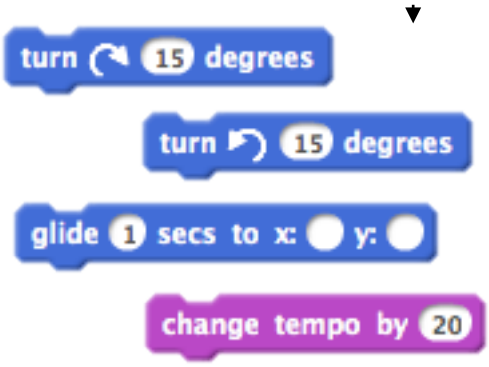
STEP-BY-STEP

NEW TO SCRATCH? CREATE YOUR FIRST SCRATCH PROJECT!

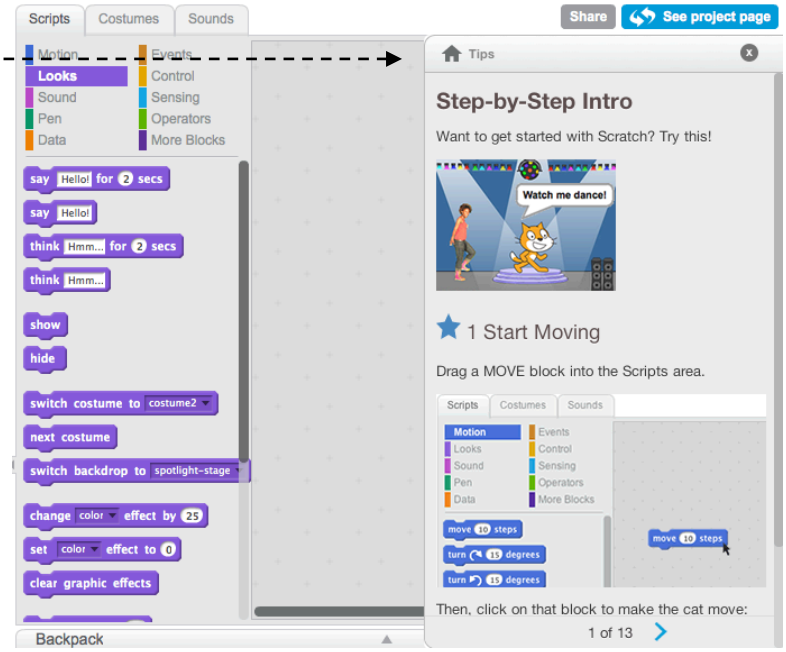
In this activity, you will follow the Step-by-Step Intro in the Tips Window to create a dancing cat in Scratch. Once you have completed the steps, experiment by adding other Scratch blocks to make the project your own.

START HERE

- ❑ Follow the Step-by-Step Intro in the Tips Window.
- ❑ Add more blocks.
- ❑ Experiment to make it your own!



What blocks do you want to experiment with?



THINGS TO TRY

- ❑ Try recording your own sounds.
- ❑ Create different backdrops.
- ❑ Turn your project into a dance party by adding more dancing sprites!
- ❑ Try designing a new costume for your sprite.

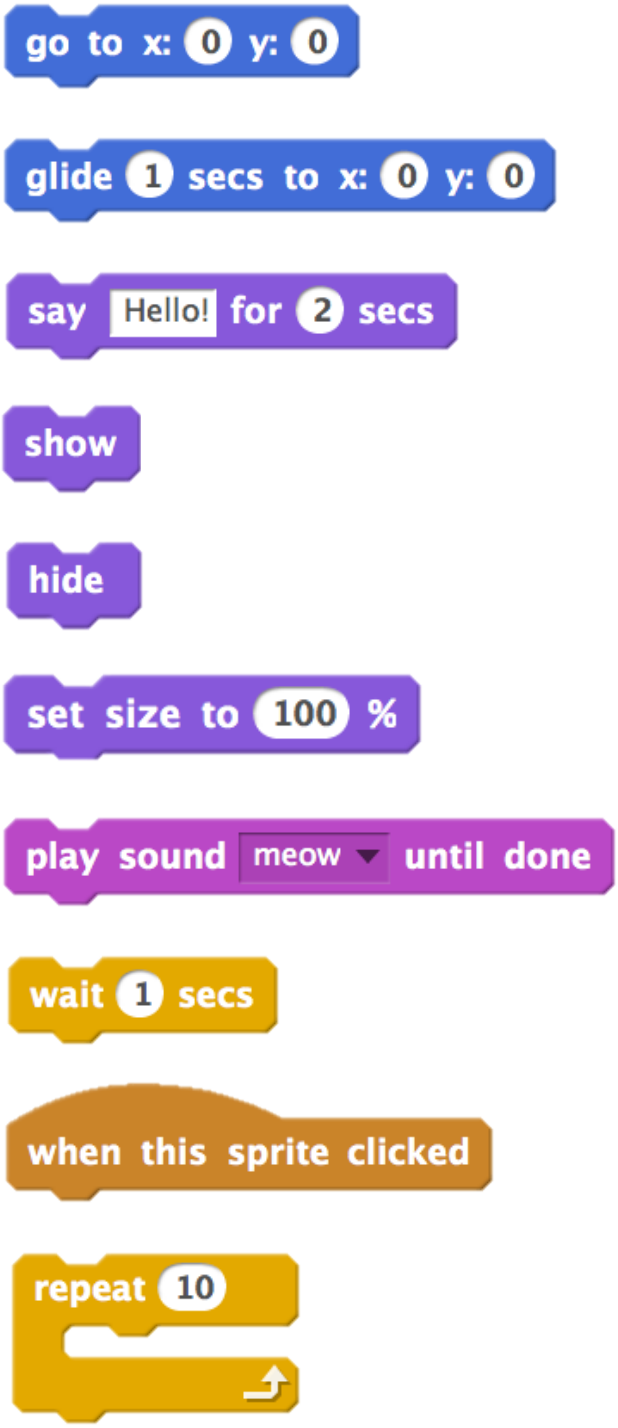
FINISHED?

- + Add your project to the Step-by-Step Studio: http://scratch.mit.edu/studios/475476
- + Challenge yourself to do more! Play with adding new blocks, sound, or motion.
- + Help a neighbor!
- + Choose a few new blocks to experiment with. Try them out!

