Make Wonder

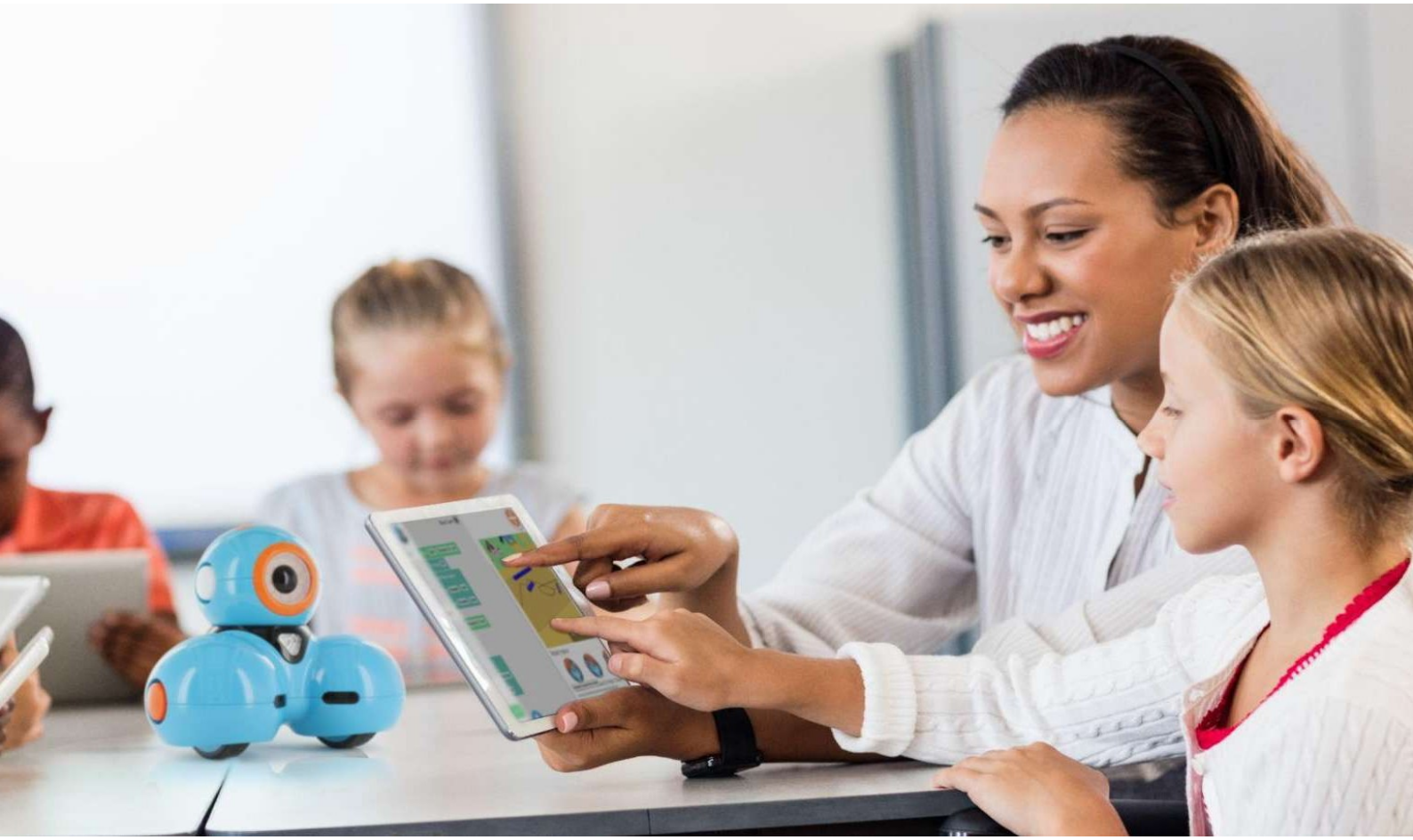
Free

Getting Started with Dash and the Make Wonder Free Tier

2024-2025

Welcome to Wonder Workshop!

Dash is an exciting, hands-on learning tool for students in grades K-8. Targeted at teaching creative problem-solving and computational thinking, Dash helps students learn fundamental processes relevant to all 21st-century skills.

