Remix and Re-imagine Sprites

The Scratch sprite library is full of a variety of characters. Let's explore remixing and re-imagining some of those characters to create fun new sprites!

There are two modes for drawing in Scratch:

- Bitmap-mode allows you to edit photos and paint with pixels.
- Vector-mode allows you to create and edit shapes.

The sprite library contains a mix of bitmap and vector sprites. You can remix and re-imaging either type of sprite, but for this exercise, we are going to focus on **vector sprites** because they are easier to edit and customize, mix and match.

In this guide, you'll find:

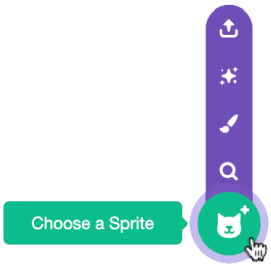
Getting Started

To start your project, head to https://scratch.mit.edu and click "Create." If you have a Scratch account, be sure to log in so your work is automatically saved. If you are new to Scratch and just getting started, check out our Getting Started Guide (http://bit.ly/Scratch-Getting-Started-Guide) for more information.

You can also create a sprite in the offline editor or without being logged in to the online editor, but you'll need to save your project to your computer in order to save your work or share later.

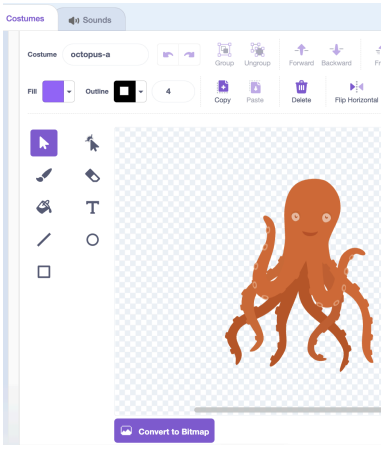
Identify Vector Sprites

To access the sprite library, hover over the sprite menu in the lower-right corner of the sprite area and choose "**Choose a Sprite**." Look through the library of sprites and select one that appeals to you.



The library does not label sprites as vector or bitmap, but **bitmap sprites are composed of pixels of color assembled in a grid-like format of rows and columns**. Their edges may be less crisp or jagged as you zoom in. Photographs, for example, are bitmap images.

Vector sprites are composed of editable shapes and colors built on mathematical formulas. That means they can be resized without a loss in resolution (the sharpness or clarity of an object). Vector sprites often look crisper and have smoother edges.



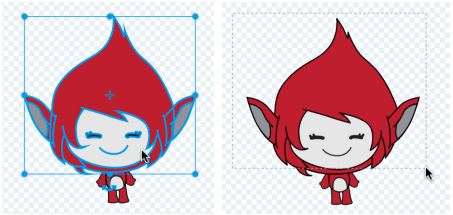
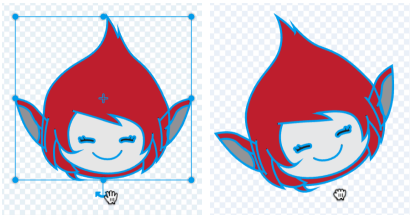
When looking through the sprite library, looking for sprites that appear crisp and smooth (and that aren't photographs) may help you identify vector sprites. Another way to know if a sprite is in vector-mode is to look at the bottom of the paint editor window once you've selected your sprites. **If you see a "Convert to Bitmap" button at the bottom of the screen, you know your sprite is in vector-mode.**

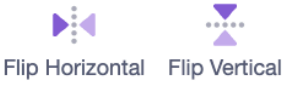
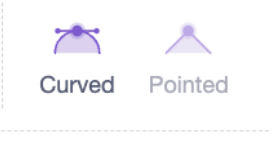
Edit Vector Sprites

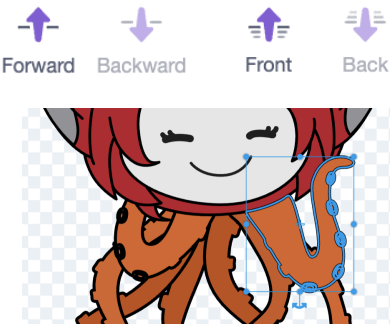
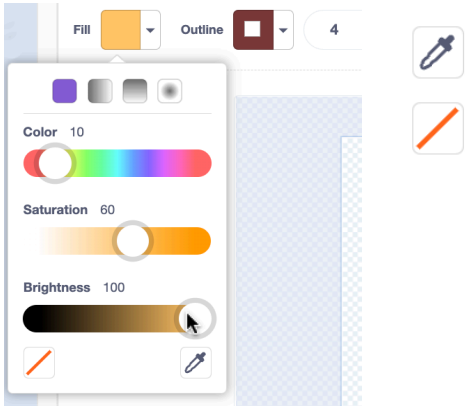
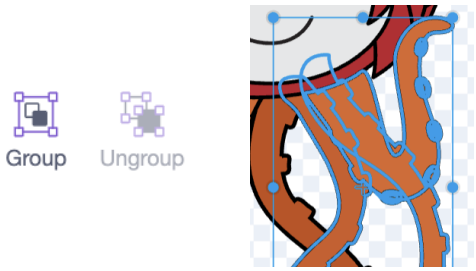
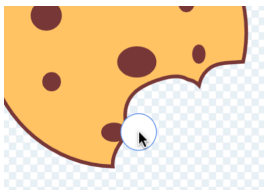
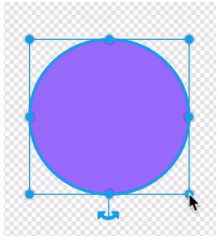
Now that you've identified two or more vector sprites, time to remix and re-image them! You could:

- Take parts from one or more sprites and place them on another.
- Use the paint editor tools to adjust the color, size, or shape of pieces of the sprite's parts.
- Draw your own elements to add to the sprite.
- Remove, rotate, flip, or move parts around.

