



**Main Criteria:** California Content Standards

**Secondary Criteria:** LEGO® Education BricQ Motion Essential, LEGO® Education SPIKE™ Essential

**Subject:** Science

**Grades:** 1, 2, 3, 4, 5

**Correlation Options:** Show Correlated

**California Content Standards**

**Science**

Grade: 1 - Adopted: 2013

<b>CONTENT STANDARD / DOMAIN / PART</b>	<b>CA.1-PS.</b>	<b>PHYSICAL SCIENCE</b>
<b>PERFORMANCE STANDARD / MODE</b>	1-PS4.	Waves and their Applications in Technologies for Information Transfer
<b>EXPECTATION / SUBSTRAND</b>		Students who demonstrate understanding can:
<b>FOUNDATION / PROFICIENCY LEVEL</b>	1-PS4-1.	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.  <u>LEGO® Education SPIKE™ Essential</u> See it! Hear It! Build It!: Lesson 2 Musical Vibrations
<b>FOUNDATION / PROFICIENCY LEVEL</b>	1-PS4-2.	Make observations to construct an evidence-based account that objects can be seen only when illuminated.  <u>LEGO® Education SPIKE™ Essential</u> Great Adventures: Cave Car See it! Hear It! Build It!: Lesson 1 Illumination
<b>FOUNDATION / PROFICIENCY LEVEL</b>	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.  <u>LEGO® Education SPIKE™ Essential</u> See it! Hear It! Build It!: Lesson 1 Illumination See it! Hear It! Build It!: Lesson 3 Transparency
<b>FOUNDATION / PROFICIENCY LEVEL</b>	1-PS4-4.	Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.  <u>LEGO® Education SPIKE™ Essential</u> Great Adventures: Animal Alarm See it! Hear It! Build It!: Lesson 2 Musical Vibrations See it! Hear It! Build It!: Lesson 4 Communicate with Light or Sound
<b>CONTENT STANDARD / DOMAIN / PART</b>	<b>CA.1-LS.</b>	<b>LIFE SCIENCE</b>
<b>PERFORMANCE STANDARD / MODE</b>	1-LS1.	From Molecules to Organisms: Structures and Processes
<b>EXPECTATION / SUBSTRAND</b>		Students who demonstrate understanding can:
<b>FOUNDATION / PROFICIENCY LEVEL</b>	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.  <u>LEGO® Education SPIKE™ Essential</u> See it! Hear It! Build It!: Lesson 5 Learning from Using Ideas from Nature
<b>CONTENT STANDARD / DOMAIN / PART</b>	<b>CA.K-2-ETS.</b>	<b>ENGINEERING DESIGN</b>
<b>PERFORMANCE STANDARD / MODE</b>	K-2-ETS1.	Engineering Design
<b>EXPECTATION / SUBSTRAND</b>		Students who demonstrate understanding can:

FOUNDATION / PROFICIENCY LEVEL	K-2-ETS1-1.	<p>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.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Dog Obstacle Course</p> <p><u>LEGO® Education SPIKETM Essential</u> Amazing Amusement Park: Classic Carousel Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Fast Lane Amazing Amusement Park: The Most Amazing Amusement Park Amazing Amusement Park: The Perfect Swing Amazing Amusement Park: The Spinning Ferris Wheel Amazing Amusement Park: Twirling Teacups Great Adventures: Animal Alarm Great Adventures: Arctic Ride Great Adventures: Boat Trip Great Adventures: Cave Car Great Adventures: The Great Desert Adventure Great Adventures: Treehouse Camp Great Adventures: Underwater Quest See it! Hear It! Build It!: Lesson 1 Illumination See it! Hear It! Build It!: Lesson 2 Musical Vibrations See it! Hear It! Build It!: Lesson 3 Transparency See it! Hear It! Build It!: Lesson 4 Communicate with Light or Sound See it! Hear It! Build It!: Lesson 5 Learning from Using Ideas from Nature</p>
FOUNDATION / PROFICIENCY LEVEL	K-2-ETS1-2.	<p>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.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Relay Race</p> <p><u>LEGO® Education SPIKETM Essential</u> Amazing Amusement Park: Classic Carousel Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Fast Lane Amazing Amusement Park: The Most Amazing Amusement Park Amazing Amusement Park: The Perfect Swing Amazing Amusement Park: The Spinning Ferris Wheel Amazing Amusement Park: Twirling Teacups Great Adventures: Animal Alarm Great Adventures: Arctic Ride Great Adventures: Boat Trip Great Adventures: Cave Car Great Adventures: The Great Desert Adventure Great Adventures: Treehouse Camp Great Adventures: Underwater Quest See it! Hear It! Build It!: Lesson 1 Illumination See it! Hear It! Build It!: Lesson 2 Musical Vibrations See it! Hear It! Build It!: Lesson 3 Transparency See it! Hear It! Build It!: Lesson 4 Communicate with Light or Sound See it! Hear It! Build It!: Lesson 5 Learning from Using Ideas from Nature</p>
FOUNDATION / PROFICIENCY LEVEL	K-2-ETS1-3.	<p>Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <p><u>LEGO® Education SPIKETM Essential</u> Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Spinning Ferris Wheel See it! Hear It! Build It!: Lesson 1 Illumination See it! Hear It! Build It!: Lesson 2 Musical Vibrations See it! Hear It! Build It!: Lesson 3 Transparency See it! Hear It! Build It!: Lesson 4 Communicate with Light or Sound See it! Hear It! Build It!: Lesson 5 Learning from Using Ideas from Nature</p>

