

Mission to Mars: Virtual Learning Simulation Experience, SEEC 2021

Justin Maenner,
MISD Jerry Knight
STEM Academy,
STEM Designer

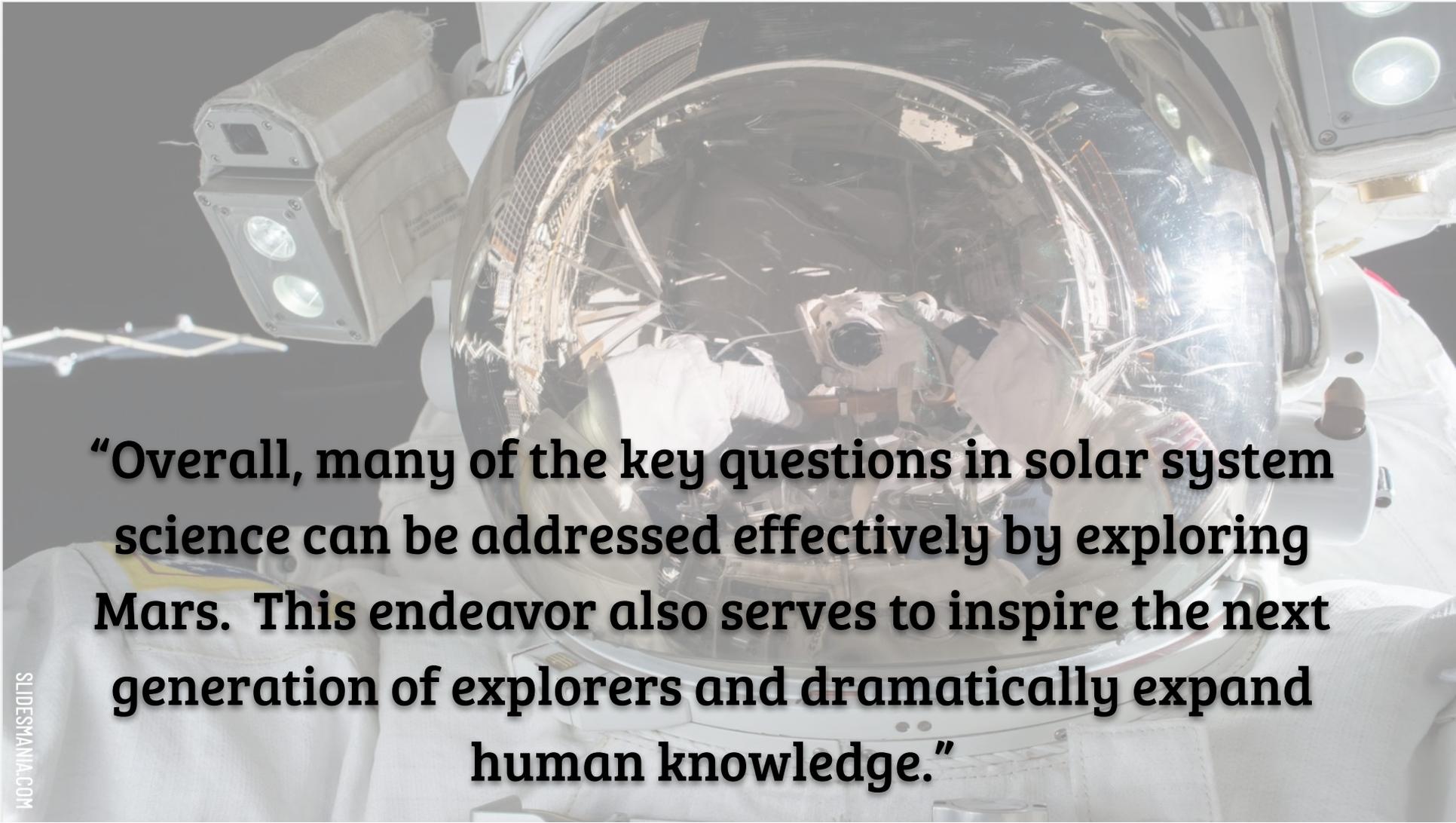
Amanda McCue,
CISD Specialist



Agenda for Today

- Introduction to the activity
 - Purpose
- Mission Reports
- JKSA Students
- Live Mission Simulation
- Considerations & Pitfalls
- Closure & Reflection

