

# WINTER WONDERLAND

## Up for a Challenge?

### Dashing Through the Snow!

#### MATERIALS



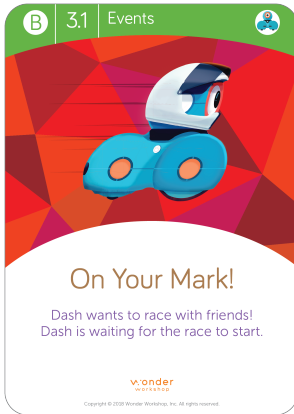
Dash robot



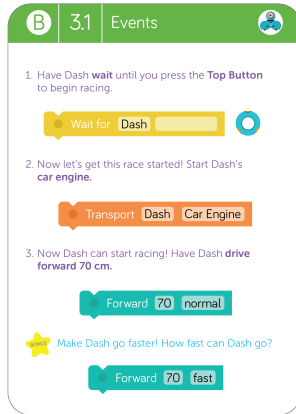
Blockly app

3 18 oz. plastic cups

Painter's tape



Dash Challenge Card B 3.1

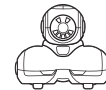


#### STEPS

- 1 Use the "Recycling Rush!" Dash Challenge Card to create a sequence of commands for Dash.
- 2 Open the Blockly app on your compatible device\* and create a new 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 Press the green PLAY button to test your program.

### What Can You Do with Cue?

#### MATERIALS



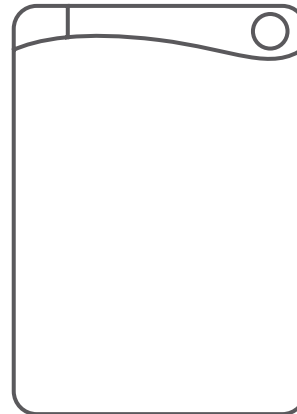
Cue robot



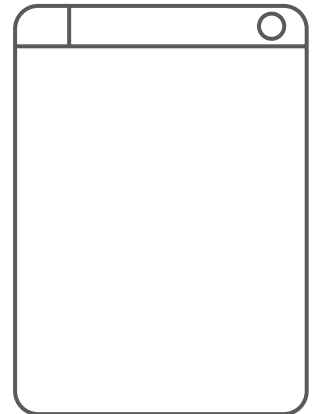
Cue app

3 (or more) 18 oz. plastic cups

Painter's tape



Blank Challenge Card



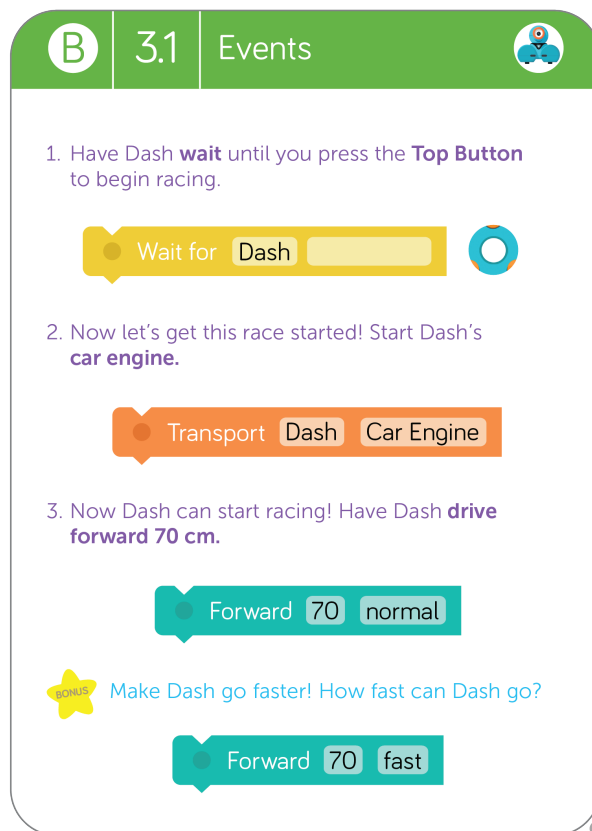
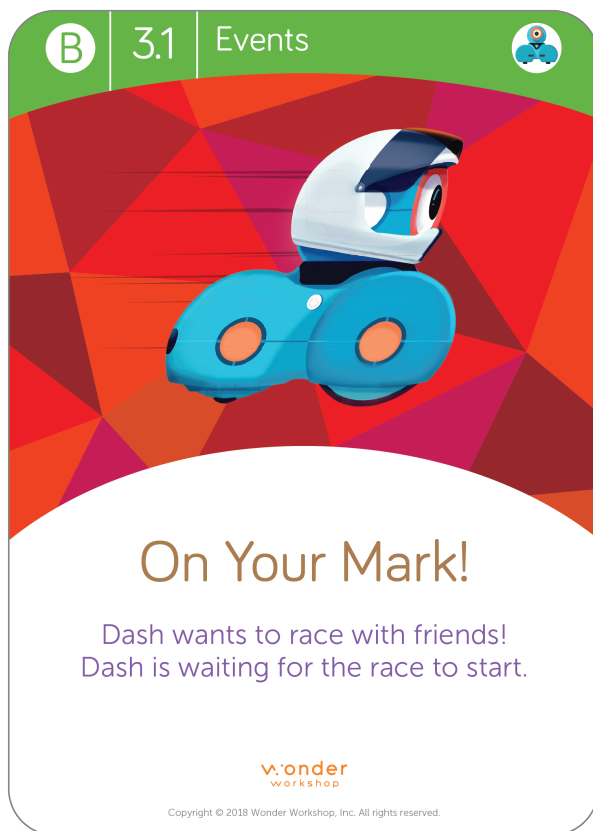
#### STEPS

