

Units	Computing / Coding			Design			STEM Challenges				Digital Citizenship		
Topic	Digital Computing / Coding	Computational Thinking	Analog Electronics	2D Design	3D Design	Maker Tools	No Tech Activities	STEM KITS	STEAM	Design Challenges	Digital Citizenship and Skills	Data Science and Infographics	Impacts of Computing
		<i>a variety of activities that can be googled to find examples and instructions</i>	<i>All of these kits are available to request from the Fab Lab</i>				<i>Mix of: no cost / random items / low cost / medium cost</i>	<i>All of these kits are available to request from the Fab Lab</i>	<i>a variety of activities that can be googled to find examples and instructions</i>	<i>a variety of activities that can be googled to find examples and instructions</i>	<i>All resources are for ALL GRADES</i>		
pk - 2 (pre-reader)	Learn to code File Games	patterns	Start up circuits	tangrams	Legos		Legos	fairy tale stem kit	Rain sticks	Build a Bridge	Learn how to code	patterns	
	Code.org	how to make a pbj	Squishy Circuits	tracing	playdoh / air clay		puzzles	stem nurse rhyme workbooks	potato stamping	Build a Tower	How to Design	surveys	
	Ozobot	Breakerspace					strawbees	take apart toys	pipe cleaner snowflake	Slow Coaster	RoboBee Resources	Codes - make / break	
	Sphero Indl.	Memory card games					jenga / uno	screwdriver board / art	Color mixing with pippets	Foam Boats	Resources for Kids	edubooks articles on data science in k-2	
3 - 5	Code.org	magic number machines	Snap Circuits	canva	tinkercad	Button Maker	Dice Roll / Data Collection	Rocket Launcher	Tie Dye	Paper Airplanes	Online Typing	Data Based on Data / Infographics	
	MakeCode Arcade	break / make a secret code / new language	Bristle Bots / Wiggle Bots	Power point		Zip Snip / MakeDo	nature art / building	Earth Quake Game	puppets	Cardboard Structure	Infographic Branding	create infographics with canva	
	MindSearch	logic puzzles	Paper Circuits	Google Slides / google draw		scorch marker	Paper Plate whole punch Sewing	carolina STEM Kits	draw a map of the school	Parachute / Egg Drop		explore infographics	
	Makey Makey	line dancing	Windmills			sticker printer	random acts of kindness rocks / notes		mandalas	Build a Marble Maze		create infographics with canva	
6 - 8	Code.org	hexaflexagons	sewable circuits	inkscape	tinkercad	heat press	sudoku		Digital Photography	Make an instrument / band		Data Game	
	MakeCode Arcade	write game rules / design new game	EL Wire Kit	silhouette studio	tinkercad	screen printing	color grids		create a flip-book	Cardboard Chair		Infographic Writing Guide	
	Sphero Bolt	basic recipies	Motor Kit	Plotter, Button Maker / Laser Cutter	3D printer		scavenger hunt		kaleidoscope	Wooden Bridge Building			
	Arduino	algorithms	simple soldering bug		Laser Cutter		design a new board game		pop up cards	Rube Goldberg Machine			

Color Coding						
	Light Pink means these items must be purchased, but can be requested from the Fab Lab if supplies / funds allow	Dark Pink items are available from the Fab Lab or from the Lending Library	Orange items must be purchased but are not available in the fab lab	Green Items are free online activities	Turquoise items are general activities most of which do not require supplies but may require directions, worksheets, etc	Purple activities can be completed with general supplies that can be found around the school, brought in from home, the dollar store, recycle bin, etc.
	STEAM Project Proposal Form	CMSD Fab Lab Lending Library				
Timing	Most k-8 tech classes meet once, or twice a week for the year. Once per week meet for a TOTAL of approximately 30 hours per year and twice a week classes meet for a total of approximately 60 hours					
Grade Level	Most activities can be completed by students in any grade level in the grade band or be differentiated for students older. EX: Bridge building design challenge can be done with pre-k students with cardboard pieces and blocks while middle schoolers can be given a variety of materials and engage in design process to create a stronger, better bridge					
Monthly Breakdown	Considering you will most likely be seeing your students 4x per month, you could break down the class into 4 major Units: (1) Computing/ Coding (2) Design (3) Challenge (4) Digital Citizenship and focus on one unit for the week with all of your students. Thus each group would have one lesson from each unit a month. You could also do a whole month of each unit then repeat in the second semester.					
	You could also think about choosing a theme for the month- these themes could be career, artist, or event inspired. You could then explore that theme within multiple areas. EX: Construction- design coding a coding game to navigate a safe construction site, design a piece of safety equipment for construction workers, build a strong structure under some parameters, research local construction projects and write letters about why it's important to the workers					
	PBL- create a PBL topic for your students to learn about and then use the resources available to you to create artifacts around that PBL. EX: Marketing a new business in town - create a slogan, jingle, commercial, tick tock, logo, merch, business plan, etc.					
Project Ideas	Check out CMSD Fab Lab for more project ideas specific to machine					

<i>Unit</i>	<i>Topic</i>	<i>Title</i>	<i>Description</i>	<i>Tech Needed</i>	<i>Links</i>	<i>Notes</i>	<i>Submitted by:</i>
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