Create a Sprite with the Paint Editor

The Scratch sprite library is full of a variety of characters. Let's explore creating your own original sprite using the Scratch paint editor tools!

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.

If you are creating your own sprites, it is important you stay in the default **vector-mode** to create your artwork. Vector-mode allows users to adjust colors, change the shape of an object in the costume, add and remove elements, etc. If users remix your sprites, this flexibility is important.

In this guide, you'll find:

- Getting Started
- Creating a Vector Sprite
- Coding Your Sprite

Getting Started

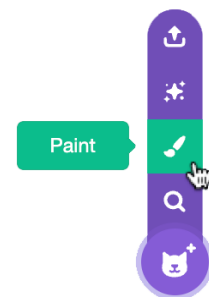To start your project, head to https://scratch.mit.edu and click "Create." If you have a Scratch account, be sure to log in so your work is automatically saved. If you are new to Scratch and just getting started, check out our Getting Started Guide (http://bit.ly/Scratch-Getting-Started-Guide).

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.
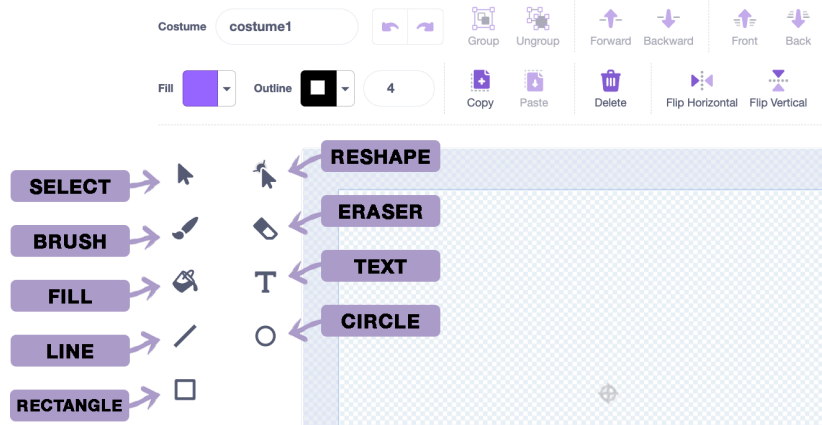
Creating a Vector Sprite
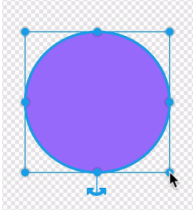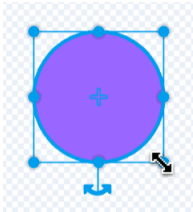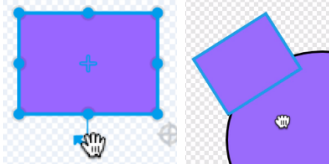
To start, hover over the sprite menu in the lower-right corner of the sprite area and choose "**Paint**," which brings you to a blank costume window under the "Costumes" tab.

When in the default vector-mode, you'll see a "Convert to Bitmap" button at the bottom of the screen.