10 BLOCKS

WHAT CAN YOU CREATE WITH ONLY 10 SCRATCH BLOCKS?

Create a project using only these 10 blocks. Use them once, twice, or multiple times, but use each block at least once.



START HERE

- ❑ Test ideas by experimenting with each block.
- ❑ Mix and match blocks in various ways.
- ❑ Repeat!

FEELING STUCK?

THAT'S OKAY! TRY THESE THINGS...

- ❑ Test ideas by trying out different block combinations. Mix and match blocks until you find something that interests you!
- ❑ Try brainstorming ideas with a neighbor!
- ❑ Explore other projects to see what others are doing in Scratch. This can be a great way to find inspiration!

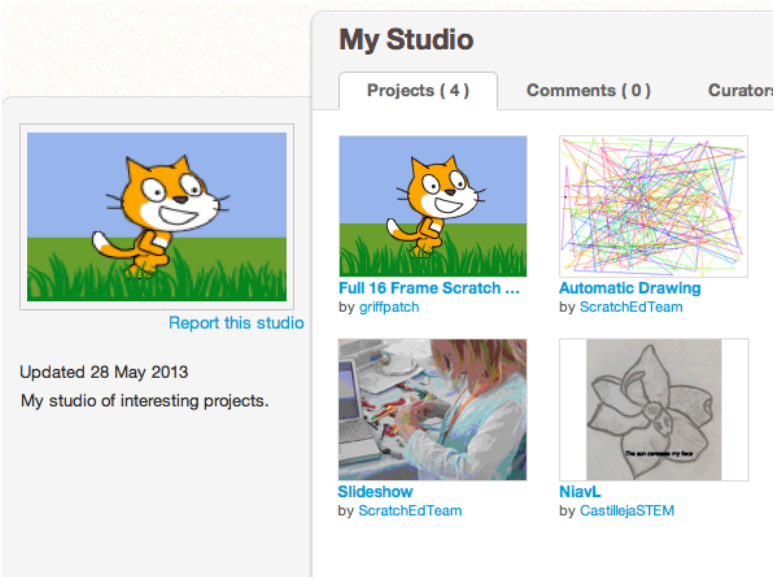
FINISHED?

- + Add your project to the 10 Blocks Studio: http://scratch.mit.edu/studios/475480
- + Play with different sprites, costumes, or backdrops.
- + Challenge yourself to do more! See how many different projects you can create with these 10 blocks.
- + Swap projects with a partner and remix each others' creations.

MY STUDIO

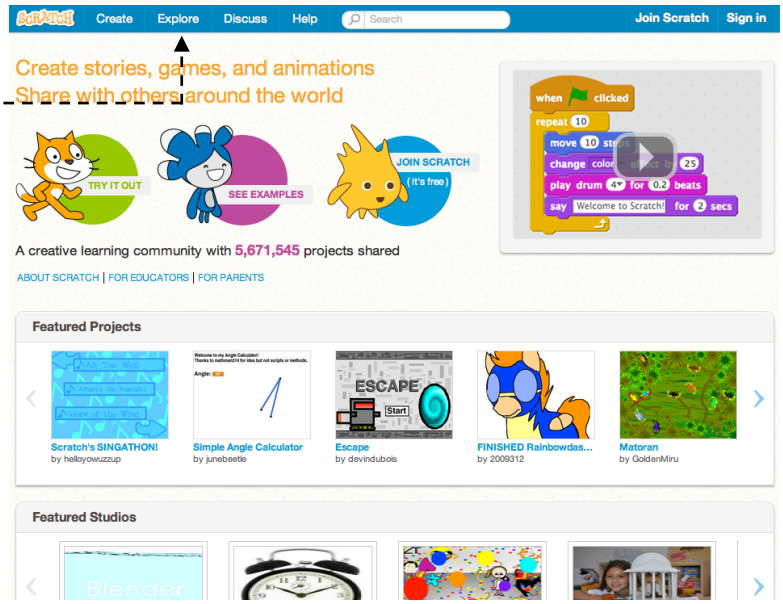
WHAT CAN BE CREATED WITH SCRATCH?

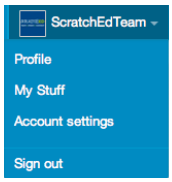
In this activity, you will investigate the range of creative possibility with Scratch by exploring some of the millions of projects on the Scratch website – and start a collection of favorites in a Scratch studio!

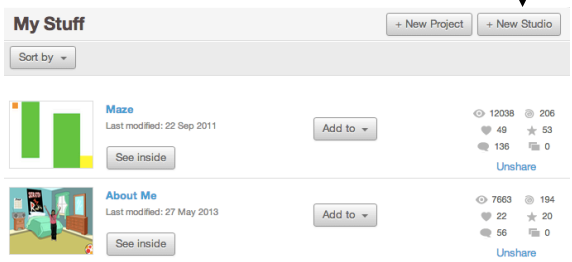


START HERE

- ❑ Browse projects on the Scratch homepage OR click on "Explore" to search for specific types of projects.
- ❑ Create a new studio from your My Stuff page.
- ❑ Add three (or more!) inspiring projects to your studio.







THINGS TO TRY

- ❑ Use the search bar to find projects that relate to your interests.
- ❑ Explore each of the Animations, Art, Games, Music, & Stories categories on the Explore page.
- ❑ Look through the Featured Studios on the homepage for ideas.

FINISHED?

- + Challenge yourself to do more! The more Scratch projects you explore, the more you learn about what can be accomplished in Scratch!
- + Find studios created by other Scratchers that you find interesting!
- + Ask a neighbor what strategies they used to find interesting projects.
- + Share your newly created studio with a neighbor!

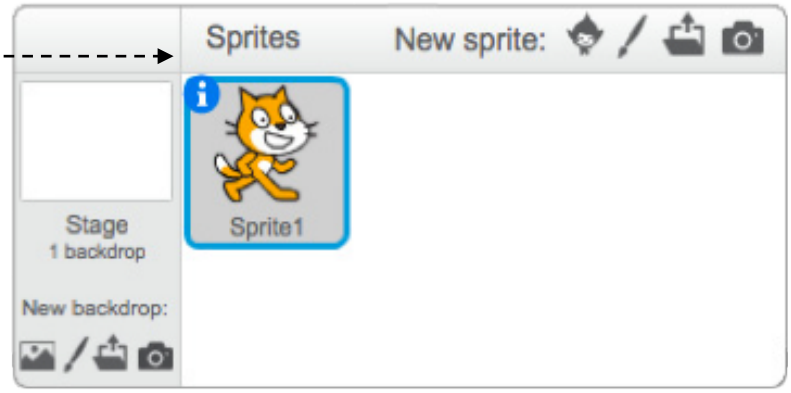
ABOUT ME

HOW CAN YOU COMBINE INTERESTING IMAGES AND SOUNDS TO MAKE AN INTERACTIVE COLLAGE ABOUT YOURSELF?

