



## Exhibit Alignment with Science Standards – 4<sup>th</sup> Grade

- SC.4.N.1.1 – Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations
  - WonderWorks Applicable Exhibits: Inversion Tunnel, Pull Yourself Up, Are you a risk taker?, What are the odds?, Safe Crackers, Upside Down World, One In a Million, Anti-Gravity Chamber, Earthquake, Hurricane Hole, How Cold Is It?, Velocity Ball, Space Trivia, Cosmic Discovery, Sound Labs, Roaring Lion, Human Race Machine, Bed of Nails, MindBall
- SC.4.N.1.2. – Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups
  - WonderWorks Applicable Exhibits: Pull Yourself Up, Inversion Tunnel, Upside Down World, Anti-Gravity Chamber, Earthquake, Hurricane Hole, How Cold Is It?, One In a Million, Kidz Pace Bike, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Mercury Capsule, Cosmic Discovery, Robotic Arms, Foot Motion Dome, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Simon , Carney Mirrors, Aging Machine, Human Race Machine, Theme Song Challenge, MindBall
- SC.4.N.1.3. – Explain that science does not always follow a rigidly defined method(“the scientific method”) but that science does involve the use of observations and empirical evidence
  - WonderWorks Applicable Exhibits: Inversion Tunnel, What are the odds?, Upside Down World, One In a Million, Anti-Gravity Chamber, Earthquake, Hurricane Hole, How Cold Is It?, Virtual Hoops, Kidz Pace Bike, Velocity Ball, Swim With The Sharks, Mirrorly a Window, Kidz Pace Snow Jam, How high can you jump?, Fog Wall, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Mercury Capsule, Cosmic Discovery, Virtual Hockey, Foot Motion Dome, Sound Labs, Roaring Lion, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Swirling Vortex, Aging Machine, Who Do You Think You Are?, Human Race Machine , How old are you really?, WonderCoaster, Bed of Nails, Talking Faces
- SC.4.N.1.4. – Attempt reasonable answers to scientific questions and cite evidence in support

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- WonderWorks Applicable Exhibits: Pull Yourself Up, Are you a risk taker?, What are the odds?, Safe Crackers, Upside Down World, One In a Million, Anti-Gravity Chamber, Earthquake, Natural Disasters, Hurricane Hole, Fog Wall, Space Trivia, Coin Orbiter, Cosmic Discovery, Aging Machine, Human Race Machine, How old are you really?, Who Do You Think You Are?, Talking Faces, MindBall
- SC.4.N.1.7 – Recognize and explain that scientists base their explanations on evidence
  - WonderWorks Applicable Exhibits: Inversion Tunnel, What are the odds?, Global VR, Upside Down World, One In a Million, Anti-Gravity Chamber, Earthquake, Hurricane Hole, How Cold Is It?, Virtual Hoops, Kidz Pace Bike, Velocity Ball, Swim With The Sharks, Mirrorly a Window, Kidz Pace Snow Jam, How high can you jump?, Fog Wall, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Mercury Capsule, Cosmic Discovery, Virtual Hockey, Foot Motion Dome, Sound Labs, Roaring Lion, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Swirling Vortex, Aging Machine, Who Do You Think You Are?, Human Race Machine, How old are you really?, WonderCoaster, Bed of Nails, Talking Faces, MindBall
- SC.4.N.1.8 – Recognize that science involves creativity in designing experiments
  - WonderWorks Applicable Exhibits: Inversion Tunnel, Pull Yourself Up, Are you a risk taker?, What are the odds?, Safe Crackers, How tall are you?, Upside Down World, One In a Million, Anti-Gravity Chamber, Earthquake, Natural Disasters, Hurricane Hole, How Cold Is It?, Virtual Hoops, Velocity Ball, Swim With The Sharks, Mirrorly a Window, How high can you jump?, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Robotic Arms, Virtual Hockey, Foot Motion Dome, Sound Labs, Roaring Lion, Strike A Pose, WonderWall, Earth Tic-Tac-Toe, Swirling Vortex, Simon , Carney Mirrors, Giant Piano, Aging Machine, Who Do You Think You Are?, Human Race Machine, How old are you really?, Couples Machine, Theme Song Challenge, WonderCoaster, Bed of Nails, Talking Faces, MindBall
- SC.4.N.2.1 – Explain that science focuses solely on the natural world
  - WonderWorks Applicable Exhibits: Earthquake, Natural Disasters, Hurricane Hole, How Cold Is It?, Velocity Ball, How high can you jump?, Fog Wall, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Sound Labs, Roaring Lion, Earth Tic-Tac-Toe, Human Race Machine
- SC.4.N.3.1 – Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model
  - WonderWorks Applicable Exhibits: At some degree, all exhibits are a sample of a scientific model

