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 11: Dashlight, The Listener, Reacher Creature, Ogre of Darkness

Concepts covered

Review of concepts covered in previous Scroll Quest Challenges:
Turning lights on and off
Turning eye lights on and off
Programming a spin using wheel differential
Programming using the top button: pushed or released as a cue
Programming the Listener cue

New Concepts:
Programming **Search** cue
Programming the Listener to **Do Nothing**

Key Terms

Listener: this state waits until a cue causes it to put Dash into a new state.

Extension questions

1. In Step 2 of Dashlight, you programmed Dash to spin by setting the left wheel to -20 cm/s and the right wheel set to 20 cm/s. What would have happened if you had set the left wheel to -20 and the right wheel to 40? Explain the results.
2. How would you rate Dash's speed at 20 cm/s? Fast? Slow? In between?
3. In The Listener, which cue prompted the Listener to move onto a new state?
4. In Step 3 of The Listener, when was the proper time to speak, so that Dash could hear you? (When the robot was paused. Dash cannot hear voice commands when its motor is running.)
5. In Step 3 of Reacher Creature, what was the purpose of the loop? Explain.
6. In Ogre of Darkness share some of the ways you programmed Dash to appear to be sleeping.

Dashlight

Zone: Castle Creepenstein
Challenge Progression 1

Step 1: *Make Dash automatically turn the lights off then automatically turn off all eye lights.*

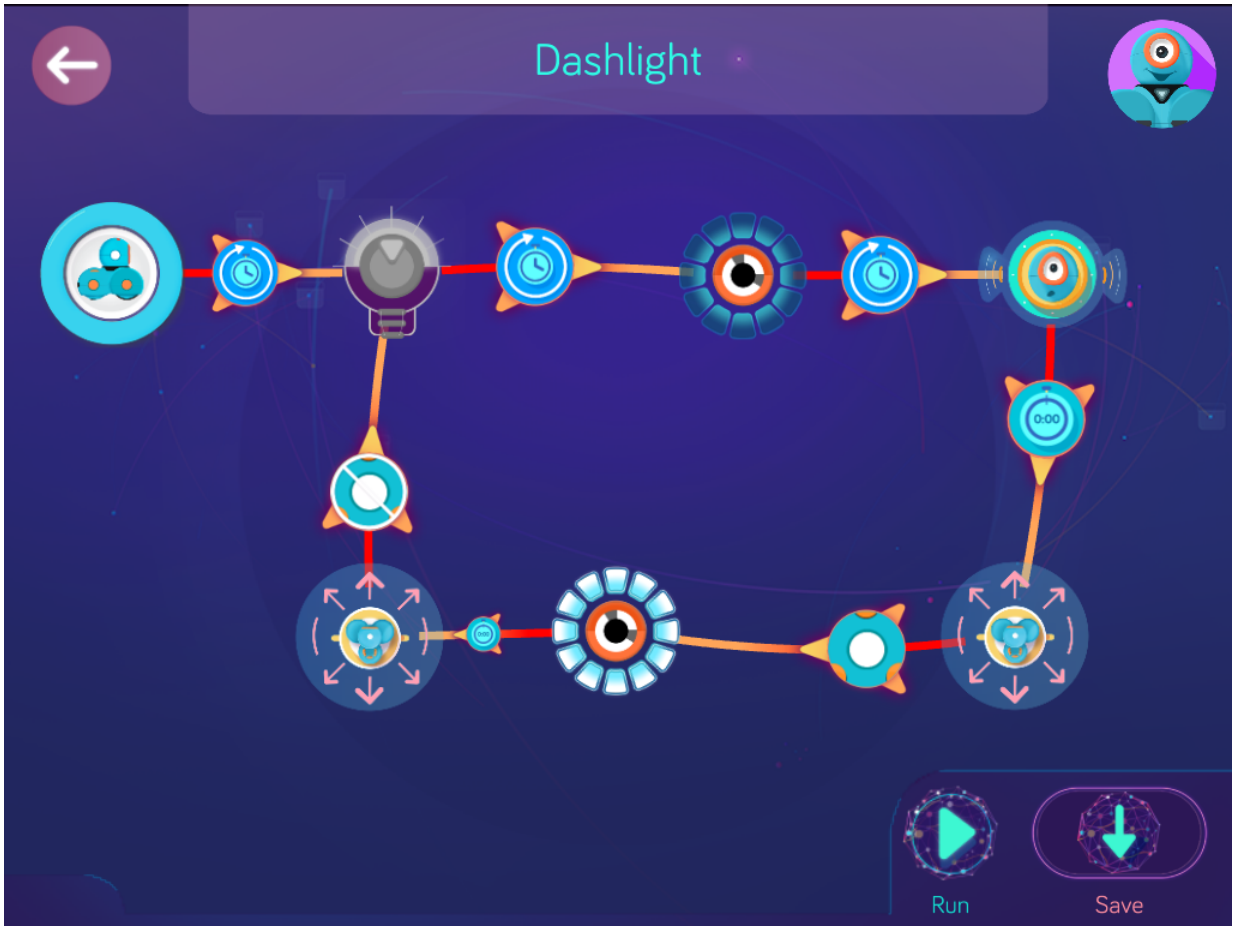
Step 2: *After turning off the eye lights, make Dash automatically say, “Oh no!”. Then make Dash instantly start spinning with the left wheel set to -20 cm/s and the right wheel set to 20 cm/s.*