- 1 Take a look at the "Recycling Rush!" Dash Challenge Card.
- 2 Create your own Challenge Card outlining a similar race challenge for Cue.
- 3 On the front side, add an image with a title and problem statement. On the back, outline your challenge in simple steps!
- 4 Open the Cue app on your compatible device\*.

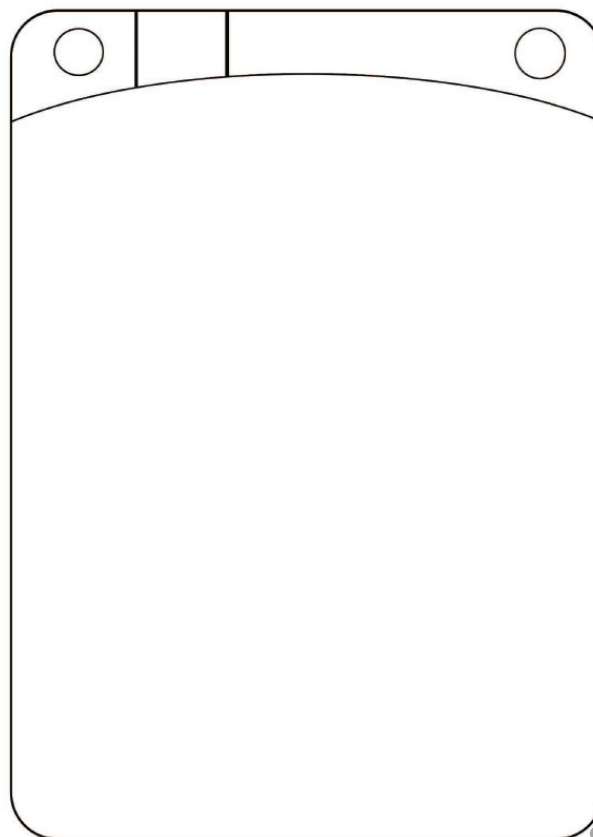
Record a video of Dash or Cue running your program successfully.

Share your video on Twitter @WonderWorkshop with the hashtag #FunWithWonder.

Cut out the Dash Challenge Card and fold in half or glue back to back.



Design your own Challenge Card. Cut and fold/glue when you are done.



# Now Let's Get Creative!

Assist Dash and Cue in an epic snowball battle. See how many points Dash can earn by throwing "snowballs." Cue, on the other hand, must roll a snowball to knock down the opponent's defense.

Who will win this winter wonderland snowball battle?

