Summer of Wonder

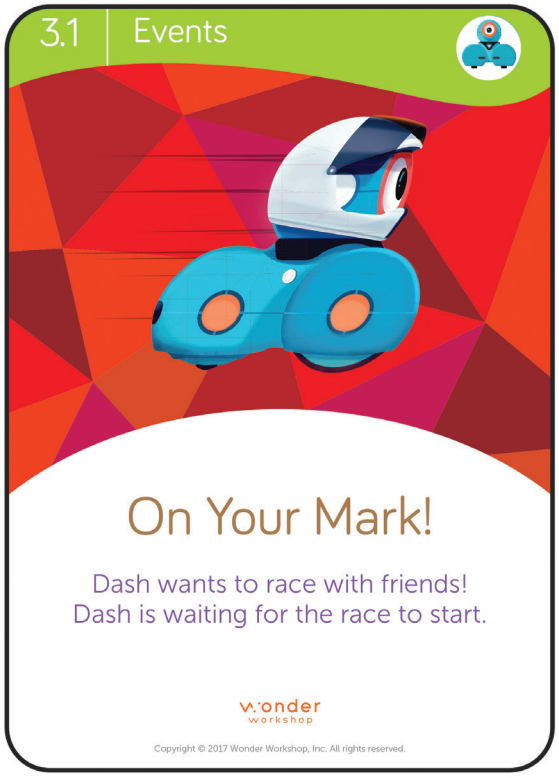
Activities Packet #1

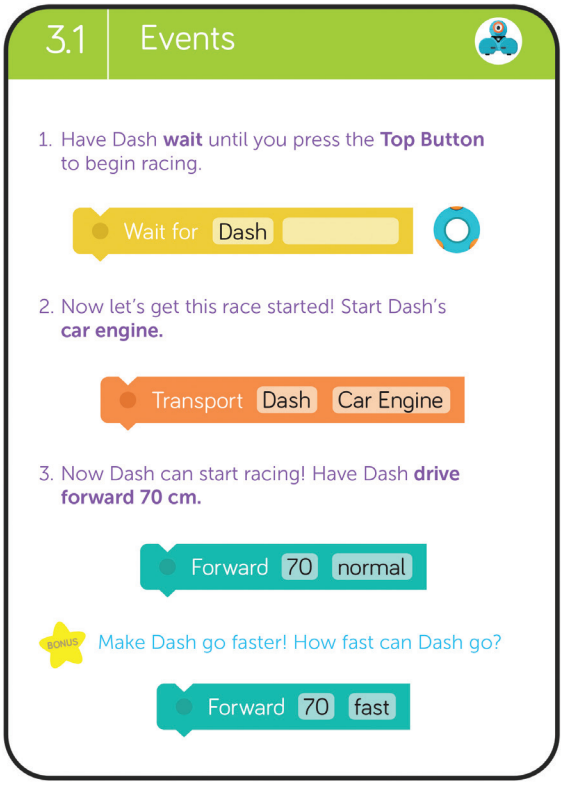
Up for a Challenge?

Robot Race!

MATERIALS:

- Dash robot
- Blockly app
- Painter's tape
- Dash Challenge Card (p. 2)





STEPS:

1. Use the "On Your Mark" Dash Challenge Card to create a sequence of commands for Dash.

2. Use painter's tape to create a starting line and a finish line for Dash.

3. Open Blockly on your compatible device (www.makewonder.com/compatibility) and create a new program.

4. Follow the instructions on the Challenge Card by dragging the block commands onto your screen. Connect them in order below the START block.

5. Press the green PLAY button to test your program.

Now Let's Get Creative!

Use your coding skills to create a bowling game for Dash!
Pretend that Dash is a bowling ball, and program it to knock down a set of pins.
Consider how you might put a summer spin on the bowling pins.
How might you decorate them to be ice cream cones or palm trees?

MATERIALS:

- Dash robot
- Path, Blockly, or Wonder
- Bulldozer Accessory (optional)
- Toy bowling pins, or you can substitute empty water bottles or cardboard paper towel rolls
- Painter's tape
- Supplies to decorate pins: scrapbook paper, craft paints, washi tape, scissors, and/or double-sided tape

STEPS:

1. Designate a bowling lane somewhere in your house, and mark the "starting line" with the painter's tape.
2. Set up pins in a triangular pattern (or any pattern you would like) about 8-10 feet from the starting line.
3. Program Dash using Path, Blockly, or Wonder, to bowl a strike, by creating a sequence of commands that will send the robot down the lane to knock the pins down in one fell swoop.
4. Use a clap, voice command, or other event to run your program.
5. Test your program as many times as you want! There are 10 frames in bowling, but who's counting?
6. Record and share your robot victory once you have written a "striking" program.

LEVEL UP!

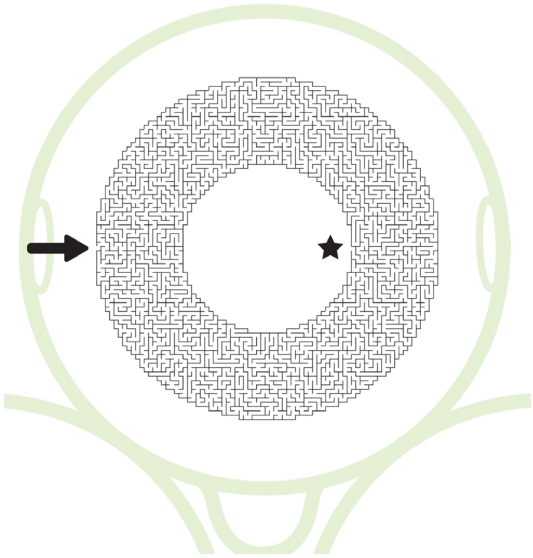
Start Dash off to the side, not directly in front of the pins, or backwards, not facing to the pins, to practice turns and angles. Or try adding more pins! You also can spread out the pins to increase the difficulty. Definitely choreograph a robot victory dance after you have made a strike!

