

Mission: 4th Grade Curriculum Standards

The following standards have been identified by the U.S. Space & Rocket Center as possible focus areas for Mission: 4th Grade field trips.

Alabama Academic Standards

MA19.3.DA Data Analysis

SC23.3.MS Motion and Stability: Forces and Interactions

SC23.4.E.TE Transference of Energy

SC23.5.MII.PCC Physical and Chemical Changes

Next Generation Science Standards

3rd Grade: Forces and Motion

- 3-PS2-1: Plan and conduct investigations to provide evidence of the effects of balanced and unbalanced forces on an object's motion.
- 3-PS2-2: Make observations and measurements of an object's motion to provide evidence that a predictable pattern (e.g., swinging, rolling) can be used to predict future motion.
- 3-PS2-3: Ask questions to determine the cause and effect relationships of electric or magnetic interactions between objects not in contact

4th Grade: Energy

- 4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.
- 4-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- 4-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide.
- 4-PS3-4: Apply scientific ideas to design, test, and refine a device that converts energy from one form to another (e.g., motion to heat)

5th Grade: Matter and Its Interactions

- 5-PS1-1: Model that matter consists of particles too small to be seen.

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- 5-PS1-2: Measure and graph quantities to show that total weight is conserved when substances are mixed, heated, or cooled.
- 5-PS1-3: Identify materials through observations and measurements of properties like hardness, solubility, and reflectivity.
- 5-PS1-4: Investigate whether mixing two or more substances creates new substances. [

Grade 6 (United States Studies: Industrial Revolution to the Present)

- Identifies causes, consequences, and reasons for U.S. entry into World War II.
- Highlights how the American home front changed during the war.
- Evaluates major social, cultural, and technological changes in the U.S. since WWII (e.g., the G.I. Bill of Rights of 1944, the space race, and postwar medical/social programs).

Alabama Social Studies Standards: AL History, WWII and After

10a Explain Alabama's contributions to military production during World War II.

Examples: aluminum production, Birmingham steel industry, Huntsville Arsenal, Percy Julian and firefighting foam, Port of Mobile, cotton and textile production

11a Identify Alabamians who contributed to the growth of American culture post-World War II into the 1970s. Examples: Bear Bryant, Hank Aaron, Hank Williams, Harper Lee, Nat King Cole, Tammy Wynette

14b Describe how technological innovations boosted space exploration during the Space Race, including the role of Redstone Arsenal and the Marshall Space Flight Center. Examples: Operation Paperclip and Werhner von Braun, Jupiter-C, Saturn V, Skylab

16 Research and report on Alabama's economic contributions and participation in global markets from the mid-twentieth through twenty-first centuries. Examples: decline of textiles; growth of aerospace, automobile manufacturing, and aviation