



Week	Title	Standards Covered	
1	Science and Engineering		
2	Scientists and Engineers Use the Five Senses	Nature of Science	
3	You Can be a Scientist or Engineer		
4	The Engineering Design Process	Science and Engineering	
5	Structure and Function	Crosscutting Concepts	
	K. Foi	ces and Interactions: Pushes and Pulls	
6	Motion		
7	What is a Push?	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.	
8	What is a Pull?	on one game on a monomer of an object.	
9	Engineering: Push and Pull	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.	
10	Measurement and Data	Nature of Science	
K. In	K. Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment		
11	Living and Nonliving Things	Nature of Science	
12	Plants Have Needs		
13	Animals Have Needs	K-LS1-1 Use observations to describe patterns of what plants and animals	
14	Humans Have Needs	(including humans) need to survive.	
15	Engineering: Needs		
16	Cause and Effect	Crosscutting Concepts	
17	Plants Change the Environment		
18	Animals Change the Environment	K-ESS2-2 Construct an argument supported by evidence for how plants and	
19	Humans Change the Environment	animals (including humans) can change the environment to meet their needs.	
20	Engineering: Change		
21	Models	Nature of Science	
22	Food chains	K-ESS3-1 Use a model to represent the relationship between the needs of	
23	Habitats	different plants or animals (including humans) and the places they live.	

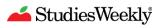




Week	Title	Standards Covered
24	Engineering: Protect a Habitat	K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
		K. Weather and Climate
25	Patterns	Crosscutting Concepts
26	The Sun	K-PS3-1 Make observations to determine the effect of sunlight on Earth's
27	Sun Protection	surface.
28	Engineering: Sun Protection	K-PS3-2 Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.
29	What is Weather?	K-ESS2-1 Use and share observations of local weather conditions to describe
30	Weather Has Patterns	patterns over time.
31	Severe Weather	K-ESS3-2 Ask questions to obtain information about the purpose of weather
32	Engineering: Weather	forecasting to prepare for, and respond to, severe weather.

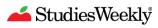


Week	Title	Standards Covered
1	Science and Engineering	
2	You Can Be a Scientist or Engineer!	Nature of Science
3	Teamwork	
4	Patterns	Crosscutting Concepts
5	The Engineering Design Process	Science and Engineering
6	Cause and Effect	Crosscutting Concepts
		1. Waves: Light and Sound
7	What is Sound?	1-PS4-1 Plan and conduct investigations to provide evidence that vibrating
8	Features of Sound	materials can make sound and that sound can make materials vibrate.
9	What is Light?	1-PS4-2 Make observations to construct an evidence-based account that
10	Sources of Light	objects can be seen only when illuminated.
11	Light On Materials	1-PS4-3 Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.
12	Sound and Light	1-PS4-4 Use tools and materials to design and build a device that uses light or
13	Engineering: Sound and Light	sound to solve the problem of communicating over a distance.
	1. Struc	ture, Function, and Information Processing
14	Structure and Function	Crosscutting Concepts
15	Animals Have Parts That Help Them	
16	Animals Live In Many Places	
17	Plants Have Parts That Help Them	1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
18	Plants Live In Many Places	and meet their needs.
19	Engineering: Animals & Plants	
20	Models	Nature of Science
21	Animal Offspring	1-LS1-2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
22	Plant Offspring	



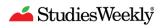


Week	Title	Standards Covered	
23	Animals and their Offspring		
24	Plants and their Offspring	1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	
25	Engineering: Learning from Offspring		
26	Measurement and Data	Nature of Science	
	1. Space Systems: Patterns and Cycles		
27	Objects in Space		
28	Daytime Sky	1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns	
29	Nighttime Sky	that can be predicted.	
30	Phases of the Moon		
31	Seasons	1 ESS1 2 Make absentations at different times of year to relate the amount of	
32	Engineering Design: Sundial	1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.	