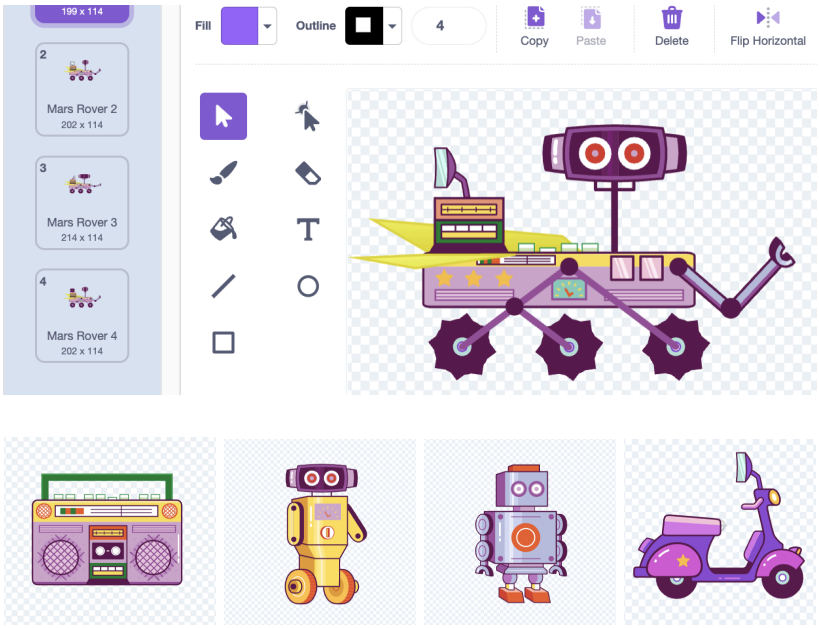
The following paint editor tools can be used to edit or draw sprites in vector-mode:

	Use the select to **select an object** or click and drag to select multiple objects at once.	
	To **rotate** an object, use the Select tool to grab the anchor under the object and drag it. Hold down the Shift key while dragging to rotate at 45 degree angles.	
	Using the Select tool, select an object and click the buttons on the top menu to **copy and paste** an exact duplicate, or move from one costume window to another.	

	Using the Select tool, select an object and click and drag one of the corner points to **resize** it.	
	Using the Select tool, select an object and click the flip horizontal or flip vertical buttons on the top menu to **flip** it.	
	Using the Reshape tool, click on one of the points of an object and **move the point** around to alter the shape. Click + Shift key to select and move multiple points at once. Click on a part of the object that doesn't have a point to **add a new point**, or click on a point and press "Delete" to **remove a point**.	
	Using the Reshape tool, click on a point and choose whether it is **curved or pointed**. Drag rotate the handles attached to the point to **alter the shape of a curve**.	 
	Use the brush tool for **freehand line drawing**. The example to the right shows hand drawn whiskers.	

	Using the Select tool, select a shape and click the Forward, Backward, Front, or Back buttons to change the **layer order**.	
 	Select the fill from the dropdown and use the fill (paint bucket) tool to adjust an object's color. Or using the Select tool, select an object and then use the Fill and Outline dropdowns to adjust the **color, saturation, brightness, and outline**. You can also choose to use a **gradient**. Use the eyedropper to select a color from another shape. Use the red strikethrough to fill with no color.	
	Using the select tool and holding down the "Shift" key, select multiple objects to **group** them together. Grouping is helpful when you want to move several pieces together.	
	Use the **eraser** tool to remove parts of the drawing from *all* objects and layers it comes into contact with when clicking and dragging to erase. You can use the reshape tool to then adjust the new points created.	
  	Click and drag with the Line, Circle, or Rectangle tools to **create a shape**. Hold down the Shift key while dragging to create equal sides, or 45 and 90 degree angles with lines.	

Remixed Sprite Examples



Here is an example of a remixed sprite made from remixed parts of four other sprites, as well as additional original elements. Can you see which parts are remixed and which are new?

Here is an example of a remixed sprite made from remixed parts of five other sprites, and then pieces were also recolored. Can you see which parts were remixed? Hint, look at the faces, hands, and feet.

Some sprites have multiple costumes, so be sure to hover over sprites to see all the costumes available when looking for options to remix.

Here are some additional sprite remix examples by Scratch users 311ra, Chumie, RealAimkidBunni, SaffronChai, Tutorial-Doggy, TinkaTonka510, bgordi0077, girlugotthis, and Heartofthehawk to serve as inspiration. Can you tell which sprite pieces were used?

Coding Your Sprite

Click the Code tab, then try adding a few blocks! Below is one project example, but the possibilities are endless! What will you create?

The Scratch Ideas page (https://scratch.mit.edu/ideas) is a great place to find tips for getting started, tutorials, Scratch Coding Cards, and more, before jumping into creating your first project.

In this example of a sprite remix project, a Giga sprite head has been added on an octopus sprite body and then been recolored. The costume was duplicated to make additional versions with slightly different tentacle angles. Then code was added to play the “Mystery” sound while moving the sprite across the stage as the costume changes, creating animated movement.

See our companion resource video here for more:

Remix and Re-imagine Scratch Sprites | Tutorial

Tip: If you'd like to translate this guide, **click here to make a copy** of this Google doc.