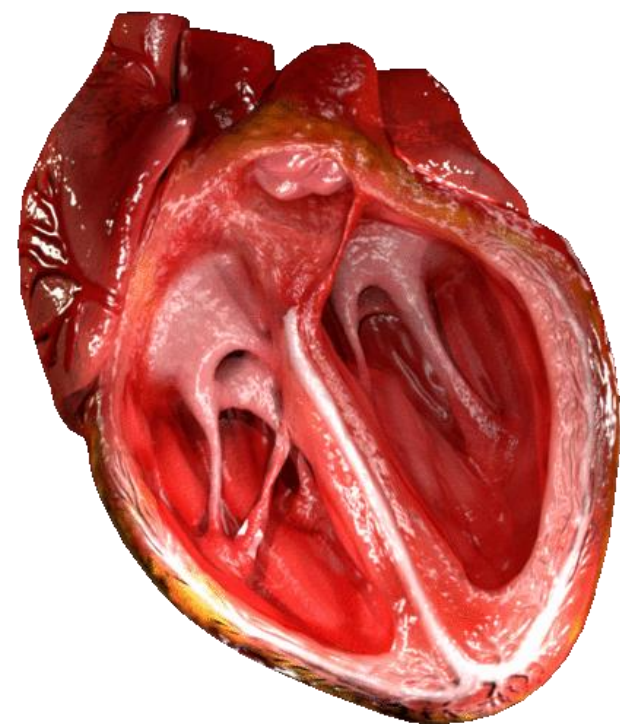




ATL Game Development Platform

Day 02

Working with Sprites in Scratch



**By Mr. Neeraj &
Ms. Chithra from
Learning Links Foundation**

Agenda of the day

01

Reflections of Day - 1



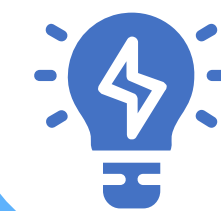
02

Brief on Sprites, Different ways to add sprites, Different ways to add backgrounds



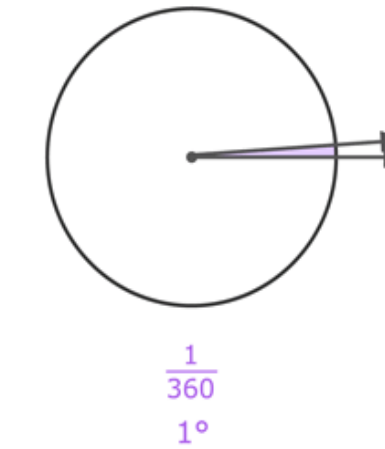
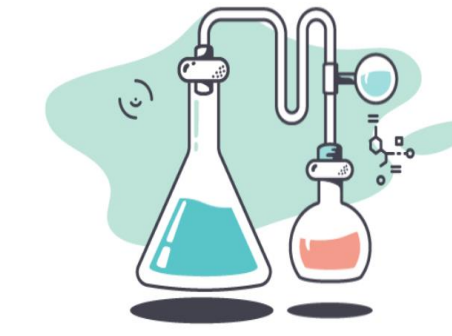
03

Role of coordinates in Scratch, Different ways to add sounds



04

Home Assignment, Q&A

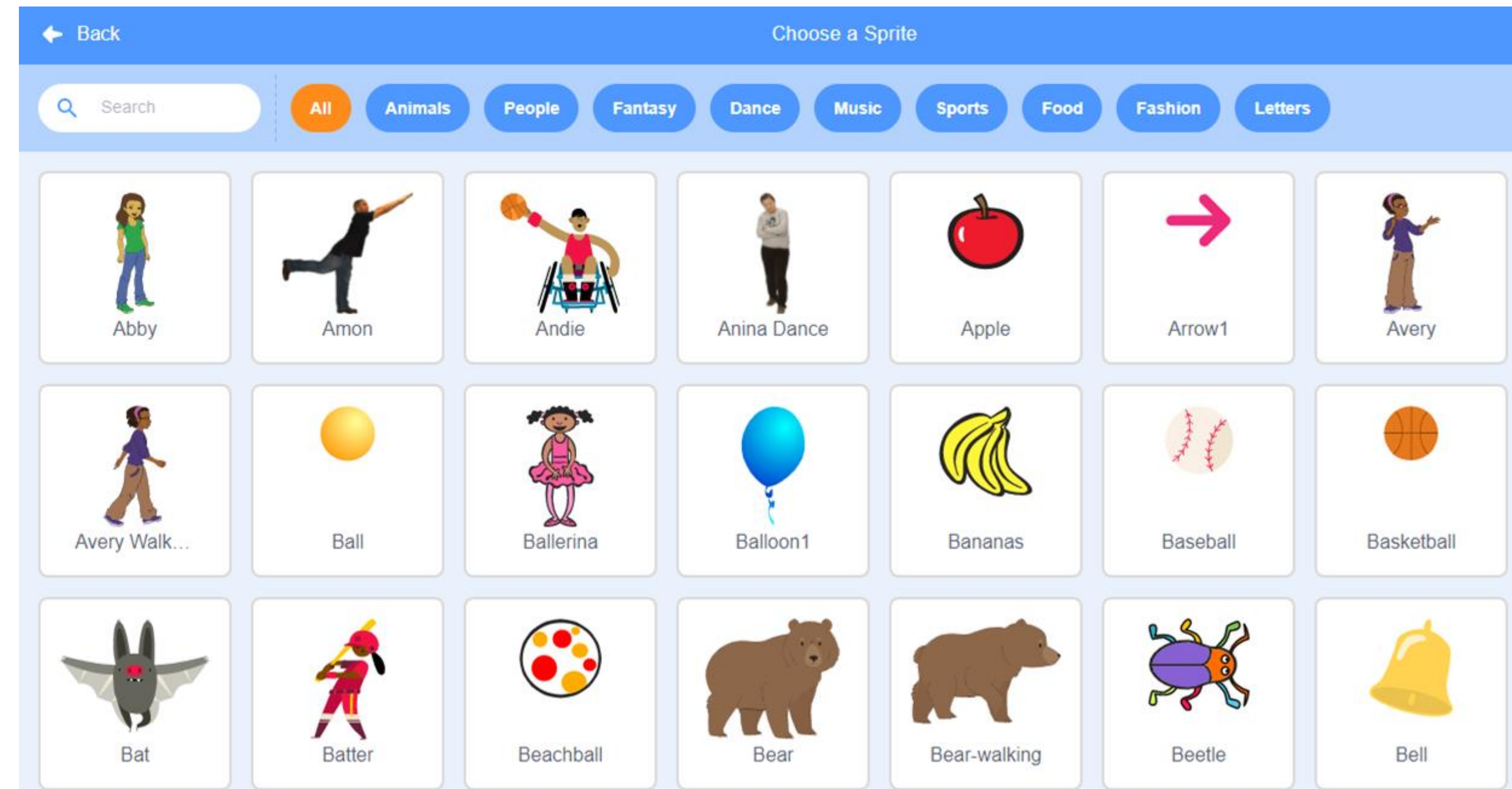


Reflections of Day - 1

- Introduction to Game Based Resources (Animations/Games/Activities)
- Various ICT tools to create game based resources
- Introduction to Scratch
- Installing Software (Offline)
- Registration Process on Scratch (Online)
- Scratch Interface
- Demonstration of Sample STEM Animations

Introduction to Sprites

Sprites are the images on a Scratch Computer Program Screen. Every Scratch Program is made up of sprites and the Scripts to control them.



Adding Sprites and Backgrounds

Adding sprites to your game

Each object in Scratch is called a SPRITE.

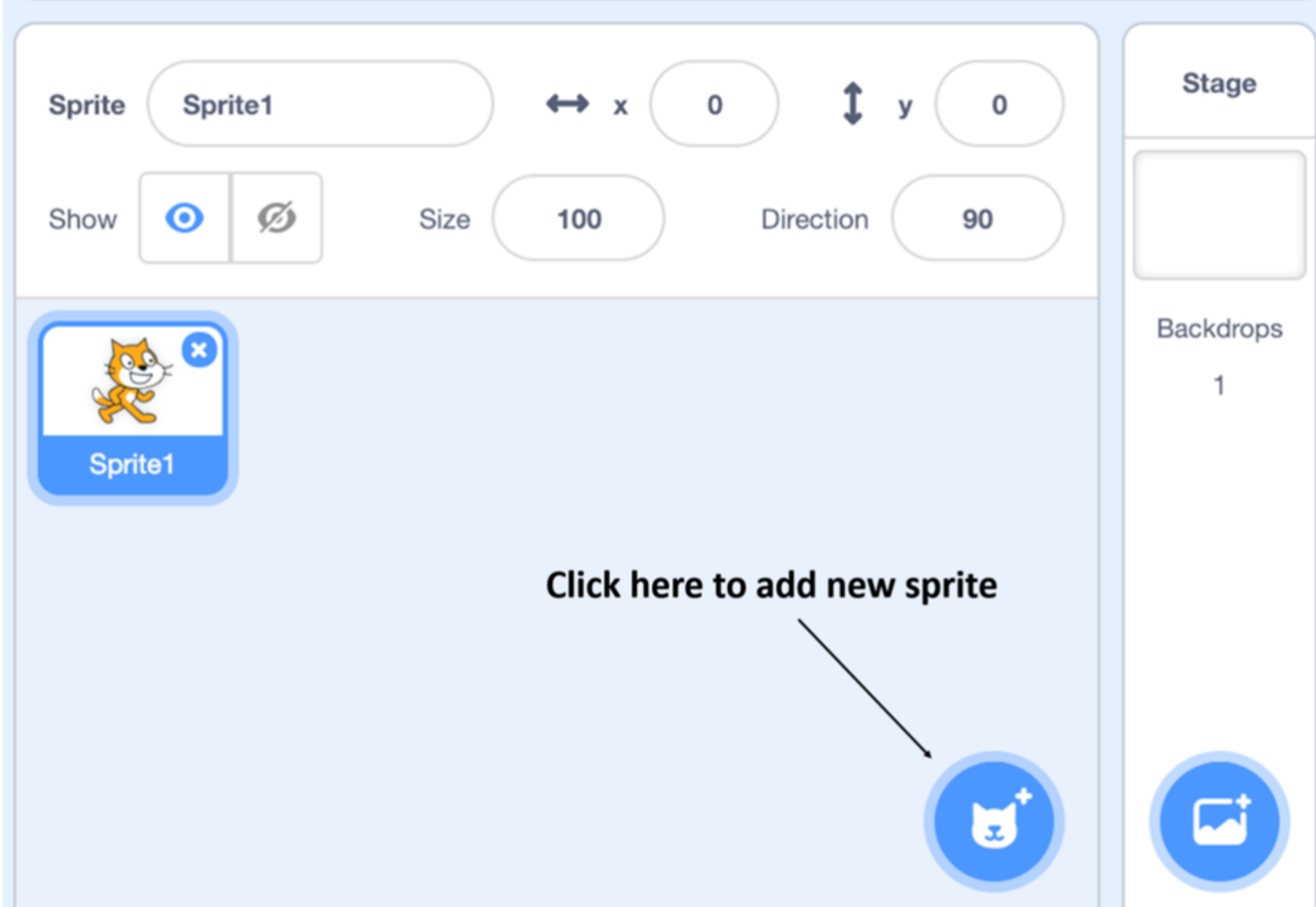
To add a sprite, you can do in the following ways:

Choose from the library

Paint your own sprite

Upload your own image or sprite

Take a picture



Sprite: Sprite1

x: 0 y: 0

Show:

Size: 100 Direction: 90

Stage

Backdrops: 1

Click here to add new sprite

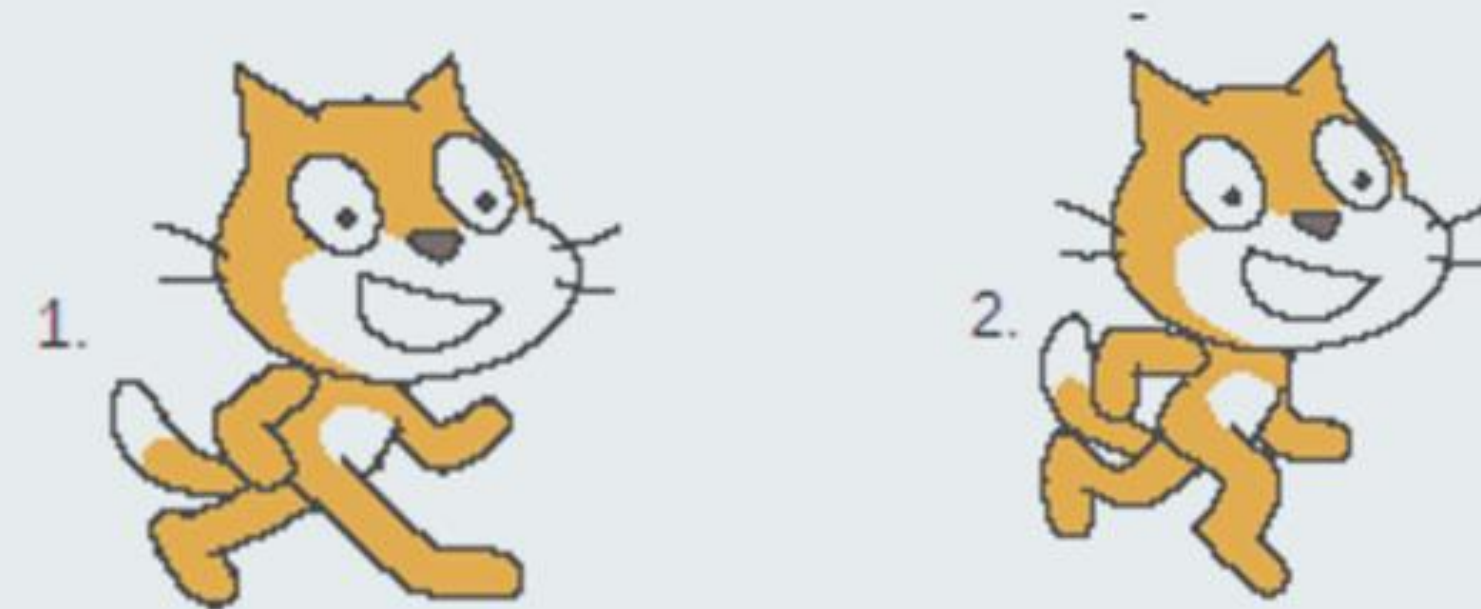
Adding sprites to your game

A costume is one out of possibly many "frames" or alternate appearances of a sprite. Sprites can change their look to any of its costumes. They can be named, edited, created, and deleted, but every sprite must have at least one costume

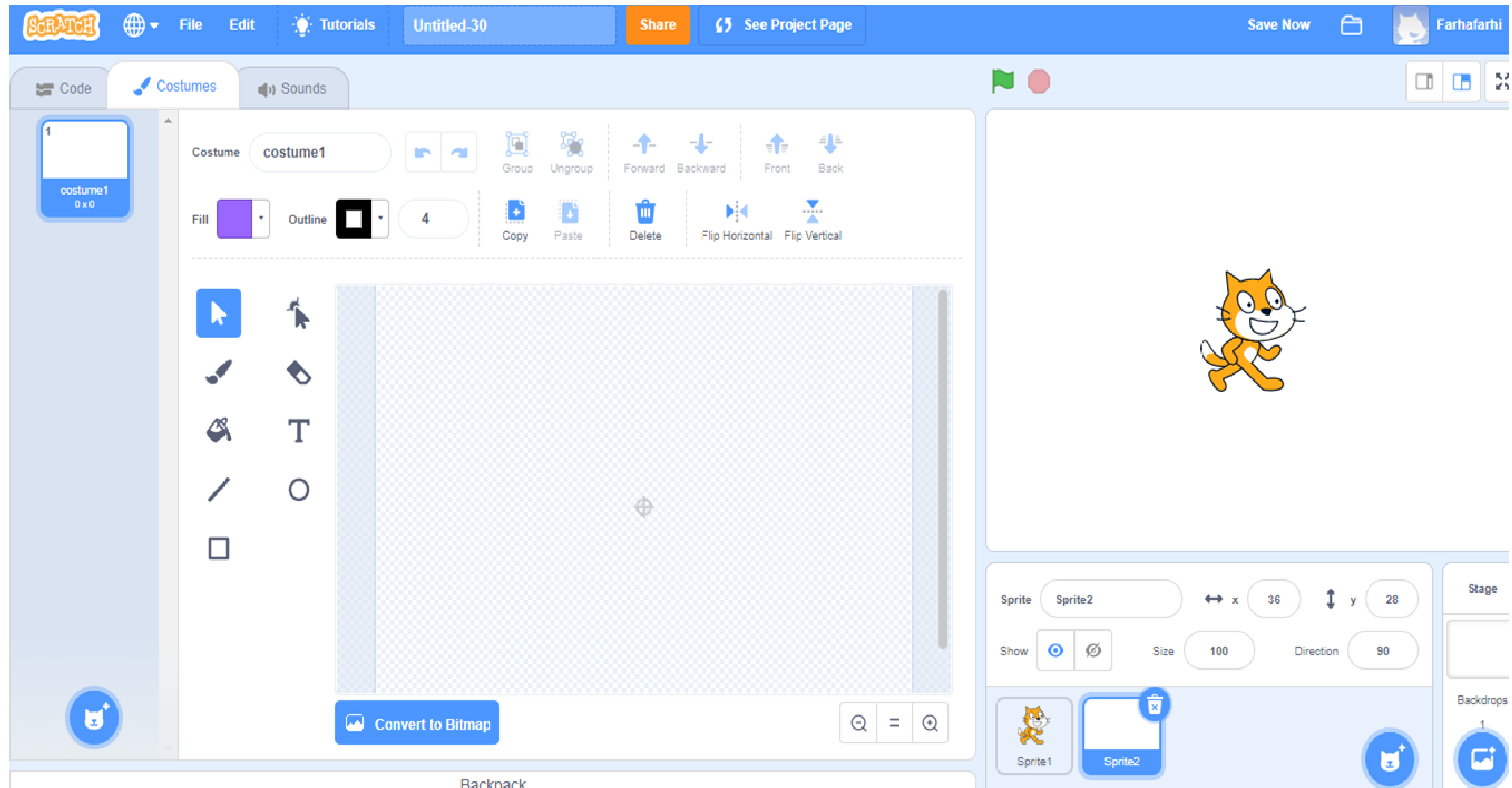


- 1) To see the costumes of a sprite, click on the Costumes Tab.
- 2) This will display a list of the costumes in the sprite, as well as open the paint editor.

Example of next costume

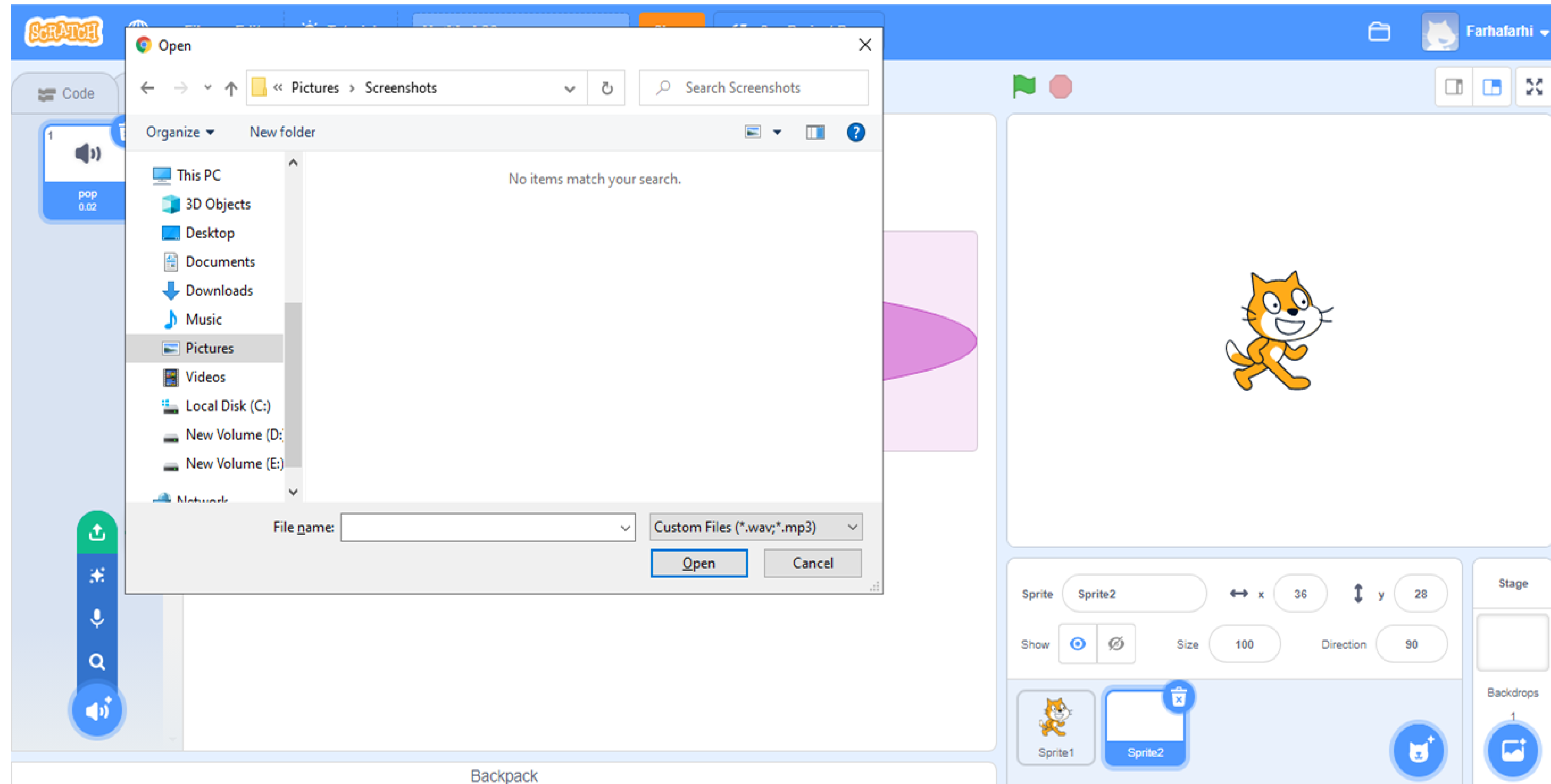


Painting Sprites



The screenshot displays the Scratch software interface. At the top, the 'Scratch' logo is on the left, and the 'File', 'Edit', 'Tutorials', 'Share', and 'See Project Page' menus are in the center. On the right, there are 'Save Now', a folder icon, and the user name 'Farhafarhi'. Below the menu bar, the 'Code', 'Costumes', and 'Sounds' tabs are visible, with 'Costumes' being the active tab. The 'Costumes' panel shows a single costume named 'costume1' with a size of 0x0. The 'Fill' color is purple, and the 'Outline' is black. The 'Costume Editor' is open, showing a grid and various drawing tools. The 'Stage' area shows the Scratch cat sprite. The 'Sprite' panel at the bottom right shows 'Sprite2' with a size of 100 and a direction of 90 degrees. The 'Backdrops' panel is empty.

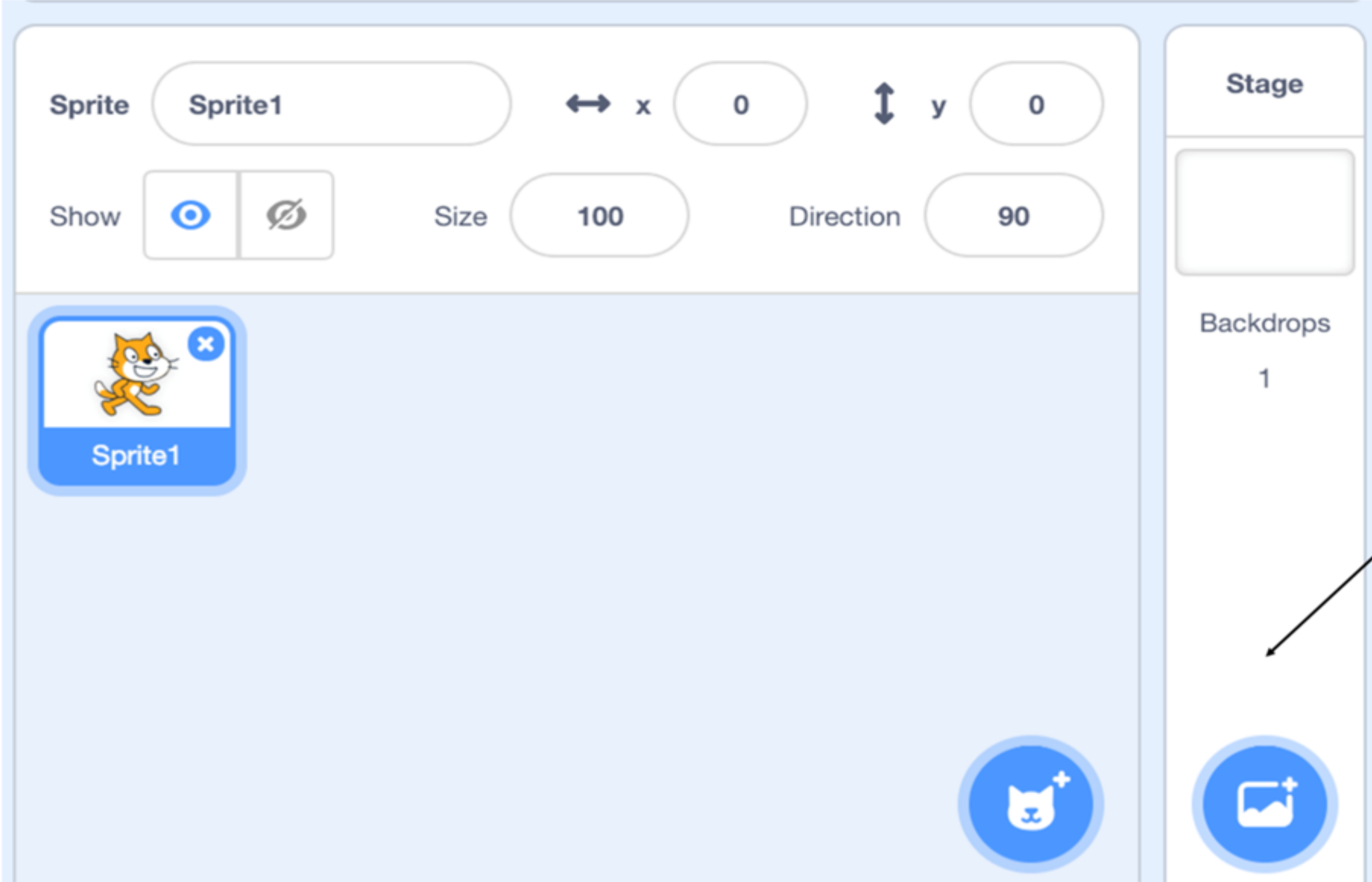
Uploading Sprites



The image shows the Scratch web application interface. A file upload dialog box is open, displaying the 'Pictures > Screenshots' folder. The dialog box contains a search bar with the text 'Search Screenshots' and a message 'No items match your search.' The file name field is empty, and the file type is set to 'Custom Files (*.wav;*.mp3)'. The 'Open' and 'Cancel' buttons are visible at the bottom of the dialog box. In the background, the Scratch interface is visible, showing the 'Code' tab selected on the left. The main stage area displays a single sprite, 'Sprite2', which is a cartoon cat. The 'Sprite' panel at the bottom shows the selected sprite and its properties: 'Sprite2', 'x: 36', 'y: 28', 'Size: 100', and 'Direction: 90'. The 'Stage' panel is empty, and the 'Backdrops' panel shows a single backdrop labeled '1'. The 'Backpack' area at the bottom left shows two sprites: 'Sprite1' and 'Sprite2'.

Adding backdrops to your game

A backdrop is an image that can be shown on the stage. It is similar to a costume, except that it is shown on the stage instead. They are located in the backdrops library.



The screenshot shows the Scratch interface. The top panel is the 'Sprite' panel, which includes a 'Sprite' dropdown menu set to 'Sprite1', 'x' and 'y' coordinate fields both set to '0', 'Show' buttons (one active), 'Size' set to '100', and 'Direction' set to '90'. Below this is a library of sprites, with 'Sprite1' (a cat) selected. The bottom panel is the 'Stage' panel, which shows a preview of the stage and a 'Backdrops' section with a '1' indicating one backdrop is currently selected. At the bottom of the Stage panel is a circular button with a landscape icon and a plus sign, which is the button to add a new backdrop.

