Wonder Dash Teacher Guide

Scroll Quest Challenges for Dash Inside the Wonder App

Level 1
Wonder Workshop - Hello World
Wonder Workshop - Celebrations
Wonder Workshop - Go Bot
Wonder Workshop - Stroll Patrol
Wonder Workshop - Clap and Dance
Wonder Workshop - Press to Express

Level 2
Firefly Lagoon - Firefly Watch
Firefly Lagoon - Water Wiggle
Firefly Lagoon - Marco Polo

Level 3
Dragon Reach - Thrill Ride

Level 4
Yeti Pass - Snowman
Yeti Pass - Crazy Skates

Level 5
Mount Ashburn - Volcanic Trek
Mount Ashburn - Random Volcano

Level 6
Galaxy Lake - Spaceship Rescue
Galaxy Lake - Robot Translator

Level 7
Kong City - Doing Donuts
Kong City - Spinning Dash Game
Kong City - Butler Dash

Level 8
Forgotten Jungle - OMG Poppies!
Forgotten Jungle - Ancient Robot

Level 9
Dry Gulch Desert - Square Dance
Dry Gulch Desert - Desert Dash
Dry Gulch Desert - Dune Buggy

Level 10
Big Cat Canyon - Itchy Lion

Level 11
Castle Creepenstein - Dashlight
Castle Creepenstein - The Listener
Castle Creepenstein - Reacher Creature
Castle Creepenstein - Ogre of Darkness

Level 7: Doing Donuts, Spinning Dash Game, Butler Dash

Concepts covered

- Programming wheel differential for turns
- Programming a cue for when Dash gets stuck
- Programming the **Top Button Released** cue
- Programming Dash to move a set distance in cm.
- Programming Dash to sense an obstacle in front

Key terms

Stuck: a cue for Dash to go to the next state when stuck.
Top Button Released: a cue to program Dash to go to the next state when you release the big white button on Dash's head.

Extension questions

1. When making a left turn, which wheel turns faster? The left or right wheel. Explain why.
2. How is programming a right turn different than programming a left turn?
3. How is programming a turn different than programming a spin?
4. Which direction did Dash spin when you programmed the turn for -45 degrees in Butler Dash? Which direction did Dash spin when you programmed the turn for 45 degrees?
5. What is the farthest degree that you can set Dash to spin in either direction?

Doing Donuts

Zone: Kong City
Challenge Progression 1

Step 1: Make Dash automatically play a silly sound, play a transport sound, then spin right (left wheel 80 cm/s, right wheel 10 cm/s).

Step 2: *After spinning right, make Dash wait for 3.0 s, then spin left (left wheel set to 10 cm/s, right wheel set to 80 cm/s.) Then make Dash wait for 3.0 s and spin right again.*

Step 3: *While spinning left or spinning right, make Dash say, “Oh no!” if Dash gets stuck.*

Step 4: *When Dash says, “Oh no!” make Dash instantly stop.*

Step 5: *Make Dash play the silly sound again when Dash moves forward or moves backward.*

