

# ***Air Zoo Education Programs: Space, the Next Frontier***

Grades 6-8

## **CONSTRUCT NEW SCIENTIFIC AND PERSONAL KNOWLEDGE**

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

**SCI.I.1.M.2** – Design and conduct simple investigations.

**SCI.I.1.M.3** – Investigate toys/simple appliances and explain how they work, using instructions and appropriate safety precautions.

**SCI.I.1.M.4** – Use measurement devices to provide consistency in an investigation.

**SCI.I.1.M.5** – Use sources of information to help solve problems.

## **REFLECT ON THE NATURE, ADEQUACY AND CONNECTIONS ACROSS SCIENTIFIC KNOWLEDGE**

**SCI.II.1.M.1** – Evaluate the strengths and weaknesses of claims, arguments, or data.

**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.

**SCI.II.1.M.5** – Recognize the contributions made in science by cultures and individuals of diverse backgrounds.

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

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

**SCI.IV.1.M.2** – Describe when length, mass, weight, area, or volume are appropriate to describe the size of an object or the amount of a substance.

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

**SCI.IV.1.M.7** – Describe how common forms of energy can be converted, one to another.

**SCI.IV.2.M.1** – Describe common physical changes in materials: evaporation, condensation, thermal expansion, and contraction.

**SCI.IV.2.M.2** – Describe common chemical changes in terms of properties of reactants and products.

**SCI.IV.3.M.1** – Qualitatively describe and compare motions in three dimensions.

**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.3.M.4** – Design strategies for moving objects by application of forces, including the use of simple machines.

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

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