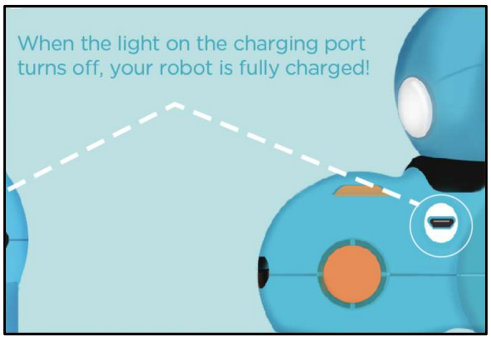


This guide includes some helpful tips to set up and manage multiple Dash robots in your classroom. Dash can't wait to meet your students!

Table of Contents

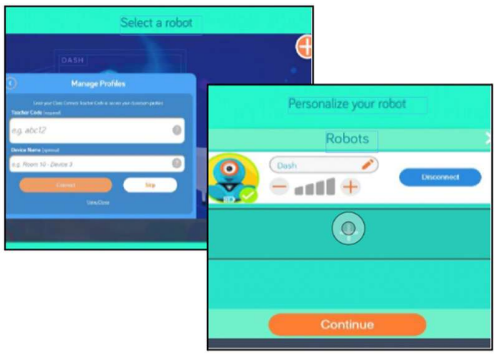
Setting Up Your Dash Robots

Setting up your robots is easy, and a getting started guide is included in every box! Here are some tips for classrooms that have multiple robots. For additional information, go to https://www.makewonder.com/en/getting-started/.

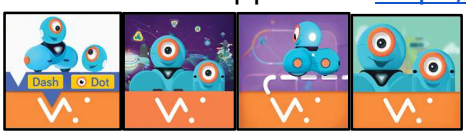


1. Charge Your Robots
Dash has rechargeable batteries, so you will need to ensure they are charged for class. Simply plug them into the wall or a computer using the charging cable included in the box or one like it. A full charge cycle takes about 60-90 minutes.

2. Name Your Robots
Step 1: Click on the "+" to access the robot settings.
Step 2: Change the name In this settings menu, you can change the settings of the robot, increase and decrease the robot's volume, change the color of the robot, and even set its wake-up animations.



3. Wonder Workshop Supported Apps
Our free apps including *Blockly* (K-5), *Wonder* (2-5), *Path* (K-1), and *Go* (K-1), come preloaded with tons of puzzles that make it easy for kids to start coding with Dash, right out of the box. More than learning to code, our apps offer students an open-ended learning platform that makes STEM knowledge simple and accessible. Check out our apps here: https://www.makewonder.com/en/apps/



Tech Specs for Dash

Drive - Dash can drive forward, backward, turn left (spin), and turn right (spin). There are two wheels beneath the left and right side of Dash's body. You can steer Dash by changing the speed and/or direction of either wheel. Head Motion - Dash can look up (25 degrees), down
(10 degrees), left (120 degrees), or right (120 degrees).

Lights - There are 12 LEDs in Dash's eye. In Dash's ears (E) and chest (C), there are RGB LEDs. In Dash's tail, there are 2 red LEDs.
Sounds - Includes a variety of pre-programmed sounds! Microphone - Dash has 3 microphones, allowing Dash to hear claps and identify the direction of your voice.
Distance sensors - Dash 2 distance sensors in front (F) and 1 in back (B), allowing Dash to detect obstacles in front and objects behind with infrared lights.
Buttons - Dash has 4 programmable buttons.

Getting Started with Blockly (Student Access)

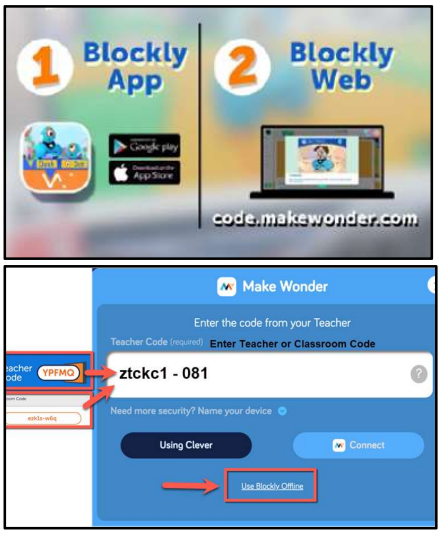
Getting Started: Student Access in Blockly: Overview Video

This video provides an overview of how students can access Blockly, both offline and with a Make Wonder Free Tier account, as well as how to navigate Blockly Puzzles and the My Projects section of the platform. (Additional information on setting up a Make Wonder Free Tier account can be found on Page 14.)