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

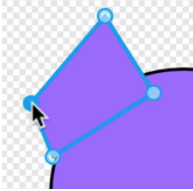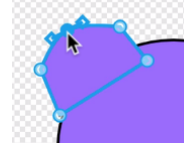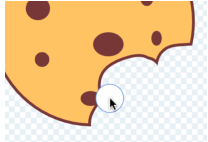|		
✏️ ⭕ ⬜	Click and drag with the Line, Circle, or Rectangle tools to **create a shape**. Hold down the Shift key while dragging to create equal sides, or 45 and 90 degree angles with lines.	
↖️	Using the Select tool, select a shape and click and drag one of the corner points to **resize** it.	
↖️	To **rotate** a shape once you've made it, use the Select tool to grab the anchor under the shape and drag it. Hold down the Shift key while dragging to rotate at 45 degree angles.	
↖️	Using the Reshape tool, click on one of the points of a shape and **move the point** around to alter the shape. Click + Shift key to select and move multiple points at once.	
↖️	Using the Reshape tool, click on a part of the shape 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**.	Curved Pointed
	Using the Reshape tool, click on a point and drag rotate the handles attached to the point to **alter the shape of a curve**.	
	Using the Select tool, select a shape and click the buttons on the top menu to **copy and paste** a duplicate.	Copy Paste
	Using the Select tool, select a shape and click the flip horizontal or flip vertical buttons on the top menu to **flip** a shape.	Flip Horizontal Flip Vertical
	Using the Select tool, select a shape and click the Forward, Backward, Front, or Back buttons to change the **layer order**.	Forward Backward Front Back
	Select the fill from the dropdown and use the fill (paint bucket) tool to adjust a shape's color. Or using the Select tool, select a shape 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.	Fill Outline 4 Color 10 Saturation 60 Brightness 100
	Using the select tool and holding down the "Shift" key, select multiple shapes to **group** them. Grouping is helpful when you want to move several shapes together.	Group Ungroup
	Use the brush tool for **freehand line drawing**. The example to the right shows hand drawn whiskers.	
	Use the **eraser** tool to remove parts of the drawing from *all* shapes 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.	

| T	The **text** tool comes with a dropdown list of font options to choose from. Use the Fill and Outline dropdowns to change the text color and outline.	
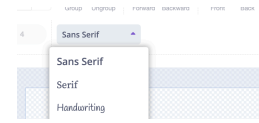
Coding Your Sprite

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.

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In this example, an original dragon sprite has been coded to switch between two costumes repeatedly so it looks like the tag is wagging and the head is moving.
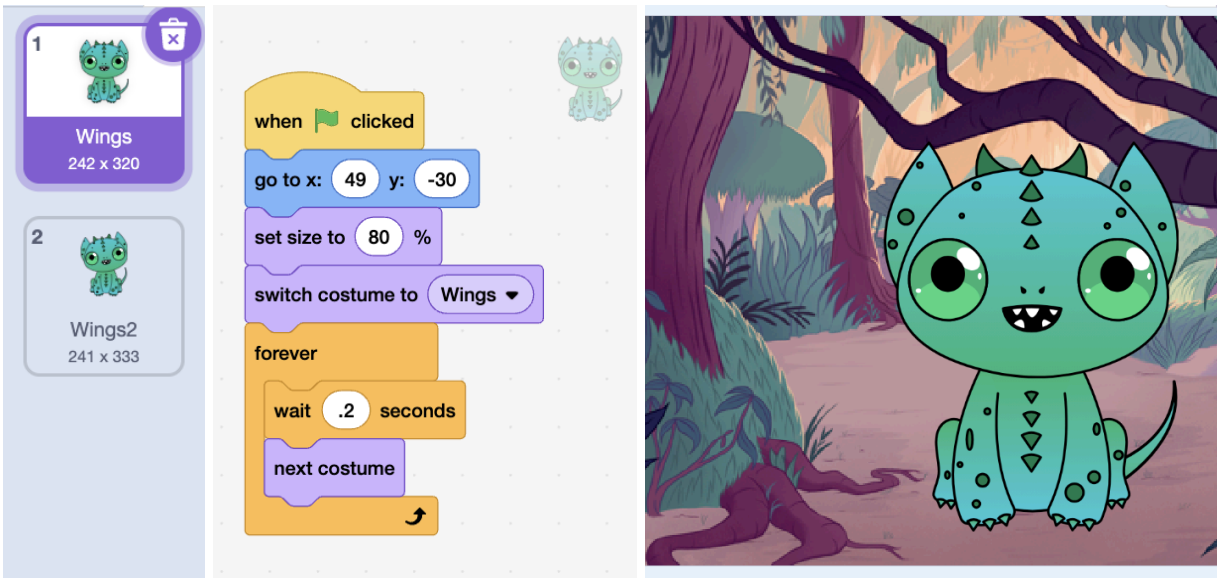
Tip: If you'd like to translate this guide, **click here to make a copy** of this Google doc.