2020-2021 CCA S.T.E.M. Program Schedule

Date	1st Grade Class	2nd - 3rd Grade Class	4th – 6th Grade Class	Coding Class
10/16	**Topic:** What is S.T.E.M.? **Key Concepts:** The definitions and importance of Science, Technology, Engineering, and Math **Activity:** Kahoot quiz **Recommended Apps:** Kahoot app/web browser	**Topic:** What is S.T.E.M.? **Key Concepts:** The definitions and importance of Science, Technology, Engineering, and Math **Activity:** Kahoot quiz **Recommended Apps:** Kahoot app/web browser	**Topic:** What is S.T.E.M.? **Key Concepts:** The definitions and importance of Science, Technology, Engineering, and Math **Activity:** Kahoot quiz **Recommended Apps:** Kahoot app/web browser	**Topic:** What is a computer? **Key Concepts:** Binary operations and computer memory **Activity:** Game Theorists video: We Built a Computer in Mario Maker **Recommended Apps:** None
10/23	**Topic:** Simple Machines **Key Concepts:** The six simple machines and what they do **Activity:** None **Recommended Apps:** None	**Topic:** Programing a robot **Key Concepts:** Communicating with robots to complete a task **Activity:** Robot teacher **Recommended Apps:** None	**Topic:** Programing a robot **Key Concepts:** Communicating with robots to complete a task **Activity:** Robot teacher **Recommended Apps:** None	**Topic:** Operating a pc **Key Concepts:** Navigating the windows desktop and pc hardware **Activity:** Using a search engine **Recommended Apps:** None
10/30	**Topic:** Simple Machines **Key Concepts:** Using levers and the wheel and axle **Activity:** Building Lego cars **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Following instructions and identifying parts **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Following instructions and identifying parts **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** Email **Key Concepts:** How to use an email **Activity:** Creating Google accounts for use in the class (note from Mr. Josh: the email addresses associated with these accounts are linked to my CCA

				email and owned by me). **Recommended Apps:** None
11/6	**Topic:** Simple Machines **Key Concepts:** Using gears to make axles faster or slower **Activity:** Testing motorized Lego fans **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Following instructions and identifying parts **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Following instructions and identifying parts **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** Saving files **Key Concepts:** File types and storage locations **Activity:** Brainstorming website names and themes **Recommended Apps:** None
11/13	**Topic:** Simple Machines **Key Concepts:** Lifting with pulleys **Activity:** Building pulleys **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Using motors, sensors, and the robot brain **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Using motors, sensors, and the robot brain **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** Website domains **Key Concepts:** The purpose and function of domains **Activity:** Claiming a subdomain on Neocities.org **Recommended Apps:** None
11/20	**Topic:** Scientific Method **Key Concepts:** Research and hypothesis **Activity:** Creating a hypothesis **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Using gears to change the direction of axles **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Using gears to change the direction of axles **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** html code **Key Concepts:** Basic html commands **Activity:** completing the html tutorial on Neocities.org **Recommended Apps:** None

12/4	**Topic:** Scientific Method **Key Concepts:** Experimentation and analysis **Activity:** Conducting an experiment **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Using levers to control the robots **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Using levers to control the robot **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** Website design **Key Concepts:** Basic components of a website **Activity:** Brainstorm designs for our websites **Recommended Apps:** None
12/11	**Topic:** Complex Machines **Key Concepts:** applying two forces at once **Activity:** Designing a complex machine **Recommended Apps:** None	**Topic:** Building a robot **Key Concepts:** Symmetry and stabilization **Activity:** Robot building **Recommended Apps:** Lego Boost App	**Topic:** Building a robot **Key Concepts:** Symmetry and stabilization **Activity:** Robot building **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** html/css **Key Concepts:** Changing the style and format of a website **Activity:** Choosing text and background styles for our websites **Recommended Apps:** None
12/18	**Topic:** Programing a robot **Key Concepts:** Communicating with robots to complete a task **Activity:** Robot teacher **Recommended Apps:** None	**Topic:** Programing a robot **Key Concepts:** Operation order **Activity:** Robot programing **Recommended Apps:** Lego Boost App	**Topic:** Programing a robot **Key Concepts:** Operation order **Activity:** Robot programing **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** html/css **Key Concepts:** Adding images to websites **Activity:** selecting images for our websites **Recommended Apps:** None
1/8	**Topic:** Programing a robot **Key Concepts:** Operation order **Activity:** Robot programing	**Topic:** Programing a robot **Key Concepts:** Using sensors **Activity:** Robot programing	**Topic:** Programing a robot **Key Concepts:** Using sensors **Activity:** Robot programing	**Topic:** html/css **Key Concepts:** Using hyper links **Activity:** adding links to other websites

	Recommended Apps: Lego Boost App	**Recommended Apps:** Lego Boost App	**Recommended Apps:** Lego Mindstorms Controller app	**Recommended Apps:** None
1/15	**Topic:** Programing a robot **Key Concepts:** Using sensors and remote control **Activity:** Robot programing **Recommended Apps:** Lego Boost App	**Topic:** Programing a robot **Key Concepts:** Remote control **Activity:** Robot programing **Recommended Apps:** Lego Boost App	**Topic:** Programing a robot **Key Concepts:** Remote control **Activity:** Robot programing **Recommended Apps:** Lego Mindstorms Controller app	**Topic:** Internet safety **Key Concepts:** Viruses, malicious websites, and hacking **Activity:** None **Recommended Apps:** None
1/22	**Topic:** Robot design **Key Concepts:** problem solving through design engineering **Activity:** Designing a robot to perform a task **Recommended Apps:** None	**Topic:** Robot design **Key Concepts:** problem solving through design engineering **Activity:** Designing a robot to perform a task **Recommended Apps:** None	**Topic:** Robot design **Key Concepts:** problem solving through design engineering **Activity:** Designing a robot to perform a task **Recommended Apps:** None	**Topic:** Internet safety **Key Concepts:** Viruses, malicious websites, and hacking **Activity:** Creating secure passwords **Recommended Apps:** None
1/29	**Review/catchup day:** The plan for this class is to review the topics covered up to this point; however, I will use this class as an extra day to work on	**Review/catchup day:** The plan for this class is to review the topics covered up to this point; however, I will use this class as an extra day to work on	**Review/catchup day:** The plan for this class is to review the topics covered up to this point; however, I will use this class as an extra day to work on	**Review/catchup day:** The plan for this class is to review the topics covered up to this point; however, I will use this class as an extra day to work on