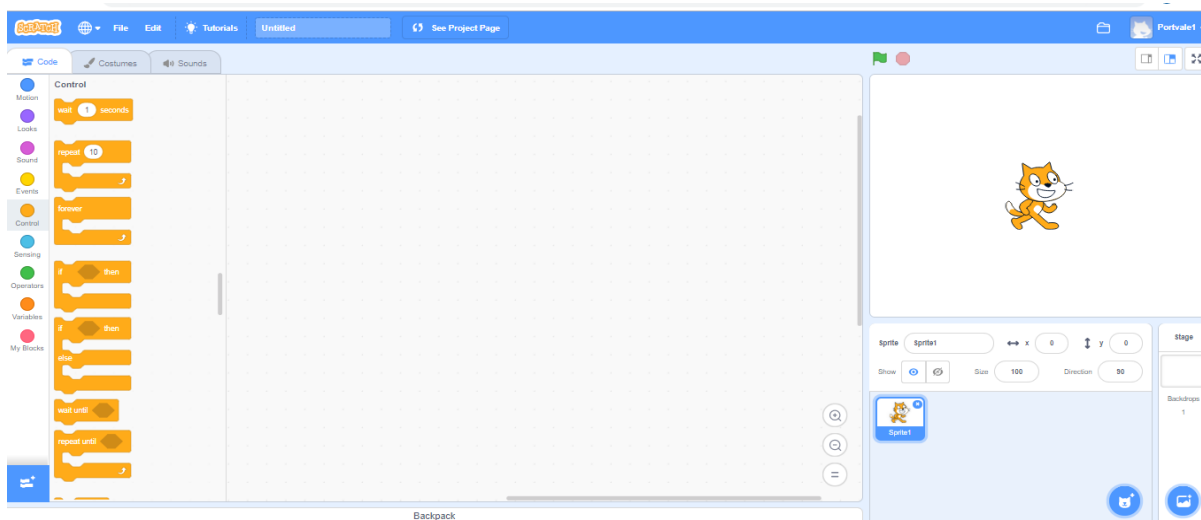
1. Open Scratch 3.0

For today's project, I will show you a few tricks you can do with letters. You can then decide how you use them.



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



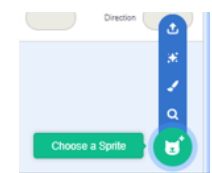
2. First thing we are going to do is create the backdrop.

- Go to the *Backdrops* 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. I've chosen one called *Stars*. 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 *Stars* one, so you can click on the white screen, and then click on the white x to delete it



3. Next, we need a few sprites to play with. I'm going to use the word "CODERDOJO"

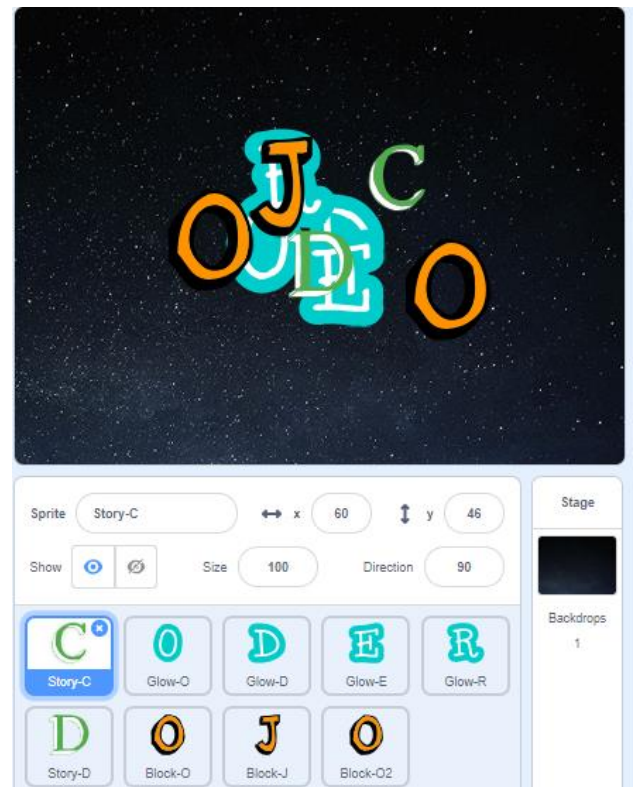
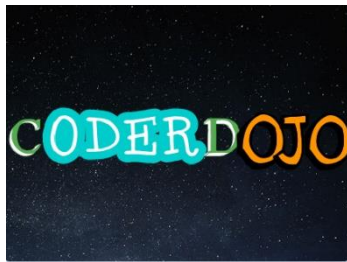
- This time go to the cat's head (next to where you chose your *backdrop*) and click on "Choose a Sprite" - This opens the *Sprites* library
- Click on the *Letters* filter from the top. This will show you all of the letter Sprites
- Click on the first letter you need.
 - Your letter Sprite will now appear next to the cat
- Repeat this step until you have all of the letters you need.
- Feeling creative? Click on the paintbrush sprite and create your own
- We don't need Scratchy for this project, so you can delete him by clicking on the him, then click on the white x



4. Your letters should all be selected but appear in a big jumble on the page

- Here's my page
- The easiest way to put them in some order is to simply drag them to the right place
- This looks a bit better. Now let's play

Did you know? Before you do this, click on the Code tab and then click on the Motion section. Keep an eye on the blocks with an x and y value. You will see each change to the co-ordinates of the new location of each letter.



5. First, we are going to make a letter spin

- Click on the *Sprite* you want to spin – I'm using the "C"- and make sure you are on the *Code* tab
- From *Events* drag a "when green flag clicked" block
- From *Control* add a "forever" loop
- Inside the loop, from *Motion* add a "turn degrees"
- Your code should look like this
- Play with the numbers and see what happens



6. For the next letter, let's make it spin the other way

- Click on your next letter – I'm using the first "O" – and again click on the *Code* tab
- Recreate the same code, but this time use the other "turn degrees" block
- Your code should look like this



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

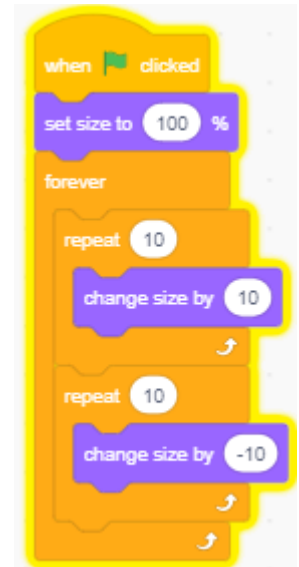
Now time to test your work

- ✓ Click on the green flag. What happens?
- ✓ Play with the numbers. What happens?
- ✓ What happens if you change the forever loop for a repeat loop, and set a number of times?
- ✓ Don't forget to put all the values back to the code above so I know where you are up to.

Growing, Coloring and Creativity

7. Next, let's see if we can make letters grow and shrink. Try this

- Click on your next letter *sprite* – my next one is “D” - and make sure you are on the *Code* tab
- Again, start with a “*when green flag clicked*”
- To make sure we always start with the right size, from *Looks* add a “*change size to 100%*” block
- Add a “*forever*” loop
- Next, from *Control* we need a “*repeat*” loop
- Then from *Looks* we'll use a “*change size by*” block

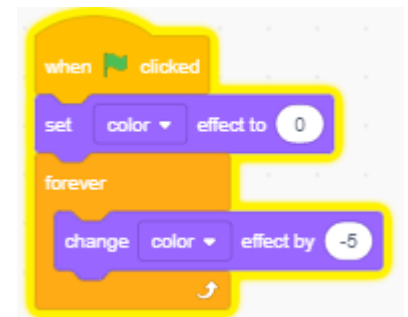


8. If we then want to shrink it, we simply

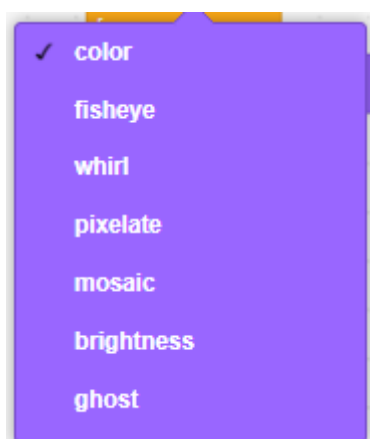
- Add another “*repeat*” loop
- Add another “*change size by*” block, but this time change the number to -10, the minus (-) makes it smaller
- Your code should look like this

9. Let's see how we can change colours. Try this

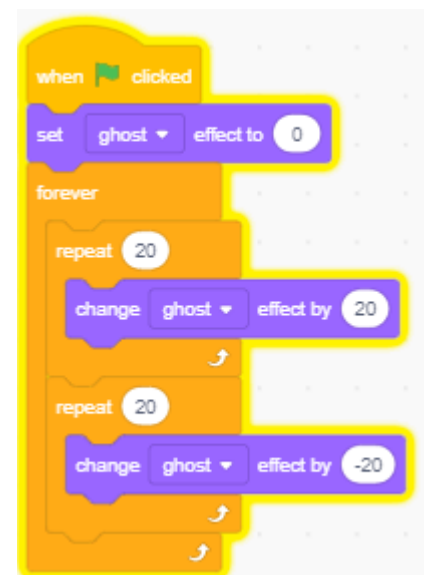
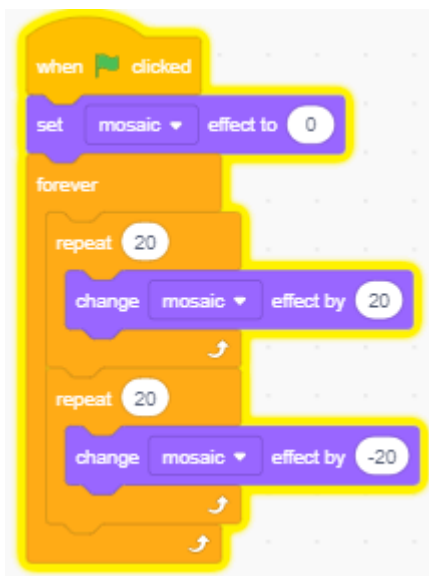
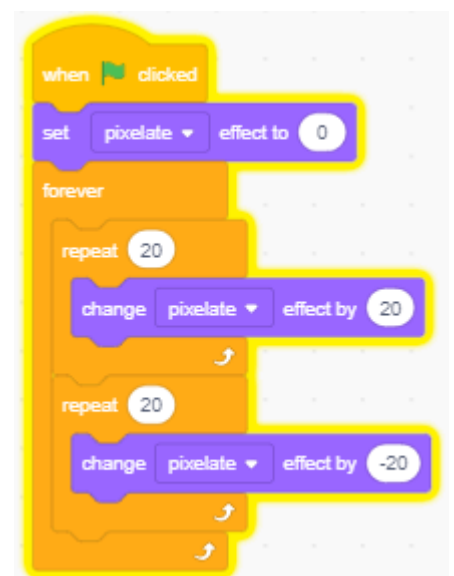
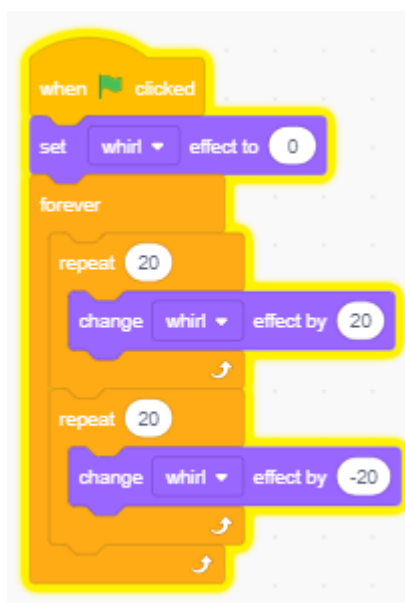
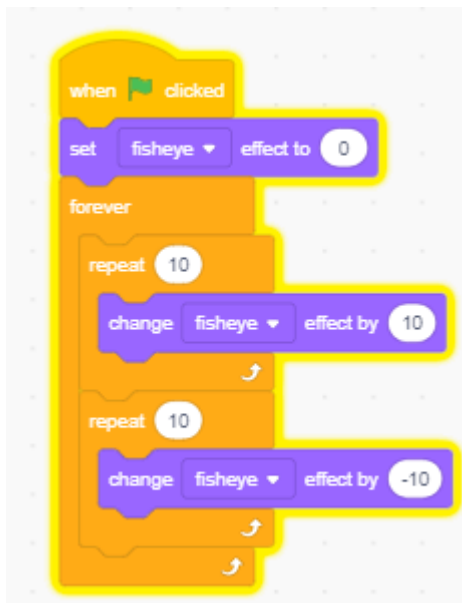
- Click on your next letter *sprite* – my next one is “E” - and make sure you are on the *Code* tab
- Start with a “*when green flag clicked*”
- From *Looks* add a “*change effect to*”. Make sure the drop down is set to *color* and the number to 0
- Add a *forever* loop
- Also from *Looks* add a “*change effect by*”. Again, make sure the drop down is set to *color* and this time change the number to 5



There are quite a few effects on this block, so use the same code on other blocks, but change the drop-down to see what the effect is. There are:



10. Here's a few ideas using these blocks and some of the loops. You may need to adjust the numbers to make the effect work better. Try these:



Time to save

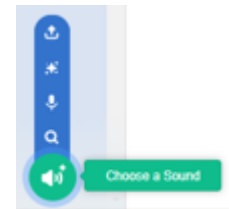
Now test, and really play with these options

- ✓ Change the numbers
- ✓ Combine the effects
- ✓ Play with the loops
- ✓ Add in delays
- ✓ Don't forget to put all the values back to the code above so I know where you are up to.