Wonder Key: qfxv

Spinning Dash Game

Zone: Kong City
Challenge Progression 2

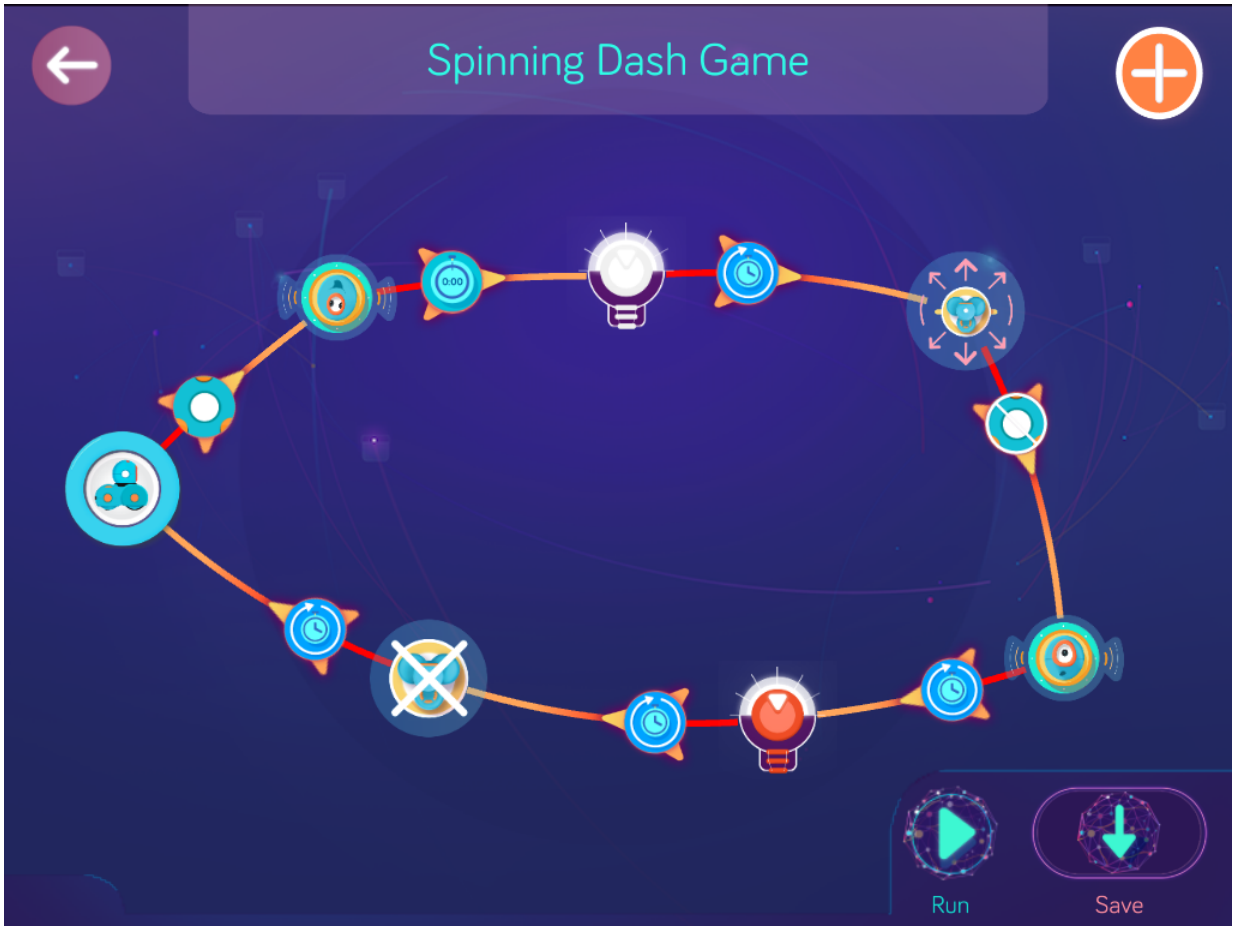
Solutions

Step 1: *Make Dash sing the Inputs and Outputs song when the top button is pressed.*

Step 2: *When Dash starts singing, make Dash instantly turn on white lights. Then make Dash automatically spin right (left wheel 30 cm/s, right wheel -30 cm/s).*

Step 3: *Make Dash say, “Oh no!” when the top button is released.*

Step 4: *After saying, “Oh no!”, make Dash automatically turn on red lights then automatically stop.*



