

Air Zoo Education Programs: To Space and Back

Grades 5-8

CONSTRUCT NEW SCIENTIFIC AND PERSONAL KNOWLEDGE

SCI.I.1.E.1 – Generate reasonable questions about the world based on observation.

SCI.I.1.E.2 – Develop solutions to unfamiliar problems through reasoning, observation, and/or experiment.

SCI.I.1.M.1 – Generate scientific questions about the world based on observation.

REFLECT ON THE NATURE, ADEQUACY AND CONNECTIONS ACROSS SCIENTIFIC KNOWLEDGE

SCI.II.1.E.1 – Develop an awareness of the need for evidence in making decisions scientifically.

SCI.II.1.E.2 – Show how science concepts can be interpreted through creative expression such as language arts and fine arts.

SCI.II.1.E.3 – Describe ways in which technology is used in everyday life.

SCI.II.1.E.4 – Develop an awareness of and sensitivity to the natural world.

SCI.II.1.E.5 – Develop an awareness of contributions made to science by people of diverse backgrounds.

SCI.II.1.M.2 – Describe limitations in personal knowledge.

SCI.II.1.M.3 – Show how common themes of science, mathematics, and technology apply in real-world contexts.

SCI.II.1.M.4 – Describe the advantages and risks of new technologies.

USE SCIENTIFIC KNOWLEDGE FROM THE *PHYSICAL SCIENCES* IN REAL-WORLD CONTEXTS

SCI.IV.1.E.1 – Classify common objects and substances according to observable attributes; color, size, shape, smell, hardness, texture, flexibility, length, weight, buoyancy, states of matter, or magnetic properties.

SCI.IV.1.E.4 – Identify forms of energy associated with common phenomena.

SCI.IV.1.M.1 – Measure physical properties of objects or substances.

SCI.IV.1.M.6 – Describe energy and the many common forms it takes (mechanical, heat, light, sound, electrical, magnetic, chemical, nuclear)

SCI.IV.3.E.1 – Describe or compare motions of common objects in terms of speed and direction.

SCI.IV.3.E.2 – Describe how forces (pushes or pulls) are needed to speed up, slow down, stop, or change the direction of a moving object.

SCI.IV.3.M.2 – Relate changes in speed or direction to unbalanced forces in two dimensions.

SCI.IV.3.M.3 – Describe the forces exerted by magnets, electrically charged objects, and gravity.

SCI.IV.4.E.3 – Describe light from a light source in terms of its properties.

SCI.IV.4.E.4 – Explain how light illuminates objects.

SCI.IV.4.M.3 – Explain how light helps us to see.

SCI.IV.4.M.4 – Explain how objects or media reflect, refract, transmit, or absorb light.

USE SCIENTIFIC KNOWLEDGE FROM THE EARTH AND SPACE SCIENCES IN REAL-WORLD CONTEXTS

SCI.V.1.E.1 – Describe major features of the earth’s surface.

SCI.V.1.E.2 – Recognize and describe different types of earth materials.

SCI.V.2.E.1 – Describe how water exists on earth in three states.

SCI.V.2.M.1 – Describe various forms that water takes on the earth’s surface and conditions under which they exist.

SCI.V.3.E.1 – Describe the atmosphere.

SCI.V.3.E.2 – Describe the weather conditions and climates.

SCI.V.3.M.1 – Describe the composition and characteristics of the atmosphere.

SCI.V.4.E.1 – Describe the sun, moon and earth.

SCI.V.4.E.2 – Describe the motions of the earth and moon around the sun.

SCI.V.4.M.1 – Compare the earth to other planets in terms of supporting life.

SCI.V.4.M.2 – Describe, compare, and explain the motions of planets, moons, and comets in the solar system.

SCI.V.4.M.3 – Describe and explain common observations of the day and night skies.