## Engineering BINGO (Grades 4-5)

Make a boat that can really float. How can you modify your design so that it would be a fun bath toy?	Fold and fly different styles of paper airplanes. How can the science of flight help you design a better plane?	Build a mini golf course. Show us your creation. What difficulties did you have?	Transform a room of your house into a castle! What features do you think are most important in real castle designs?	Create the ultimate creative rolling car that can go down a ramp. How many different ideas can you try?
Create a gap that is about 12 inches across. Use different materials to create a simple bridge. How can you determine which bridge is the strongest?	Do batteries really power the world? Go on a scavenger hunt to find things powered by batteries. What kind of batteries can you find?	Transform a sheet of paper into a fan. How many different designs can you come up with? How else can you transform paper?	Louis Braille wanted to make reading easier for other blind people so he created a code of raised dots. Can you write a message in Braille?	Watch this video of Dominoes Falling. Can you build a domino falling chain reaction, or create something else that causes a chain reaction? Share.
Invent your own musical instrument. Share your creation with us.	Plan and make <u>a</u> model playground. Who will you make a model playground for?	FREE SPACE	Build a car or house entirely out of edible materials. Consider having an edible car race	Track and graph your high score in a game.
Experiment with freezing different mixtures of water and salt. What do you notice about the amount of salt and the time it takes to freeze?	Build a pendulum by tying a weight on a string. What do you notice about the swing when you change the length? How can you use this as a timer?	Did you know that windshield wipers were invented by Mary Anderson? Experiment with making a model windshield wiper. What would you invent for cars?	Design a town square for the heart of a healthy community. What makes a community healthy and strong?	Make a building with multiple floors. What do you need to do to ensure that the building is stable? Can you install an elevator?
Take apart a click-to-write pen to see if you can get a closer look at the mechanisms that make it work.	Grab three balls, go outside, and simulate a supernova. What do you notice about the maximum height?	Find six things that are held together with screws. Pick one and use a screwdriver to look inside.	Invent something to solve a problem around your house. Describe the problem and show us your solution.	Using <i>only</i> paper or index cards, design a tall tower that can support an object. What object will you try to support?