

Unit Title: Coding with Dash Robot
Grade Level: (example: 9, 10, 11, 12 or 7-8) K, 1, 2
Subject Area: (example: Science, Physics; English, Short Stories) STEM
Duration/Length/Number of class periods: (example: 5 class periods) 4 to 5 periods
Description: With a Wonder Dash robot and a tablet or phone, the students will use the app called Blockly.
Established Goals (National, State, Local): Coding with K-2 students. With an app called Blockly, the students will learn how to make Dash run with instructions and then their own idea. Students will build networks and customize their learning environments that support the learning process their learning. Students use technology to seek feedback that informs and improves their practice and ability to demonstrate their learning in different ways.

What Enduring Understandings are desired? I can program Dash the robot to follow a path.
What Essential Questions will be considered? Show them a program I did with Blockly and Dash. Telling them that at the end they will be able to do their own program, but first they would need to know how to follow some preprogrammed Blockly cards to learn the Codes for Blockly app. Essential Questions need to be broad: "How does coding impact our lives?"
Students will know / be able to: Students will be able to do simple coding with the program Blockly.

Description <i>Units must include at least one of each formative, summative, introductory activity and learning activity. Check the appropriate box; one per row.</i>	Formative	Summative	Introductory Activity	Learning Activity	Student Technology Used	Teacher Technology Used	ISTE Standards
Observing the students as I give them Dash and see how they use it without having used it before	X				X	X	
Observing the students as they use Dash with their own program that they have Dash doing after learning what the codes mean		X			X	X	

Students will be introduced to Dash and told that they can make Dash do what they want Dash to do. They will be given Dash and the program for Dash without any knowledge on how to use the program			x		x	x	
Students will be given information on how the program works with the instructor giving them information about the program and using Dash challenge cards to learn how to code Dash. As they use these cards they will be learning the code movements so that at the end of the unit, they will program into Dash their own program not using the challenge cards to help them. The end result will be that they have learned how to do some simple coding.				x	x	x	

Materials, tools and resources Dash robot, Dash challenge cards, and a tablet with the app Wonder Path on it.
Unit Plan Author (name, school and optional email address or hyperlink to teacher's web page) Sherrilyn Klaassen Adrian Elementary School. Web site isd511.net s.klaassen@isd511.net
Additional credit given to

Additional, fun resource related to this unit: <https://r2csbuilders.blogspot.com/>

These resources can also help with Dash: http://4code.dk/wp-content/uploads/2015/01/wonder_magazine_001.pdf,
<https://teachbesideme.com/teach-kids-programming/>, and <https://www.brilliantlabs.ca/dashlessons> which has lessons and a blog to help you.