



KELP Module 1
Topic: Writing a Program
ACTIVITY 5: Dance Party

VOCABULARY

Costume: The picture that represents a sprite

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

ACTIVITY GOAL

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

BACKGROUND

To animate a sprite you must change its **costume**. Changing costumes changes the look of the sprite if done correctly you can get sprites to look like they are walking, talking, or doing other interesting things. In addition to changing a sprites costume, you will also control how often the costume changes (**timing**) and add **motion** to your sprite.

Costumes

To make a good animation, you need multiple pictures for the same sprite. Here are two pictures of a dog. Notice that they look almost the same, except the legs are in slightly different positions. By putting these two costumes together you can make it look like the dog is walking.



Motion

If the animation you want involves a sprite that is moving from one place to another, then you need to make the motion happen **at the same time** as the costume changes. To do this you can use the blocks to the right to make your sprite move in between each costume change.



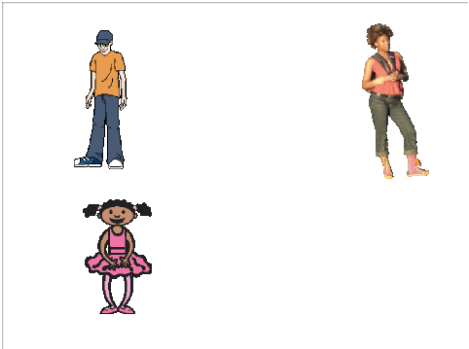
Timing

If you just pair motion with costume changes, it will occur so quickly that you will not be able to see what is happening very well. By using the “**wait**” block below (found in the “Control” category) you can make the changes happen slowly enough so you can see the costume changes.





EXPLORE

1. Open the project (LessonDanceParty). You should see a white background with three people standing there.
2. Click on the green flag. Then click on the ballerina. What happens when you click on her? Describe it below.



3. You should be able to see the **scripts** for the ballerina. Notice how she has two different scripts. The first one resets her when you click on the green flag and the other one is the script for her dance routine.

What types of **blocks** are used for the two scripts? Write out the different blocks that are used for each script below (only write each block once).
Hint: You only need to write the "switch to costume" block once.

Script 1 (Reset Ballerina)	Script 2 (Ballerina Dance Routine)
	
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4. The **costumes** tab holds all of the costumes for your sprites. Click on the costumes tab (right next to **Scripts**).

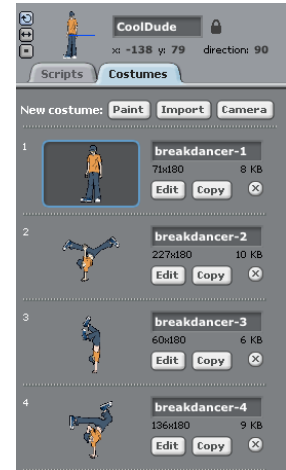
How many costumes are there for the Ballerina? _____

How many costumes for the Cool Dude? _____

How many costumes for Cassy? _____



5. To change costumes for a sprite you will use the costume blocks in the **Looks** category. Change the Cool Dudes costume using one of these blocks. *Hint: Start this script with the "When CoolDude clicked" block*

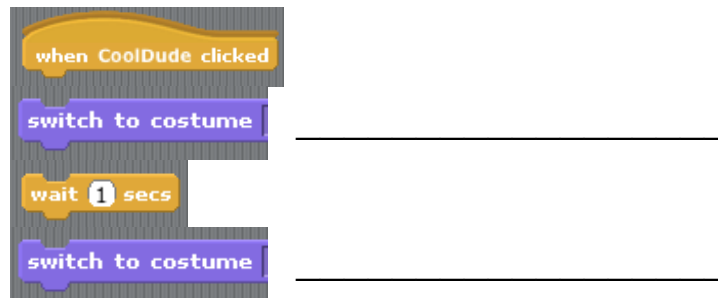


6. Now that you have changed the Cool Dude's costume you need to make sure that when you click on the green flag he goes back to his original position.



To do this you need to add the block on the left to his "When green flag clicked" script.

7. Now add a "**wait 1 secs**" block to the Cool Dude's script. Add another **costume change** block to the end. Write out your script so far and the costumes you had the Cool Dude switch into.



8. To **initialize** (reset) the Cool Dude you need to click the green flag before you **add more to his dance routine script**. Remember that you need to click on his **sprite** to get him to do his dance.

PROGRAMMING CHALLENGE: Dance Party

Your goal is to create dance routines for all of the dancers. You should already have scripts for the Cool Dude and the Ballerina, but you still need to create one for Cassy.

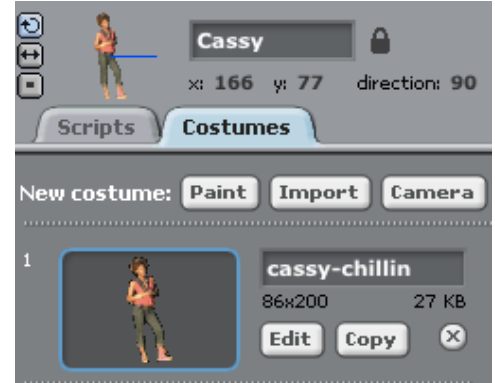
PLAN

Step 1: Plan Cassy's dance moves. Look at all of Cassy's costumes in the "costumes" tab.

Write out the first five dance moves you want her to do (which **costumes** will she switch into).

Hint: Start with the costume "cassy-chillin"

1. Cassy- chillin
2. _____
3. _____
4. _____
5. _____



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


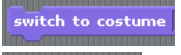

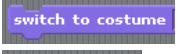

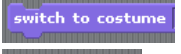

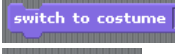

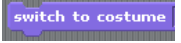
Decide how many seconds you want to **wait** between each dance move. How many seconds will you wait between move 1 and move 2? _____

How many seconds will you wait between move 2 and move 3? _____

How many seconds will you wait between move 3 and move 4? _____

How many seconds will you wait between move 4 and move 5? _____

Step 3: Create the script for Cassy's dance routine. Put together the blocks you need for Cassy's dance routine. Remember to put a "wait" block between each "switch costume" block. Write your completed script on the right.

 	_____ # _____
 	_____ # _____
 	_____ # _____
 	_____ # _____
 	_____ # _____

CREATE

Now it is time to create your dance routine! Go to the left side of the screen where the blocks are and find the blocks you need to create the dance routine for Cassy.

Hint: Use the script you created in step 3 above to help you figure out which blocks to use.

Before you begin: Remember that you need to **initialize** Cassy so that she will return to her original position when you click on the **green flag**. To do this you need to add the block below to her “when green flag clicked” script.



Try it out: Now you can try out your script for Cassy. To have her do her dance routine click on the **green flag** and then click on **Cassy**.

IMPROVE

1. Once you have finished creating Cassy's dance routine you can go back and improve the script for the **Cool Dude** too.

2. **Try getting all of them to dance at once!**

3. What could you do to make your dance party more interesting? Write what blocks you might use and what those blocks would make your dancers do below.



REFLECT

Is there anything you found surprising when you were doing this project? Why?

Did anything work differently than how you thought it would?

What was the hardest thing to figure out about the project? Why?