Experiment with sprites, costumes, backdrops, looks, and sounds to create an interactive Scratch project – a project that helps other people learn more about YOU and the ideas, activities, and people that you care about.

START HERE

- ❑ Create a sprite.
- ❑ Make it interactive.
- ❑ Repeat!

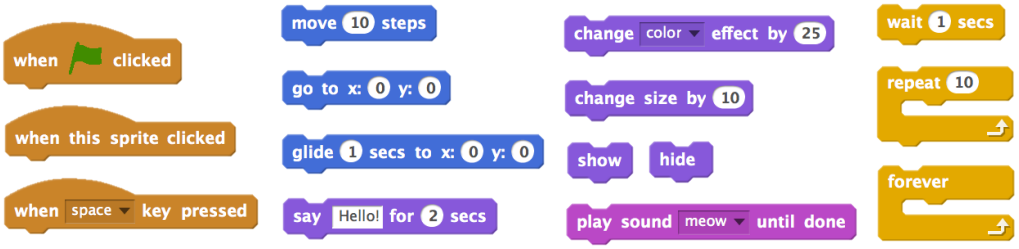


Make your sprite interactive by adding scripts that have the sprite respond to clicks, key presses, and more!

THINGS TO TRY

- ❑ Use costumes to change how your sprite looks.
- ❑ Create different backdrops.
- ❑ Try adding sound to your project.
- ❑ Try adding movement into your collage.

BLOCKS TO PLAY WITH



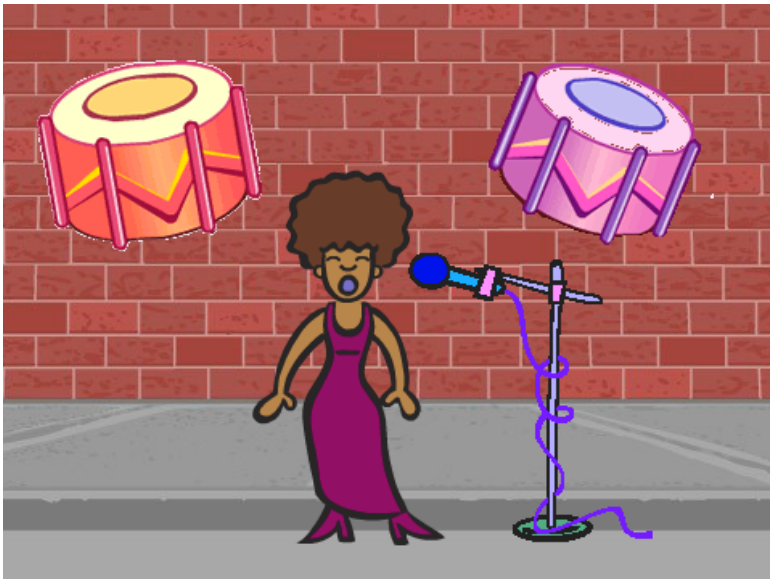
FINISHED?

+ Add your project to the About Me Studio: http://scratch.mit.edu/studios/475470
+ Challenge yourself to do more! Play with adding new blocks, sound, or motion!
+ Help a neighbor!

BUILD-A-BAND

HOW CAN YOU UTILIZE SCRATCH TO CREATE SOUNDS, INSTRUMENTS, BANDS, OR STYLES OF MUSIC THAT REPRESENT THE MUSIC YOU LOVE MOST?

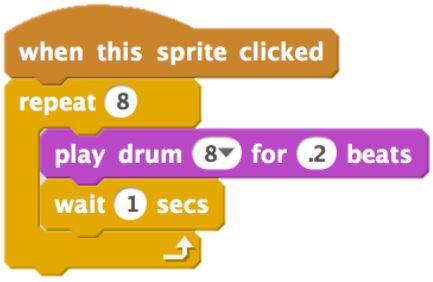
In this activity, you will build your own music-inspired Scratch project by pairing sprites with sounds to design interactive instruments.



START HERE

- ❑ Create a sprite.
- ❑ Add sound blocks.
- ❑ Experiment with ways to make your instruments interactive.

Choose instruments from the sprite library or create your own.



THINGS TO TRY

- ❑ Use repeat blocks to make a sound play more than once.
- ❑ Import or record your own sounds or experiment with the Sounds editor.
- ❑ Try playing with the tempo blocks to speed up or slow down the rhythm.

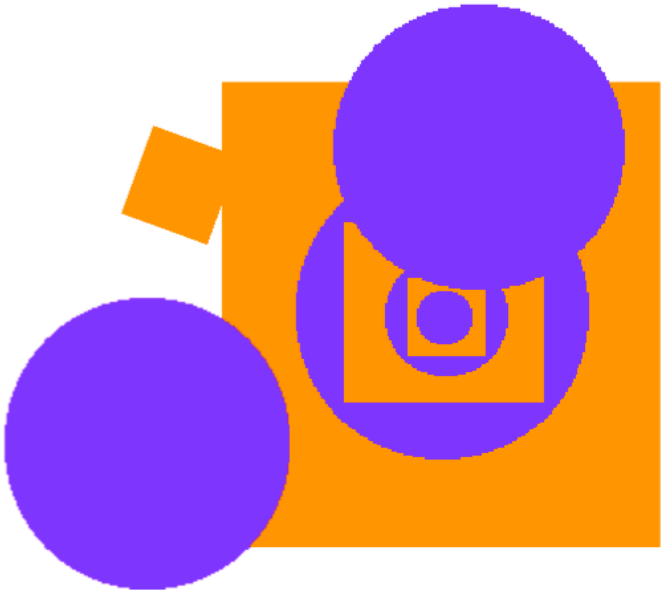
FINISHED?