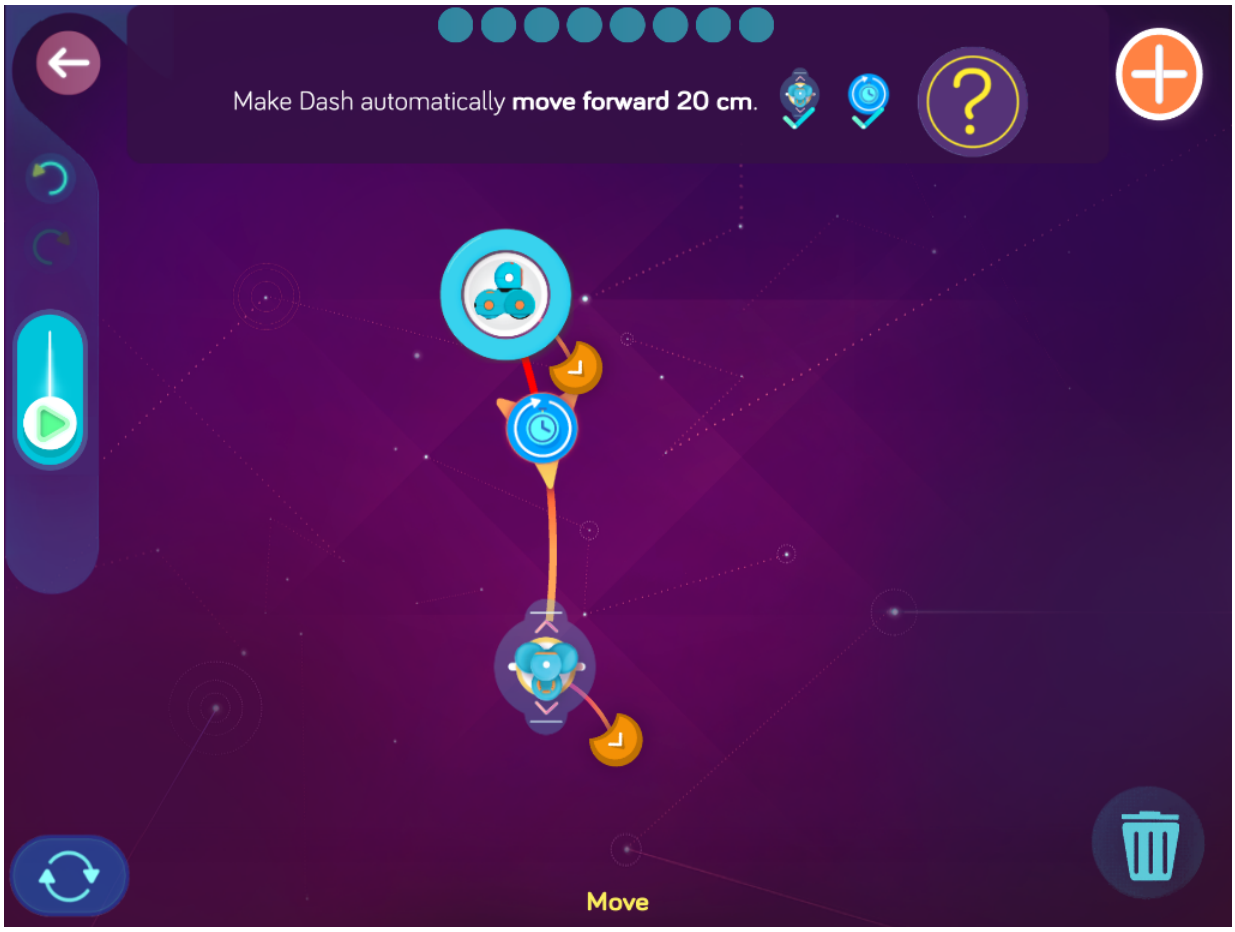
Wonder Key: 6ruz

Butler Dash

Zone: Kong City
Challenge Progression 3

Solutions

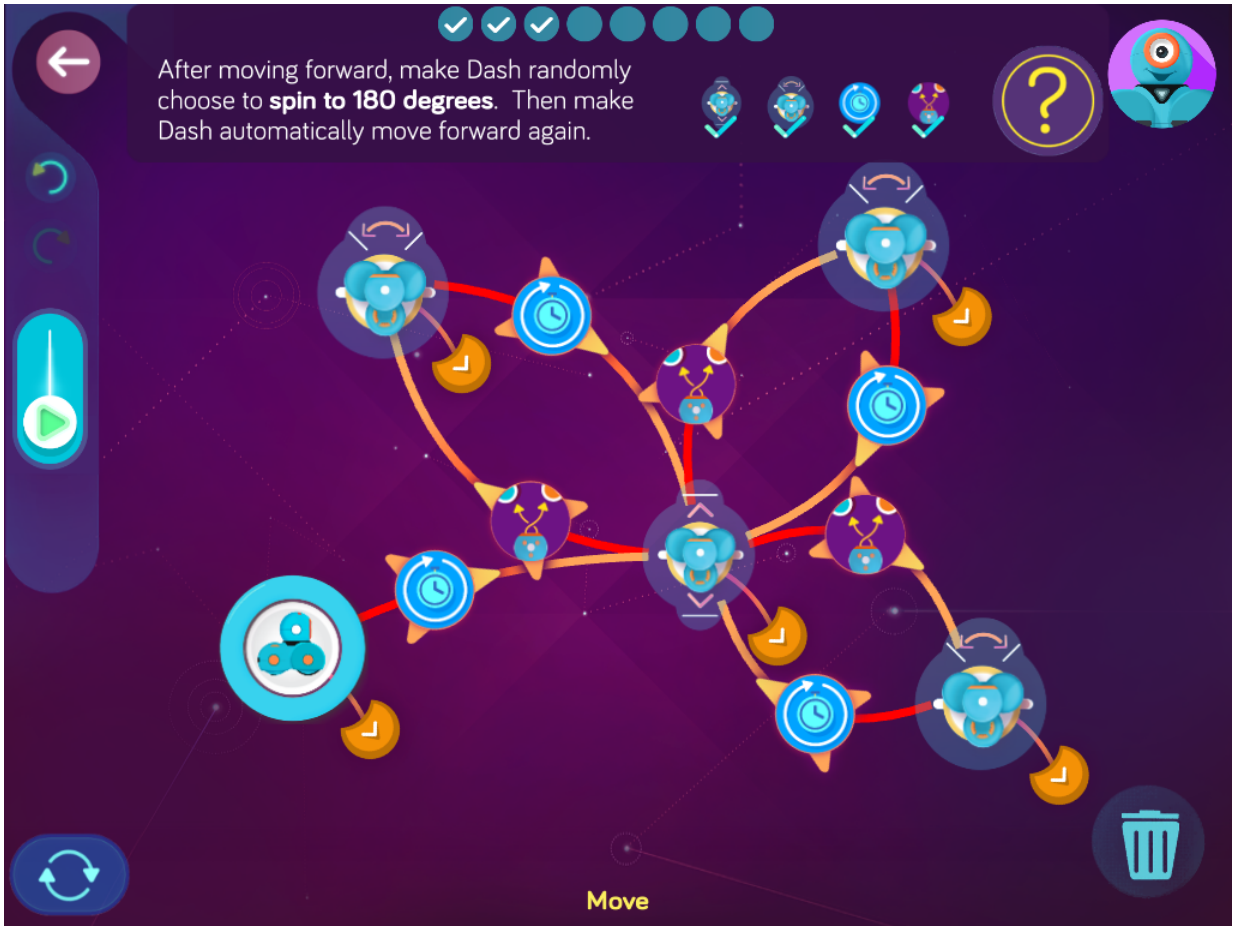
Step 1: Make Dash automatically move forward 20 cm.



Step 2: *After moving forward, make Dash randomly choose to spin -45 degrees. Then make Dash automatically move forward again.*

Step 3: *After moving forward, make Dash randomly choose to spin 45 degrees. Then make Dash automatically move forward again.*

Step 4: *After moving forward, make Dash randomly choose to spin 180 degrees. Then make Dash automatically move forward again.*

