

## Scratch Interface (from Super Scratch Programming Adventure)

The image shows the Scratch programming environment with several callout boxes providing instructions and descriptions for key features:

- Play the game full screen.** (Callout pointing to the full screen button)
- Give your project a new name.** (Callout pointing to the name input field)
- Sprite Toolbar**  
Contains the Duplicate, Delete, Grow, Shrink, and Block Help tools (Callout pointing to the toolbar icons)
- Palette**  
Each of these ten buttons lets you choose functions (called *blocks*) for programming your sprites. You can combine these command blocks in stacks to create programs that control objects on the screen. (Callout pointing to the block palette)
- Stage**  
Displays your creation (Callout pointing to the stage area)
- The green flag starts the game and the red flag stops the game.** (Callout pointing to the green and red flag buttons)
- Sprite List**  
Here are the characters and objects you've created, including the Stage itself. Click the icons to edit each sprite individually. (Callout pointing to the sprite list)
- Scripts Area**  
Here's where you build your programs. Stacking blocks together here lets you control the sprites in your project. Click one of the three tabs at the top to change to other functions:
  - Scripts:** Allows you to drag command blocks from the Palette and put them together to write a program
  - Costumes:** Allows you to draw, import, or edit images for a sprite
  - Sounds:** Allows you to record or import sound files for a sprite to use(Callout pointing to the scripts area)
- New Sprite Buttons**  
There are four ways to add a sprite:
  - Pick one from Scratch's built-in library
  - Draw a new one
  - Upload an image you already have
  - Take a photo with your computer's webcam(Callout pointing to the 'New sprite' button)

### Sprite Information

You might have noticed a little blue **i** in the corner of the box around Scratchy when you select his sprite in the Sprite List. Try clicking the **i**, and you'll get information about that sprite.

This section shows the sprite's name, position, and direction it is facing (the little blue line).

This is how you can rename the Scratchy sprite. Right now it's *Sprite1*. Don't you think that's a little boring? Try renaming this sprite.

CLICK  
HERE



Click this arrow when you're done with the Sprite Settings pane. We'll play with these other settings later.

### Rotation Settings

You can control how a sprite rotates in three ways:

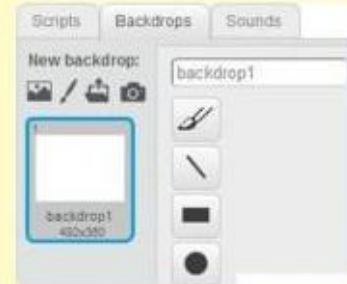
- Can rotate freely
- Can face only left or right
- No rotating allowed

Try clicking and dragging the little blue line—see what happens to Scratchy's orientation.

Now, onto the fun stuff. To use Scratch to program movements, you first have to understand how Scratch positions things.

Click the **Stage** icon in the Sprite List. Switch to the **Backdrops** tab in the Scripts Area and choose **Choose backdrop from library**.

Note: Sprites have *costumes* while the Stage has *backdrops*.



Choose the *xy-grid* backdrop and click **OK** to use it. It's in the "Other" category.

### Backdrop Library

Category  
All  
Indoors  
Outdoors  
Other

Theme



Now you can see exactly how Scratch positions objects. Everything is on a grid with two axes:

**y-axis:** A vertical line that marks up and down positions; ranges from -180 (lowest) to +180 (highest)

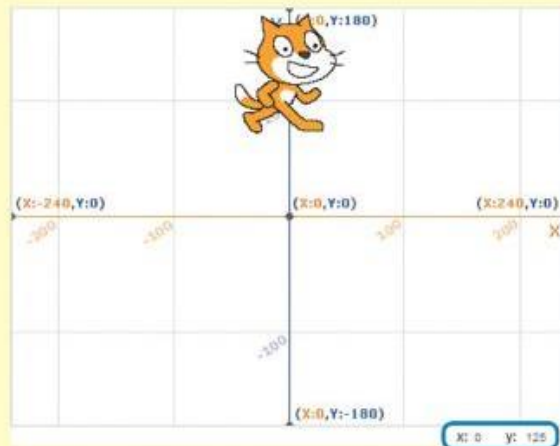
**x-axis:** A horizontal line that marks left and right positions; ranges from -240 (farthest left) to +240 (farthest right)

Scratchy's default position is at the point where the x-axis and y-axis meet. His coordinates are (X: 0, Y: 0).

Now we can program movements for Scratchy the cat! But first, try dragging him to the top of the Stage, as shown on the right.

Note: The bottom-right corner displays the coordinates of your mouse. This will be really helpful when we start setting the positions of sprites!

The current coordinates of a sprite are shown in the upper-right corner of the Scripts Area, too.



To make sure we're giving Scratchy the cat instructions, click him in the Sprite List (the box at the bottom left of the screen). Switch to the **Scripts** tab in the Scripts Area and then click the **Motion** palette button. Click and drag out the command block `go to x:0 y:0` to the Scripts Area.

