(30 pts) Approx. 3 days

Unmanned systems let scientists and aerospace engineers collect data and accomplish tasks without putting human lives at risk. Often, unmanned systems are used in places that humans cannot travel. Space is one good example of where unmanned systems can make many things possible without putting people in danger.

One branch of unmanned systems operation is in the use of satellites. Satellite systems make it possible to communicate and survey large areas from space. In this part of the unit, we'll learn about unmanned systems, satellite launching, and remote sensing techniques. These are just some of the ways that aerospace engineers can collect data.

1. **Notes:** Start by watching the *Unmanned Systems, Getting Satellites to Space,* and *LiDAR Remote Sensing* videos. Each of these share different pieces of information about how satellites and other unmanned systems are used by scientists today.   Take a full page of good, detailed notes on the topics presented. Think a little bit about what other unmanned systems are in operation today.
2. **Unmanned System Investigation:** Start your *Unmanned System Investigation* by working with your classmates to brainstorm different unmanned systems. Then, go to work looking up the basic information about four (4) unmanned systems *per person*. Share your results with your team and discuss which ones are the coolest.
3. Once your group has discussed and shared your ideas, have each person select one (1) unmanned system to investigate further. Follow the *Unmanned System Investigation* assignment sheet and conduct your own individual research about your chosen system. Make sure you find information about all the questions posed.
4. **Data Sharing**: Add the results of your investigation to the class Google Doc/Spreadsheet so that others can see it too. Take some time to look through their results as well before answer the reflection questions.
5. Answer the three reflection questions on unmanned systems in your engineering notebook. Those questions are on the assignment sheet and also listed below:
    a. Does a common thread or theme exist relating to unmanned system development throughout time?
    b. List major influences on the unmanned systems industry and explain their significance.
    c. Explain the cause and effect relationship of the unmanned systems industry.

Part 1: Tasks	10 points	9-6 point	5-0 points
▢ Notes on Unmanned Systems	+ You took a full page of notes describing Unmanned Systems and Satellite abilities + Your notes include details about what remote sensing makes possible	- Your notes are lacking - Your notes do not describe remote sensing systems	- Your notes are missing - Your notes are missing many important parts
⊕ Unmanned Systems Investigation	+ You worked with your classmates to investigate remote systems + You completed your individual unmanned systems investigation	- You only did part of the unmanned system investigation	- Your unmanned system investigation is missing major parts
▢ Data Sharing	+ You added your results from your investigation to the class Google Spreadsheet/Google Doc + You answered the reflection questions in your engineering notebook	- You did not share all of your information - Your reflection question answers are missing	- Your information was not shared at all - You did not record anything in your notebook