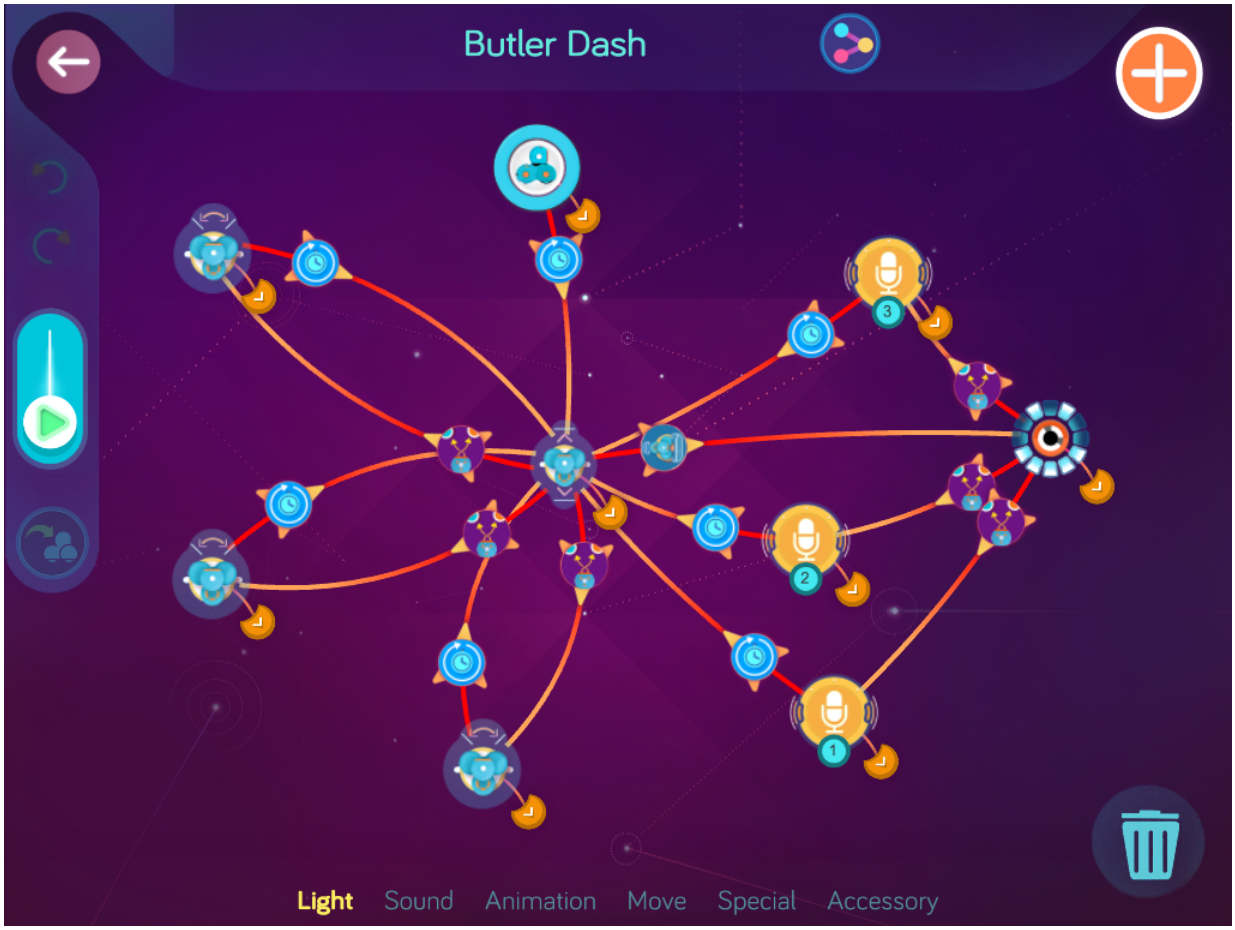


Step 5: *While moving forward, make Dash smile if an obstacle is seen in front.*

Step 6: Edit the custom sound to make Butler Dash offer some food.

Step 7: *After smiling, make Dash randomly choose to play a new custom sound that offers something to eat or drink.*

Step 8: *After smiling, make Dash automatically choose to play another custom sound that offers a different kind of food or drink. Then make Dash automatically move forward again.*



Wonder Key: inyq