Kindergarten Coders
Using Computer Coding to Create in Kindergarten

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Start Date: October 16, 2017

Grade Cluster K-2

Presentation
Promo Video

Standards Met:
ISTE: Digital Citizenship, 5b, 5c
ISTE: Innovator Designer, 4a, 4b, 4c
ISTE:Technology Operations and Concepts, 6a, 6b,6c,6d
CCSS.MATH.PRACTICE.MP1 Make sense of problems and persevere in solving them.
CCSS.MATH.PRACTICE.MP5 Use appropriate tools strategically.
NGSS K-2-ETS1-1: Ask questions, make observations and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Quick Look:

Students will learn how to use computer coding and programming to create their own computer game. The kindergarten class will play interactive games to learn what coding, programming and commands are. Then students will use the iPad app called Kodable to practice coding a computer robot. At the end of the first unit, the teacher will lead a whole-group activity where the entire class will create a game, using the Hour of Code, to share with another kindergarten class to play.

Goal:

To have a purposeful use of technology for students. Students will learn what computer coding is and for student to use their coding skills to create their own game to share to an authentic audience.

Scenario:

Kindergarten students will create a computer game using the iPad app and website Kodable. The project will begin with the teacher leading an interactive group coding game. One student will be a robot and the class will create signals to be commands. The robot will then follow the student commands. During this interactive and hands-on game, students will learn the vocabulary, coding, programming and commands. Students will use this new vocabulary knowledge when using the App Kodable. Students will watch short youtube videos from www.hourofcode.com to introduce real-world programming and coding careers, such as an animator for Disney.

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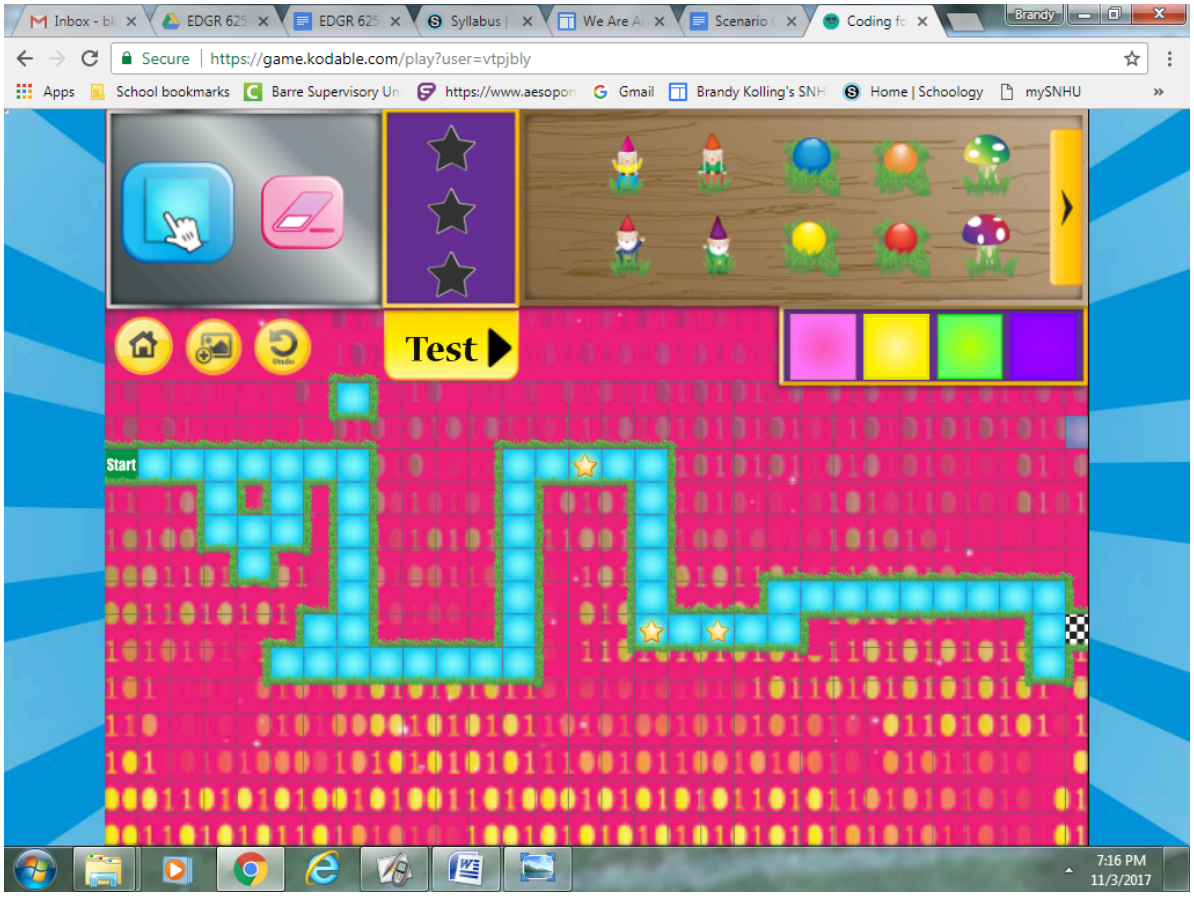
Students will have their own account on the Kodable app and will work at their own pace. Students will use the Kodable app during math stations and can choose to use it during centers (choice time).The teacher is able to follow the students' progress as they move through each challenge. The teacher will also have an account. The class will use the Promethean Board and teacher's account to work together on a coding challenge on Kodable at our end of the day closing circle. The experience on the app and whole group will give students instant feedback to continue growing their programming and coding skills.

Once students have built strong coding skills using the Kodable program the class will work together to create a computer game we can share with another kindergarten classroom and families. This will give students an authentic audience once the game is complete.

The teacher will continue to track student progress and once students are ready to create a game on their own and will be able to using the Kodable app. Students will be able to share the game with the entire class and with a peer.

Supporting Documents:

Our classroom maze students created together to share with our partner class!



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A student's coding work on their iPad

Students learning to code without technology using a Robot Group Game.

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Students learning how to code and practicing skills using Kodable