- + Add your project to the Build-A-Band Studio: http://scratch.mit.edu/studios/475523
- + Challenge yourself to do more! Invent a new instrument or record your own sounds.
- + Help a neighbor!

ORANGE SQUARE, PURPLE CIRCLE

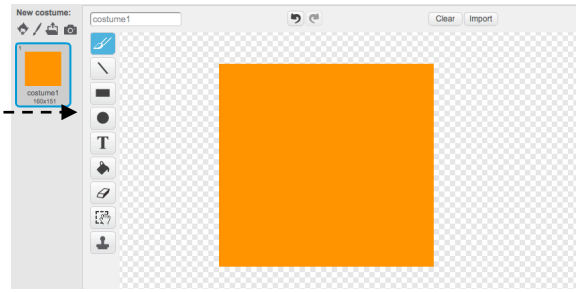
WHAT PROJECT CAN YOU CREATE THAT INCLUDES AN ORANGE SQUARE AND A PURPLE CIRCLE?

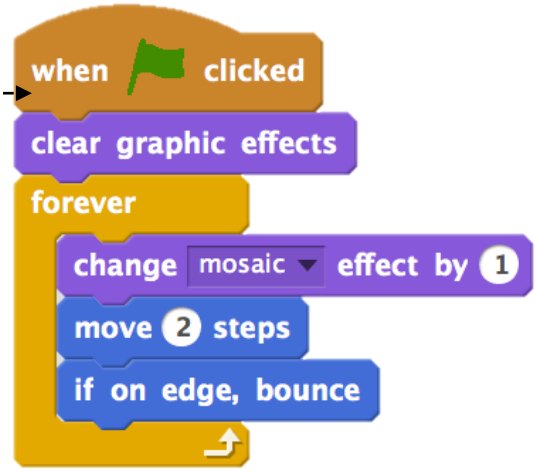
In this challenge, you'll create a project that includes an orange square and a purple circle. What will you create?



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...

- ❑ 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!

FINISHED?

- + 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!

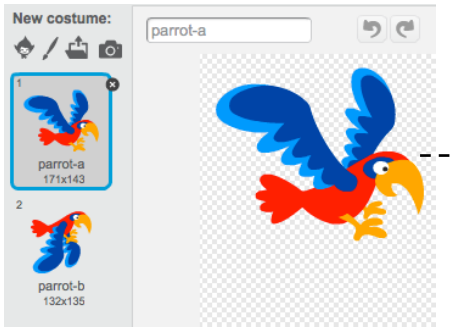
IT'S ALIVE!

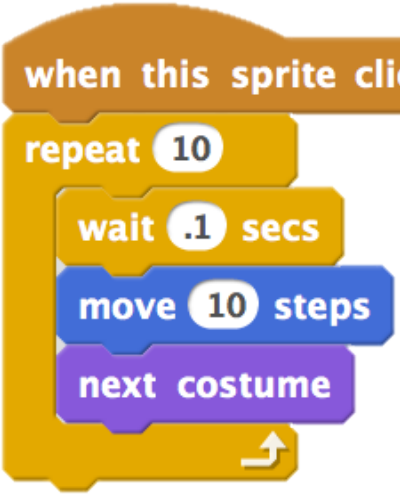
HOW CAN YOU TAKE AN IMAGE OR A PHOTO AND MAKE IT COME ALIVE?

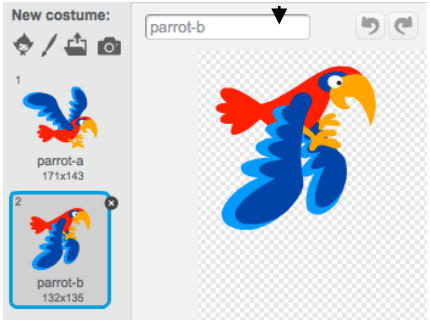
In this activity, you will explore ways of bringing sprites, images, and ideas to life as an animation by programming a series of costume changes.

START HERE

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







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!

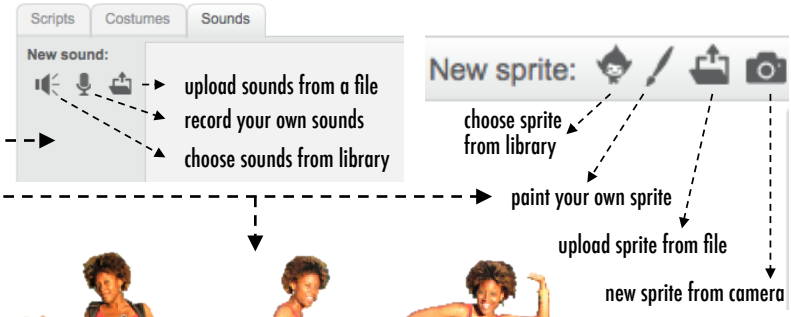
MUSIC VIDEO

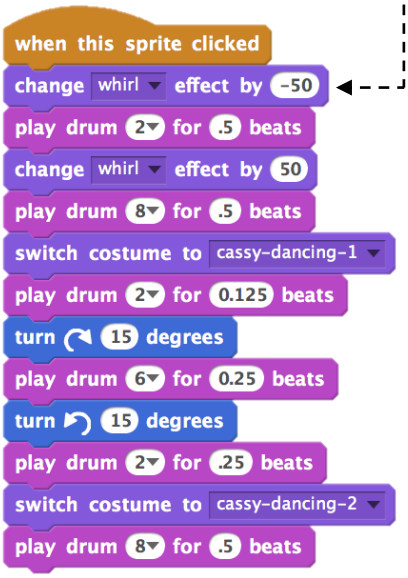
HOW CAN YOU COMBINE ANIMATION WITH MUSIC TO CREATE YOUR OWN SCRATCH-INSPIRED MUSIC VIDEO?

In this project, you will explore ideas related to theatre, song, dance, music, drawing, illustration, photography, and animation to create a personalized music video!

START HERE

- ❑ Add sound.
- ❑ Create and animate a sprite.
- ❑ Make them interact together!





THINGS TO TRY

- ❑ Use costumes to help bring your animations to life!
- ❑ Make your sprite interactive by adding scripts that have the sprite respond to clicks, key presses, and more.
- ❑ Add instructions on the project page to explain how people can interact with your program.

BLOCKS TO PLAY WITH

FINISHED?

