



## Europa Encounter:

Virtual Mission delivered online by Scobee's Challenger Mission Directors and Commanders

**TEKS:** 6(2)(E), 6(3)(A), 6(3)(B), 6(4)(A), 6(7), 6(8)(B), 6(8)(C), 6(9)(A), 6(9)(C), 6(11)(A)(C)  
7(2)E, 7(3)A, 7(3)B, 7(4)A, 7(5)(A), 7(9)A, 7(12)(A), 7(12)(B), 7(13)(A), 7(13)(B)  
8(2)C, 8(2)E, 8(3)A, 8(3)B, 8(4)A, 8(6)A, 8(7)(C), 8(8)C

It is the year 2042, astronauts have traveled from Earth to Jupiter in a space station equipped with a vehicle that will travel to Jupiter's moon, Europa, to launch a probe into the icy moon. Its goal is to dive deep into the massive water ocean, underneath the ice sheets studied by the Europa Clipper in the 2020s.

Working remotely the Mission Control Team must manage their mission objectives and keep our astronaut safe from the dangers of space travel.

What mysteries lay hidden deep beneath this Galilean moon's ocean? Is it suitable for life? Guide the spacecraft to the proper orbit, determine where and when to launch the probe to its salty depths, and then analyze its data to reveal Europa's secrets.

Are you ready to explore Europa? Join our Mission Control Team today!

- Designed for Grades 6-8
- 8-13 students working at their unique workstations and tasks
- Physically distanced classrooms, and hybrid or remote classrooms
- 45-60 minute experience
- Delivered over the Zoom web conferencing platform with video and audio capabilities.
- No advanced handout or materials required.

### Scobee Education Center

at San Antonio College

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## Student Teams include:



**COM** The Communications (COM) Officer is the voice of Mission Control. This vital team member speaks directly to our astronaut Commander relaying information from mission control teammates to the spacecraft.



**NAV** The Navigation Team is responsible for tracking the spacecraft and inserting it into the correct orbit around Europa. Once the probe has been launched, NAV is responsible for the safe return to the spacecraft to the Jupiter Gateway.



**PROBE** The PROBE Robotics Team must prepare, test, and launch the PROBE carrying the robotic ice drill and data sensors critical to the science outcomes of the mission.



**REM** The REMOTE (REM) Officer must determine the best location for the probe to impact the surface and drill through the thick ice sheets.



**NRG** The Energy (NRG) Officer works with the HAZ Team to manage the energy sources for the spacecraft and conducts vital calculations to help the NAV team determine the correct orbit around Europa.



**SPACE WEATHER** The Space Weather Team monitors the radiant energy emitted by Jupiter to ensure the spacecraft's safety throughout the mission.



**OCEAN** The OCEAN Team must analyze the icy surface of Europa's oceans to determine its element composition and assist the REM Team in identifying the PROBE's impact site.



**ASTROBIOLOGY** The BIO Officer studies the data to determine if the environment could potentially support life as we know it.



**LIFE SUPPORT** Life Support Officer maintains the critical life support systems onboard the spacecraft.



**RAD** The Radiation Team monitors the radiation levels onboard the Spacecraft. A large level of radioactivity could create a hazardous environment for the astronaut.



**HAZ** The Hazard Team monitors all potential dangers and threats to the Spacecraft and its crew.



**MED** The Medical Team monitors the Mission Commander's physical and mental well-being during the mission.



**SAT** The Satellite Team works with the Mission Commander to align the communication satellite and to research the antennas needed to keep the satellites and probes in working order.

## Ready for Launch?!

- Contact us at [sac-ScobeeCtr@alamo.edu](mailto:sac-ScobeeCtr@alamo.edu) to complete registration and schedule your mission.
- Tell us how many student and teachers will participate.
- Share if your school is a Title I school eligible for the Najim Foundation funded scholarship.
- Start the countdown to launch your students' experience!

*Scobee Education Center mission is to engage our students and community in life-changing experiences that inspire the pathways to STEAM careers.*

