LEAFS Programming 2021

Write your name or draw something that represents you!

PB&J Activity

Write a “Program” to Make a PB&J!

- Take 5 minutes and write instructions to construct a Peanut Butter and Jelly sandwich
- We will come together as a group and attempt to execute your programs!

PB&J Program - What's the point?

Computers-- much like J-- just can't do it all

- they have specific capabilities that can be used to solve more complex problems
- A programmer's job is to define instructions which make use of these capabilities to produce a greater result

Scratch Programming

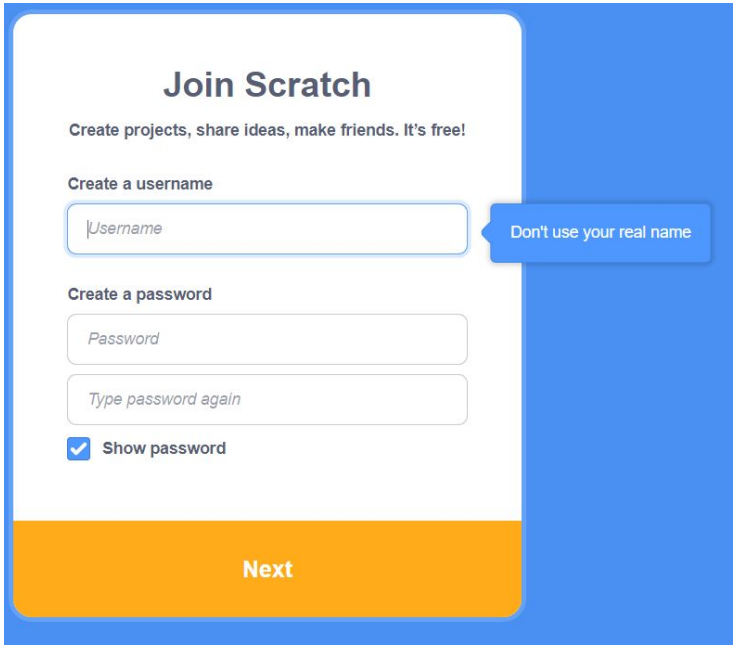
How to Create an Account

You are not required to create an account to use Scratch.

But it makes it easy to save your games in case you want to work on them later!

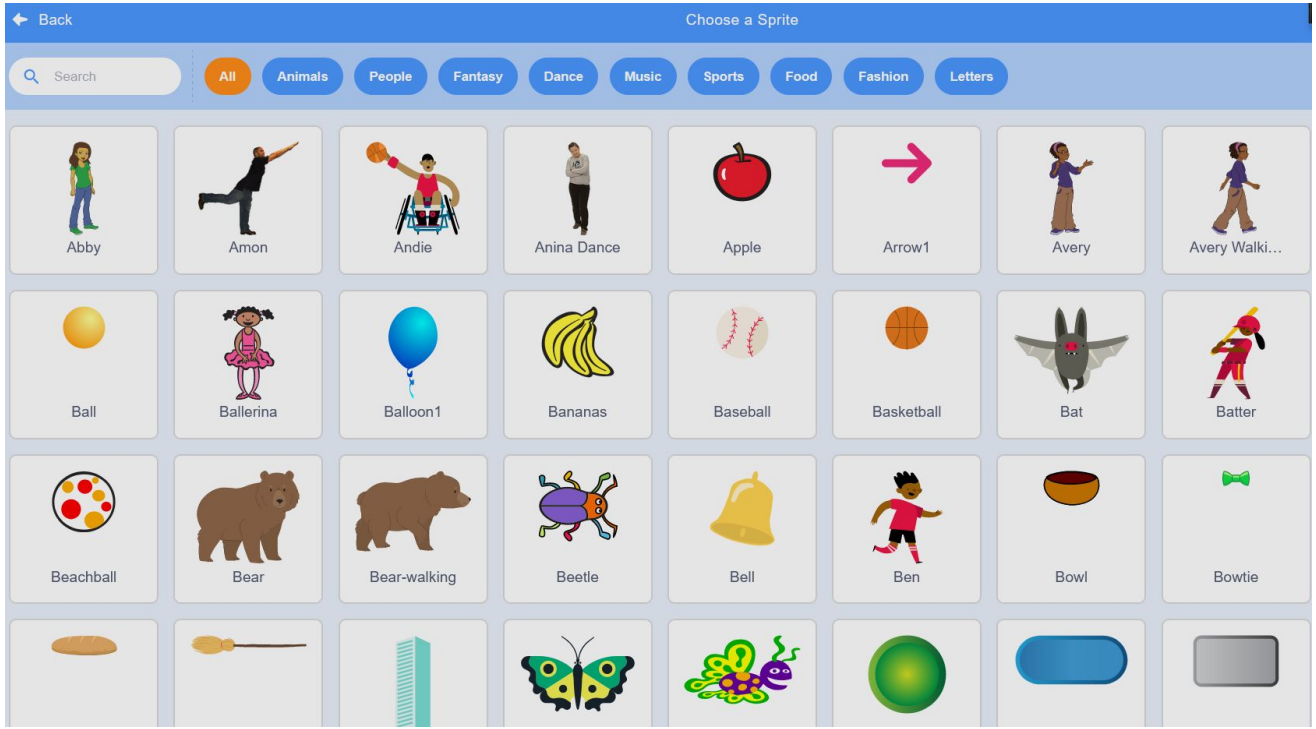
Click “Join Scratch” to start the process.

