

## Up for a Challenge?

5.1 | Functions 



### Dance Rehearsal

Dash is getting ready for the Interstellar Dance Contest! Let's create a dance move for Dash to use in the contest.



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5.1 | Functions 

1. Use a **Function** block to make Dash's new dance.  

2. What do you want Dash's dance to look like? You can add blocks like these **inside the Function** block.  
  
  

3. Under the **When Start** block, program Dash to do the dance **at least 2 times**.  


Add **lights and sounds** to Dash's dance as well.

 Use more **functions** to create new dance moves for Dash!

### MATERIALS:

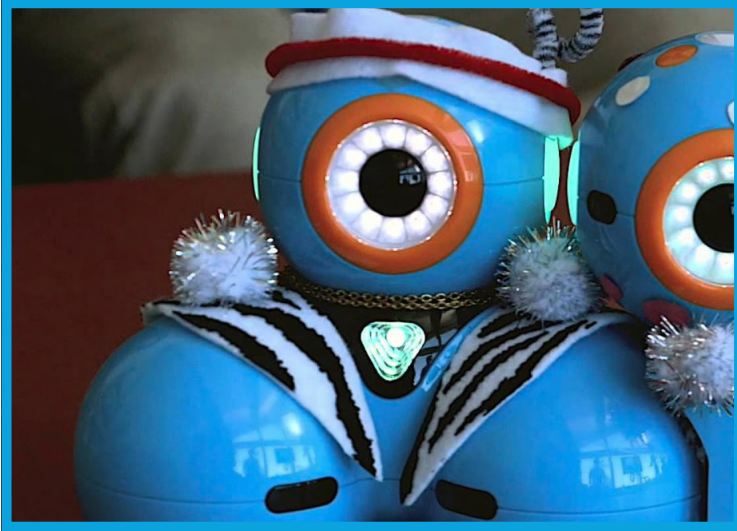
- Dash robot
- Blockly app
- Background Music
- Dash Challenge Card

### STEPS:

1. Use the "Dance Rehearsal" Dash Challenge Card to create a sequence of commands for Dash.
2. Open Blockly on your [compatible device](http://www.makewonder.com/compatibility) (www.makewonder.com/compatibility) and create a program.
3. Follow the instructions on the Challenge Card by dragging the block commands onto your screen. Connect them in order below the START block.
4. Be creative when choreographing Dash's dance moves. Don't be afraid to use trial and error!
5. Press the green PLAY button to test your program.until it looks just right.

# Now Let's Get Creative!

Use your coding skills to create a music video for Dash!  
Pretend that Dash is starring in a music video. Choose a song, or make your own, and choreograph a dance routine to go along with the song of your choice.  
Dance costumes are encouraged!



## MATERIALS:

- Dash robot
- Path, Blockly, or Wonder
- Building Brick Connectors and LEGOs
- Fun summer song of your choice
- Sketch Kit (optional)
- Painter's tape
- Craft materials for costumes: fabric scraps, construction/scrapbook paper, tape, scissors, etc.

## STEPS:

1. Designate a dance floor somewhere in your house, and mark out a square with painter's tape as the dance space.
2. Program Dash's dance moves using Path, Blockly, or Wonder.
3. Be sure to get creative with lots of spins, head nods, and flashing lights!
4. Use a clap, voice command, or other event to run your program.
5. Record and share your dance routine when you think it is worthy of an MTV Music Video Award!

## LEVEL UP!

Dash needs a partner! Use another Dash as a background dancer flashing its lights to the music? Or can you build an attachment so that Dash can carry a stuffed animal, doll, or action figure throughout the routine?

## LEVEL UP AGAIN!

Attach the Sketch Kit to Dash to create an illustration or design while your robot dances along to the music. What shapes can Dash create as they move across the a whiteboard mat dance floor?

Record a video of your robot performing the dance routine and share it with us on Twitter [@WonderWorkshop](#) with the hashtag [#SummerofWonder](#).