+ Add your project to the Music Video studio: http://scratch.mit.edu/studios/475517
+ Be sure to give credit to any music, code, or other work used in your project.
+ Challenge yourself to do more! Create your own sprites, sounds, or costumes!

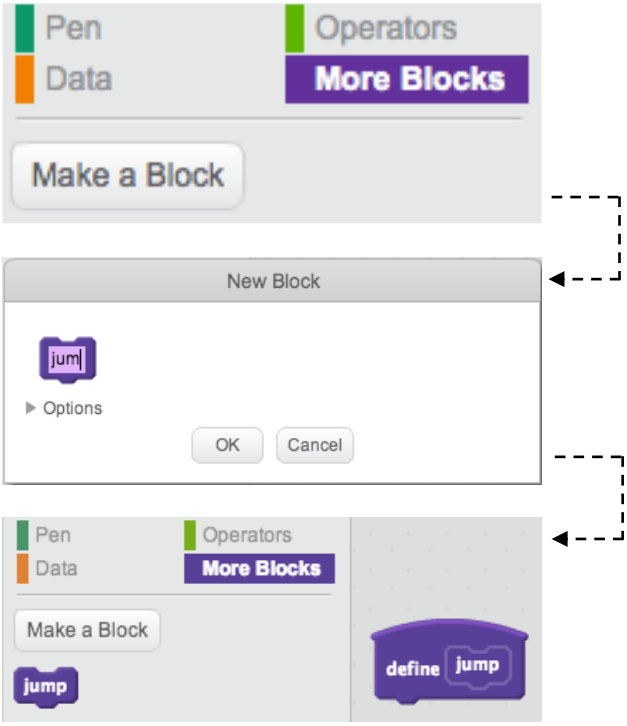
CHARACTERS

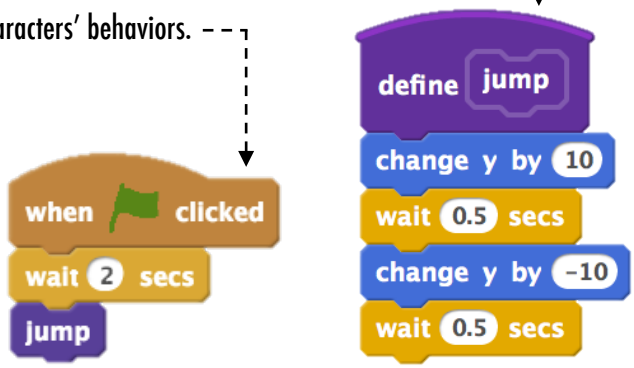
DO YOU WANT TO CREATE YOUR OWN SCRATCH BLOCKS?

Experiment with the Make a Block feature in Scratch! In this project, you will create your own blocks that define two behaviors for two different characters.

START HERE

- ❑ Choose from the library, paint, or upload two sprite characters.
- ❑ Click on the Make a Block button in the More Blocks category to create and name your block.
- ❑ Add blocks under the Define block to control what your custom block will do.
- ❑ Experiment with using your block to program your characters' behaviors.
- ❑ Repeat!





THINGS TO TRY

- ❑ Feeling stuck? That's okay! Check out this video to get started with the Make a Block feature: http://bit.ly/makeablock
- ❑ Explore other projects in the Characters Studio to see what new blocks others have created.
- ❑ Sometimes there can be more than one way of defining the same behavior. Experiment with different block combinations to try out multiple options and outcomes.

FINISHED?

- + Add your project to the Characters Studio: http://scratch.mit.edu/studios/475545
- + Challenge yourself to do more! Experiment with adding different characters and behaviors using the Make a Block feature.
- + Help a neighbor!

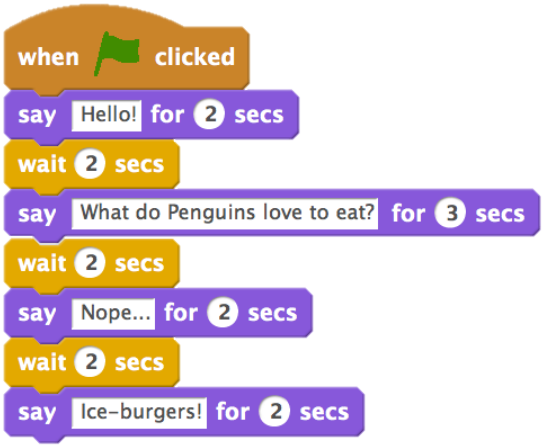
CONVERSATIONS

WHAT ARE DIFFERENT WAYS TO COORDINATE INTERACTIONS BETWEEN SPRITES?

In this activity, you'll explore different ways to program sprites to have conversations! Experiment with timing and explore using broadcast by remixing a joke project.

START HERE

- ❑ Look inside the Penguin Jokes project: http://scratch.mit.edu/projects/10015800
- ❑ Investigate the code to see how the wait and say blocks are used to coordinate the conversation.
- ❑ Remix the project to use the broadcast and when I receive blocks instead of wait blocks.



FEELING STUCK?

THAT'S OKAY! TRY THESE THINGS...

- ❑ Brainstorm ideas with a neighbor! Generate a list of possible solutions and test them out together.
- ❑ Try using the broadcast and when I receive blocks in different parts of your project.
- ❑ Explore projects in the Conversations studio to get inspiration for different ways to coordinate conversations between sprites.

FINISHED?

- + Add your project to the Conversations studio: http://scratch.mit.edu/studios/475547
- + Challenge yourself to do more! Add other characters and conversations.
- + Share your project with a neighbor and walk them through your process of exploration and design.
- + Help a neighbor!