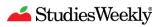


Week	Title	Standards Covered
1	What is Science? What is Engineering?	
2	How Scientists and Engineers Think and Act	Nature of Science
3	Working Together	
4	Engineering Design Process	Science and Engineering
5	Crosscutting Concepts	Crosscutting Concepts
6	Measurement and Data	Nature of Science
	2.	Structure and Properties of Matter
7	States of Matter	
8	Properties of Matter	
9	Investigating Matter: Part 1	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
10	Investigating Matter: Part 2	
11	Engineering Design: Catapults	2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
12	Assembly and Disassembly	2-PS1-3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
13	Changes in States of Matter	2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.
	2. Inter	rdependent Relationships in Ecosystems
14	Germination and Plant Growth	2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.
15	Plant Parts and Functions	
16	Pollination	2-LS2-2 Develop a simple model that mimics the function of an animal in
17	Seed Dispersal	dispersing seeds or pollinating plants.
18	Engineering Design: Seed Dispersal or Pollination	



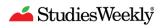


Week	Title	Standards Covered
19	Rainforest and Temperate Forest Habitats	
20	Tundra, Grassland, and Desert Habitats	2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.
21	Saltwater and Freshwater Habitats	
22	Human Impacts on Habitats	This week is optional.
	2. Earth's	Systems: Processes that Shape the Earth
23	Earth's Surface Changes Quickly	2-ESS1-1 Use information from several sources to provide evidence that Earth
24	Earth's Surface Changes Slowly	events can occur quickly or slowly.
25	Natural Disaster Safeguards	
26	Engineering Design: Protection Against Flooding	2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.
27	Engineering Design: Protection Against High Winds	
28	Landforms	2-ESS2-2 Develop a model to represent the shapes and kinds of land and
29	Bodies of Water	bodies of water in an area.
30	Water Cycle	
31	Engineering Design: My Community's Landforms and Bodies of Water	2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.
32	Weather	This week is optional.





Week	Title	Standards Covered
1	Who Are Scientists and Engineers?	Nature of Science
2	Big Ideas of Science and Engineering	Crosscutting Concepts
3	Measurement and Data	Nature of Science
4	Engineering Design Process	Science and Engineering
		3. Forces and Interactions
5	Forces	3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
6	Patterns in Forces	
7	Engineering Design: Why do I move when the car stops?	3-PS2-2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.
8	Magnetic Forces	
9	Electromagnets	3-PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.
10	Electric Forces	
11	Engineering Design: Magnetic and Electric Forces	3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.
	3. Inter	rdependent Relationships in Ecosystems
12	Surviving in a Group	3-LS2-1 Construct an argument that some animals form groups that help members survive.
13	Fossils	3-LS4-1 Analyze and interpret data from fossils to provide evidence of the
14	Clues from the Past	organisms and the environments in which they lived long ago.
15	Organisms in their Habitats	3-LS4-3 Construct an argument with evidence that in a particular habitat some
16	Engineering Design: The Big Mix up	organisms can survive well, some survive less well, and some cannot survive at all.
17	Changing Ecosystems	
18	People and the Ocean	3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
19	Engineering Design: Water Collection	

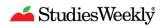




Week	Title	Standards Covered	
	3. Inheritance and Variation of Traits: Life Cycles and Traits		
20	Life Cycles	3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	
21	Inheriting Traits	3-LS3-1 Analyze and interpret data to provide evidence that plants and animals	
22	Families	have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	
23	Adaptations		
24	Are an Organism's Traits Influenced by the Environment?	3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.	
25	Variation Helps Organisms Survive	3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	
	3. Weather and Climate		
26	What Will the Weather Be Today?	3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	
27	Weather vs Climate	3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.	
28	Weather Hazards	3-ESS3-1 Make a claim about the merit of a design solution that reduces the	
29	Engineering Design: Can We Control the Weather?	impacts of a weather-related hazard.	
30	Matter		
31	What is Energy?	These weeks are optional.	
32	Engineering Design: Heat Transfer		

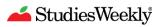


Week	Title	Standards Covered	
1	Measurement		
2	Data and Graphing	Nature of Science	
3	Engineering Design Process	Science and Engineering	
4	Crosscutting Concepts	Crosscutting Concepts	
5	Mindsets	Nature of Science	
		4. Energy	
6	Sound Energy	4-PS3-1 Use evidence to construct an explanation relating the speed of an	
7	Let's Play Ball!	object to the energy of that object.	
8	Law of Conservation of Energy	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	
9	Electricity	morn place to place by sound, light, heat, and electric currents.	
10	The Energy of Collision	4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	
11	Types of Energy	4 DC2 4 Annily asignifical depote design test and refine a device that converts	
12	Engineering Design: Rube Goldberg Machine	4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	
13	Nonrenewable Energy	4-ESS3-1 Obtain and combine information to describe that energy and fuels	
14	Renewable Energy	are derived from natural resources and that their uses affect the environment.	
		4. Waves: Waves and Information	
15	What Causes Changes in the Wavelength of a Wave?	4-PS4-1 Develop a model of waves to describe patterns in terms of amplitude	
16	How Much Energy is in a Wave?	and wavelength and that waves can cause objects to move.	
17	Transferring Data	4-PS4-3 Generate and compare multiple solutions that use patterns to transfer information.	
	4. Structure, Function, and Information Processing		
18	The Science of Eyesight	4-PS4-2 Develop a model to describe that light reflecting from objects and	
19	Phases of the Moon	entering the eye allows objects to be seen.	



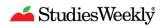


Week	Title	Standards Covered	
20	What Is So Special About Leaves?	4-LS1-1 Construct an argument that plants and animals have internal and	
21	Biodiversity	external structures that function to support survival, growth, behavior, and reproduction.	
22	Engineering Design: Hermit Crabs		
23	Animal Senses	4-1 \$1-2 Use a model to describe that animals receive different types of	
24	The Five Senses	4-LS1-2 Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	
25	Adaptation		
	4. Earth's Systems: Processes that Shape the Earth		
26	What is a Fossil?	4-ESS1-1 Identify evidence from patterns in rock formations and fossils in	
27	The Rock Cycle	rock layers to support an explanation for changes in a landscape over time.	
28	Weathering and Erosion	4-ESS2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	
29	Maps are Models	4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's	
30	Volcanoes	features.	
31	Engineering Design: Natural Disasters	4-ESS3-2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	
32	Stopping the Impact!		





Week	Title	Standards Covered	
1	Metric System and Measurement	Nature of Science	
2	Crosscutting Concepts	Crosscutting Concepts	
3	Engineering Design Process	Science and Engineering	
	5.	Structure and Properties of Matter	
4	What is Matter?	5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.	
5	States of Matter	5-PS1-2 Measure and graph quantities to provide evidence that regardless of	
6	Law of Conservation of Mass	the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	
7	Properties of Matter - Part 1	5-PS1-3 Make observations and measurements to identify materials based on	
8	Properties of Matter - Part 2	their properties.	
9	Engineering Design: Fixing Potholes	5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	
	5. Matter and Energy in Organisms and Ecosystems		
10	Matter Flow in Ecosystems	5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	
11	Photosynthesis	5-LS1-1 Support an argument that plants get the materials they need for	
12	Plants	growth chiefly from air and water.	
13	Invasive Species	5-LS2-1 Develop a model to describe the movement of matter among plants,	
14	The Carbon Connection	animals, decomposers, and the environment.	
		5. Earth's Systems	
15	Hydrosphere		
16	Geosphere		
17	Atmosphere	5-ESS2-1 Develop a model using an example to describe ways the geosphere,	
18	Biosphere	biosphere, hydrosphere, and/or atmosphere interact.	
19	Engineering Design: Building Dams		
20	Types of Water	5-ESS2-2 Describe and graph the amounts of salt water and fresh water in	
21	The Role of Water	various reservoirs to provide evidence about the distribution of water on Earth.	





Week	Title	Standards Covered
22	Engineering Design: Oil Spill	
23	Protecting the Earth	5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
24	Engineering Design: Landfills	ase solence lacus to protect the Earth's resources and environment.
	5. Spa	ce Systems: Stars and the Solar System
25	What is Gravity?	5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.
26	Gravity in Space	
27	Engineering Design: Mission to Mars	
28	What is a Star?	5-ESS1-1 Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.
29	Shadows	
30	The Earth	5-ESS1-2 Represent data in graphical displays to reveal patterns of daily
31	The Moon	changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
32	The Seasons	