

Scientific Inquiry

Standard 6-1: The student will demonstrate an understanding of scientific inquiry, including the process skills, mathematical thinking, controlled investigative design and analysis, and problem solving

6 – 1.1 – Use appropriate tools and instruments (including a spring scale, beam balance, barometer, and sling psychrometer) safely and accurately when conducting a controlled scientific investigation

• <u>WonderWorks Applicable Exhibits:</u> Pulley Power, Coin Orbiter

6 – 1.2 – Differentiate between observation and inference during the analysis and interpretation of data

• <u>WonderWorks Applicable Exhibits:</u> MindBall, Are you a risk taker?, What are the odds?, One In a Million, Anti-Gravity Chamber, Space Weight, Coin Orbiter, Earth Tic-Tac-Toe

6 - 1.4 - Use a technological design process to plan and produce a solution to a problem or a product (including identifying a problem, designing a solution or a product, implementing the design, and evaluating the solution or the product)

- <u>WonderWorks Applicable Exhibits:</u> Are you a risk taker?, What are the odds?, One In a Million, Anti-Gravity Chamber, Space Weight, Coin Orbiter, MindBall, Earth Tic-Tac-Toe, Plastex Surgery
- 6 1.5 Use appropriate safety procedures when conducting investigations
 - <u>WonderWorks Applicable Exhibits:</u> Hurricane Wind Shack, Tesla Coil, Bed of Nails, Xtreme 360, Ropes Challenge Course, Virtual Sports



Structures, Processes, and Responses of Animals

Standard 6-3: The student will demonstrate an understanding of structures, processes, and responses of animals that allow them to survive and reproduce (Life Science)

6 – 3.5 – Illustrate animal behavioral responses (including hibernation, migration, defense, and courtship) to environmental stimuli

- <u>WonderWorks Applicable Exhibits:</u> Roaring Sounds
- 6 3.7 Compare learned to inherited behaviors in animals
 - <u>WonderWorks Applicable Exhibits:</u> Roaring Sounds

Earth's Atmosphere and Weather

Standard 6-4: The student will demonstrate an understanding of the relationship between Earth's atmosphere properties and processes and its weather and climate (Earth Science)

6 - 4.1 - Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers)

• WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

6 – 4.2 – Summarize the interrelationships among the dynamic processes of the water cycle (including precipitation, evaporation, transpiration, condensation, surface-water-flow, and groundwater flow)

• WonderWorks Applicable Exhibits: Natural Disasters, Earth Tic-Tac-Toe

6 – 4.4 – Summarize the relationship of the movement of air masses; high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions



 <u>WonderWorks Applicable Exhibits</u>: Natural Disasters, Earth Tic-Tac-Toe, Hurricane Wind Shack, How cold is it?

6 - 4.5 – Use appropriate instruments and tools to collect weather data (including wind speed and direction, air temperature, humidity, and air pressure)

• WonderWorks Applicable Exhibits: How cold is it?

6 – 4.6 – Predict weather conditions and patterns based on weather data collected from direct observations and measurements, weather maps, satellites, and radar

- o <u>WonderWorks Applicable Exhibits</u>: Natural Disasters, Earth Tic-Tac-Toe
- 6 4.7 Explain how solar energy affects Earth's atmosphere and surface (land and water)
 - <u>WonderWorks Applicable Exhibits:</u> Earth Tic-Tac-Toe, Natural Disasters
- 6 4.8 Explain how convection affects weather patterns and climate
 - <u>WonderWorks Applicable Exhibits:</u> Earth Tic-Tac-Toe, Natural Disasters
- 6 4.9 Explain the influence of global winds and the jet stream on weather and climatic conditions
 - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

Conservation of Energy

Standard 6-5: The student will demonstrate an understanding of the law of conservation of energy and the properties of energy and work (Physical Science)

6 – 5.1 – Identify the sources and properties of heat, solar, chemical, mechanical, and electrical energy

• WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe



6 – 5.2 – Explain how energy can be transformed from one form to another (including the two types of mechanical energy, potential and kinetic, as well as chemical and electrical energy) in accordance with the law of conservation of energy

 <u>WonderWorks Applicable Exhibits:</u> Pulley Power, Xtreme 360, Anti-Gravity Chamber, Hurricane Wind Shack, Hoop Fever, Swim with the Sharks, Virtual Sports, Kidz Pace Snow Jam, True Grip Challenge, How high can you jump?, Coin Orbiter, Robotic Arms, Virtual Hockey, Recollections, Strike a Pose, Floor Piano

6 - 5.4 – Illustrate energy transformations (including the production of light, sound, heat, and mechanical motion) in electrical circuits

- <u>WonderWorks Applicable Exhibits:</u> Recollections, Strike a Pose, Pulley Power, Xtreme 360, Robotic Arms, Anti-Gravity Chamber, Hurricane Wind Shack, Hoop Fever, Swim with the Sharks, Virtual Sports, Kidz Pace Snow Jam, How high can you jump?, Coin Orbiter, Virtual Hockey, Floor Piano
- 6 5.6 Recognize that energy is the ability to do work (force exerted over a distance)
 - <u>WonderWorks Applicable Exhibits:</u> Pulley Power, Xtreme 360, Hurricane Wind Shack, Hoop Fever, Swim with the Sharks, Virtual Sports, Kidz Pace Snow Jam, How high can you jump?, Coin Orbiter, Robotic Arms, Virtual Hockey, Recollections

6 - 5.7 – Explain how the design of simple machines (including levers, pulleys, and inclined planes) helps reduce the amount of force required to do work

- o <u>WonderWorks Applicable Exhibits:</u> Pulley Power, Coin Orbiter
- 6 5.8 Illustrate ways that simple machines exist in common tools and in complex machines
 - <u>WonderWorks Applicable Exhibits:</u> Pulley Power, Coin Orbiter, Hurricane Wind Shack, Wonder Coaster