

DEBUG IT!

HELP! CAN YOU DEBUG THESE FIVE SCRATCH PROGRAMS?

In this activity, you will investigate what is going awry and find a solution for each of the five Debug It! challenges.

START HERE

- ❑ Go to the Unit 1 Debug It! studio:
<http://scratch.mit.edu/studios/475483>
- ❑ Test and debug each of the five debugging challenges in the studio.
- ❑ Write down your solution or remix the buggy program with your solution.

FEELING
STUCK?

THAT'S OKAY! TRY THESE THINGS...

- ❑ Make a list of possible bugs in the program.
- ❑ Keep track of your work! This can be a useful reminder of what you have already tried and point you toward what to try next.
- ❑ Share and compare your problem finding and problem solving approaches with a neighbor until you find something that works for you!

❑ **DEBUG IT! 1.1** <http://scratch.mit.edu/projects/10437040>

When the green flag is clicked, both Gobo and Scratch Cat should start dancing. But only Scratch Cat starts Dancing! How do we fix the program?

❑ **DEBUG IT! 1.2** <http://scratch.mit.edu/projects/10437249>

In this project, when the green flag is clicked, the Scratch Cat should start on the left side of the stage, say something about being on the left side, glide to the right side of the stage, and say something about being on the right side. It works the first time the green flag is clicked, but not again. How do we fix the program?

❑ **DEBUG IT! 1.3** <http://scratch.mit.edu/projects/10437366>

The Scratch Cat should do a flip when the space key is pressed. But when the space key is pressed, nothing happens! How do we fix the program?

❑ **DEBUG IT! 1.4** <http://scratch.mit.edu/projects/10437439>

In this project, the Scratch Cat should pace back and forth across the stage, when it is clicked. But the Scratch Cat is flipping out – and is walking upside down! How do we fix the program?

❑ **DEBUG IT! 1.5** <http://scratch.mit.edu/projects/10437476>

In this project, when the green flag is clicked, the Scratch Cat should say 'Meow, meow, meow!' in a speech bubble and as a sound. But the speech bubble happens before the sound – and the Scratch Cat only makes one 'Meow' sound! How do we fix the program?

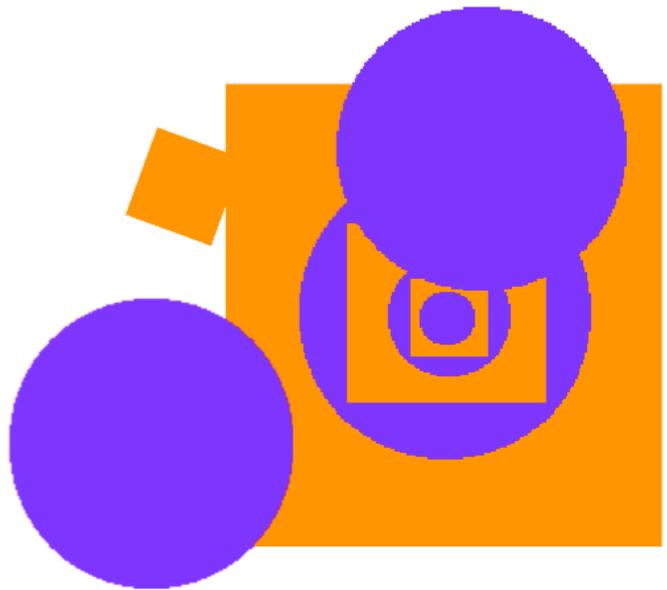
FINISHED?

- + Discuss your testing and debugging practices with a partner. Make note of the similarities and differences in your strategies.
- + Add code commentary by right clicking on blocks in your scripts. This can help others understand different parts of your program!
- + Help a neighbor!

ORANGE SQUARE, PURPLE CIRCLE

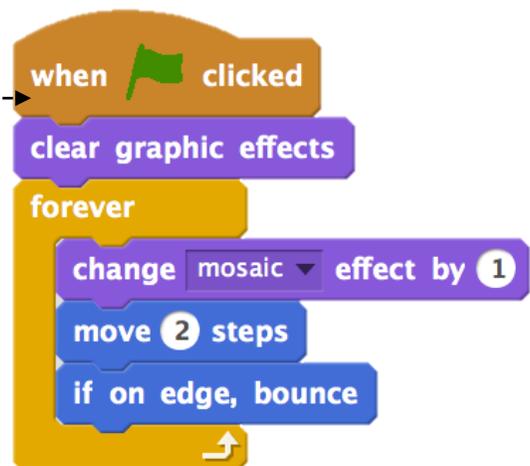
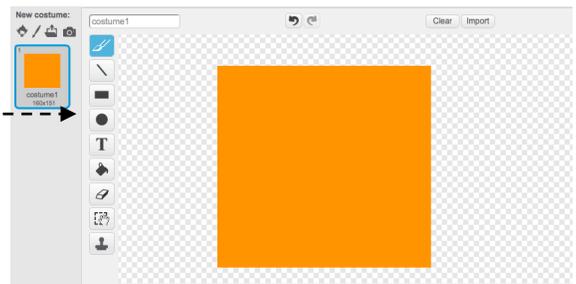
WHAT PROJECT CAN YOU CREATE THAT INCLUDES AN ORANGE SQUARE AND A PURPLE CIRCLE?

In this challenge, you'll create a project that includes an orange square and a purple circle. What will you create?



START HERE

- Draw your sprites using the Paint Editor.
- Add different Looks and Motion blocks to bring your sprites to life.
- Repeat!



FEELING
STUCK?

THAT'S OKAY! TRY THESE THINGS...

FINISHED?

- Try brainstorming with a neighbor!
- Create a list of things you would like to try before you start building your project in Scratch!
- Explore other projects to see what others are doing in Scratch - this can be a great way to find inspiration!

- + Add your project to the Orange Square, Purple Circle Studio: <http://scratch.mit.edu/studios/475527>
- + Explore the difference between bitmap mode and vector mode, located at the bottom of the paint editor.
- + Challenge yourself to do more! Add another shape and color.
- + Swap projects with a partner and remix each other's creations.
- + Help a neighbor!

IT'S ALIVE!

HOW CAN YOU TAKE AN IMAGE OR A PHOTO AND MAKE IT COME ALIVE?

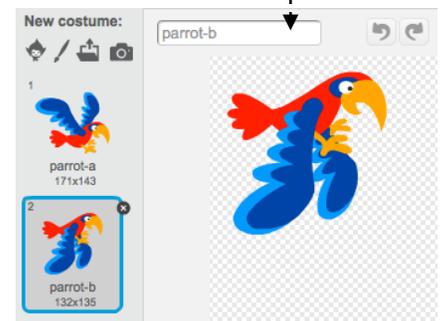
In this activity, you will explore ways of bringing sprites, images, and ideas to life as an animation by programming a series of costume changes.



START HERE

- Choose a sprite.
- Add a different costume.
- Add blocks to make the image come alive.
- Repeat!

```
when this sprite clicked
repeat 10
  wait .1 secs
  move 10 steps
  next costume
```



THINGS TO TRY

- Try sketching your animation ideas on paper first - like a flipbook.
- Experiment with different blocks and costumes until you find something you enjoy.
- Need some inspiration? Find projects in the Animation section of the Explore page.

FINISHED?

- + Add your project to the It's Alive studio: <http://scratch.mit.edu/studios/475529>
- + Challenge yourself to do more! Add more features to your project to make your animations look even more lifelike.
- + Help a neighbor!
- + Share your project with a partner and walk them through your design process.
- + Find an animated project you're inspired by and remix it!