Blockly introduces both fundamental and advanced coding concepts through engaging projects and puzzle activities. Students learn about coding by exploring variables, events, conditionals, and more. The puzzles guide students through block coding using the Wonder Workshop Blockly platform, covering coding levels A to F with quick and enjoyable challenges.

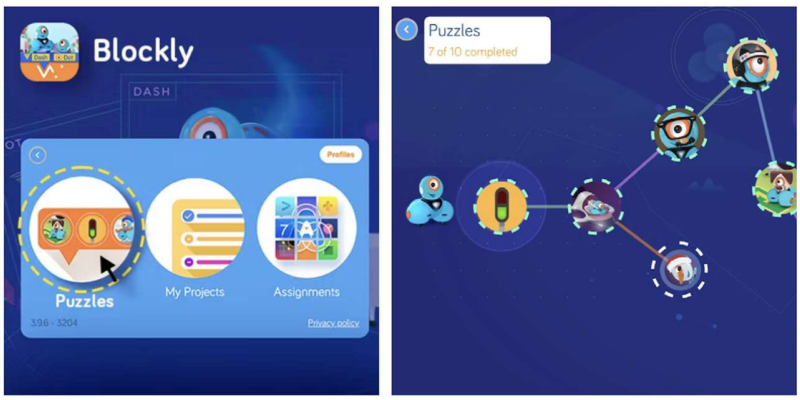
Students can access Blockly in 2 different ways:

1. **For iOS** Download the Blockly App and then locate it to launch the application.
2. **Access in a Chrome Web Browser** by having students navigate to: https://code.makewonder.com and then selecting "Play with Dash & Dot."
3. **Logging In:** Students will select "*Use Blockly Offline*" to login, or they can enter in a Teacher Code or Classroom Code and select "*Connect*" if the teacher has setup a *Make Wonder Free Tier Account (see Page 14 for additional details).*



Blockly Puzzles

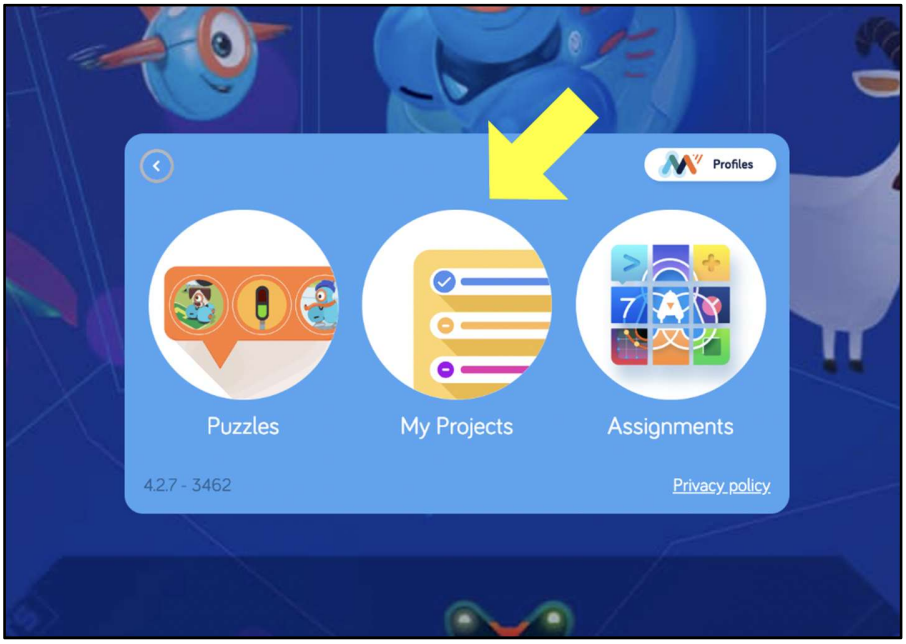
We recommend that students start working with Blockly Puzzles which introduces them to block coding and Wonder Workshop's Blockly platform.



Students work with puzzles starting with basic coding concepts and working their way to more advanced ones.

