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Technology Integration Workshop 2020

Alternate Unit Plan

Project / Event Name	Coding for Primary Learners
Description	This unit will focus on the introduction of the basic coding skills (by understanding algorithm in coding) for first and second grade students.
Purpose	The purpose is to target specific grade levels/ students, introducing the term/meaning algorithm. Employing the concept to introduce the basics of coding. Adding to my tools with resources created for early learners.
Established Goals; **Standards Being Met**	**Outcome** of the project/event **Language Arts:** MN Standards. I.A.2. Match spoken words with print. **Computational Thinker:** ISTE Standard. Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.
Essential Question(s) (at the end of this project/event) what people will be able to answer or do	What is an algorithm? How does this relate to coding? Teaching algorithm will have a lasting impact by building a strong foundation in logical thinking and problem solving. Students understand the benefits of sequence, and doing things in a specific order for a desired result. They also develop the skill of pattern recognition. This will be a useful skill in understanding code.
Audience	Students: First and Second Graders.
Timeline	Project start: December 2020 Planning start date August 2020 Milestone dates: The unit will last through winter session (2 months).
Materials / Resources Needed	Experts https://www.youtube.com/watch?v=Da5TOXCwLSg https://www.commonsense.org/education/lesson-plans/understanding-algorithms-computer-science-class https://www.tynker.com/blog/articles/ideas-and-tips/how-to-explain-algorithms-to-kids/ https://kids.kiddle.co/Algorithm Space/Location: Schools Maker Space (BMO elementary) Printed materials: Large cut-outs (construction paper) color coordinated. Laptops, internet access, Promethean board
Tools/Equipment Needed	Tables, chairs, collaborative workspace, shared digital space for curated files
Technology Needed:	▯ Students have access to laptops and internet
Who to Involve	Technology Teacher/Classroom teachers
Process	Teaching algorithm: 1.) Introduce algorithm STEPS Students will be expected to draw a 'to do list". The teacher will supply the template. (many examples will be given during the introduction). Students can also have a family member record them showing the step-by-step task.

	2.) Life size game board (Grid) covering 2 sides of the classroom. One student in a red vest the other in a blue. The rest of the students will plot out an algorithm to get their team robot from A to Z. Some of it will be done on a template, and part of the activity will be done as a group engagement. Materials: Grids board (Large), templates, pencils, red and blue vests, laptops, 1 Introduction Engage 2 Explore 3 Explain : The Importance of Step-By-Step Directions/Instructions 4 Elaborate 5 Evaluate 3.) The teacher will elaborate by employing video and printed resources. Some of activities allow students the opportunity to practice the vocabulary.
Research/Rationale	https://kids.kiddle.co/Algorithm#History_2
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Additional Credit Given To	