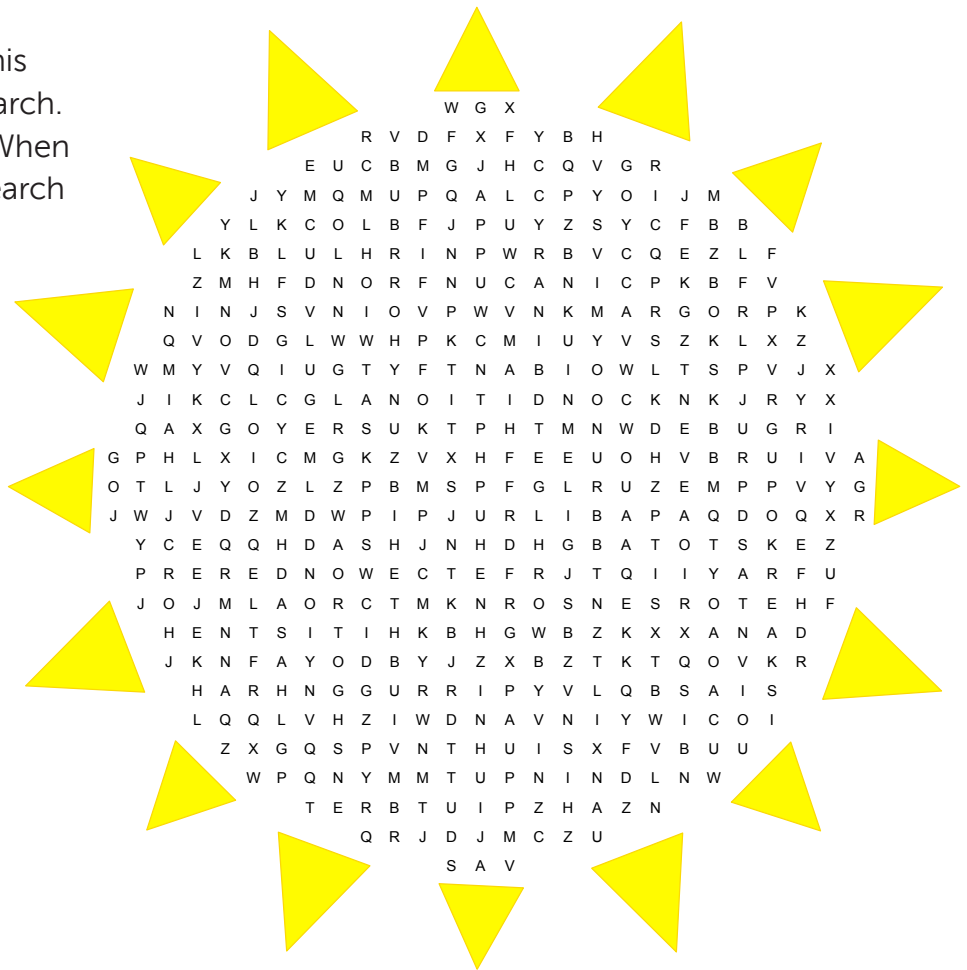
## Vocabulary

**Function:** A function is a command that we get to invent and name. It allows us to break our program into smaller parts, making the program easier to understand.

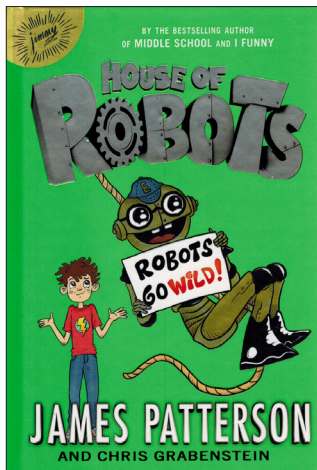
# Time to Go Offline!

Want to unplug for a while? Try this summer themed coding word search. How many words can you find? When you are finished, create a word search of your own on pg 5.