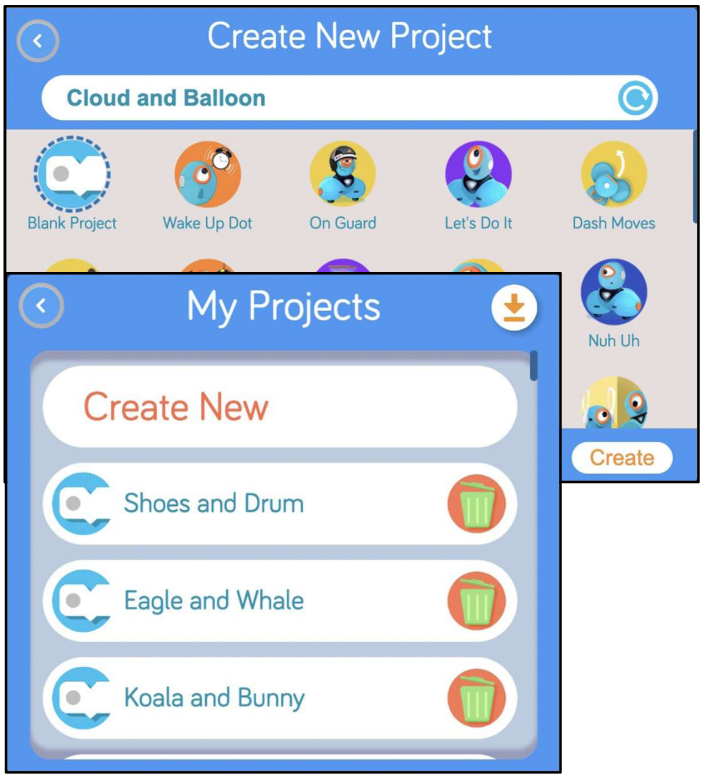
Saving and Creating Projects

Blockly allows you to save, create, and load sample projects.



You can find sample projects by tapping the “My Projects” button on the main menu.

Students can also create blank projects.



Suggested Projects Implementation in Blockly

When you have a content area or project you want to support in the classroom, you can have students create a New Project in Blockly. You will have students share their KEY with you and then you can type it in to see what they have done.

Control Dash’s lights to give your program some color! All Colors will light up Dash’s ears and chest. Mood will light up Dash’s chest.

The Eye Pattern block indicates the pattern of the 12 LED eye lights in the 1st drop-down and where the pattern starts at in the 2nd drop-down. #1 is at the top of Dash's eye, and then the numbers increase in a clockwise direction.

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Make Dash's head move any way you want! Units refer to degrees. Degree units are absolute, meaning Left 30 sets the head at 30 degrees left from a neutral straight position. The Look towards Voice block allows you to program Dash's head to look towards the direction of the sound of your voice. This works best in a quiet room with minimal background noise.

Dash loves to play sounds—use the drop down menus to add some fun effects to your programs!

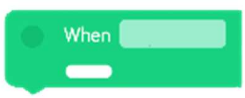
Control how Dash interacts with his environment!

Blockly Glossary

Here's the scoop on everything you need to know to use Blockly, a visual drag-and-drop coding tool.

Start

This is where you control how your program will start. Use a block beginning with "When" to indicate the event that will start executing your program.



This block will start running your program when you press

the top button on Dash's head or on the bottom left corner of the Blockly screen. Drag and stack additional blocks below a When block to write your program.

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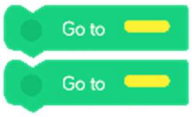
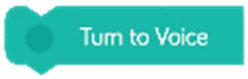


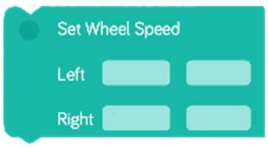
Using multiple When blocks? Use Go to when you want to repeat a sequence. The yellow or white bar indicates the stack that will repeat. For example, to repeat the sequence under When Top Button, use the white Go to block.

Drive

Drive blocks control where and how Dash moves! Forward and Backward blocks use centimeters as units, and turns refer to degrees as the unit of the turn angle.



The Turn to Voice block allows you to program Dash to turn towards the sound of your voice. This works best in a quiet room with minimal background noise.



The Set Wheel Speed block gives you individual control of Dash's wheels. Forward and backward at the same speed makes Dash spin. Forward at different speeds makes Dash go in an arc. Try different combinations out! Note: to stop Dash's wheels add the Stop Wheels block.

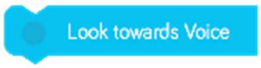
Light

Control Dash's lights to give your program some color! All Colors will light up Dash's ears and chest. Mood will light up Dash's chest.

