



VOCABULARY

Costume: The picture that represents a sprite

Change Costume: Changing the picture that you use for a sprite

Animation: When sprites come to life by moving and doing different actions

Timing: When something happens

Motion: When a sprite moves

ACTIVITY GOAL

In this project, you will learn how to **animate** sprites.

BACKGROUND

To **animate** a **sprite** you must change its **costume**. In addition to changing a sprites **costume**, you will also control how often the **costume** changes (**timing**).

Costumes

To make a good animation, you need multiple pictures for the same sprite, called **costumes**.



Timing

By using the wait **block** to the right (in the Control category) you can make the costume changes happen slowly enough so that you can see them.



EXPLORE

1. Open the project. Click on the **green flag**.



2. Click on the ballerina.
Describe what happened below.

She does a dance routine.



3. Look at the **scripts** for the ballerina. Notice how she has *two different scripts*. The first one resets (**initializes**) her when you click on the green flag and the other one is the **script** for her dance routine.

4. Click on the **costumes** tab (next to the **Scripts** tab). This tab holds the costumes for your sprite.

How many costumes does the Ballerina have? 5

How many does the Cool Dude have? 4

How many does Cassy have? 8




Create a quick animation for the Cool Dude

1. Click on the Cool Dude in the **sprite list**.
2. Find the **costumes** tab where all of the Cool Dude's **costumes** are. Decide which costume you want him to change into.
3. Change the Cool Dude's **costume** using one of the **blocks** below.
Hint: Add to the script that starts with the "When CoolDude clicked" block.



4. Add more **blocks** to the Cool Dude's **script** to change his **costume**. There should already be some blocks that will change his costume.
5. Try out your **script!** Click on the Cool Dude and see what happens. Write what you saw below.

He moved a little bit for a split second and then went back to his original position. The script ran too fast to really see anything.

6. To make the **costume** changes happen more slowly you need to add a **wait block** between each **costume** change. 
7. Now that the Cool Dude's **costume** is changed you need to make sure that when you click on the green flag he gets reset (**Initialized**).

Add the "switch to costume" **block** to his "When green flag clicked" script.



PROGRAMMING CHALLENGE: Dance Party

Your goal is to create a dance routine for Cassy using costume changes.

PLAN

Step 1: Plan Cassy's dance moves.

Look at all of Cassy's **costumes** in the Costumes tab. Write out the first five costumes you want her to switch into.

1. Cassy- chillin
2. Any costumes for Cassy that
3. are chosen are correct. All of
4. these will start with "Cassy - ".
5. _____



Step 2: Plan the timing of Cassy's dance routine.

Decide how many seconds you want to **wait** between each dance move. Try each of the times below in your **wait blocks** and see which one you like the best. Circle the one you choose.



Any choice is correct.

CREATE

Now it is time to create your dance routine for Cassy!

Double-check: Did you remember everything?

1. Did you **initialize** Cassy so that she will return to her original position when you click on the **green flag**?
2. Did you create a dance routine for Cassy using **costume** changes and **wait blocks**?

Try it out: Try out your **script!** Click on the **green flag** and then click on **Cassy**.

IMPROVE

1. Add **motion blocks** to your **scripts** to make the **sprites** move while dancing.
2. What could you do to make your dance party more interesting? Write the **blocks** you might use and what those **blocks** might do below.

IMPROVE sections are designed to be open-ended for students and there are multiple correct responses and solutions to these questions.
