

8. Variables Blocks

Variables blocks (**dark orange**) let you **store and manage data** in your project. A variable is like a labelled box that can hold a number or piece of text, and whose contents can change while the project runs. Variables are used for scores, lives, timers, player names, and much more

Creating a variable

Before you can use a variable, you need to create it:

1. Click on the 'Variables' category in the Programming Palette.
2. Click 'Make a Variable'.
3. Type a name for your variable (e.g. 'Score', 'Lives', 'Timer').
4. Choose whether the variable is for all sprites (global) or just this sprite (local).
5. Click OK. Your new variable will appear in the palette ready to use.

[my variable]

This is the variable's own reporter block (oval-shaped)-it reports the variable's current value.

An orange oval-shaped reporter block with the text "my variable" in white.

Observe with project-[Simple relational operators](#)

Set [] to []

Sets the variable to a specific value.



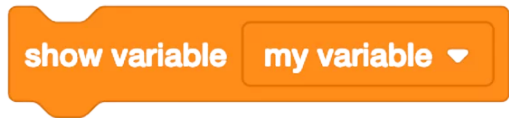
Change [] by []

Increases or decreases the variable's current value by a set

	amount. 'Change score by 1' is the classic way to add a point each time something happens.
--	--



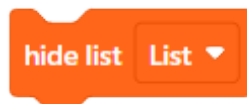
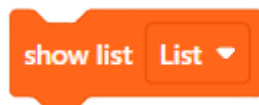
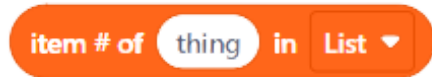
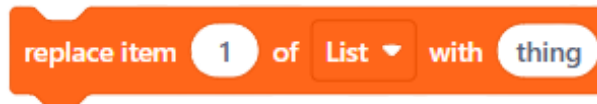
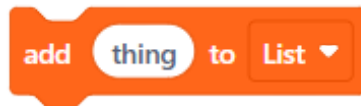
Show variable []	Makes the variable's current value visible as a display box on the stage. Useful for showing the player their score or remaining lives.
----------------------------	---



Hide variable []	Hides the variable display from the stage. You might hide certain variables the player does not need to see.
----------------------------	--



Lists: Scratch also supports Lists — a special type of variable that can store multiple values in order (like a high score table). Click 'Make a List' in the Variables category to create one. Lists have their own set of blocks for adding, removing, and reading items.



Let's learn with projects:

[Simple Calculator](#)

[Arithmetic multiply/divide](#)

[Math Game](#)