Vocabulary

Event: An action that causes something to happen.

Time to Go Offline!

Want to unplug for a while? Dash wants in on the summer fun! Put your problem-solving skills to the test with this (eye)ball of a maze on **page 5**

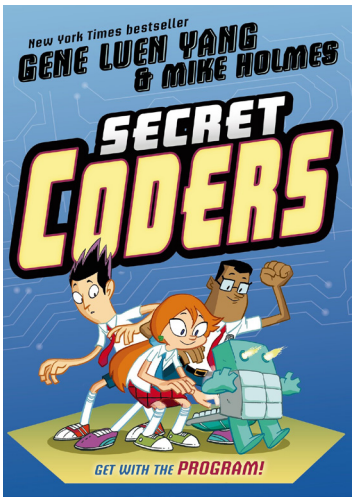


Can you "see" a way to the finish?

Use the activity sheets on pages 4 and 5. Remember to fail forward and don't give up!

When you are done, try creating your own maze on **page 5**. How difficult will you make it? Will you begin from the start or work backwards from the finish?

SUMMER READING:



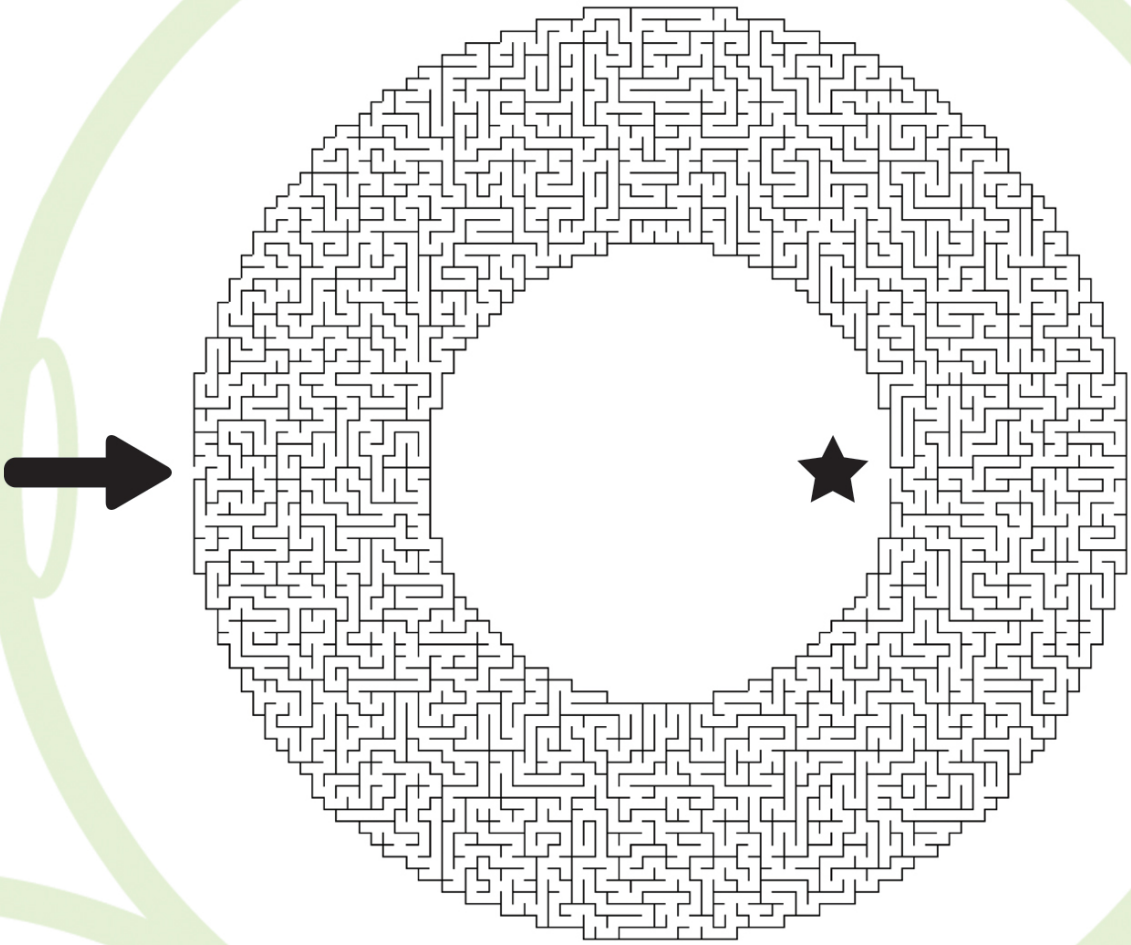
Take a look at our blog's Summer STEAM Reading List. We've just added chapter books to the current list of picture books for older readers. How many books have you read this summer that have to do with coding or robotics? http://bit.ly/STEAMreading

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

FUN FACT:

The first humanoid robot debuted in 1939. Elektro, built by Westinghouse, was 7 feet tall and could 'speak' 700 words.

Dash is a-maze-ing!



Design Your Own Maze!