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- SC.4.E.5.1. – Observe that the patterns of stars in the sky stay the same although they appear to shift across the sky nightly, and different stars can be seen in different seasons
  - WonderWorks Applicable Exhibits: Space Trivia, Cosmic Discovery, Earth Tic-Tac-Toe
- SC.4.E.5.2. – Describe the changes in the observable shape of the moon over the course of about a month
  - WonderWorks Applicable Exhibits: Space Trivia, Earth Tic-Tac-Toe
- SC.4.E.5.3. – Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day
  - Wonder Works Applicable Exhibits: Space Trivia, Earth Tic-Tac-Toe
- SC.4.E.5.4. – Relate that the rotation of Earth (day and night) and apparent movements of the Sun, Moon, and Stars are connected
  - WonderWorks Applicable Exhibits: Space Trivia, Earth Tic-Tac-Toe
- SC.4.E.5.5. – Investigate and report the effects of space research and exploration on the economy and culture of Florida
  - WonderWorks Applicable Exhibits: Space Trivia, Cosmic Discovery, Space Shuttle Simulators
- SC.4.E.6.1. – Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure)
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
- SC.4.E.6.2. – Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
- SC.4.E.6.3 – Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable resources
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
- SC.4.E.6.5 – Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things
  - WonderWorks Applicable Exhibits: What are the odds?, One In a Million, Earthquake, Hurricane Hole, Natural Disasters, How Cold Is It?, Velocity Ball, How high can you jump?, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Mercury Capsule, Cosmic Discovery, Robotic Arms, Sound Labs, Roaring Lion, Earth Tic-Tac-Toe, Bed of Nails

## **Exhibit Alignment with Science Standards – 4<sup>th</sup> Grade**

- **SC.4.P.8.1** – Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets
  - **WonderWorks Applicable Exhibits:** How Cold Is It?, Pull Yourself Up, Coin Orbiter, Space Weight, Earth Tic-Tac-Toe, Bubble Lab, Robotic Arms, Simon
- **SC.4.P.8.2.** – Identify properties and common uses of water in each of its states
  - **WonderWorks Applicable Exhibits:** Hurricane Hole, How Cold Is It?, Bubble Lab, Earth Tic-Tac-Toe
- **SC.4.P.8.3.** – Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts
  - **Wonder Works Applicable Exhibits:** Robotic Arms, WonderWall, Earth Tic-Tac-Toe
- **SC.4.P.9.1.** – Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking
  - **WonderWorks Applicable Exhibits:** Carney Mirrors, Human Race Machine, Aging Machine How old are you really?, Earth Tic-Tac-Toe
- **SC.4.P.10.1.** – Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion
  - **WonderWorks Applicable Exhibits:** Pull Yourself Up, Anti-Gravity Chamber, Earthquake, Natural Disasters, Hurricane Hole, Virtual Hoops, Velocity Ball, Swim With The Sharks, Robotic Arms, Virtual Hockey, Sound Labs, Simon , Giant Piano, Theme Song Challenge
- **SC.4.P.10.2.** – Investigate and describe that energy has the ability to cause motion or create change
  - **WonderWorks Applicable Exhibits:** Pull Yourself Up, Anti-Gravity Chamber, Virtual Hoops, Velocity Ball, Coin Orbiter, Fighter Jets, Space Shuttle Simulators, Virtual Hockey, Foot Motion Dome
- **SC.4.P.10.3.** – Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates
  - **WonderWorks Applicable Exhibits:** Sound Labs
- **SC.4.P.11.1** – Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature
  - **WonderWorks Applicable Exhibits:** Natural Disasters, How Cold Is It?
- **SC.4.P.12.1** – Recognize that an object in motion always changes its position and may change its direction

## **Exhibit Alignment with Science Standards – 4<sup>th</sup> Grade**

- WonderWorks Applicable Exhibits: Inversion Tunnel, Pull Yourself Up, Global VR, Anti-Gravity Chamber, Earthquake, Hurricane Hole, Velocity Ball, Space Trivia, Coin Orbiter, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Foot Motion Dome, Virtual Hockey, Swirling Vortex, Bed of Nails, Talking Faces
  
- SC.4.P.12.2 – Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds
  - WonderWorks Applicable Exhibits: Inversion Tunnel, Pull Yourself Up, Global VR, Anti-Gravity Chamber, Earthquake, Hurricane Hole, Velocity Ball, Space Trivia, Coin Orbiter, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Foot Motion Dome, Virtual Hockey, Swirling Vortex, Bed of Nails, Talking Faces
  
- SC.4.L.16.2 – Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
  
- SC.4.L.16.3 – Recognize that animal behaviors may be shaped by heredity and learning
  - WonderWorks Applicable Exhibits: Roaring Lion
  
- SC.4.L.17.2 – Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
  
- SC.4.L.17.3 – Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe
  
- SC.4.L.17.4 – Recognize ways plants and animals, including humans, can impact the environment
  - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe