Exhibit Alignment with Science Standards – 8th Grade

- PS1.1 – Define a problem from the eighth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions
    - WonderWorks Applicable Exhibits: 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, Air Cannon, Lightning Coil, Jacob's Ladder
- PS2.1 – Design and conduct a study using repeated trials and replication
    - WonderWorks Applicable Exhibits: Pull Yourself Up, Natural Disasters, Velocity Ball, How High Can You Jump, Coin Orbiter, Cosmic Discovery, Fighter Jets, Shuttle Landers, Robotic Arms, MindBall, Air Cannon, Lightning Coil, Jacob's Ladder
- S1.3 – Use phrases such as "results report" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim
    - WonderWorks Applicable Exhibits: Anti-Gravity Chamber, MindBall
- S1.3.2a-c – Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data
    - WonderWorks Applicable Exhibits: Anti-Gravity Chamber, MindBall
- S1.2.1 – Analyze the methods used to develop a scientific explanation as seen in different fields of science
    - WonderWorks Applicable Exhibits: Inversion Tunnel, Upside Down World, Anti-Gravity Chamber, Hurricane Shack, Kidz Pace Bike, Velocity Ball, 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, MindBall, Air Cannon, Lightning Coil, Jacob's Ladder, Astronaut Suit, Google Earth

Exhibit Alignment with Science Standards – 8th Grade

- S1.2.1 – Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence

    - WonderWorks Applicable Exhibits: Pull Yourself Up, Velocity Ball, How High Can You Jump, Coin Orbiter, Cosmic Discovery, Robotic Arms, Strike A Pose, Earth Tic-Tac-Toe, Swirling Vortex, Memory Sequencer , Bed of Nails, MindBall, Air Cannon, Lightning Coil, Jacob's Ladder, Google Earth

- S1.1 – Discuss what characterizes science and its methods

    - WonderWorks Applicable Exhibits: Natural Disasters, Hurricane Shack, Velocity Ball, How High Can You Jump, Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Shuttle Landers, Cosmic Discovery, Earth Tic-Tac-Toe, MindBall, Air Cannon, Lightning Coil, Jacob's Ladder, Google Earth

- S1.1.2 – Select models useful in relating the results of their own investigations

    - WonderWorks Applicable Exhibits: Pull Yourself Up, Natural Disasters, Velocity Ball, How High Can You Jump, Coin Orbiter, Cosmic Discovery, Air Cannon, Lightning Coil, Jacob's Ladder, Astronaut Trainer

- S1.1 – Explain why theories may be modified but are rarely discarded

    - WonderWorks Applicable Exhibits: Pull Yourself Up, Upside Down World, Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Space Trivia, Coin Orbiter, Cosmic Discovery, MindBall, Astronaut Traininer

- S1.1– Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international level

    - WonderWorks Applicable Exhibits: Natural Disasters, Space Trivia, Fighter Jets, Shuttle Landers, Cosmic Discovery, Earth Tic-Tac-Toe

- S7.3 – Explain how political, social, and economic concerns can affect science, and vice versa

    - WonderWorks Applicable Exhibits: Anti-Gravity Chamber, Natural Disasters, Hurricane Shack, Velocity Ball, Space Trivia, Cosmic Discovery, Mission to Mars

Exhibit Alignment with Science Standards – 8th Grade

- PS1.1a-j – Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance
    - WonderWorks Applicable Exhibits: Cosmic Discovery, Shuttle Landers, Earth Tic-Tac-Toe, Space Trivia, Google Earth
- PS1.1a-j – Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars
    - WonderWorks Applicable Exhibits: Cosmic Discovery, Space Trivia
- PS1.1a-j – Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size and composition
    - WonderWorks Applicable Exhibits: Cosmic Discovery, Earth Tic-Tac-Toe, Space Trivia, Mission to Mars
- PS1.1a-j – Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions
    - WonderWorks Applicable Exhibits: - Inversion Tunnel, Pull Yourself Up, Upside Down World, Anti-Gravity Chamber, How High Can You Jump, Space Trivia
- PS1.1b – Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness) of stars
    - WonderWorks Applicable Exhibits: Cosmic Discovery, Space Trivia
- PS1.1a-j – Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions
    - WonderWorks Applicable Exhibits: Cosmic Discovery, Space Trivia, Mission to Mars
- PS1.1a-j – Explain the impact of objects in space on each other including: 1. The Sun on the Earth including seasons and gravitational attraction, 2. The moon on the Earth, including phases, tides, and eclipses, and the relative position of each body
    - WonderWorks Applicable Exhibits: Natural Disasters, Cosmic Discovery, Earth Tic-Tac-Toe, Space Trivia

Exhibit Alignment with Science Standards – 8th Grade

- S7. – Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information

    - WonderWorks Applicable Exhibits: Space Trivia, Astronaut Suit, Coin Orbiter, Space Weight, Fighter Jets, Shuttle Landers, Mercury Capsule, Cosmic Discovery, Earth Tic-Tac-Toe, Mission to Mars

- PS3.1 – Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional, to mass

    - WonderWorks Applicable Exhibits: Pull Yourself Up, Anti-Gravity Chamber, Hurricane Shack, Velocity Ball, How High Can You Jump, Coin Orbiter, Space Weight, Astronaut Traininer

- PS3.1h – Explore and describe the densities of various materials through measurement of their masses and volumes

    - WonderWorks Applicable Exhibits: Pull Yourself Up, Anti-Gravity Chamber, Hurricane Shack, Velocity Ball, How High Can You Jump, Coin Orbiter, Space Weight

- PS3.1a&b – Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample

    - WonderWorks Applicable Exhibits: Coin Orbiter, Space Weight, Bubble Lab

- PS3.1 – Distinguish among mixtures (including solutions) and pure substances

    - WonderWorks Applicable Exhibits: Bubble Lab, Anti-Gravity Chamber

- PS3.2a &c – Differentiate between physical changes and chemical changes

    - WonderWorks Applicable Exhibits: Natural Disasters

- PS3.2c – Investigate and describe how temperature influences chemical changes

    - WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe