RIDES & The Next Generation Science Standards Quick Guide

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| **Kindergarten** | **Weather & Climate** | 2.3 Eat A Rock2.9 Water Erosion and Pollution |
|  | **Effects of Sunlight on Earth’s Surface** | 1.5 Solar Math: Solar Cars3.7 Studying & Making Crystals |
|  | **Identify Needs of Plants & Animals** | 2.5 Butterfly Camouflage |
|  | **Plants & Animals can Change Their Environment** | 2.5 Butterfly Camouflage |
|  | **Human Impact on Environment** | 1.21 Fuel Consumption & Newton’s 2nd Law of Motion2.1 All Aboard2.8 Do Oil & Water Mix?2.9 Water Erosion and Pollution4.7 Designing A Spaghetti Bridge4.8 Bridges4.9 Civil Engineering |
|  | **Force & Motion** | 1.5 Potential & Kinetic Energy1.19 Pendulum Problem1.20 Newton’s Marbles1.21 Fuel Consumption & Newton’s  2nd Law of Motion1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky1.26 Book Drop1.28 Crash Test2.2 Slippery When Wet2.4 Soap Boats2.21 Energy & Propulsion4.2 Clay Car Races4.3 Toy Cars4.5 Designing Paper Airplanes4.6 Design A Boat Challenge |
| **Grade 1** | **Waves: Light & Sound** | 1.10 Seismic Science1.16 Traveling Sounds |
|  | **Patterns in Sun, Moon and Stars** | 3.7 Studying & Making Crystals (patterns) |
|  | **Seasons: Relate Daylight to Time of Year** |  |
|  | **Variation & Inheritance of Traits** | 2.5 Butterfly Camouflage |
|  | **How Parents Help Offspring Survive** | 2.5 Butterfly Camouflage |
|  | **How Plants & Animals Meet Needs** |  |
| **Grade 2** | **Describe & Classify Properties of Materials** | 2.3 Eat A Rock2.6 Water Cohesiveness2.7 Color Changing Milk2.8 Do Oil & Water Mix?2.12 Curious Cubes3.5 Classification Using Rocks |
|  | **Heating or Cooling substances may be Reversible** | 2.3 Eat A Rock3.5 Classification Using Rocks |
|  | **Identify Where Water is Found on Earth** |  |
|  | **Modeling Landforms** | 3.5 Classification Using Rocks |
|  | **Processes that Shape the Earth** | 2.9 Water Erosion and Pollution3.5 Classification Using Rocks |
|  | **Diversity of Life in Different Habitats** |  |
|  | **Plant Growth Investigations** |  |
|  | **Modeling Seed Dispersal & Pollination** |  |
| **Grade 3** | **Forces & Motion** | 1.5 Potential & Kinetic Energy1.19 Pendulum Problem1.20 Newton’s Marbles1.21 Fuel Consumption & Newton’s  2nd Law of Motion1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky1.26 Book Drop1.28 Crash Test2.2 Slippery When Wet4.2 Clay Car Races4.3 Toy Cars4.5 Designing Paper Airplanes4.6 Design A Boat Challenge |
|  | **Electricity & Magnetism** | 1.4 Magnetic Travel1.6 Marbles in Motion2.4 Soap Boats3.5 Classification Using RocksSTEM conference activity: SimpleCircuits |
|  | **Seasons & Weather** | 1.14 Ice Cream & Thermal Energy (water cycle extension) |
|  | **Climates in Different Regions of the World** |  |
|  | **Interdependent Relationships & Ecosystems** |  |
|  | **Fossils Provide Evidence of Past Life** | 3.5 Classification Using Rocks |
|  | **Plant & Animal Life Cycles & Reproduction** | 2.5 Butterfly Camouflage |
|  | **Inherited Characteristics & Variation** | 2.5 Butterfly Camouflage |
|  | **Adaptation: Change Over Time** | 2.5 Butterfly Camouflage |
| **Grade 4** | **Energy: Forms, Storage, Conversion & Transfer****Properties of Waves** | 1.5 Potential & Kinetic Energy1.9 Slinky Science1.11 The Domino Chain Reaction1.12 Domino Speed/Distance  Lab1.14 Ice Cream & Thermal Energy1.17 Speaker Power1.18 Pinwheel Power1.19 Pendulum Problem1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky1.28 Crash Test2.3 Eat A Rock2.19 Food: Fuel for Humans2.21 Energy & Propulsion4.2 Clay Car Races |
|  | **Light & Vision** | 3.7 Studying & Making Crystals |