Click here to add backdrop





















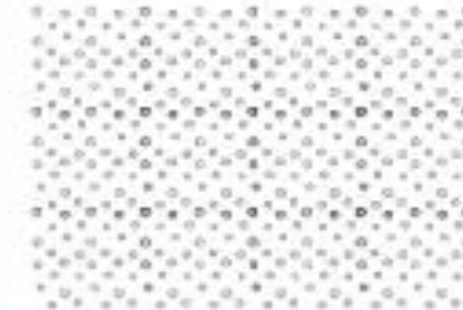


Selecting Backdrops from the Library

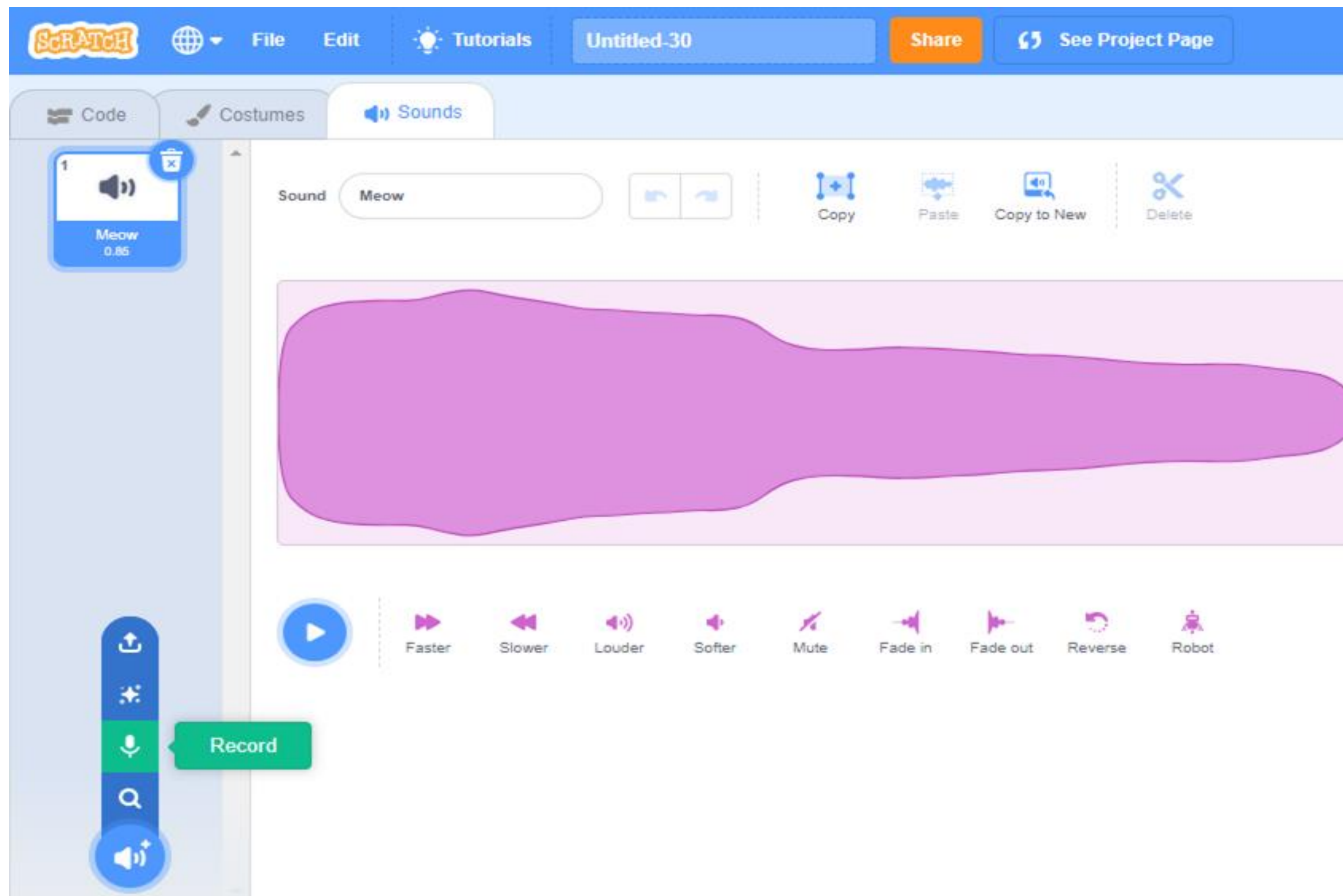
← Back Choose a Backdrop

Search

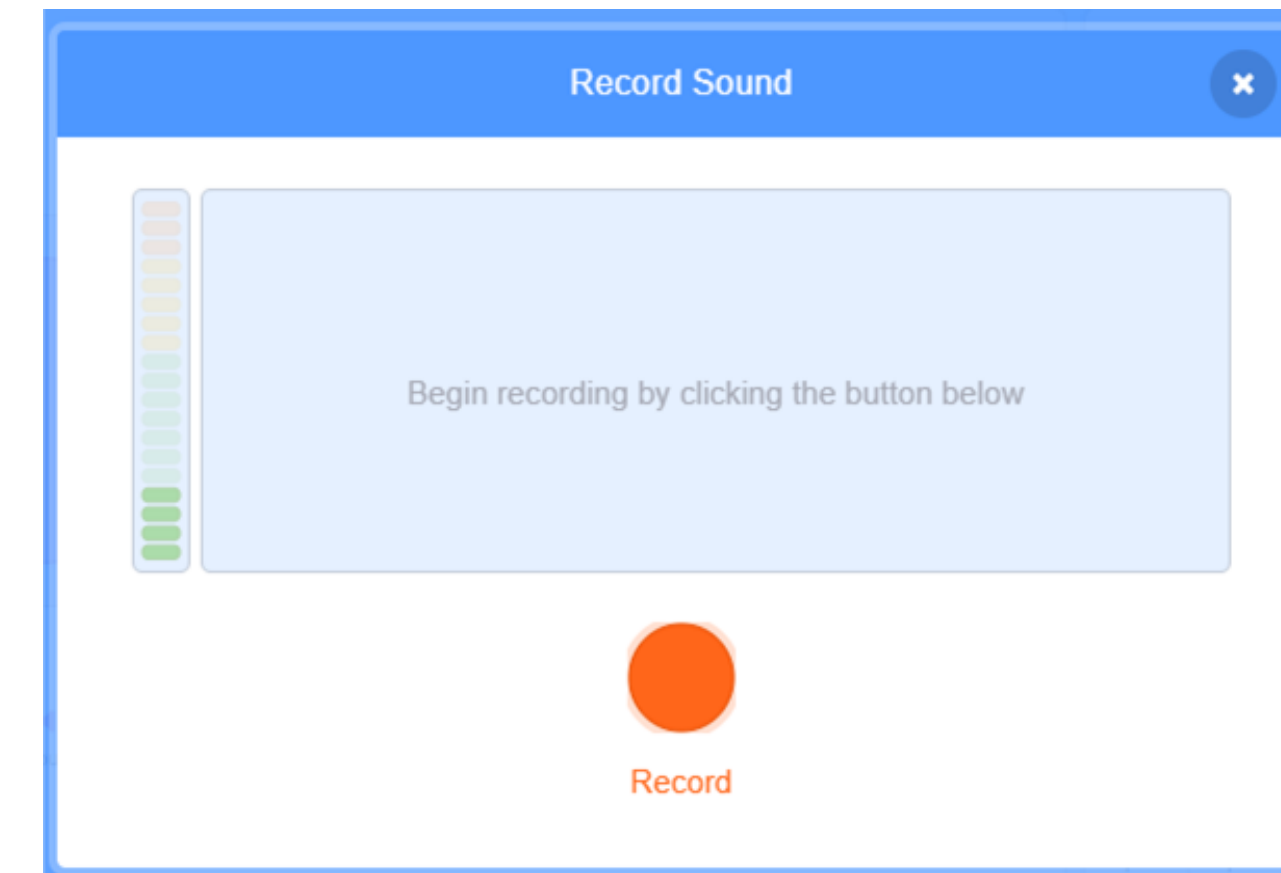
All Fantasy Music Sports Outdoors Indoors Space Underwater Patterns

 <p>Arctic</p>	 <p>Baseball 1</p>	 <p>Baseball 2</p>	 <p>Basketball 1</p>	 <p>Basketball 2</p>	 <p>Beach Malibu</p>	 <p>Beach Rio</p>
 <p>Bedroom 1</p>	 <p>Bedroom 2</p>	 <p>Bedroom 3</p>	 <p>Bench With...</p>	 <p>Blue Sky</p>	 <p>Blue Sky 2</p>	 <p>Boardwalk</p>
 <p>Canyon</p>	 <p>Castle 1</p>	 <p>Castle 2</p>	 <p>Castle 3</p>	 <p>Castle 4</p>	 <p>Chalkboard</p>	 <p>Circles</p>

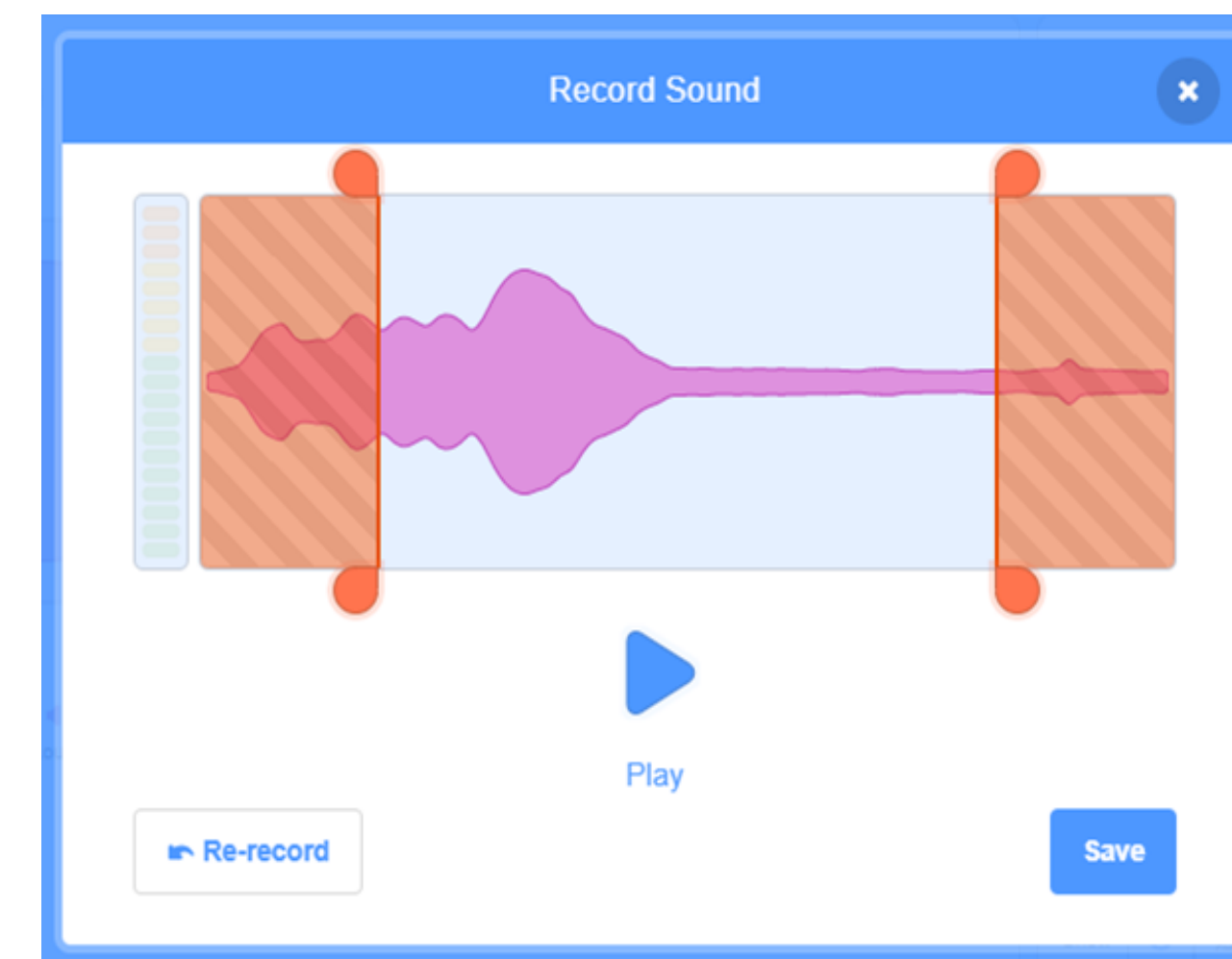
Adding Sounds to your game



The image shows the Scratch Sounds panel. At the top, there are tabs for 'Code', 'Costumes', and 'Sounds'. The 'Sounds' tab is active. Below the tabs, there is a search bar containing the text 'Meow'. To the right of the search bar are icons for 'Copy', 'Paste', 'Copy to New', and 'Delete'. Below these icons is a large purple waveform representing the 'Meow' sound. At the bottom of the panel, there is a row of control buttons: 'Faster', 'Slower', 'Louder', 'Softer', 'Mute', 'Fade in', 'Fade out', 'Reverse', and 'Robot'. On the left side of the panel, there is a vertical toolbar with a 'Record' button highlighted in green.



The image shows the 'Record Sound' dialog box. It has a blue header with the text 'Record Sound' and a close button. Below the header, there is a light blue box with the text 'Begin recording by clicking the button below'. To the left of this box is a vertical volume indicator. Below the text box is a large orange circular button with the text 'Record' underneath it.













































The image shows the 'Record Sound' dialog box after recording. It has a blue header with the text 'Record Sound' and a close button. Below the header, there is a waveform representing the recorded sound. The waveform is purple and is set against a light blue background. The waveform is flanked by two vertical orange bars with diagonal stripes. Below the waveform is a blue play button with the text 'Play' underneath it. At the bottom left, there is a 'Re-record' button, and at the bottom right, there is a 'Save' button.

Selecting Sounds from the Library

← Back Choose a Sound

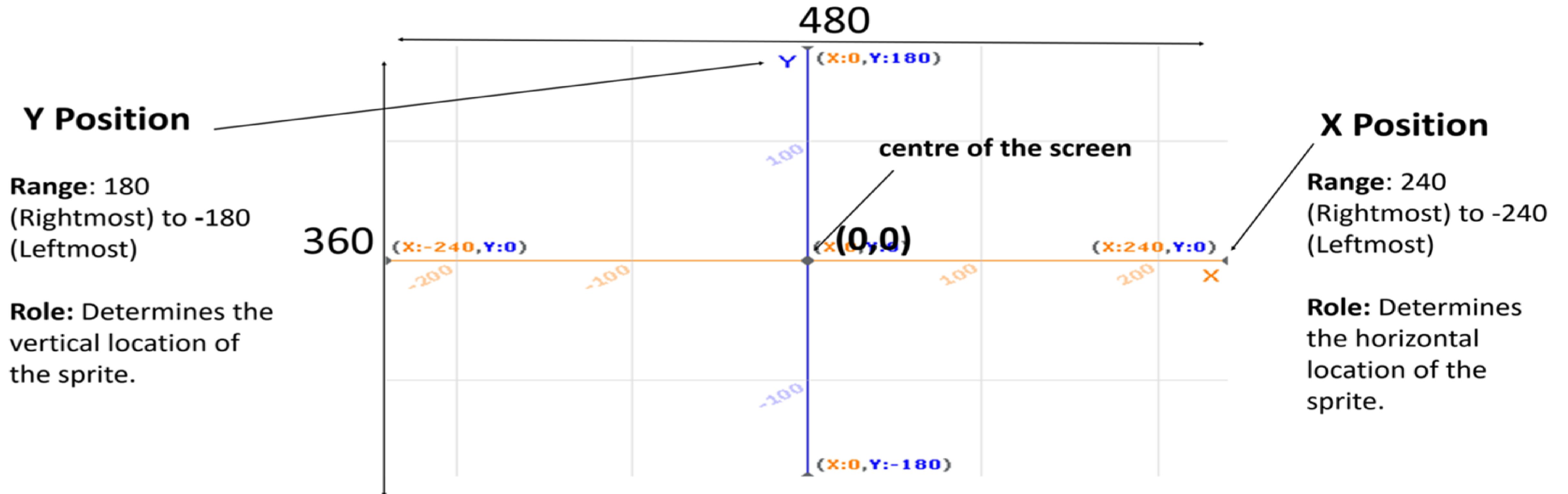
Search

All Animals Effects Loops Notes Percussion Space Sports Voice Wacky

  A Bass	  A Elec Bass	  A Elec Guitar	  A Elec Piano	  A Guitar	  A Minor Uk...	  A Piano
  A Sax	  A Trombone	  A Trumpet	  Afro String	  Alert	  Alien Creak1	  Alien Creak2
  B Bass	  B Elec Bass	  B Elec Guitar	  B Elec Piano	  B Guitar	  B Piano	  B Sax

