Coding Basics 2
Code Your Performance Routine

Learn about song functions.

When a programmer creates a function, she needs to define it for the computer — that's called a **function declaration.** The computer needs to know the name of the function and what kind of details — or arguments — it can have.

Function declaration is the process for creating a new function. Creating new functions allows a programmer to create reusable code.

How to declare a function:

1. Start with the keyword "function." This tells the computer it's going to be a new function.

2. Give the new function a name followed by parentheses.

3. Start the body of the function with open curly brackets "{"

4. Insert the code you want to run - functions for smaller steps in this larger function. Put one function per line and to indent a bit. This makes your code easier to read because it creates visual chunks or blocks.

5. Close the curly brackets "}" to tell the computer the function is complete.

Here are some functions you can use to create your performance code. You can also make your own.

- stepLeft()
- stepRight()
- stomp()
- clap()
- pause()
- say("message")
- shout("message")
- whisper("message")

Example of a Function Declaration

Line No.	Explanation	Code
1	Declare function name, open bracket to start new function	`function boxDance() {`
2	Step to the left	`stepLeft()`
3	Step forward	`stepForward()`
4	Step to the right	`stepRight()`
5	Step back	`stepBack()`
6	Close bracket to finish new function	`}`

First, declare a function to create your dance routine.

Step 1. Pick 3 functions from the list, or create your own, to create a dance routine that relates to your song lyrics.

Line No.	Explanation	Code
1	Example function	`stomp()`
2	Example function	`shout("message") // remember to include the message!`
3		
4		
5		
6		

Step 2. Create a new function declaration. Use Javascript-style syntax to declare your new function and name it to describe what the function does.

Line No.	Explanation	Code
1	Fill in function name	`function _____() {`
2	Use function from Step 1	
3	Use function from Step 2	
4	Use function from Step 3	
5	Close function	`}`

Optional: Create another sequence of dance movements to go with a different part of your song. Declare the function by writing to code on a blank sheet of paper.

Then, combine your song lyrics and dance routine into one piece of code.

How to combine song lyrics and dance moves into a coded performance:

1. Use the chart on the following page of this handout.

2. Start the new function by deciding on the new function's name and filling it in on line 1.

3. After you fill in a name for your main function, use each line to write in the steps of your routine. These go inside of your main function.

4. Continue adding lines until your all your lyrics are translated into code and you've added your dance moves, too.

5. Remember that the computer can only do exactly what you tell it to do, in the order you tell it to do.

Here's one example of a coded performance:

Line No.	Code
1	function loveNotHate() {
2	var line1 = "Love"
3	var line2 = "Not Hate"
4	var line3 = "Makes America Great"
5	var line4 = "We choose love"
6	
7	for 1...4 {
8	shout(line1)
9	shout(line2)
10	shout(line3)
11	}
12	
13	shout(line4)
14	raiseArms()
15	headBow()
16	fistPump()
17	}

Use Javascript-style syntax to declare your new function and name it to describe what the function does. Fill in the blank lines with all the sub-steps of your performance.

Remember: Don't forget to use loops for any code that repeats!

Line No.	Explanation	Code
1	Fill in function name	`function _____() {`
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20	Close function	`}`