https://scratch.mit.edu/

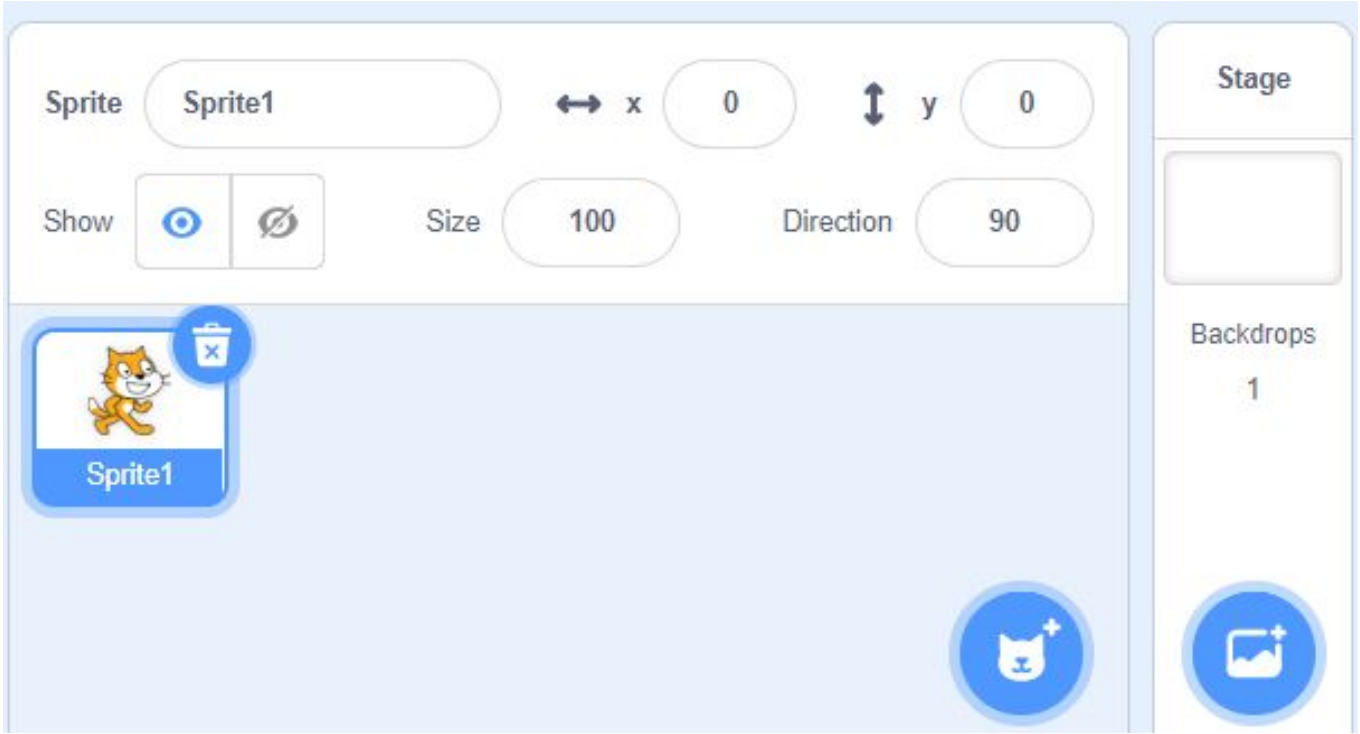


Sprites

Programmable entities with appearances you can modify.



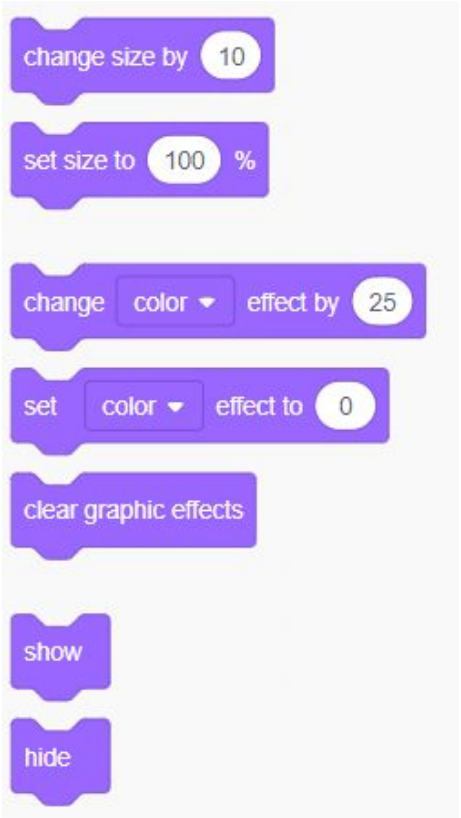
Sprites and Backgrounds Workspace

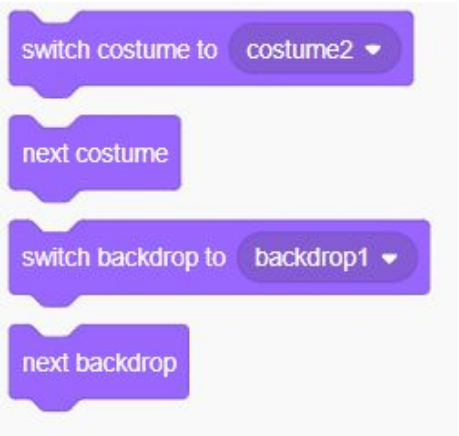


Working with Sprites and Backdrops

These blocks allow you to change how a sprite looks on the screen.

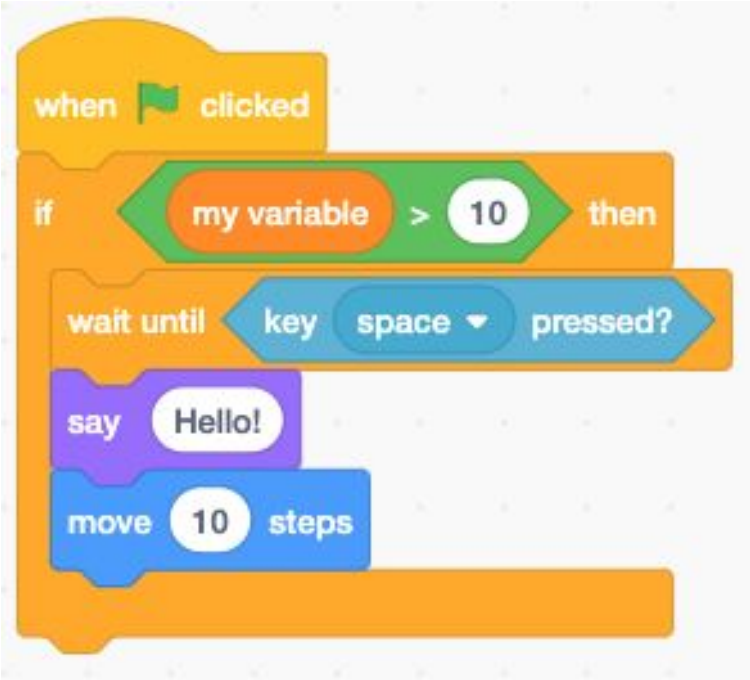
You can also change the backgrounds for the sprites.





Basic Scratch Blocks to Get You Started

- Events
- Control
- Motion
- Variables
- Operators
- Others



Events

Event blocks are handy for controlling a game or sprite's state. When their condition is met, they execute the code attached to them.

Control

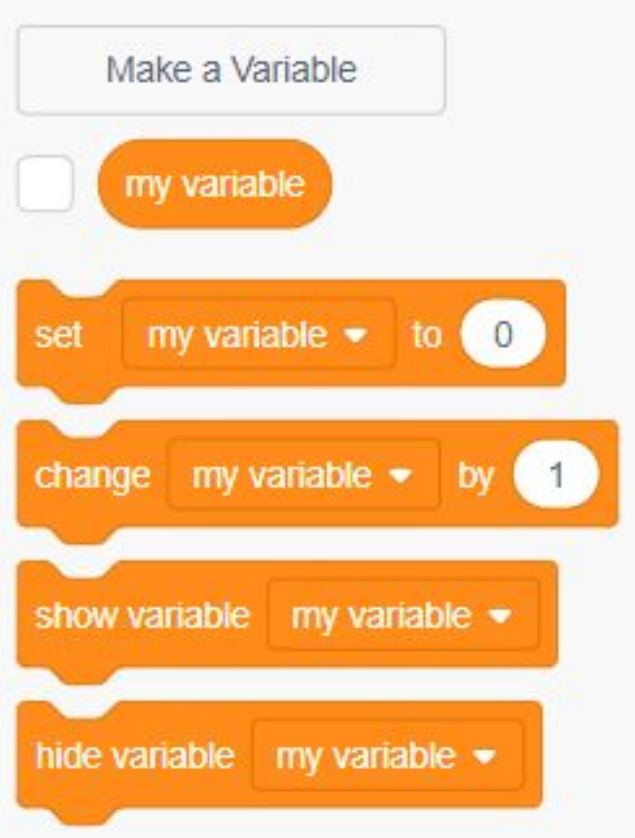
Control blocks will make up the foundation of your code. They enable code to execute in different ways, or based on certain conditions.

Motion

Motion blocks move, rotate, and alter sprites. They can be used to make controllable characters, NPCs, and other elements of your game.

Variables

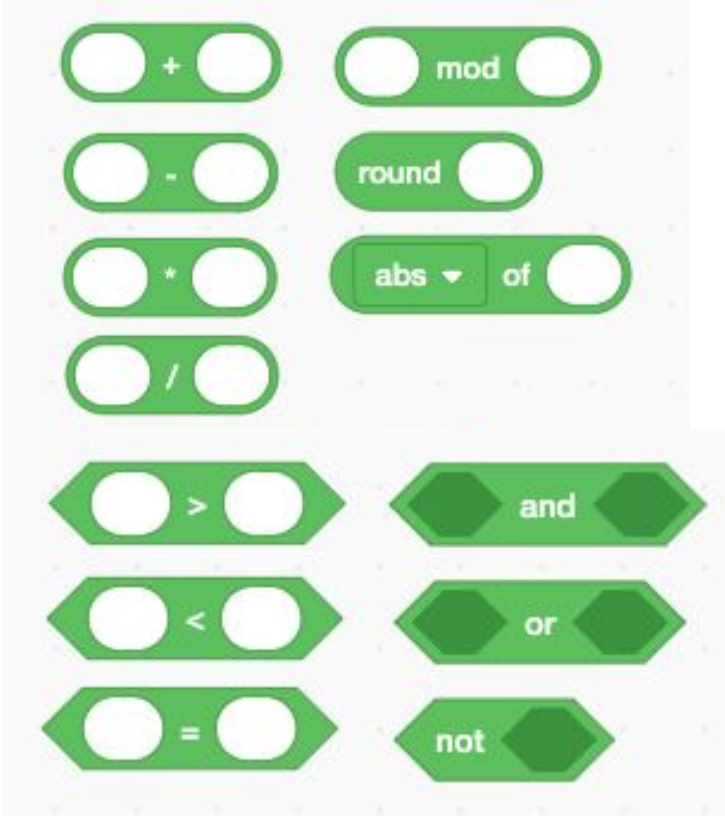
Variables represent a number which can be set and changed using variable code blocks. They can be used to keep score or modify other blocks dynamically.



Operators

Operators fall into two categories:

- Rounded operator blocks modify number values.
- Hexagons evaluate the truth of a statement.



Other Useful Blocks

Templates You Can Use To Get Started

Catch Fruit:
https://scratch.mit.edu/projects/472615821

Jump on Bread:

https://scratch.mit.edu/projects/472615960

Bear Crossing:

https://scratch.mit.edu/projects/465683323/

Showcase Your Creations!

More resources for coding ideas

How To Make a Platformer Game in Scratch 3.0 | Part 1

How to Make a Jumping Game in Scratch | Tutorial

How to Make a Virtual Pet in Scratch | Tutorial

Snake Game in Scratch 3.0