## MATERIALS



Dash



Blockly app

OR



Wonder app

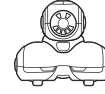
**Launcher accessory** (including balls or crumpled paper balls)

**DIY materials** such as tape, cups, cardboard, scissors, baskets, etc.

## STEPS

- 1 Create bins to catch the snowballs. To increase the challenge, the bins can be of different heights with various mouth widths.
- 2 Assign points to each of the bins.
- 3 Use painter's tape to mark three different toss lines, from which Dash can toss the "snowballs" into the bin.
- 4 Program Dash to move to each spot to try to toss the "snowball" into any of the bins.
- 5 Consider using loops to repeat the same command multiple times.
- 6 Count up the earned points. Who is the master snowball tosser?

## MATERIALS



Cue



Cue app

**Painter's tape**

**Bulldozer** (optional)

**Toy bowling pins, empty water bottles, or stackable plastic cups**



## STEPS

- 1 Use tape to mark a starting line.
- 2 Set up pins or bottles in a triangular pattern or stack cups into a pyramid about 8-10 feet from the starting line.
- 3 Determine a scoring system related to how many pieces of the defense fall away (e.g., 10 points per piece).
- 4 Create a sequence of commands that will move Cue to knock down all of the pins/cups in one fell swoop.
- 5 Use a clap, voice command, or other event to run your program.

## VOCABULARY

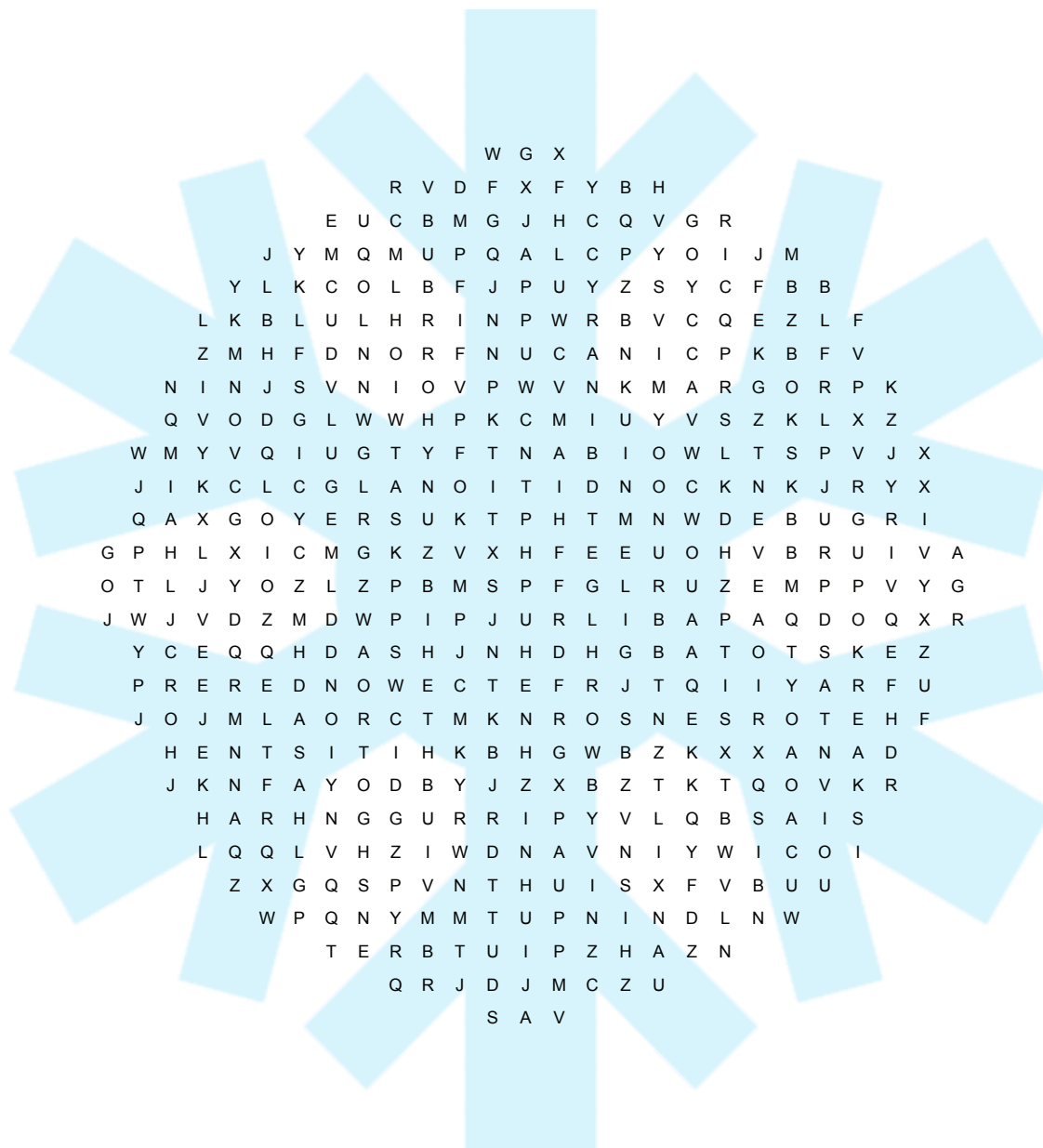
**Event** An action that causes something to happen.