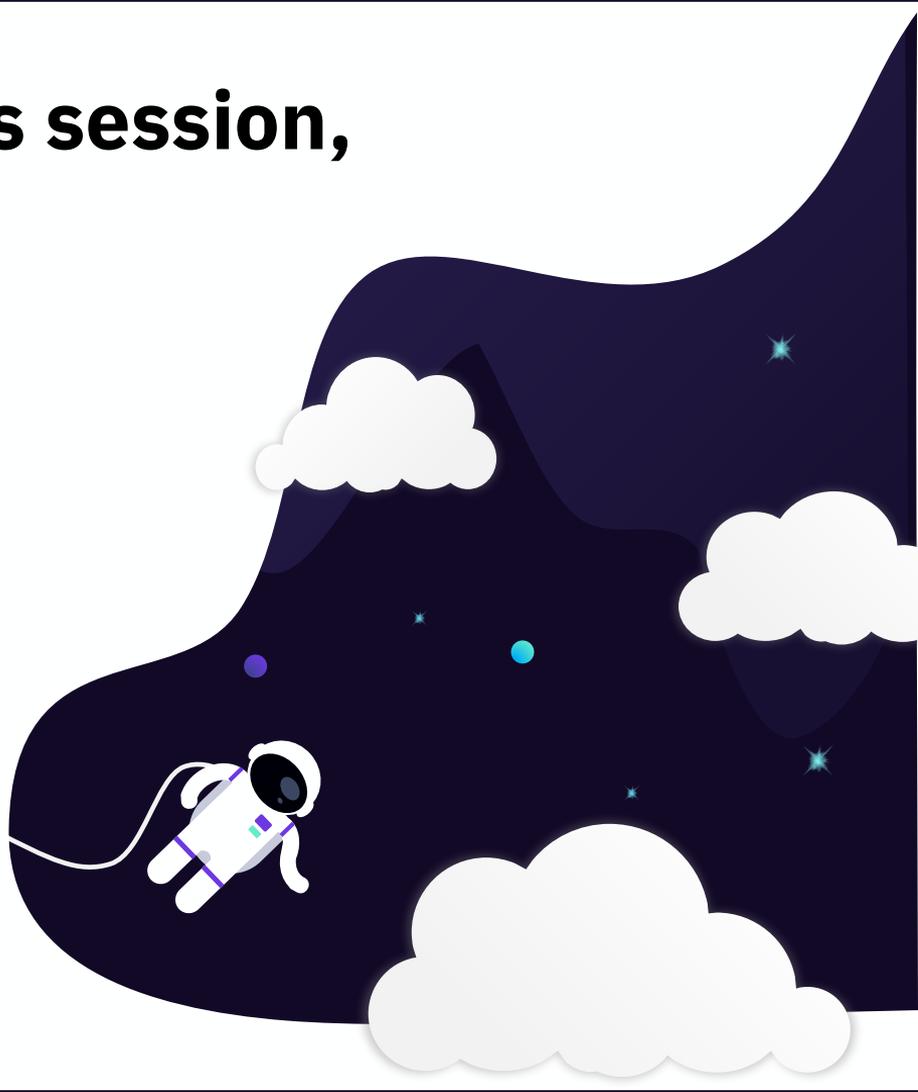




“Overall, many of the key questions in solar system science can be addressed effectively by exploring Mars. This endeavor also serves to inspire the next generation of explorers and dramatically expand human knowledge.”

To get the most from this session, here are some ideas...

1. **Look at the Mission Supplies ahead of time.** Gather and do with us the day of the session! (*Not required, you can still participate without them.*)
2. **Watch, participate, and take notes.** This session is designed to be implemented in the classroom using some of our examples & tips.
3. **Write down questions!** Write down questions that come up as the session progresses. We would love to hear from you and address anything that may help you!



Mission Supplies

Power Supply: Insulation & HUB

- Construction paper (10)
- Cotton balls (8)
- Bubble wrap (2 sheets)
- Notebook paper (10)
- Masking tape (10 ft)
- Duct tape (3 ft)
- Aluminum foil (5 squares; 3ft)
- Glue (unlimited)
- Wood (40 sticks)
- Straws (15)
- Twine (10 ft)

Power Supply: Battery Box Differentiation

Challenging: Have students create the dimensions of the battery box themselves as part of their initial supplies. Give them the constraint of being able to hold a battery of a specific size.

Medium: Pre-make skeletons of the box and have students finish filling and designing them out with their supplies.

Supportive: Provide students with a completed box structure, such as a shoebox, and have students use their materials to focus on the insulation.



Notes Outline



Terms Used During the Presentation...

Simulation - “Simulations are instructional scenarios where the learner is placed in a "world" defined by the teacher. They represent a reality within which students interact. The teacher controls the parameters and uses it to achieve the desired instructional results. Students experience the reality of the scenario and gather meaning from it,” (Simulations, 2018)

Virtual learners - Students who are learning remotely and not present in building.

In-person - Students who are ‘present’ or ‘in-person’ in the building with teacher.

Hybrid - A type of learning model in which remote virtual learners experience lessons synchronously with in-person learners.

JKSA - Jerry Knight STEM Academy, Mansfield ISD

21st Century Skills - Based on the 21st Century Framework, this is a set of skills, knowledge, and experiences that students need to master to be successful.

Thank you!

Digital Copies

**[Mission Reports](#); [Mission Checklist](#);
[Student Hook Slides](#)**

Questions? Thoughts?

Reach out to us via email:

amanda.mccue@crowley.k12.tx.us

justinmaenner@misdmail.org