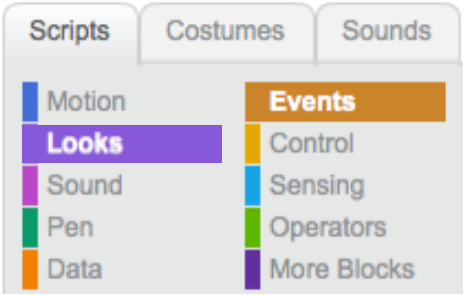
SCENES

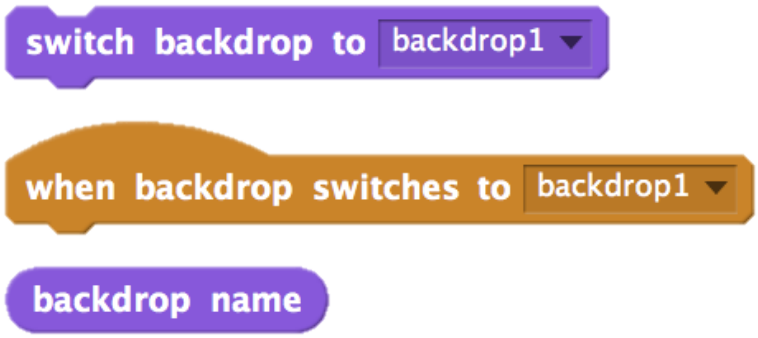
WHAT IS THE DIFFERENCE BETWEEN THE STAGE AND SPRITES?

In this activity, you will create a project that experiments with backdrops, like a story with multiple scenes or a slideshow.

START HERE

- ❑ Choose from the library, paint, or upload multiple backdrops into your project.
- ❑ Experiment with blocks from the Looks and Events categories to initiate switching backdrops.
- ❑ Add scripts to the stage and sprites to coordinate what happens when the backdrop changes in your project!





THINGS TO TRY

- ❑ Look for blocks under the sprites and the stage related to backdrop and test them out to see what they do!
- ❑ Need more inspiration? Explore the Scratch online community to discover projects that use multiple backdrops.

FINISHED?

- + Add your project to the Scenes Studio: http://scratch.mit.edu/studios/475550
- + Challenge yourself to do more! Add more backdrop changes to your project.
- + Help a neighbor!
- + Return to one of your previous projects or find a project you are inspired by and remix it by adding switching backdrops.

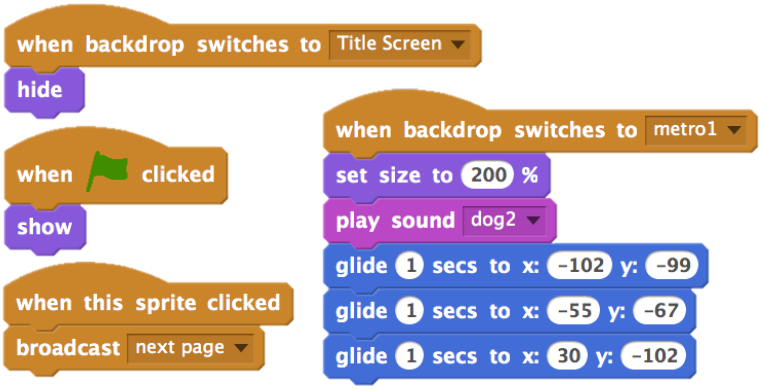
PASS IT ON

WHAT CAN WE CREATE BY BUILDING ON OTHERS' WORK?

In this project, you will start developing an animated story project, and then you will pass the story on to others to remix, extend, or reimagine!

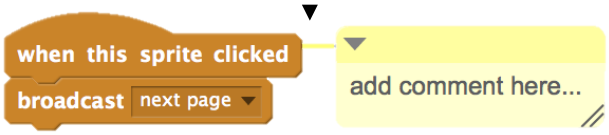
START HERE

- ❑ Work on a story project that focuses on characters, scene, plot, or whatever element excites you.
- ❑ After 10 minutes, save and share your project online.
- ❑ Rotate & extend another story project by remixing it.
- ❑ Repeat!

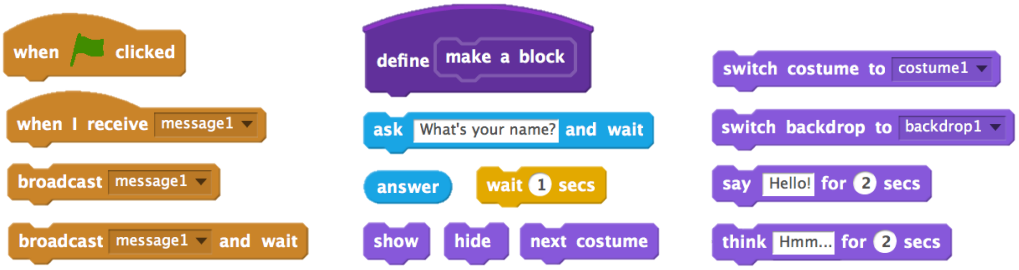


THINGS TO TRY

- ❑ Brainstorm different possibilities for remixing, extending, or reimagining a story. Do you want to add a new scene to the end? Could you imagine what happens before the story begins? What if a new character was added? How about inserting a plot twist? What else?
- ❑ Adding comments in your code can help others understand different parts of your program. To attach a comment to a script, right click on a block and add a description.



BLOCKS TO PLAY WITH



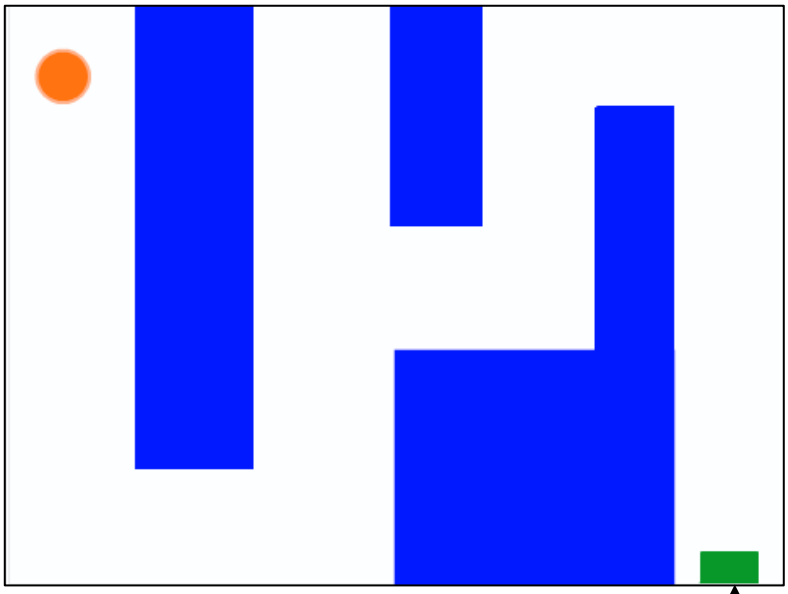
FINISHED?