Step 3: *After spinning, make Dash turn on all eye lights when the top button is pressed.*

Step 4: *After turning on the eye lights, make Dash instantly move forward with both wheels set to 20 cm/s.*

Step 5: *After moving forward, make Dash turn the lights off again when the top button is released.*

Step 6: *PLAY WITH DASH: Help Dash escape from Castle Creepenstein! Press the top button to make Dash move forward three times.*

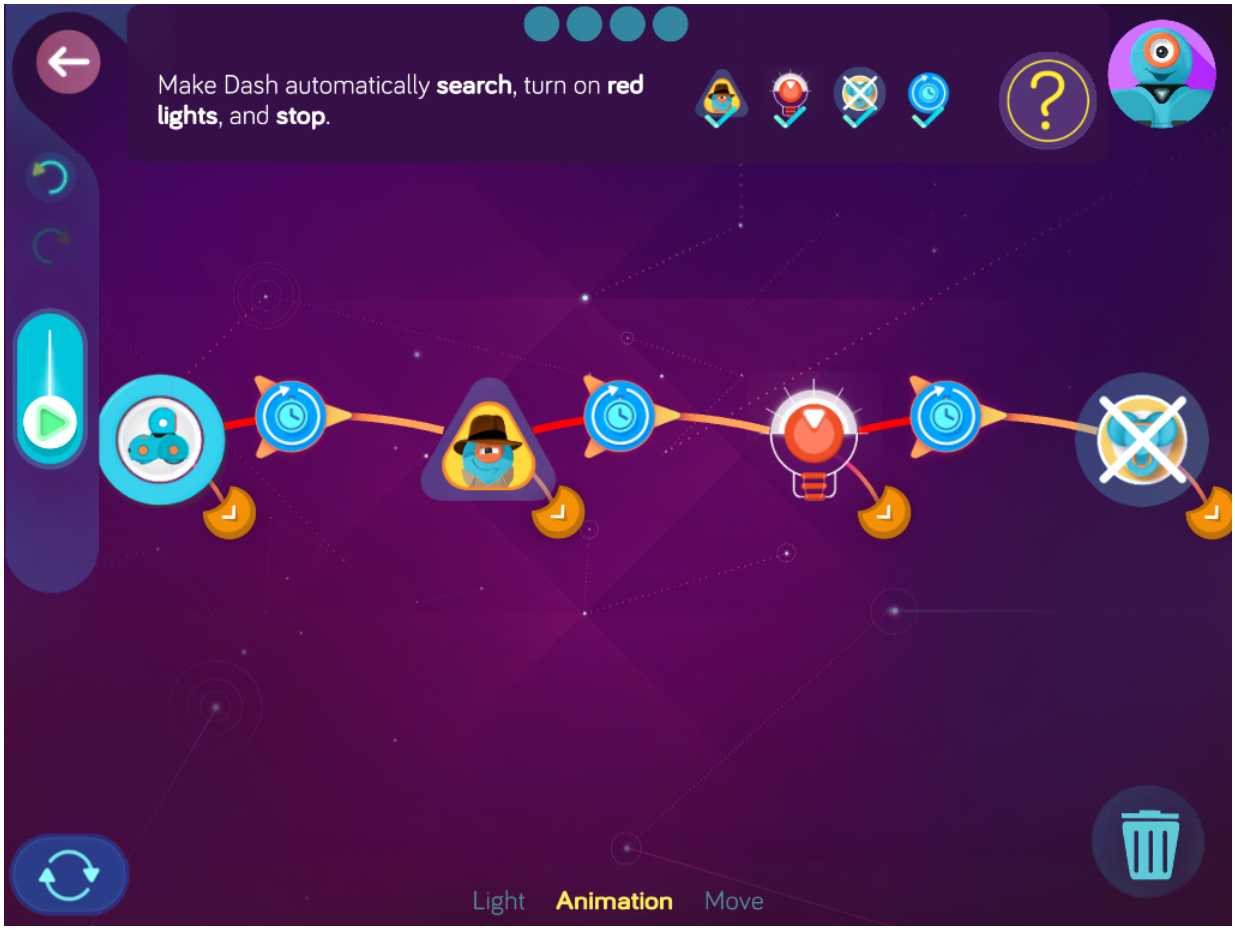


Wonder Key: u92f

The Listener

Zone: Castle Creepenstein
Challenge Progression 2

Step 1: *Make Dash automatically search, turn on red lights, and stop.*



Step 2: *After stopping, make Dash wait for 2.0 s then search again.*

Step 3: *Make Dash use the Listener to turn the lights off when a voice is heard. Then make Dash automatically say, “Oh no!” and turn off all eye lights.*

Step 4: *After turning off the eye lights, make Dash wait for 3.0 s then look around. Then make Dash automatically search again.*

