

1. **What is the title of your leadership project?** Exploring NASA resource MarsTrek to choose safe landing sites on Mars.
2. **What option did you choose and why did you choose that option/topic:** I chose to share PD with my district colleagues and other PLTW teachers across the nation. I chose this option because we will be meeting regularly virtually in our district. I also want to share this fantastic resource with other PLTW or science teachers that teach Flight and Space subjects.
3. **Who is your proposed audience?**
 - a. **Which teachers will you serve with your PD and activities?**
Directly - 6th grade PLTW Flight & Space teachers in our school district (there are ten total). Indirectly - Other PLTW Flight & Space teachers in the PLTW community across the nation.
 - b. **What grades, subjects, and how many students do they teach?** They teach middle school students grade 6-8, but this lesson is designed for the 6th grade Flight & Space classes. Each class ranges from 12-24 students and is offered for a quarter. Some schools teach two sections, others teach one. I can estimate that approximately 200-240 students will be served each quarter, and 800-1000 students each year.
4. **How will your project demonstrate integration of STEM in the classroom?** This project applies to all STEM subject areas.
 - a. Science - Using Mars orbiters like MRO, we can create incredibly detailed maps of the Martian surface, similar to how we create maps of Earth using satellites.
 - b. Technology - With Mars Trek, students will explore the different Map layers and see what each proposed landing site looks like.
 - c. Engineering - Students will compare five different landing sites and discuss qualities of those sites that make them safe for humans to land on.
 - d. Math - Students will record the Latitude, Longitude, and Elevations to consider safe landing sites.
5. **What outcomes or expectations do you hope to see for your educators?** I hope that our teachers in the district will share this

resource and allow their students to explore the more detailed landing sites. I think they will be really excited to explore MarsTrek.

6. **How will you follow up with teachers in attendance?** For the teachers in my district, I can follow up with teachers at our upcoming PD zoom and ask them in person what they think of MarsTrek and use it as a powerful STEM resource for the 6th grade PLTW Flight & Space Course. I can also create a google form to send to the district and PLTW teachers to gather more detailed feedback.

NASA Resources for the Project:

1. [Mars Trek](#)
2. <https://www.jpl.nasa.gov/edu/learn/project/map-a-mars-rover-driving-route/>
3. PLTW - Lesson 3 Destination Mars