+ Add your project to the Pass It On studio: http://scratch.mit.edu/studios/475543
+ Help a neighbor!
+ Return to all the projects you contributed to and check out how the stories evolved!

MAZE

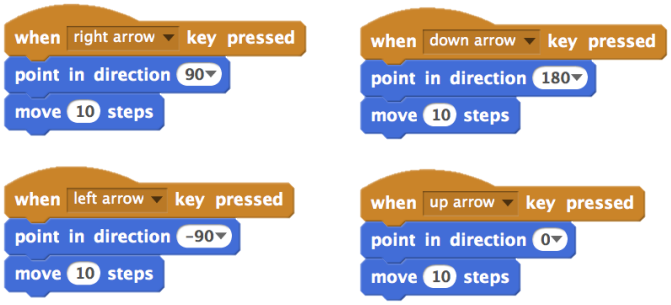
HOW CAN YOU USE SCRATCH TO BUILD AN INTERACTIVE GAME?

In this project, you will create a game. This game includes interactions between sprites, score, and levels. You move a sprite from the start of a maze to the end without touching the walls.



START HERE

- ❑ Draw a maze-like background and use different colors for the walls and end-of-maze marker.
- ❑ Add a sprite.
- ❑ Make your game interactive!



These scripts give the player control over sprite movement in the maze.

This tells your sprite where to begin and marks the start of the maze.

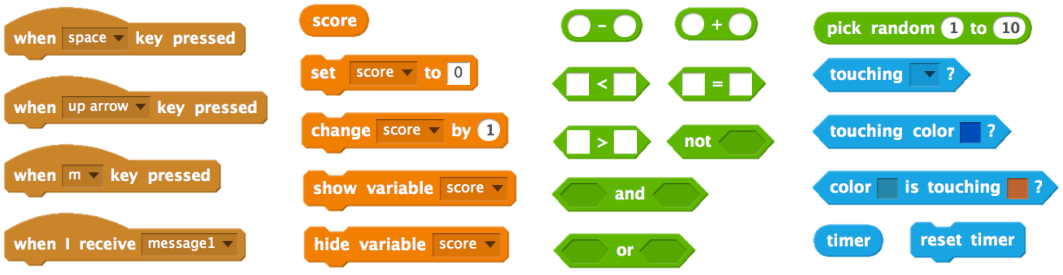
THINGS TO TRY

- ❑ Add multiple levels to your game! This can be done through the use of different backdrops and using braodcast blocks to trigger the next level.
- ❑ Use the make a variable block to keep score!
- ❑ Experiment with timer blocks to add new challenges to your maze!

This will cause your sprite to bounce off the blue walls of the maze.

This tells the end-of-maze sprite that players win when the ball touches this sprite.

BLOCKS TO PLAY WITH



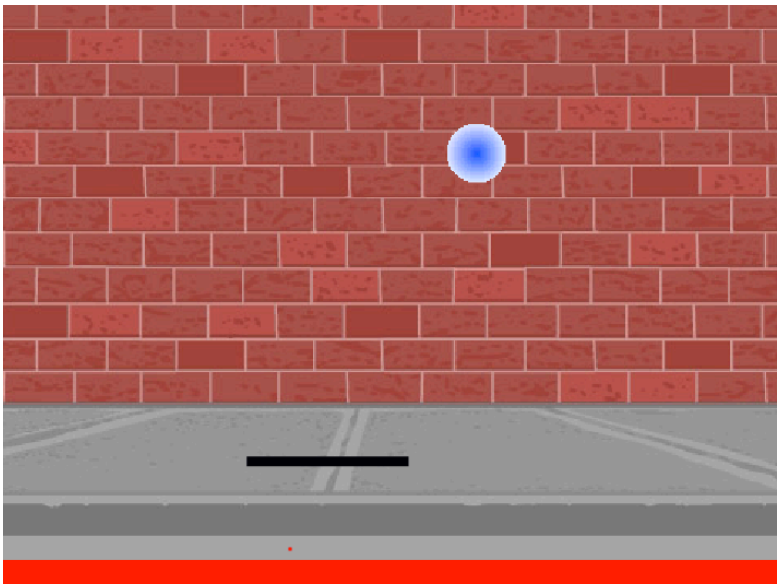
FINISHED?

+ Add your project to the Games Studio: http://scratch.mit.edu/studios/487504
+ Swap games with a partner and walk each other through your creations.

PONG

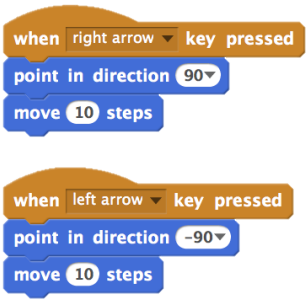
HOW CAN YOU USE SCRATCH TO BUILD AN INTERACTIVE GAME?

In this project, you will create a game. This game includes interactions between sprites, score, and levels. The game is similar to the classic game of pong, where the goal is to keep the sprite from getting past you.



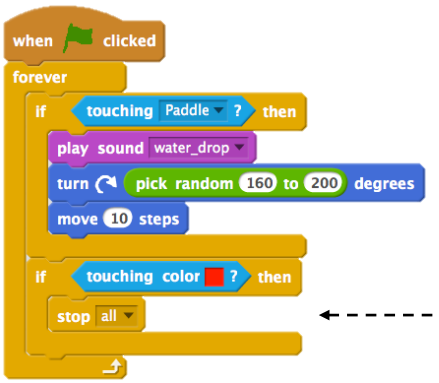
START HERE

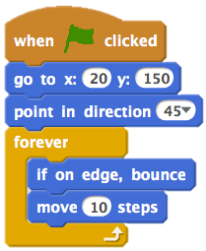
- ❑ Create two sprites: a paddle for the user to control and a ball the user will be playing with.
- ❑ Make your paddle sprite interactive.
- ❑ Bring your game to life!



THINGS TO TRY

- ❑ How do you add difficulty to your game? Creating different levels, using a timer, or keeping score are a few examples of things you could do.
- ❑ Experiment with changing the look of your game by editing the backdrops!
- ❑ Explore using different key presses to control your sprites!