The Eye Pattern block indicates the pattern of the 12 LED eye lights in the 1st drop-down and where the pattern starts at in the 2nd drop-down. #1 is at the top of Dash's eye, and then the numbers increase in a clockwise direction.

Look

Make Dash's head move any way you want! Units refer to degrees. Degree units are absolute, meaning Left 30 sets the head at 30 degrees left from a neutral straight position.



The Look towards Voice block allows you to program Dash's head to look towards the direction of the sound of your voice. This works best in a quiet room with minimal background noise.

Sound

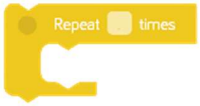
Dash loves to play sounds—use the drop down menus to add some fun effects to your programs!

Control

Control how Dash interacts with each other and their environment!

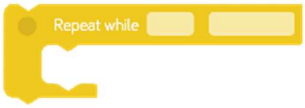
Have Dash wait for a set period of time before continuing your program.

Dash will wait for an event to be triggered before moving to execute the rest of the program.



Dash will repeat your program for a set number of loops!

Dash will repeat the program inside the brackets until the event in the drop-down menu on the right is triggered.



Your program will repeat the whole time while the event in the drop-down menu on the right is being triggered.

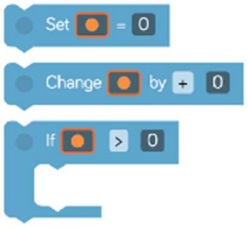
Dash will run the program inside the bracket if the condition in the right drop down menu is present.

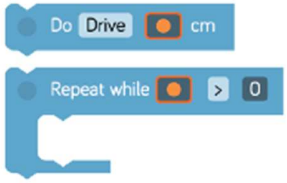
Animations

Use this section to add blocks that help code Dash to use animations.

Variables

Use this section to take your coding to a more advanced level with different types of variable blocks. You will use a fruit image to represent different variables in Blockly.





Accessories

Use this section to access blocks that support coding Dash to use accessories like the launcher, gripper, and sketch kit.

to download a copy of the [Printable Blockly Blocks] which are great for lockly to students, as well as for use in facilitating “unplugged”

Make Wonder Free Tier (Teacher Access)

Getting Started: Teacher Access in the Make Wonder Free Tier - Overview Video

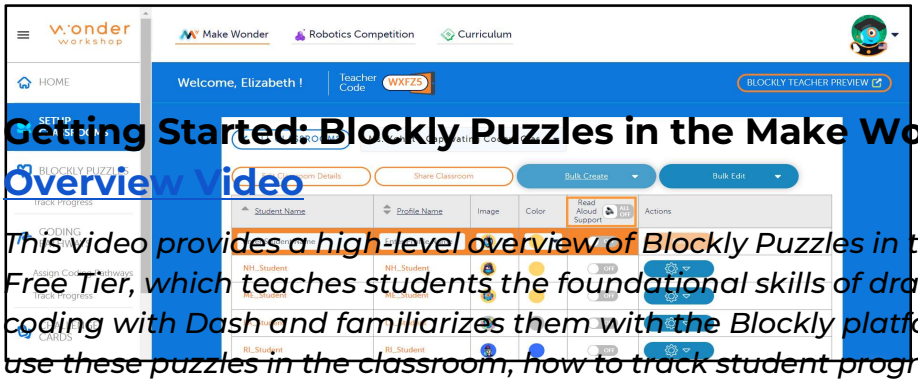
This video provides an overview of how to create a Make Wonder Free Tier Account along with detailed information on how Teacher End Users will access the Make Wonder platform, and tips for navigating the portal effectively.

Teachers can sign up for a *Make Wonder Free Tier Account* at https://portal.makewonder.com which will provide them with access to additional features that include: create a classroom, roster up to 35 students, enable Read Aloud support for early and struggling readers, and track student progress as they complete Blockly Puzzles in real-time.

Getting Started: Setup Classrooms in the Make Wonder Free Tier: Overview Video

This video provides an in-depth overview of the Setup Classrooms section in the Make Wonder Free Tier. This video covers topics such as setting up a classroom, options for rostering and managing student profiles, location and use of Classroom Codes, and enabling the Read Aloud Support feature to support early and struggling readers.

Teachers have the capability to create 1 classroom and roster up to 35 students. They can enable the Read Aloud support feature to support early/struggling readers from within a selected classroom.