Role of Coordinates

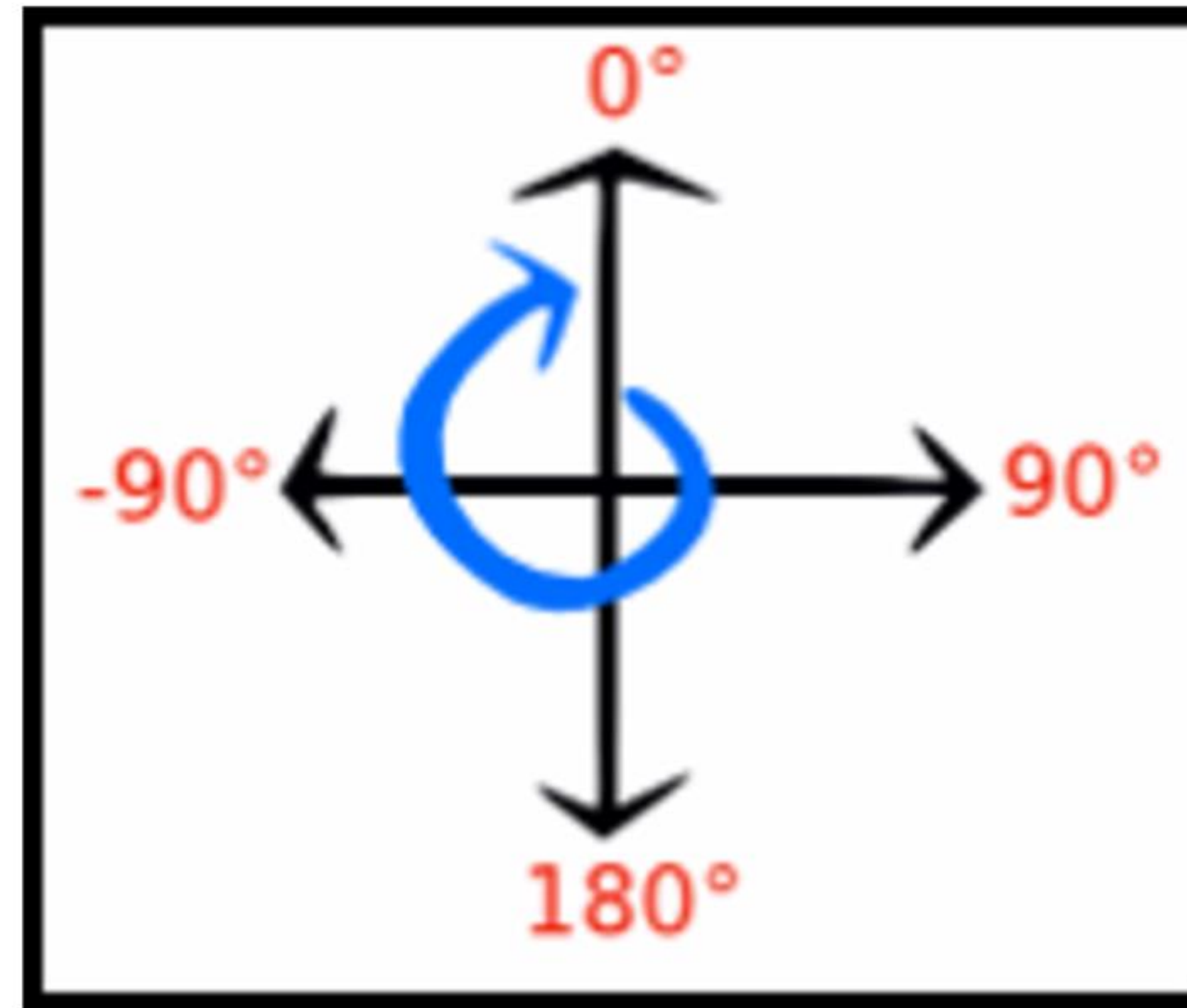
Scratch determines where to display sprites through a coordinate system, or a mathematical grid of infinite values. (X,Y). The centre of the screen is (0, 0).



Directions in Scratch

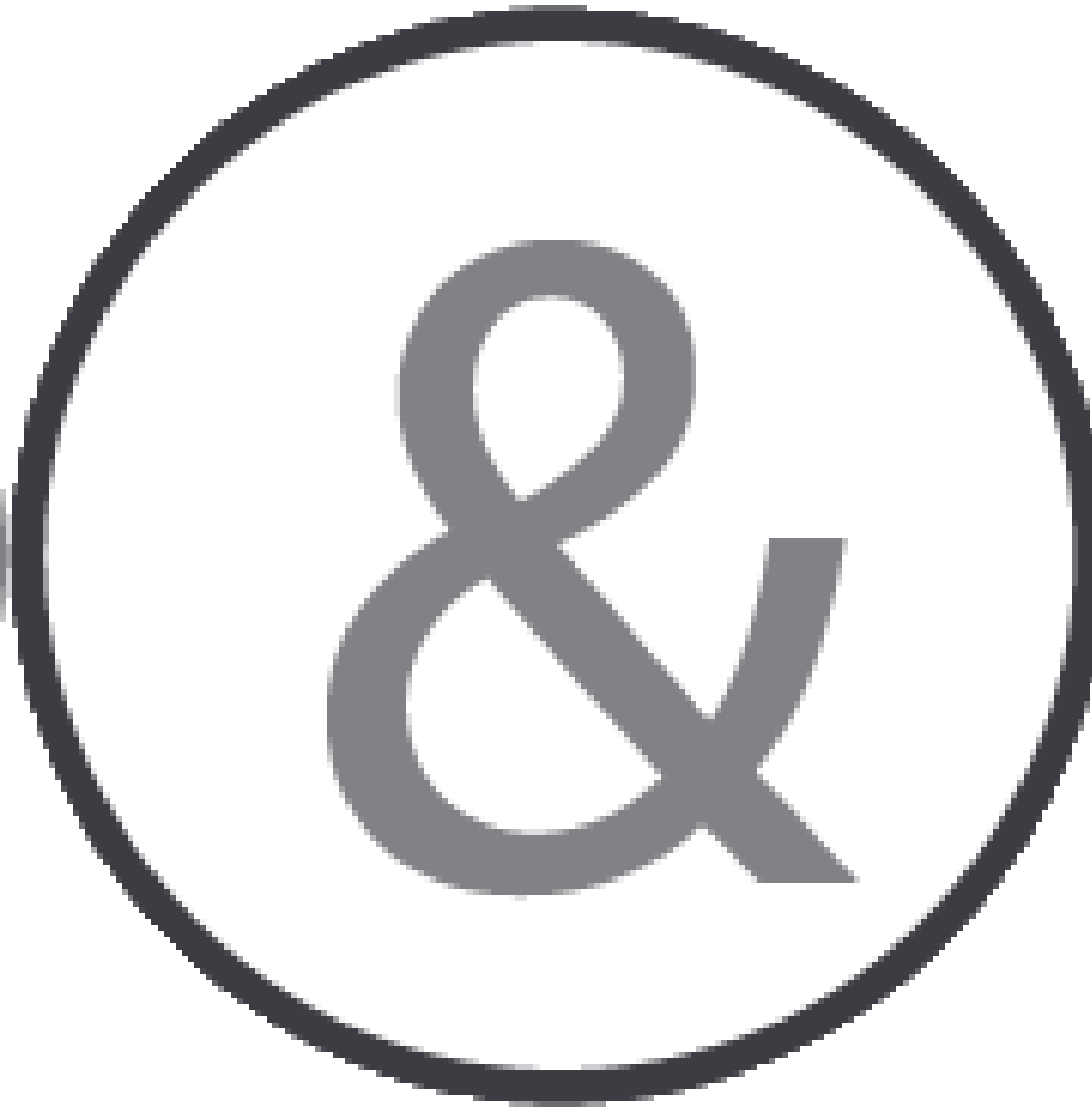
Direction is determined by a rotational number system. The direction 0 is straight up.

90 is 90 degrees clockwise and -90 is 90 degrees counter-clockwise



Assignment of the Day

- Explore scratch interface and blocks to create an animal movement



Thank You!

tech@learninglinksindia.org

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