**Record a video of Dash or Cue running your program successfully.**

Share your video on Twitter @WonderWorkshop with the hashtag #FunWithWonder.

# Time to Go Offline!

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



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

Want more free resources?

Go to [www.makewonder.com](http://www.makewonder.com) to discover more activities and lesson plans, plus special savings!

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

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- A full-page sheet of white graph paper featuring a uniform grid of thin black lines. The grid consists of 20 columns and 20 rows, creating a total of 400 small squares. The margins are consistent on all sides.

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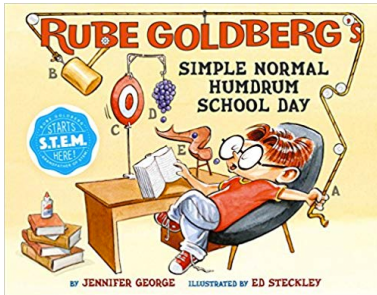
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# Recommended Reading



**Rube Goldberg's  
Simple Normal Humdrum  
School Day**  
by Jennifer George

Take a look at our recommended book.

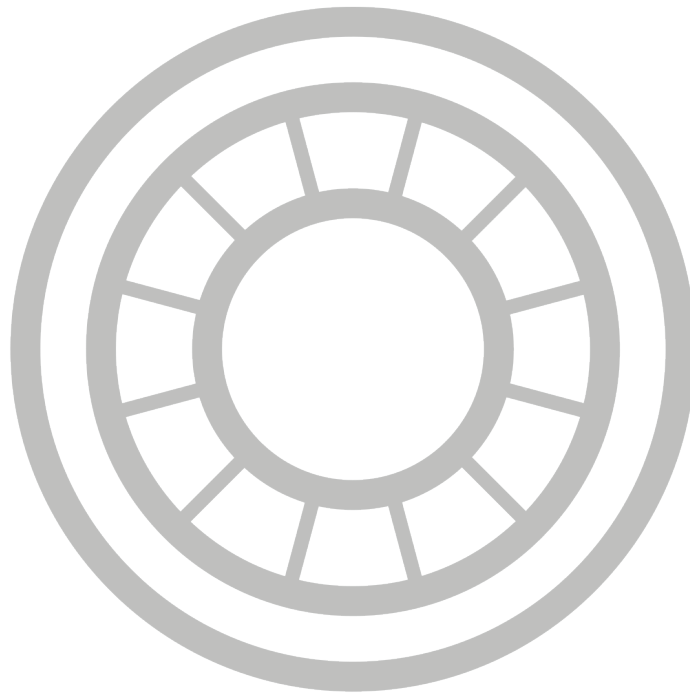
Have it heard about it before?

Do check out our other recommended picture and chapters books that have to do with coding and robotics at:

[www.makewonder.com/blog/stem-recommended-reading-list](http://www.makewonder.com/blog/stem-recommended-reading-list)

How many books on the list have you read?

Color in our robot's eye to show how many books you've read:



## ❄️ FUN FACT ❄️

Introduced at the 1939 World's Fair, the first humanoid robot, Elektro, was 7 feet tall and "spoke" more than 700 words.

**Want more free resources?**

Go to [www.makewonder.com](http://www.makewonder.com) to discover more activities and lesson plans, plus special savings!