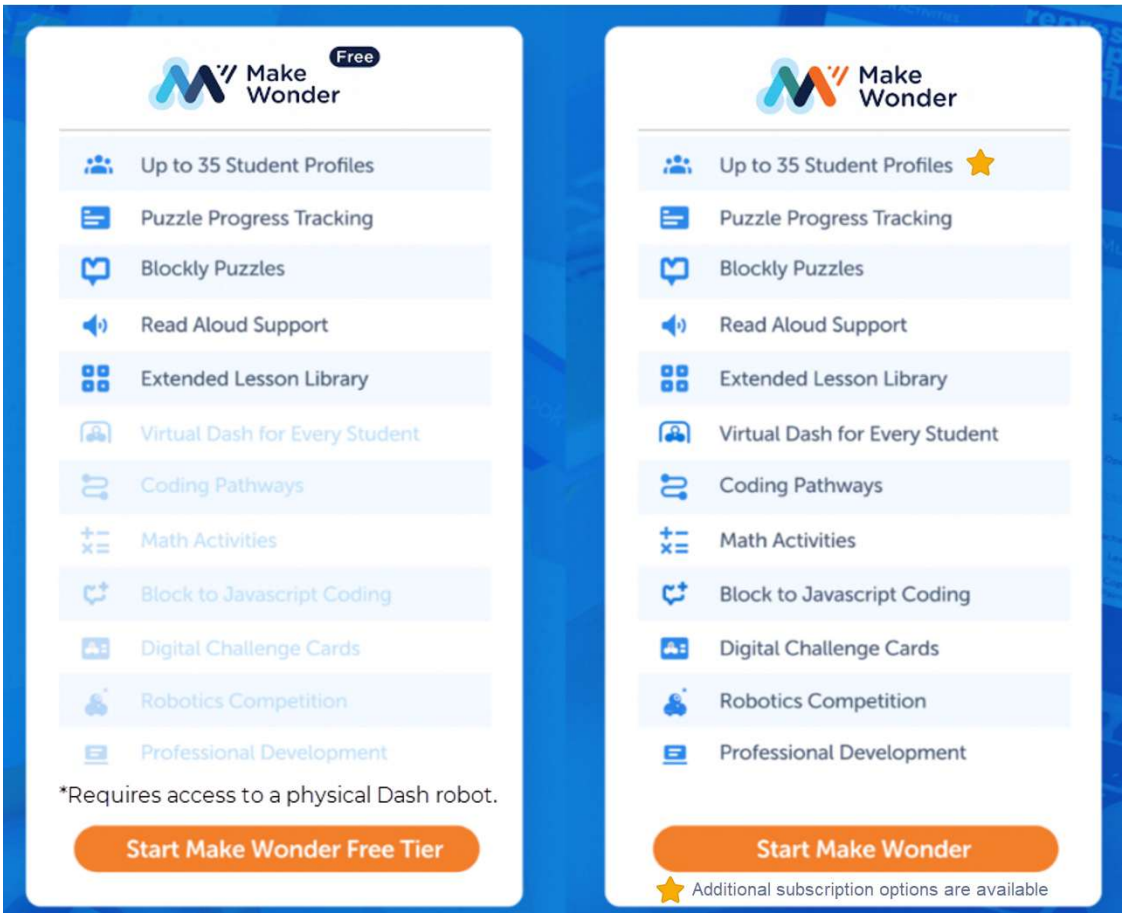
Getting Started: Blockly Puzzles in the Make Wonder Free Tier - Overview Video

This video provides a high-level overview of Blockly Puzzles in the Make Wonder Free Tier, which teaches students the foundational skills of drag-and-drop block coding with Dash and familiarizes them with the Blockly platform. Learn when to use these puzzles in the classroom, how to track student progress in real-time.

Teachers can track student progress in real time as they complete Blockly Puzzles.

Make Wonder Free Tier and Make Wonder Subscription Comparison

To further enhance your teaching experience and provide students with enriched learning opportunities, we offer two versions of our Make Wonder platform:



*View available subscription options that offer additional levels of access for teachers and students in our Wonder Workshop Store.

Interested in upgrading to a paid Make Wonder subscription? Reach out to a sales team member at: direct-sales@makewonder.com

Seeking Technical Support?

Reach out to us at support@makewonder.com.