

- <u>S1.1a &b</u> Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions
 - <u>WonderWorks Applicable Exhibits</u>: Pull Yourself Up, Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Space Trivia, Fighter Jets, Shuttle Landers, Robotic Arms, Earth Tic-Tac-Toe, Bed of Nails, MindBall
- <u>S1.3.2</u> Explain the difference between an experiment and other types of scientific investigation
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Wonder Park, How High Can You Jump, Coin Orbiter, Cosmic Discovery, Robotic Arms, Strike A Pose, Earth Tic-Tac-Toe, Swirling Vortex, Memory Sequencing, Bed of Nails
- <u>S1.3.2</u> Recognize and explain the need for repeated experimental trials
 - <u>WonderWorks Applicable Exhibits:</u> How High Can You Jump, Coin Orbiter, Fighter Jets, Shuttle Landers, Robotic Arms, MindBall
- <u>S1.3.1</u> Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."
 - <u>WonderWorks Applicable Exhibits:</u> Inversion Tunnel, Upside Down World, Anti-Gravity Chamber, Hurricane Shack, Hoop Fever, Kidz Pace Bike, Wonder Park, Kidz Pace Snow Jam, How High Can You Jump, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Shuttle Landers, Mercury Capsule, Cosmic Discovery, Virtual Hockey, Alien Stomper, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Swirling Vortex, WonderCoaster, Bed of Nails, Astronaut Trainer, Lightning Coil, Jacob's Ladder, Air Cannon
- <u>S1.1.4</u> Recognize and explain the difference between personal opinion/interpretation and verified observation
 - <u>WonderWorks Applicable Exhibits:</u> How Tall Are You, Upside Down World, Anti-Gravity Chamber, Hurricane Shack, How High Can You Jump, Space Weight, Mercury Capsule, Virtual Hockey, Swirling Vortex, MindBall

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- <u>S1.2.1</u>– Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence
 - <u>WonderWorks Applicable Exhibits:</u> Inversion Tunnel, Upside Down World, Anti-Gravity Chamber, Hurricane Shack, Hoop Fever, Kidz Pace Bike, Wonder Park, Kidz Pace Snow Jam, How High Can You Jump, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Shuttle Landers, Mercury Capsule, Cosmic Discovery, Virtual Hockey, Alien Stomper, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Swirling Vortex, Wonder Coasters, Bed of Nails, MindBall, Astronaut Trainer, Lightning Coil, Jacob's Ladder
- <u>S1.2.2</u> Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up,Natural Disasters, Air Cannon, How High Can You Jump, Coin Orbiter, Cosmic Discovery, Lightning Coil, Jacob's Ladder, Astronaut Trainer
- <u>PS1.1</u> Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way
 - <u>WonderWorks Applicable Exhibits:</u> Space Trivia, Cosmic Discovery
- <u>PS1.1</u> Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets
 - WonderWorks Applicable Exhibits: Space Trivia, Cosmic Discovery
- <u>PS1.1</u> Distinguish among the following objects of the Solar System Sun, planets, moons, asteroids, comets and identify Earth's position in it
 - <u>WonderWorks Applicable Exhibits:</u> Space Trivia, Cosmic Discovery, Earth Tic-Tac-Toe
- <u>PS2.1</u> Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes
 - <u>WonderWorks Applicable Exhibits:</u> Earth Tic-Tac-Toe
- <u>PS2.2</u> Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time
 - WonderWorks Applicable Exhibits: Natural Disasters, Hurricane Shack, Earth Tic-Tac-Toe

- <u>PS2.2</u>- Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time
 - <u>WonderWorks Applicable Exhibits:</u> Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Earth Tic-Tac-Toe
- <u>PS2.2</u> Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains
 - WonderWorks Applicable Exhibits: Natural Disasters, Hurricane Shack, Earth Tic-Tac-Toe
- <u>PS2.2</u> Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water
 - o <u>WonderWorks Applicable Exhibits</u>: Natural Disasters, Hurricane Shack, Earth Tic-Tac-Toe
- <u>PS3.1</u> Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Coin Orbiter, Space Weight, Earth Tic-Tac-Toe, Bubble Lab, Robotic Arms, Memory Sequencer
- <u>PS3.1g</u> Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction
 - WonderWorks Applicable Exhibits: Robotic Arms
- <u>PS3.3</u> Investigate and describe that many physical and chemical changes are affected by temperature
 - o <u>WonderWorks Applicable Exhibits:</u> Natural Disasters, Earth Tic-Tac-Toe
- <u>PS4.1d</u> Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical
 - <u>WonderWorks Applicable Exhibits</u>: Pull Yourself Up, Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Wonder Park, Robotic Arms, Virtual Hockey, Memory Sequencer, Giant Piano, Theme Song Challenge, Lighting Coil, Jacob's Ladder, Air Cannon, Astronaut Trainer
- <u>PS4.1e</u> Investigate and explain that energy has the ability to cause motion or create change
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Wonder Park, Coin Orbiter, Fighter Jets, Shuttle Landers, Virtual Hockey, Alien Stomper, Astronaut Trainer
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- <u>PS4.1d</u> Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Wonder Park, Robotic Arms, Virtual Hockey, Memory Sequencer, Giant Piano, Theme Song Challenge, Lightning Coil, Jacob's Ladder
- <u>PS5.2</u> Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Hoop Fever, Wonder Park, Coin Orbiter, Fighter Jets, Shuttle Landers, Virtual Hockey, Air Cannon, Astronaut Trainer
- <u>PS5.1d</u> Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Wonder Park, Coin Orbiter, Fighter Jets, Shuttle Landers, Virtual Hockey, Alien Stomper, Air Cannon, Astronaut Trainer
- <u>PS5.2</u> Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Hurricane Shack, Wonder Park, How High Can You Jump, Coin Orbiter, Space Weight, Air Cannon, Astronaut Trainer
- <u>PS5.2</u> Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced
 - <u>WonderWorks Applicable Exhibits:</u> Pull Yourself Up, Anti-Gravity Chamber, Hurricane Shack, Wonder Park, How High Can You Jump
- <u>LE1.2a</u> Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive, organs, kidneys, bladder, and sensory organs
 - <u>WonderWorks Applicable Exhibits</u>: MindBall
- <u>PS3.2b</u> Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations
 - <u>WonderWorks Applicable Exhibits:</u> Earth Tic-Tac-Toe

- <u>PS3.1b</u> Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics
 - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe