

Fruit salad



Introduction

What will you make

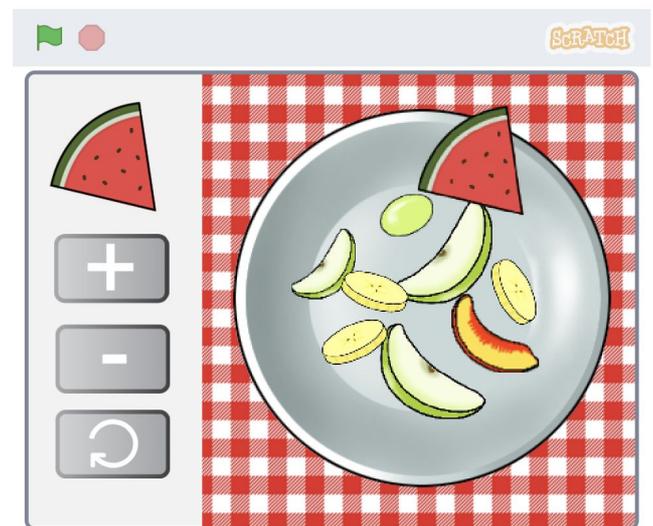
In this project, you will create an app for family and friends to design their own fruit salad. Preparing food and creating art are great ways to relax — the Fruit salad app lets you make food art!

You will learn to -

- use **broadcast** and **when I receive** blocks to communicate between different sprites and between the Stage and a sprite
- use the **Pen** extension blocks to **stamp** sprites
- add code to the **Stage**

How will you open the project

- **Online:** Open the rpf.io/fruit-salad-on in Scratch.
- **Offline:** Open the rpf.io/p/en/fruit-salad-go in the Scratch offline editor. If you need to, you can <https://scratch.mit.edu/download>.



1. Stamp fruit

Scratch extensions offer additional blocks to use, such as the **Pen** extension blocks, which allow you to draw and stamp images. You will use the **Pen** extension blocks to create stamps of a fruit sprite.

A **stamp** is a copy of the sprite, which you cannot move or delete once you have stamped it.

Step 1:

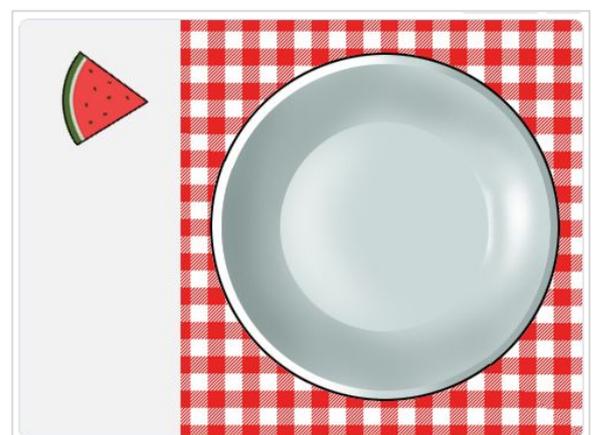
First, open the Fruit salad starter project.

You will see a backdrop with a tablecloth and a bowl.

There is a **Menu** sprite on the left-hand side of the Stage and an **Ingredients** sprite that has fruit costumes that you will be able to stamp onto the bowl.

The project does not have any code, so it does not do anything yet.

You need to add code so that every time you click or tap on the **Stage**, you create a stamp of one of the costumes in the **Ingredients** sprite at the location of your mouse pointer.



Step 2:

Select the **Stage** and then go to the **Code** tab.



Step 3:

The **Stage** needs a block to detect when it is clicked. Add a **when stage clicked** block:



Now, the **Stage** needs to let the **Ingredients** sprite know that it should add an ingredient to the bowl.

Step 4:

Add a **broadcast message1** block.

Click on **message1** and choose **New message** and enter **add**.



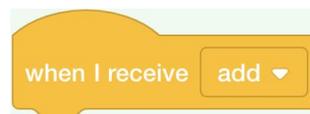
Step 5:

Now, select the **Ingredients** sprite and go to the **Code** tab.



Step 6:

Add a **when I receive add** block:



Now, you need to add the **Pen** extension blocks.

Step 7:

Click the **Add Extension** button.



Step 8:

Select the **Pen** extension.



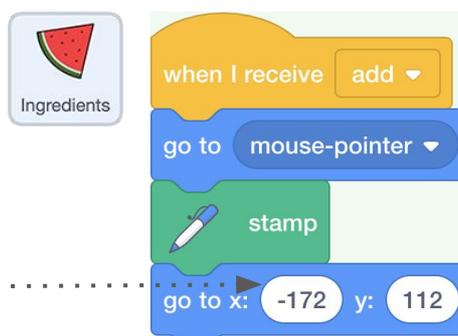
Step 9:

Then, in the **Code** tab, go to the **Pen** menu and add the **stamp** block:



Step 10:

In the **Ingredients** sprite's code, below the **when I receive add** block, add three blocks to tell the sprite to **go to** the location of the **mouse pointer**, create a **stamp**, and then return to (**go to**) the starting position within the menu:



Tip: The coordinates of the **go to x: y:** block will be set to the current location of the **Ingredients** sprite, so you need not to change them.

- Click on the bowl to add pieces of fruit.
- You will not be able to click on the menu to create a stamp because the menu stops you doing this. The **add** message is only broadcast if you click on the Stage.

Tip: In all projects, stamps go on top of backdrops, but underneath sprites.

Step 11:

Add code to the **Ingredients** sprite to clear all the stamps from the bowl **when green flag clicked**.



Step 12:

In the **Ingredients** sprite's **Code** tab, add a when green flag clicked block. Then, from the **Pen** blocks menu, add an **erase all** block:

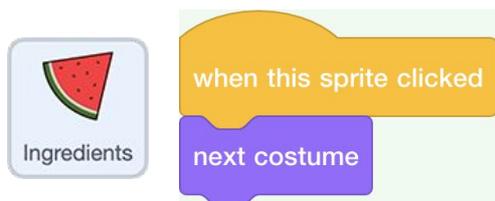


2. Choose other fruit

To make your fruit salad more interesting, you might want to add other types of fruit. The **Ingredients** sprite has other fruit costumes to choose from.

Step 1:

In the **Ingredients** sprite, create a new script beginning with **when this sprite clicked**. Select the next costume block to switch to the **next costume**:



Step 2:

Now, try out your project. Click on the **Ingredients** sprite until you see the fruit that you want to add, then click on the bowl as many times as you would like to add that fruit.

3. Add a grow button

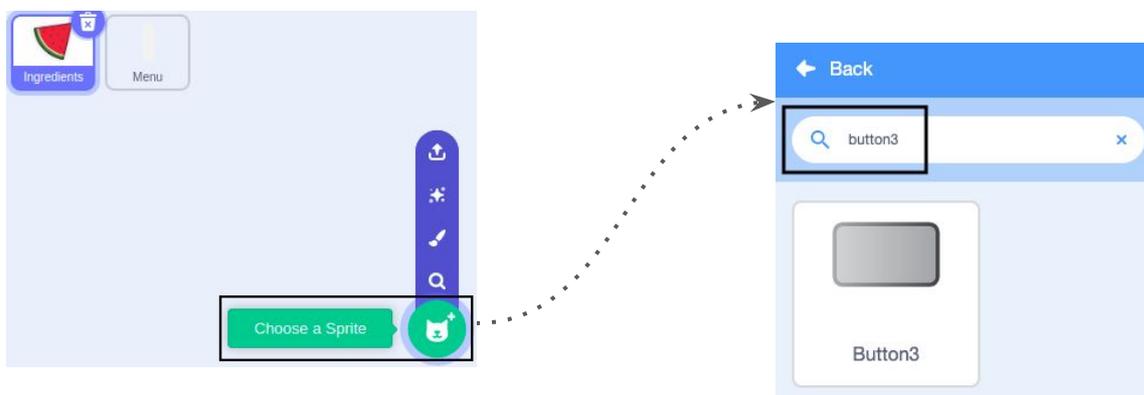
Not all pieces of fruit are the same size. In this step, you will add a button to grow your ingredients before you add them.

Step 1:

To add a button sprite, click on **Choose a Sprite**.

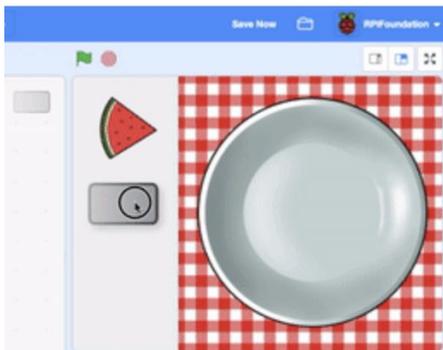
Step 2:

Type **Button3** into the search bar. Select **Button3**.



Step 3:

You will now see the button on the Stage. You need to move the button off the bowl, otherwise someone may eat it!

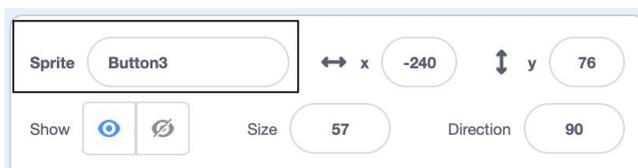


Step 4:

Drag the button from the bowl into position in the menu area on the left-hand side of the Stage.

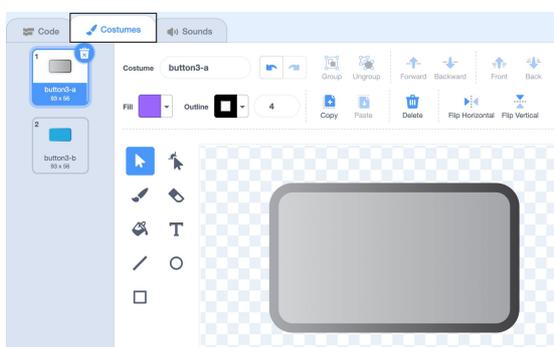
Step 5:

Change the name of the **Button3** sprite. Click on the dialogue box that shows the sprite's name. Replace **Button3** with the new name, **Grow**.



Step 6:

Click on the **Grow** sprite's **Costume** tab.



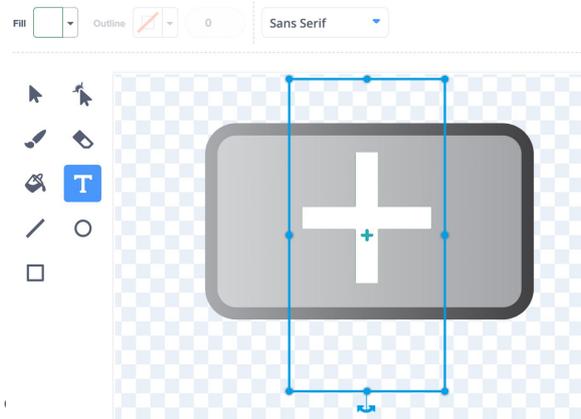
Step 7:

Choose the **Text** tool and select any **Fill** colour you like.

Step 8:

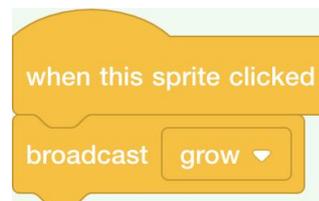
Add a **+** symbol to your button. To do this, press the **+** key on your keyboard.

Use the blue handles around the button to alter the size of the **+** symbol. Make sure that the **+** symbol fits within the button and can be seen clearly.



Step 9:

Now, you need to add some code to the **Grow** sprite. Switch back to the **Grow** sprite's **Code** tab and add the following code to **broadcast** a **grow** message **when the sprite is clicked**:



Step 10:

Now, add some code to the **Ingredients** sprite so that it can receive the message to grow from the **Grow** sprite.

Select the **Ingredients** sprite and add the following code to enable it to grow:



Step 11:

The **Ingredients** sprite is set to a starting size of **25%**. Find your existing **when this sprite clicked** script and add a **set size to** block with the value **25%** to reset the size each time the costume changes:



Step 12:

Run your program. Make sure that you can grow your pieces of fruit before you stamp them and check that they return to the original size each time you choose a new fruit costume.

4. Add a Rotate button

At the moment, each piece of fruit faces in the same direction, which will limit the design that users can create with your fruit salad app. To improve your app, you will add a **Rotate** button that users can click to rotate the ingredient before they stamp it.

Step 1:

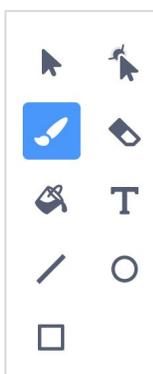
Create a **Rotate** button sprite. To do this select another **Button3** sprite.

Step 2:

Drag the new button to below the Grow button in the menu. Rename it **Rotate**.

Step 3:

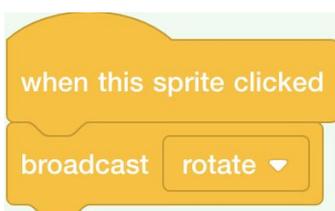
Click on the **Rotate** sprite's **Costumes** tab and select the **Brush** tool.



Tip: If you make a mistake, click on Undo and then have another go.

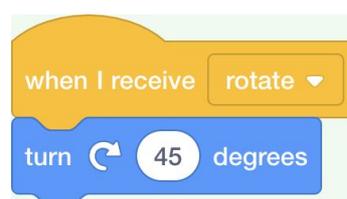
Step 5:

Now, add a new script to the Rotate sprite: **when the sprite is clicked**, it needs to **broadcast** a **rotate** message:



Step 6:

Add a new script to the **Ingredients** sprite: use a **when I receive rotate** block and a **turn right** block to rotate the **Ingredients** sprite when it receives a message to rotate.



You do not have to rotate the ingredients 45 degrees each time the **Rotate** button is clicked. You can choose any angle of rotation.

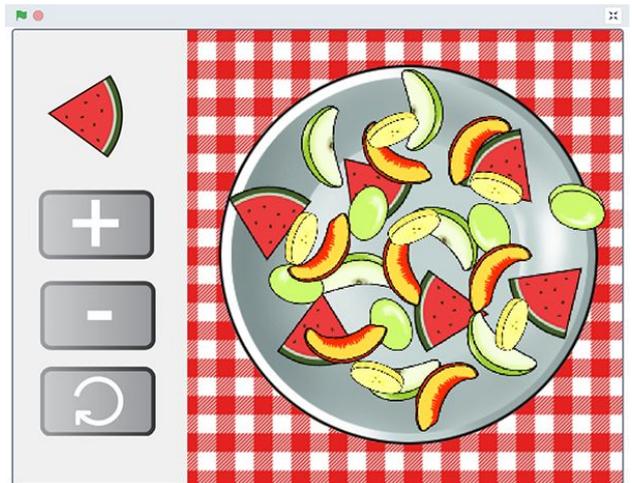
Step 7:

Try your project again. Choose an ingredient, rotate it, stamp it as many times as you like, and keep adding ingredients to create a fruit salad. What patterns can you create with fruit?

5. [Add more](#)

Customise your project. You could make another button that will shrink the ingredients or a button to change the colour of the tablecloth.

Perhaps you could create more fruit costumes to create even more varieties of fruit art.



 Save your project