|  | **Patterns to Transfer Information** | 1.7 Volume of Irregular Objects1.8 Marbles & Cylinders |
|  | **Internal/External Structures of Plants & Animals Senses/Brain Roles in Receiving/Processing Information** |  |
|  | **Rock Formation & Fossils** | 3.5 Classification Using Rocks |
|  | **Erosion & Weathering** | 2.3 Eat A Rock2.9 Water Erosion and Pollution3.5 Classification Using Rocks |
|  | **Analyzing & Interpreting Maps** | 3.9 Garage Sale Topography3.10 Using Maps to Calculate gas  Mileage3.11 Creating a Schoolyard Map |
|  | **Impact of Earth Processes on Humans** |  |
| **Grade 5** | **All Matter is Made up of Small Particles** | 2.3 Eat A Rock2.10 Splash of Color2.13 Floating Oranges |
|  | **Identifying Materials Based on Properties** | 2.8 Do Oil & Water Mix?3.7 Studying & Making Crystals |
|  | **Measuring & Graphing Quantitative Data Regarding Conservation of Matter** | 2.13 Floating Oranges3.5 Classification Using Rocks4.6 Design A Boat Challenge |
|  | **Chemical Reactions** | 2.8 Do Oil & Water Mix?2.12 Curious Cubes3.7 Studying & Making Crystals |
|  | **Earth’s Gravitational Pull is Down** | 1.22 Drop, Drop, What is Gravity?4.4 Creating A Wrecking Ball4.5 Designing Paper Airplanes4.6 Design A Boat Challenge(Using the Triple Beam Balance Scale) |
|  | **Identifying Patterns in the Earth/Sun Relationship** |  |
|  | **Interactions Between Earth’s Systems** |  |
|  | **Water Distribution & Sources** |  |
|  | **Plants Get Materials for Growth from Water/Air** |  |
|  | **Energy in Food Comes from the Sun** | 2.19 Food: Fuel for Humans2.20 Exercise & Energy |
|  | **Decomposers & Ecosystems** |  |
|  | **Protecting Earth’s Resources** | 4.7 Designing A Spaghetti Bridge4.8 Bridges4.9 Civil Engineering |
| **Middle School** | **Matter & Its Interactions** | 2.13 Floating Oranges3.5 Classification Using Rocks4.6 Design A Boat Challenge2.3 Eat A Rock |
|  | **Motion & Stability: Forces & Interactions** | 1.5 Potential & Kinetic Energy1.19 Pendulum Problem1.20 Newton’s Marbles1.21 Fuel Consumption & Newton’s  2nd Law of Motion1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky1.26 Book Drop1.28 Crash Test2.2 Slippery When Wet4.2 Clay Car Races4.3 Toy Cars4.5 Designing Paper Airplanes4.6 Design A Boat Challenge |
|  | **Energy** | 1.5 Potential & Kinetic Energy1.11 The Domino Chain Reaction1.12 Domino Speed/Distance  Lab1.14 Ice Cream & Thermal Energy1.19 Pendulum Problem1.20 Newton’s Marbles1.21 Fuel Consumption & Newton’s 2nd Law of Motion1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky1.26 Book Drop1.28 Crash Test2.2 Slippery When Wet4.2 Clay Car Races4.3 Toy Cars4.5 Designing Paper Airplanes4.6 Design A Boat Challenge |
|  | **Waves & Their Applications in Technologies for Information Transfer** | 1.10 Seismic Science1.16 Traveling SoundsSTEM conference activity: Simple Circuits |
|  | **From Molecules to Organisms: Structures & Processes** | 2.4 Soap Boats |
|  | **Ecosystems: Interactions, Energy, and Dynamics** | 2.8 Do Oil & Water Mix?2.9 Water Erosion and Pollution |
|  | **Heredity: Inheritance and Variation of Traits** | 2.5 Butterfly Camouflage |
|  | **Biological Evolution: Unity and Diversity** | 2.5 Butterfly Camouflage |
|  | **Earth’s Place in the Universe** |  |
|  | **Earth’s Systems** |  |
|  | **Earth & Human Activity** | 1.21 Fuel Consumption & Newton’s  2nd Law of Motion2.1 All Aboard4.7 Designing A Spaghetti Bridge4.8 Bridges4.9 Civil Engineering |
|  | **Engineering Design** | 1.23 Balloon Rockets1.24 Force & Rubber Band Airplanes1.25 Shoot for the Sky4.2 Clay Car Races4.5 Designing Paper Airplanes4.6 Design A Boat Challenge4.7 Designing A Spaghetti Bridge4.8 Bridges4.9 Civil Engineering |
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