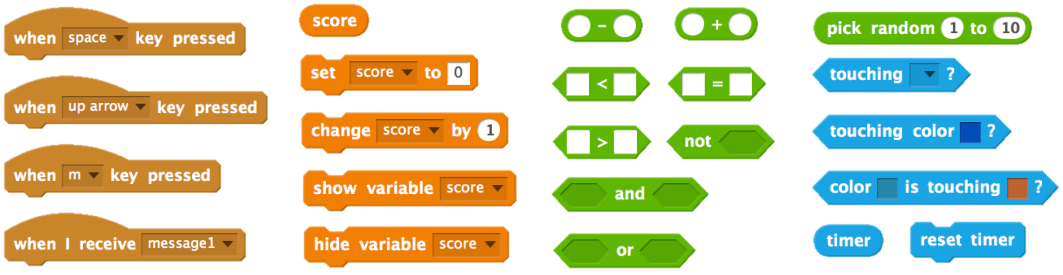




Interacts with the walls
Interacts with the paddle

These control the ball - if touching the paddle or a wall, it continues moving. If touching red (meaning the ball moved past the paddle) the game ends.

BLOCKS TO PLAY WITH



FINISHED?

+ Add your project to the Games Studio: http://scratch.mit.edu/studios/487504
+ Swap games with a partner and walk each other through your creations.

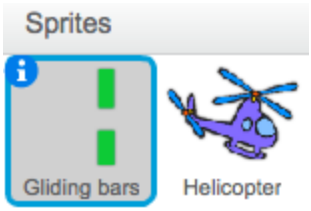
SCROLLING

HOW CAN YOU USE SCRATCH TO BUILD AN INTERACTIVE GAME?

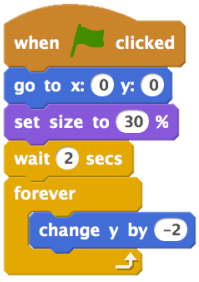
In this project, you will create a game. This game includes interactions between sprites, score, and levels. The game is similar to Flappy Bird, where the goal is to keep an object from falling to the ground or touching certain objects.

START HERE

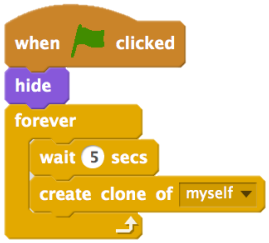
- ❑ Create two sprites: one for the player to control (helicopter) and one to avoid (gliding bars).
- ❑ Make the helicopter interactive.
- ❑ Bring your game to life by adding scripts to make the gliding bars scroll across the stage!



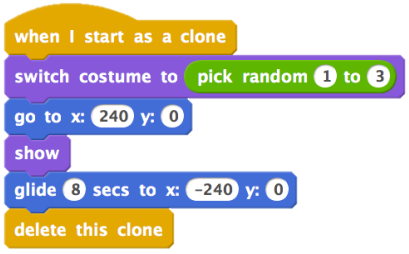
Controls sprite movement

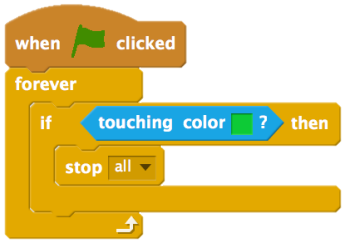


Causes sprite to constantly fall downward



This creates clones, which are used in the script below to make the bars scroll across the screen:



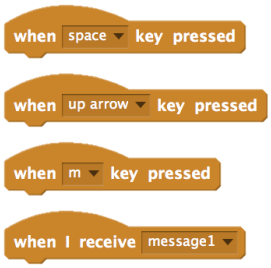


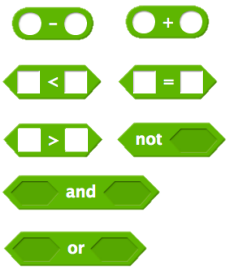
Specifies when the game ends

THINGS TO TRY

- ❑ How do you add difficulty to your game? Creating different levels, using a timer, or keeping score are a few examples of things you could do.
- ❑ Experiment with changing the look of your game by editing the backdrops!
- ❑ Explore using different key presses to control your sprites!

BLOCKS TO PLAY WITH





FINISHED?

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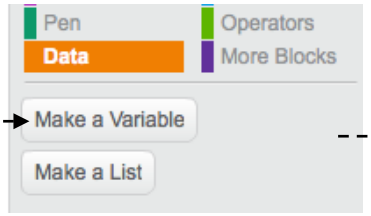
SCORE

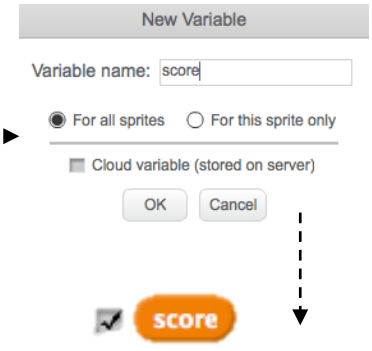
HOW CAN YOU KEEP SCORE IN A SCRATCH PROJECT?

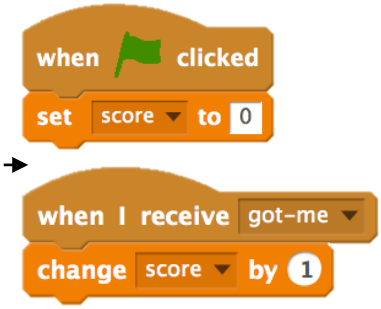
Fish Chomp is a game where players try to catch as many fish as they can by guiding a sprite with the mouse. In this activity, you will remix Fish Chomp by adding a score with variables.

START HERE

- ❑ Go to the Fish Chomp project page: http://scratch.mit.edu/projects/10859244
- ❑ Click on the Make a Variable button in the Data category to create and name a variable for score.
- ❑ Experiment with your new variable blocks to incorporate score into your project!







FEELING STUCK?

THAT'S OKAY! TRY THESE THINGS...

- ❑ Not sure how to work with variables? Check out this project for more information: http://scratch.mit.edu/projects/2042755
- ❑ Or take a look at this video: http://youtu.be/uXq379XkhVw
- ❑ Explore and study code in games that use score to learn more about creating variables and incorporating score into a project.

FINISHED?

- + Add your project to the Fish Chomp Remix studio: http://scratch.mit.edu/studios/475615
- + Challenge yourself to do more! How can you use score to add difficulty to your game design?
- + Find a game you are inspired by and remix it!