Sounds, Music & Dancing

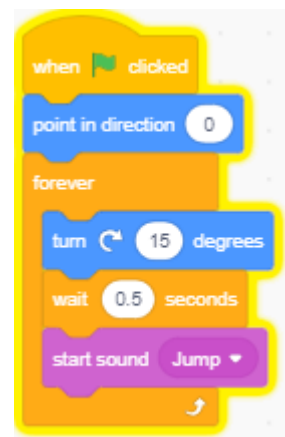
11. Let's add a sound to one of your *sprites* - I'm going to use my "C"

- Click on the Sprite you want to spin and make sure you are on the *Sounds* tab
- Delete any other sounds which are already selected
- In the bottom left of the screen you'll find the "Choose a Sound" button
Click on it and you will see the Scratch sound library
- Find a sound you like and select it. I've chosen one called "Jump"



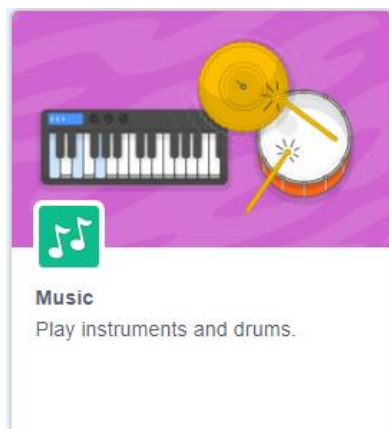
12. You've selected your sound, now let's add it to the code. My *sprite* has already got some code to make it spin, so I will be adding to this

- Click on the *Code* tab
- You will see any code you have already created
- Inside the *forever* loop, from *Control* add a "wait seconds" and change the number to 0.5
- From *Sound* add a "start sound" and select "Jump" from the drop down
- Your updated code should now look like this

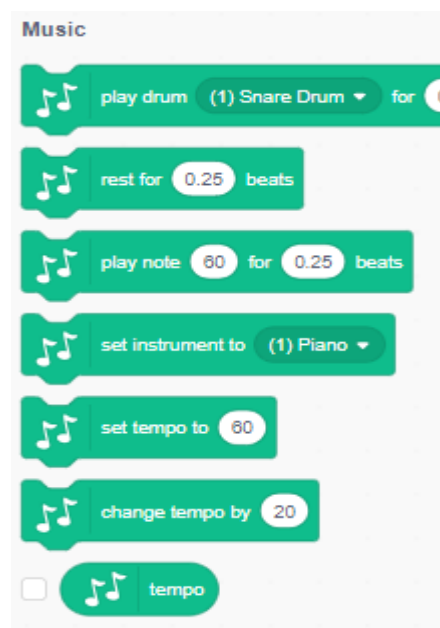


13. Ok, so we have sounds, how about a dance!

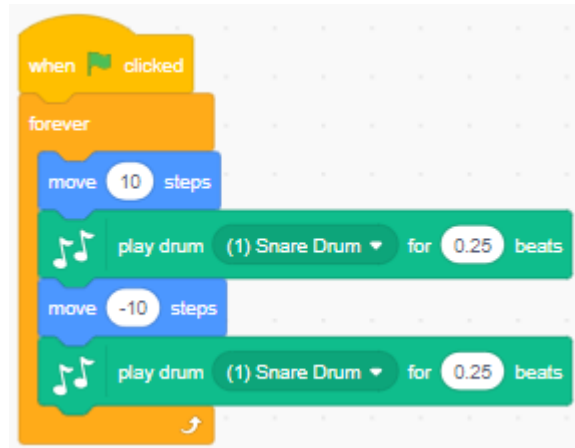
- We need to add some additional blocks. Here's how
 - Click on the Sprite you want to spin – I'm using the "J" - and make sure you are on the *Code* tab
 - At the bottom left of the screen is the "Add Extension" button.
 - It looks like this
- Click, and then click on the *Music* section



- This add a set of new blocks to your coding area called "Music"



14. Now use these blocks to create the following code



- Play with the various drop-down sounds and numbers to make a combination which makes your letters look like they are dancing

Time to save

Now test, and really play with these options

- ✓ Play with the various drop-down sounds and numbers to make a combination which makes your letters look like they are dancing
- ✓ See how you can use these new blocks in your code

I've run out of letters, so my project is finished

But this is **YOUR** project not mine. Time to put your own stamp on it and really show off what you have learned

Here are some ideas

- ✓ Create your own letters
- ✓ Add your own sounds
- ✓ Combine the effects to make the letters do all sorts of things
- ✓ Combine letters to form words, and then make your words tell a story

Ask your friends or the leaders for other ideas

Here's some ideas from the Scratch community

<https://scratch.mit.edu/projects/189099219/>

<https://scratch.mit.edu/projects/191206297/>

<https://scratch.mit.edu/projects/187520003/>