Exhibit Alignment with NC Science Standards – 6th Grade

Competency Goal 1: The learner will design and conduct investigations to demonstrate an understanding of scientific inquiry

1.01 – Identify and create questions and hypotheses that can be answered through scientific investigations

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter

1.02 – Develop appropriate experimental procedures for: given questions, student generated questions

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter

1.03 – Apply safety procedures in the laboratory and in field studies: recognize potential hazards, manipulate materials and equipment, and conduct appropriate procedures

- WonderWorks Applicable Exhibits: Pulley Power, Safe Crackers, Hurricane Wind Shack, Virtual Sports, Xtreme 360, Bed of Nails, WonderCoaster

1.04 – Analyze variables in scientific investigations: indentify dependent and independent, use of a control, manipulate, describe relationships between, define operationally

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Cosmic Discovery

Exhibit Alignment with NC Science Standards – 6th Grade

1.05 – Analyze evidence to: explain observations, make inferences and predictions, and develop the relationship between evidence and explanation

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Cosmic Discovery, Space Info Center, Space Weight

1.06 – Use mathematics to gather, organize, and present quantitative data resulting from scientific investigations

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Cosmic Discovery, Space Weight

1.08 – Use oral and written language to: communicate findings, defend conclusions of scientific investigations

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter

1.09 – Use technologies and information systems to: research, gather and analyze data, visualize data, disseminate findings to others

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Natural Disasters, Space Update, Cosmic Discovery, Space Info Center, Earth Tic-Tac-Toe

1.10 – Analyze and evaluate information from a scientifically literate viewpoint by reading, hearing, and/or viewing

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Natural Disasters, Space Update, Cosmic Discovery, Space Info Center, Earth Tic-Tac-Toe

Competency Goal 2: The learner will demonstrate an understanding of technological design

Exhibit Alignment with NC Science Standards – 6th Grade

2.01 – Explore evidence that "technology" has many definitions.

- WonderWorks Applicable Exhibits: All Exhibits use some form of technology

2.02 – Use information systems to: identify scientific needs, human needs, or problems that are subject to technological solution

- WonderWorks Applicable Exhibits: Natural Disasters, How Cold is it?, Fighter Jets, Space Shuttle Simulators, Robotic Arms, Earth Tic-Tac-Toe

2.03 – Evaluate technological designs

- WonderWorks Applicable Exhibits: Time Machine, Safe Crackers, Hurricane Wind Shack, Natural Disasters, How Cold is it?, Tesla Coil, Fighter Jets, Space Shuttle Simulators, Robotic Arms, Earth Tic-Tac-Toe, Are you a risk taker?, What are the odds?, One In a Million, Coin Orbiter, Space Update, Cosmic Discovery, Earth Tic-Tac-Toe, Google Earth

2.04 – Apply tenets of technological design to make informed consumer decisions

- WonderWorks Applicable Exhibits: Are you a risk taker?, What are the odds?, Safe Crackers, One In a Million

Competency Goal 3: The learner will build an understanding of the geological cycles, forces, processes, and agents which shape the lithosphere

Exhibit Alignment with NC Science Standards – 6th Grade

3.01 – Evaluate the forces that shape the lithosphere

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

3.02 – Examine earthquake and volcano patterns

- WonderWorks Applicable Exhibits: Natural Disasters, Hurricane Wind Shack

3.03 – Explain the model for the interior of the earth

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

3.06 – Evaluate ways in which human activities have affected Earth's pedosphere and the measures taken to control the impact

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

3.07 – Assessing the use of technology and information systems in monitoring lithospheric phenomenon

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

3.08 – Conclude that the good health of environments and organisms requires: monitoring of the pedosphere, taking steps to maintain soil quality, stewardship

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

Exhibit Alignment with NC Science Standards – 6th Grade

Competency Goal 4: The learner will investigate the cycling of matter

4.01 – Describe the flow of energy and matter in natural systems

- WonderWorks Applicable Exhibits: Natural Disasters, Earth Tic-Tac-Toe, Space Info Center

Competency Goal 5: The learner will build understanding of the Solar System

5.01 – Analyze the components and cycles of the solar system including

- WonderWorks Applicable Exhibits: Space Update, Cosmic Discovery, Earth Tic-Tac-Toe, Space Info Center

5.02 – Compare and contrast the Earth to other planets

- WonderWorks Applicable Exhibits: Space Update, Cosmic Discovery, Earth Tic-Tac-Toe, Space Info Center

5.03 – Relate the influence of the sun and the moon's orbit to the gravitational effects produced on Earth

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe, Natural Disasters, Space Info Center

5.04 – Describe space explorations and the understandings gained from them

- WonderWorks Applicable Exhibits: Space Update, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Space Info Center, Earth Tic-Tac-Toe

5.05 – Describe the setting of the solar system in the universe

- WonderWorks Applicable Exhibits: Space Update, Cosmic Discovery, Space Info Center, Earth Tic-Tac-Toe

Exhibit Alignment with NC Science Standards – 6th Grade

5.06 – Analyze the spin-off benefits generated by science exploration technology

- WonderWorks Applicable Exhibits: Space Update, Coin Orbiter, Space Weight, Fighter Jets, Space Shuttle Simulators, Cosmic Discovery, Space Info Center, Earth Tic-Tac-Toe

Competency Goal 6: The learner will conduct investigations and examine models and devices to build an understanding of the characteristics of energy transfer and/or transformation

6.03 – Analyze sound as an example that vibrating materials generate waves that transfer energy

- WonderWorks Applicable Exhibits: Roaring Sounds, Floor Piano

6.05 – Analyze the physical interactions of light and matter

- WonderWorks Applicable Exhibits: Hoop Fever, Swim with the Sharks, Virtual Hockey, Strike a Pose, Recollections Room

Competency Goal 7: The learner will conduct investigations and use technologies and information systems to build an understanding of population dynamics

7.03 – Explain how changes in habitat may affect organisms

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

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7.04 – Evaluate data related to human population growth, along with problems and solutions

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe

7.06 – Investigate processes which, operating over long periods of time, have resulted in the diversity of plant and animal life present today

- WonderWorks Applicable Exhibits: Earth Tic-Tac-Toe