Starfall Kindergarten ELA with Science and Social Studies
Alignment with Next Generation Science Standards

K-PS2 Motion and Stability: Forces and Interactions

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Next Generation Science Standards	Starfall K ELA Alignment
K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	**Teacher's Guide p. 335 -** Land and Water (landform experiment) **Teacher's Guide p. 564 -** Cooperation **Teacher's Guide p. 565 -** Force: Push and Pull **Teacher's Guide p. 566 -** Formative Assessment **Teacher's Guide p. 568 -** Teacher's Choice Suggested Activity: Children plan and experiment effects of pushing using balls and marbles **Teacher's Guide p. 568 -** Teacher's Choice Suggested Activity: Provide stuffed animals for children to plan ways to move them (provide materials such as yarn, small leashes, etc.) ***Starfall.com*** -Additional Resources: Talking Library- *My Father Runs an Excavator*
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.*	**Teacher's Guide p. 566 -** Formative Assessment **Teacher's Guide p. 568 -** Teacher's Choice Suggested Activity: Provide blocks and small cars. Children investigate speed and distance using ramps. **Teacher's Guide p. 568 -** Teacher's Choice Suggested Activity: Place rope over back of a chair with a small basket attached. Children pull rope using multiple levels of force to determine the type of pull that moved the basket the farthest. **Teacher's Guide p. 456 -** Review the Earth, The Sun, The Moon (model) ***Starfall.com*** **-**Additional Resources: Talking Library

	- *My Father Runs an Excavator*

K-PS3 Energy

Next Generation Science Standards	Starfall K ELA Alignment
K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	**Teacher's Guide "Read Me First" p.15 -** Observe the Weather **Teacher's Guide Seasonal Holidays p. 19 -** Shadows **Teacher's Guide pp. 119-120 -** Introduce Weather **Teacher's Guide pp. 120-121 -** Introduce Seasons **Teacher's Guide p. 127 -** Weather Words **Teacher's Guide p. 133 -** Introduce *A Rainbow* **Teacher's Guide pp.139-140 -** Introduce *Rainbow, Rainbow* by Margaret Hillert Starfall Science Standards **Teacher's Guide pp. 322-323 -** Introduce the Water Cycle **Teacher's Guide pp. 326-327 -** Water Cycle experiments, Write About Experiments **Teacher's Guide pp. 437-438 -** Day and Night **Teacher's Guide p. 439 -** The Earth, The Sun, The Moon **Teacher's Guide p. 446 -** How the Sun Helps Living Things **Teacher's Guide pp. 448-449 -** The Moon
K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	**Teacher's Guide Seasonal Holidays p. 19 -** Shadows **Teacher's Guide p. 133 -** Introduce *A Rainbow* **Teacher's Guide p. 141 -** Science Center: Teacher's Choice- Build a structure for Backpack Bear to protect him from the sun **Teacher's Guide p. 141 -** Science Center: Teacher's Choice Suggested Activity- Build a structure for a person to protect them from the sun (provide materials such as sheets as umbrella's to work with) **Teacher's Guide pp. 159-160 -** Introduce *Caps for Sale* **Teacher's Guide pp. 444-445 -**Experimenting with Shadows **Teacher's Guide p. 567 -** Camp Day

K-LS1 From Molecules to Organisms: Structures and Processes

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Next Generation Science Standards	Starfall K ELA Alignment
K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	**Teacher's Guide Seasonal Holidays p. 24 -** It's Earth Day Dear Dragon **Teacher's Guide Seasonal Holidays p. 25 -** Writing: I can… **Teacher's Guide pp. 34-35 -** Nighttime and Daytime **Teacher's Guide p. 214 -** Introduce *A House in a Tree* **Teacher's Guide pp. 411-412 -** Living and Nonliving **Teacher's Guide pp. 416 -417 -** Introduce Parts of a Plant **Teacher's Guide pp. 418 -** Write About Experiments **Teacher's Guide p. 439 -** The Earth, The Sun, The Moon **Teacher's Guide p. 446 -** How the Sun Helps Living Things **Teacher's Guide p. 447 -** Kid Writing: Part 1 - "Why We Need the Sun" **Teacher's Guide p. 452 -** Kid Writing: Part 2 - "How else could the sun help?" **Teacher's Guide p. 507 -** Introduce the Animal Kingdom ***Starfall.com* -**Additional Resources: Talking Library - *The Story of Milk*

K-ESS2 Earth's Systems

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Next Generation Science Standards	Starfall K ELA Alignment
K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.	**Teacher's Guide "Read Me First" p.15 -** Observe the Weather **Teacher's Guide pp. 34-35 -** Nighttime and Daytime **Teacher's Guide pp. 119-120 -** Introduce Weather **Teacher's Guide pp. 120-121 -** Introduce Seasons **Teacher's Guide pp. 125-126 -** Introduce Cause and Effect **Teacher's Guide pp. 127-128 -** Weather Words **Teacher's Guide pp. 139-140 -** Introduce *Rainbow, Rainbow* by Margaret Hillert

	Teacher's Guide pp. 322-323 - Introduce the Water Cycle **Teacher's Guide p. 326 -** Water Cycle Experiments **Teacher's Guide pp. 437-438 -** Day and Night **Teacher's Guide pp. 448-449 -** The Moon **Teacher's Guide pp. 456-457** - Review The Earth, The Sun, The Moon **Teacher's Guide pp. 463-464** - Planet Earth and the Universe
K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	**Teacher's Guide p. 517, 519 -** Introduce *Backpack Bear's Mammal Book* **Teacher's Guide p. 537 -** Questions About Mammals **Teacher's Guide pp. 538-539 -** Write About Mammals **Teacher's Guide p. 557 -** Cause and Effect **Teacher's Guide p. 589 -** Introduce *Backpack Baer's Bird Book* **Teacher's Guide p. 644 -** Introduce *Penguin, Penguin* **Teacher's Guide p. 678 -** Introduce *Wolves* by Margaret Hillert **Teacher's Guide pp. 681-682 -** Begin Research Writing, Write About Wolves, Illustrate Research Writing **Teacher's Guide p. 693 -** Introduce Exercise and the Heart **Teacher's Guide pp. 733-734 -** Introduce Helen Keller **Teacher's Guide pp. 807-808-** Introduce *The Salamander Room* **Teacher's Guide p. 810 -** Shared Writing ***Starfall.com* -**Additional Resources: Talking Library - *The Story of Milk*

K-ESS3 Earth and Human Activity

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Next Generation Science Standards	Starfall K ELA Alignment
K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	**Teacher's Guide p. 214 -** Introduce *A House in a Tree* **Teacher's Guide pp. 411-412 -** Living and Nonliving **Teacher's Guide pp. 416 -417 -** Introduce Parts of a Plant **Teacher's Guide p. 422 -** Plant Seeds **Teacher's Guide p. 427 -** Plant Facts

	Teacher's Guide pp. 553-554 - Compare and Contrast Plants and Animals **Teacher's Guide p. 644 -** Introduce *Penguin, Penguin* **Teacher's Guide p. 650 -** Review Birds **Teacher's Guide p. 651 -** Create Individual Bird Posters **Teacher's Guide p. 678 -** Introduce *Wolves* **Teacher's Guide p. 812 -** Introduce Habitat: Pond **Teacher's Guide pp. 681-682 -** Begin Research Writing, Write About Wolves, Illustrate Research Writing **Teacher's Guide p. 877 -** Honeybees **Teacher's Guide pp. 894-896 -** *The Butterfly Book* ***Starfall.com* -**Additional Resources: Talking Library - *The Story of Milk, Dolphins Are Not Fish, Humpback Whales*
K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	**Teacher's Guide "Read Me First" p. 15 -** Observe the Weather (daily) **Teacher's Guide pp. 119-120 -** Introduce Weather **Teacher's Guide pp. 120-121 -** Introduce Seasons **Teacher's Guide pp. 125-126 -** Introduce Cause and Effect **Teacher's Guide pp. 137-138 -** Introduce *Benjamin Franklin* **Teacher's Guide p. 122 -** Introduce *Cloudy With a Chance of Meatballs* **Teacher's Guide p.126 -** Formative Assessment
K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	**Teacher's Guide Seasonal Holidays pp. 23-25 -** Earth Day **Teacher's Guide p. 346 -** Taking Care of the Environment **Teacher's Guide pp. 34-348 -** Introduce *Miss Rumphius* **Teacher's Guide p. 352 -** Recycling/Composting **Teacher's Guide pp. 356-357 -** Get to Know John Muir **Teacher's Guide pp. 358-359 -** IntroduceReducee, Reuse, Recycle **Teacher's Guide p. 361 -** Introduce *The Bottle in the River* **Teacher's Guide p. 362 -** Write Class Pledge **Teacher's Guide pp. 363-364 -** How We Protect Our Environment **Teacher's Guide p. 364 -** Author's Chair **Teacher's Guide pp. 428-429 -** The Oxygen Cycle and Pollination **Teacher's Guide p. 568 -** Trash Bag/Recycling

K-2-ETS1 Engineering Design

K-2-ET S1 Engineering Design

Next Generation Science Standards	Starfall K ELA Alignment
K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	**Teacher's Guide pp. 137-138 -** Introduce *Benjamin Franklin* **Teacher's Guide p. 142 -** Researching Benjamin Franklin **Teacher's Guide pp. 250-252 -** Introduce Scientists and Inventors **Teacher's Guide p. 258 -** Inventions of Long Ago **Teacher's Guide p. 269 -** Create an Invention **Teacher's Guide pp. 358-359 -** Introduce Reduce, Reuse, and Recycle **Teacher's Guide p. 360 -** "Reuse" in the Classroom **Teacher's Guide p. 614 -** Introduce the Wright Brothers **Teacher's Guide p. 731 -** Make Popcorn **Teacher's Guide pp. 865-866 -** Introduce *The Crow and the Pitcher* **Teacher's Guide p. 869 -** Backpack Bear's Story
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	**Teacher's Guide p. 269 -** Create an Invention **Teacher's Guide p. 482 -** Create a Model of the Solar System: Progressive Center **Teacher's Guide p. 559 -** Backpack Bear Puppet **Teacher's Guide p. 567 -** Camp Day **Teacher's Guide p. 568 -** Building a Campsite **Teacher's Guide p. 568 -** Trash Bag/Recycling **Teacher's Guide p. 614 -** Introduce the Wright Brothers (experiment) **Teacher's Guide pp. 865-866 -** Introduce *The Crow and the Pitcher*
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	**Teacher's Guide p. 269 -** Create an Invention **Teacher's Guide p. 482 -** Create a Model of the Solar System: Progressive Center **Teacher's Guide pp. 565-566 -** Force: Push and Pull **Teacher's Guide p. 731 -** Make Popcorn (use two available methods and compare) **Teacher's Guide pp. 865-866 -** Introduce *The Crow and the Pitcher* (experiment with two different objects) **Teacher's Guide p. 869 -** Backpack Bear's Story (compare with experiment on p. 866) **Teacher's Guide pp. 874-875 -** Sink or Float?

Publisher's Note: The citations included in this alignment represent a sampling of the Starfall Kindergarten ELA with Science and Social Studies Curriculum. Each week provides an opportunity for additional experimentation in the "Teacher's Choice" centers.
Starfall Kindergarten Math also provides lessons to support Next Generation Science Standards.