- DASH
- PROGRAM
- CODE
- DEBUG
- CONDITIONAL
- LOOP
- BINARY
- BLOCKLY
- WONDER
- FUNCTION
- EVENT
- SENSOR
- INPUT
- ITERATION
- RUN
- VARIABLE



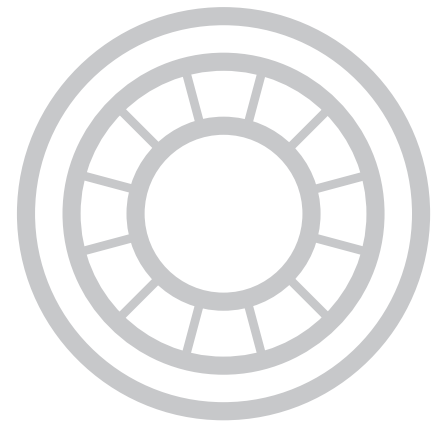
## SUMMER READING:



Take a look at our blog's Summer STEAM Reading List. How many books have you read this summer that have to do with coding or robotics?

<http://bit.ly/STEAMreading>

## COLOR IN OUR ROBOT'S EYE TO SHOW HOW MANY BOOKS YOU'VE READ SO FAR:



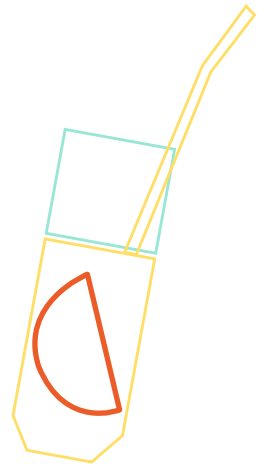
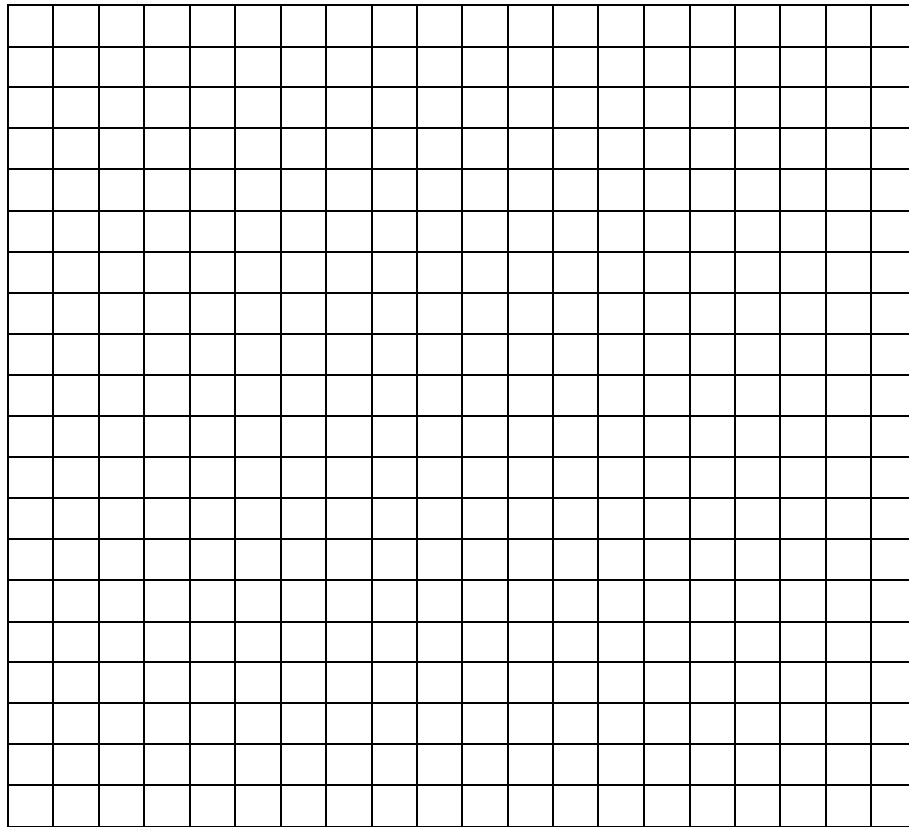
## FUN FACT:

The earliest modern robots were created in the early 1950s by George C. Devol, an inventor from Louisville, Kentucky. He invented and patented a reprogrammable manipulator called "Unimate," from "Universal Automation."

# Create Your Own Word Search

Use this Code.org [glossary](https://code.org/glossary) <https://code.org/curriculum/docs/k-5/glossary> to help you add words to your puzzle.

Place your favorite coding words in the blank template provided. Remember, you can make the words go across, down, backwards, and diagonally. Fill in the remaining boxes with random letters of your choice.



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