STEM Startups / Engineering 3 Summer Assignment

In STEM Startups / Engineering 3, you will create a startup around an idea you're passionate about. The STEM Startups Summer Assignment is designed to jumpstart your startup journey. Start early, do it throughout the su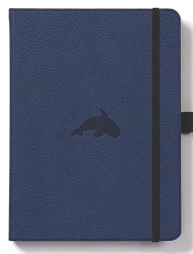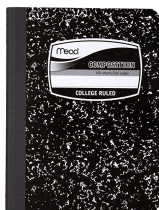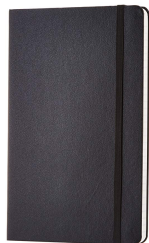mmer, and have fun! Email bbonomo@lwsd.org with questions. There are 3 parts to this 100-point assignment: getting an idea notebook, recognizing problems, and then exploring the startup world.

PART 1: IDEA NOTEBOOK (20 POINTS)

Buy / acquire / find an idea notebook

Unlike Engineering 1 and 2, you will NOT be using a large spiral notebook. Instead, you should find a notebook that is portable (around 6" x 8" tends to be a good size) and personal (you really like it). Lined, grid, or dot pages are fine. You'll use it for a mix of writing, drawing, organizing, etc. No electronic notebooks!

Here are examples of potential idea notebooks:

PART 2: PROBLEM STATEMENTS (30 POINTS)

Create a list of 30 problem statements in your journal

Finding a good idea is one of the hardest parts of starting a startup, so let's start that process now. Ideas are born from recognizing problems as opportunities.

You will write 30 problem statements with explanation:

❏ 10 should be directly inspired by your day-to-day life or personal experiences. Include a brief explanation of what inspired the problem statement.
❏ 10 should be drawn from conversations you have with people during summer or research into current issues or technologies. Include a brief explanation of what inspired the problem statement.
❏ The last 10 can be completely random. No explanation necessary.

Each problem statement includes **who** needs what and *why*. The "**who**" needs to be specific ("high school engineering students at Tesla STEM" is much better than "youth" or even "students"). Here are some examples from students last year:

● **Online shoppers** need a better way of knowing if where they are shopping is ethical or not *without them having to constantly do their own research into companies, which can be tiring*.
● **Chess players** need an easy way to learn chess openings since it is a *common problem for players and it is difficult to memorize*.
● **High school students** need a better way to manage their sleep schedule because *currently they are not getting the appropriate amount of sleep which leads to stress and mental health issues*.

A couple final notes:

● **Do not mention a solution in your problem statement**. There are lots of ways to solve a problem, and you don't want to bias yourself now.
● Your problem statements don't need to be big, profound, or unique - they just need to be real!

PART 3: START EXPLORING STARTUPS! (50 POINTS MINIMUM)

Complete at least 50 points of activities from the options below.

This part of the assignment is designed to get you thinking about startups! There are lots of options to choose from, as long as you complete at least 50 points of activities that you track below. Have fun, find things that align with your interests and current startup aspirations, but challenge yourself and get out of your comfort zone. *You can not do the same option more than once (can't do 10d five times).* Bonus Challenge: Get the most points!

10 points each	10a. Listen to an episode of a startup- or business-related podcast (examples: How I Built This, The Pitch, Planet Money). Write or draw/sketch a reflection in your notebook on what you found interesting.	10b. Read an article or blog post related to startups. Write or draw/sketch a reflection in your notebook on what you found interesting.	10c. Interview a person related to a problem you want to solve. Take detailed notes in your notebook.	10d. Watch an episode of Shark Tank. Write or draw/sketch a reflection in your notebook on what you found interesting.
20 points each	20a. Create a 500-1300 word article or blog post that lists 5-10 startup resources for students with a description for why each resource is worthwhile.	20b. Interview a current investor or entrepreneur. Turn your interview into a podcast episode, a video, or a 500-1300 word blog post.	20c. Find an entrepreneurship "thought leader" (someone who's well known and influential). Learn more about the person, read their writings, etc. Then, write a 500-1300 blog post on the person, their startup philosophy, and your opinion on the person. Make sure to cite sources.	20d. Create a 500-1300 blog post or an infographic about a problem you want to solve in order to convince others why it's a problem worth solving. Make sure to cite sources.
30 points each	30a. Read the book *The Lean Startup* by Eric Ries. Write a 500-1300 word blog post reflecting and sharing your opinion about it.	30b. Attend a startup-related event (remote is okay). Create a 1-slide reflection of your experience. Include an image of you at the event. Some suggestions of organizations that have startup events: The Greater Foundation, Seattle Angel Conference, Founders Live		30c. Build something cool. Deepen your technical skills by creating an interesting, self-driven project from start to finish. Document your process and learning in a 500-1300 word blog post that includes images.
40 points	Do something substantive to grow your entrepreneurial thinking, and document it in a 500-1300 word blog post that includes images. Interning at a startup this summer? Trying the Red Paperclip challenge and trading/bartering for something better? *(This is the option that we did a couple years ago, but given the pandemic, it might be harder to do now.)* Setting up a flower business in Animal Crossing? Just creating your own startup? Etc. Send me an email at bbonomo@lwsd.org with your proposal to get this option approved.			