

Orion Splash Down (Grades 3-8)

Explore the Engineering Design Process and use it to solve an Orion spacecraft design challenge. When astronauts return to Earth in the Orion spacecraft, they will re-enter on an extremely hot and fast journey through the atmosphere before splashing down in the Pacific Ocean. To protect the crew on landing, NASA is evaluating how the spacecraft may behave by conducting water-impact testing. In this session, the engineers in training will design and create a watertight spacecraft that is buoyant and will protect the team's astronaut (marshmallow) from water infiltration as it is submerged in water. Requirements for the design challenge will include meeting certain constraints, including budget, materials, time, and size. Teachers will be able to implement this lesson in their classrooms using easily obtainable materials and teach students to think like engineers. Valuable NASA and Boeing resources will also be shared during this session.

Bio:

Jessica Strauss started her teaching career as an elementary math and science teacher. Last year she moved to H.B. Plant High School in south Tampa. She currently teaches Probability and Statistics Honors as well as Algebra 1. She also heads the school's astronomy club.

Jessica is a part of various aerospace organizations including Civil Air Patrol (CAP), Space Educator Expedition Crew (SEEC), and Space Teacher Liaison. She strives to create and disseminate space-related educational lessons and curriculum to educators both in Florida and in the country. Her students have sent experiments to the International Space Station and presented their findings at the Smithsonian in Washington DC.

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(straussjessica.wixsite.com) or <https://sites.google.com/view/steminquirydatabase/home> to see some of the amazing resources out there.