Wonder Key: i75a

Reacher Creature

Zone: Castle Creepenstein
Challenge Progression 3

Step 1: *Make Dash automatically play the Whistle #1 sound then instantly move forward with both wheels set to 15 cm/s.*

Step 2: *When Dash is moving forward, if Dash is picked up, make Dash say, “Help!” and automatically push to try and get away.*

Step 3: *After pushing to get away, make Dash stop if Dash it put down. Then make Dash automatically say “Ahh” and play the Whistle #1 sound again.*

Wonder Key: tso4

Ogre of Darkness

Zone: Castle Creepenstein
Challenge Progression 4

Step 1: *Make Dash automatically turn on red lights, show a pattern in the eye ring, play the growl sound, and move forward.*

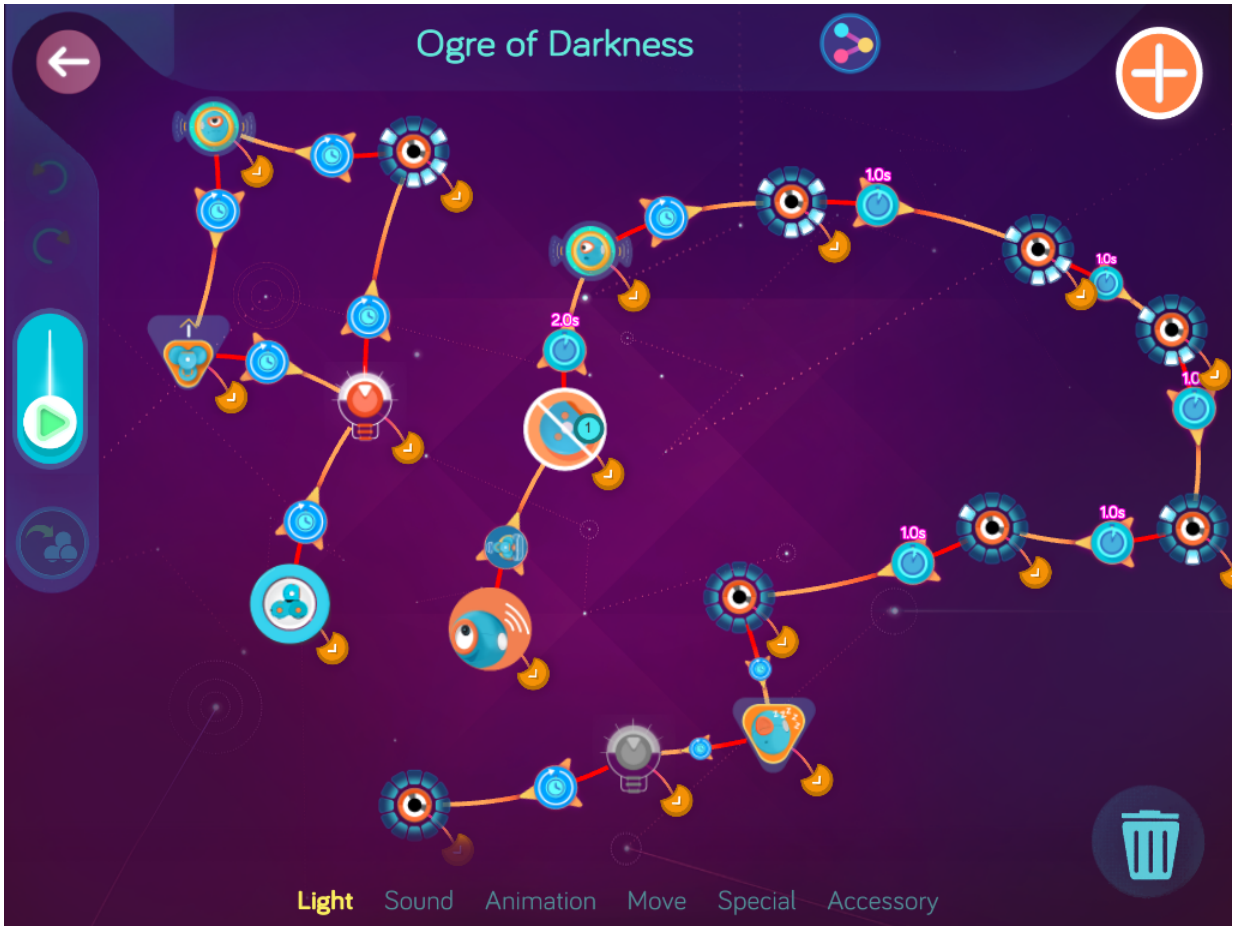
Step 2: *After moving forward, make Dash automatically turn on red lights again.*

Step 3: *Make Dash use the listener to do nothing when an obstacle is seen close behind Dash.*

Step 4: *After doing nothing, make Dash wait for 2.0 s then say, “Help!”.*

Step 5: *Make Dash turn off an eye light every 1.0 s. Make Dash finish with all of the eye lights turned off.*

Step 6: *After turning off the eye lights, make Dash automatically go to sleep. Then make Dash automatically turn the lights off and automatically turn off the eye lights again.*



Wonder Key: ewrx