HACKASCRATCH

THE AMATEUR MANAGER AND SCIENTIST

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Let's learn how to use Scratch

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Learn How to Use Scratch

First we'll answer a few common questions about Scratch.

What is Scratch coding?

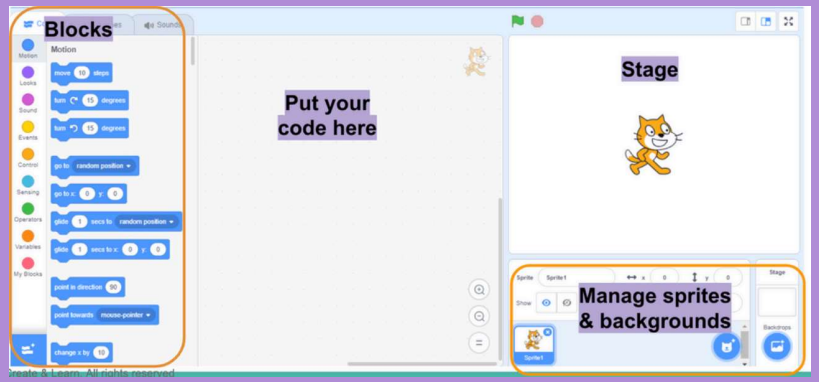
Scratch is a free block-based coding platform that allows you to create your own games, stories, and animations. On Scratch, you can program many different types of projects, such as a Magic Pen, Wizard Tag Game, Geometry Dash, Basketball Game, Pacman, or Snake.

How do I learn to code with Scratch?

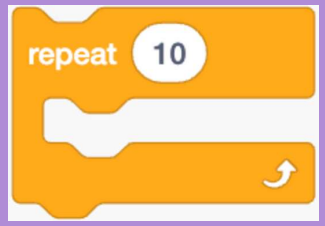
Here we'll get started learning Scratch coding in a few simple steps.

1. Start a new project

To code in Scratch, first open the page on Scratch at MIT. Next, click on the "create" button to make a new project. You should have a screen that looks like this:



How it works: The forever loop will keep running the code, as long as your program is running. Notice that the forever loop doesn't have a notch at the bottom. This is because the loop will keep running forever, so nothing added under it will run!



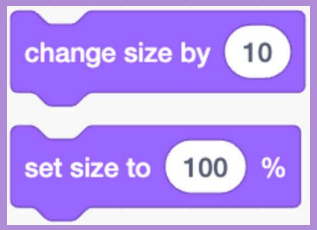
How it works: The repeat loop allows you to specify how many times you want to run the code.

And that's it!
Scratch coding is fun and easy.

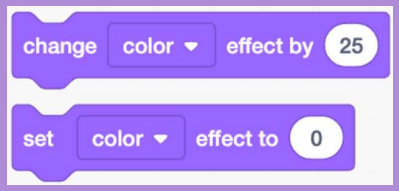
All The Best!

Looks blocks

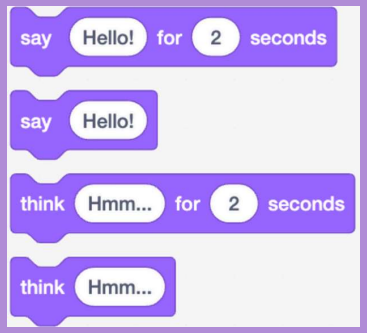
These purple colored blocks change the appearance of your sprite.



How it works: These blocks change the size of your sprite.



How it works: These blocks will change the color of your sprite. Use the dropdown menu to see other fun effects!



How it works: These blocks will create a speech or thought bubble for your sprite, with the text in the code block.

Loops - Control the flow of your Scratch code

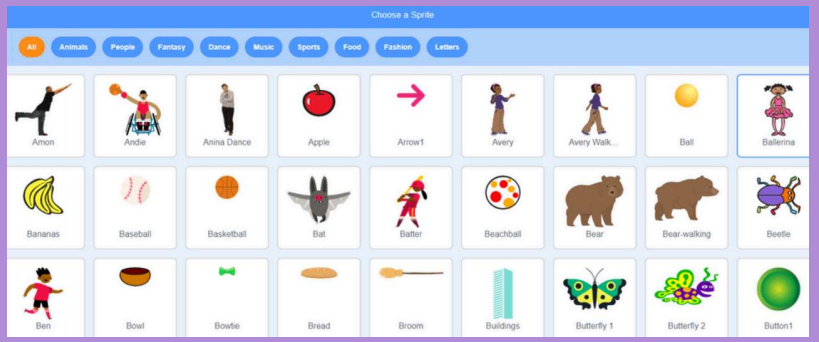
These blocks are found in the "control" section, colored in orange. Like the events blocks, they also have a special shape. Loops enable the continually run and repeat.

2. Drag the code blocks

The code blocks are on the left hand side of the screen. To code, click and drag the blocks to the large center space. On scratch, the characters and objects are called "sprites." You can add or delete as many sprites as you want. Each time you add a sprite, it will appear on the stage.

3. Click on sprites to code for them

Click on each sprite to code for that particular sprite. There are hundreds of fun sprites to choose from. Whether it's a soccer player, a butterfly, or a ballerina.



To code, you can drag blocks of code from the left hand side and connect them together. Each sprite, as well as the background, will have its own code.
These blocks can make sprites move, make sounds, and change color. And when connected together form a series of actions to build your games, animations, and other projects.

4. Watch your code run

After you've coded your project, you can click on the Green Flag to see your code run on the Stage.
If you want to save or share your project, make sure it's saved under your account.

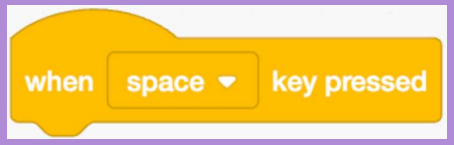
How to do Scratch programming with basic coding blocks?

There are many different types of blocks on Scratch.
Notice how most of the blocks are shaped with a special notch at the top and the bottom; this is so that they can connect together! Here are some of the most important blocks:

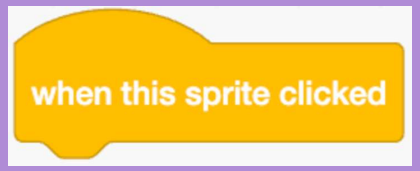
Events blocks in Scratch

These yellow colored blocks have a special shape, with the bump at the top. These blocks are “starting blocks,” meaning they must go at the top of any chunk of code we create. They tell us when the code will be run.

How it works: Run the code when the green flag is clicked (when the program begins). Most of the time, we use this block



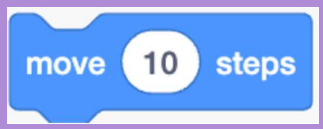
How it works: Run the code when a key is pressed. Use the dropdown menu to choose which key you want!



How it works: Run the code when the sprite is clicked.

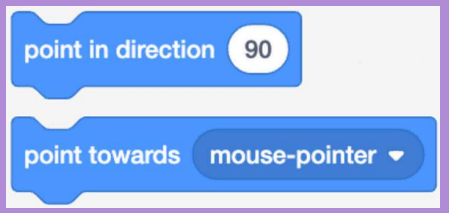
Scratch motion blocks

These blue colored blocks allow your sprite to move, rotate and glide.

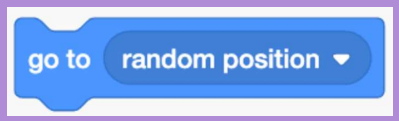


How it works: This block allows you to move your sprite. It will move in the direction your sprite is facing.

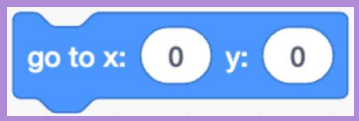
How it works: These blocks allow you to rotate your sprite to the right or to the left.



How it works: These blocks allow you to adjust the direction that your sprite is facing.



How it works: This block lets your sprite "jump" to a position. You can click on the dropdown menu to see the different options!



How it works: This block allows your sprite to smoothly glide across your screen to a position of your choosing.

Try combining a motion block with an event block to see what happens!