Preparing Arizona students for the 21st century requires stepping out of the box and taking a new approach to the traditional classroom setting. Mesa Public Schools has launched a solution with the Space Integration Module (SIM). This simulated mission into space offers sixth grade students the opportunity to apply knowledge to real-life scenarios in an authentic learning environment. In addition to emphasizing the scientific process, this innovative program allows students to experience first hand the importance of leadership, collaboration, communication and problem solving as they work together toward a common goal.

Using technology, robotics, and inquiry, students constantly analyze information and make inferences in an effort to propose solutions to the difficulties presented to them. Problem solving as a team becomes an invaluable tool to success, creating confidence and an eagerness to learn more. Focused on completing a successful mission, students are empowered to take ownership of their learning and work collaboratively while learning to be effective communicators, leaders, creative problem solvers, inventors and innovators.

The SIM Mission is broken into three components: Mission Control, Space Shuttle, and Space Station. Each mission is designed to accommodate one sixth-grade class per school day, actively engaging up to 40 students for the duration of the four-hour mission. Serving over 50 elementary schools in the Mesa District, SIM currently provides 5000 sixth graders per year with this once-in-a-lifetime experience. Prior to their scheduled mission date, students take part in a required Pre-Flight Briefing, Student Training, and Technology Training. In addition, Team Building Activities, Extension Activities and Community Opportunities are also available for classroom implementation.

The driving force behind each mission is the simulated Oxygen Tank. Using software designed by Mesa Public Schools, students work collaboratively to replenish the ever-depleting oxygen tank, which can only be filled with student-completed tasks. This sense of urgency gives the mission purpose, focusing students on a common goal throughout the experience.

With an emphasis on science, technology, engineering, and mathematics (STEM) SIM curriculum is aligned to National Science Standards as well as standards for mathematics, technology, engineering, language arts, and social studies. High academic expectations, along with a supportive peer environment, strengthen the student - teacher relationship, providing students with a positive atmosphere that empowers them to succeed.

Several weeks prior to the mission, the classroom teacher carefully assigns each student a role, building on his/her strengths. This ensures a positive experience for each child, fostering a sense of empowerment and creating opportunities for future success. Throughout the mission day, students are communicating with two-way radios, streaming video and texting. Teamwork is critical as the crews work together on an extensive variety of activities, experiments and research designed for all academic levels. SIM provides every student with a relevant and rigorous experience appropriate to meet the diverse needs of all learners, including gifted, ELL and special needs students.

Using space exploration as a theme, SIM missions prepare students for future educational and careers in STEM. Combining STEM with communication, analytical, technical and collaborative skills accompanied by a strong work ethic all translate to the job market and prepare students for success.

Students across Arizona are the leaders and innovators of tomorrow. SIM, in partnership with the Boeing Company, knows that the future of industry is through the smart, talented and enthusiastic students of today. By meeting the demands of the 21st century and inspiring students to be the next generation of scientists and explorers, SIM prepares Arizona students for the future.