California Content Standards  
Science  
Grade: 2 - Adopted: 2013

CONTENT STANDARD / DOMAIN / PART	CA.2-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	2-PS1.	Matter and its Interactions
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	2-PS1-1.	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.  <u>LEGO® Education SPIKE™ Essential</u> Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects Science in Nature and our Daily Life: Lesson 4 Classify and Choose Materials
FOUNDATION / PROFICIENCY LEVEL	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.  <u>LEGO® Education SPIKE™ Essential</u> Amazing Amusement Park: Classic Carousel Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Fast Lane Amazing Amusement Park: The Most Amazing Amusement Park Amazing Amusement Park: The Perfect Swing Amazing Amusement Park: The Spinning Ferris Wheel Amazing Amusement Park: Twirling Teacups Great Adventures: Animal Alarm Great Adventures: Arctic Ride Great Adventures: Boat Trip Great Adventures: Cave Car Great Adventures: The Great Desert Adventure Great Adventures: Treehouse Camp Great Adventures: Underwater Quest Science in Nature and our Daily Life: Lesson 1 Habitats Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects Science in Nature and our Daily Life: Lesson 3 Pollination Science in Nature and our Daily Life: Lesson 4 Classify and Choose Materials Science in Nature and our Daily Life: Lesson 5 Protection from Wind  <u>LEGO® Education BricQ Motion Essential</u> Relay Race
FOUNDATION / PROFICIENCY LEVEL	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.  <u>LEGO® Education SPIKE™ Essential</u> Great Adventures: Boat Trip Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects
CONTENT STANDARD / DOMAIN / PART	CA.2-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	2-LS2.	Ecosystems: Interactions, Energy, and Dynamics
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	2-LS2-2.	Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.  <u>LEGO® Education SPIKE™ Essential</u> Science in Nature and our Daily Life: Lesson 3 Pollination
CONTENT STANDARD / DOMAIN / PART	CA.2-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	2-LS4.	Biological Evolution: Unity and Diversity
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:

FOUNDATION / PROFICIENCY LEVEL	2-LS4-1.	Make observations of plants and animals to compare the diversity of life in different habitats[Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]  <u>LEGO® Education SPIKE™ Essential</u> Science in Nature and our Daily Life: Lesson 1 Habitats
CONTENT STANDARD / DOMAIN / PART	CA.2-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	2-ESS1.	Earth's Place in the Universe
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	2-ESS1-1.	Make observations from media to construct an evidence-based account that Earth events can occur quickly or slowly.  <u>LEGO® Education SPIKE™ Essential</u> Science in Nature and our Daily Life: Lesson 5 Protection from Wind
CONTENT STANDARD / DOMAIN / PART	CA.2-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	2-ESS2.	Earth's Systems
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	2-ESS2-1.	Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.  <u>LEGO® Education SPIKE™ Essential</u> Science in Nature and our Daily Life: Lesson 5 Protection from Wind
CONTENT STANDARD / DOMAIN / PART	CA.K-2-ETS.	ENGINEERING DESIGN
PERFORMANCE STANDARD / MODE	K-2-ETS1.	Engineering Design
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	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.  <u>LEGO® Education BricQ Motion Essential</u> Dog Obstacle Course  <u>LEGO® Education SPIKE™ Essential</u> Amazing Amusement Park: Classic Carousel Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Fast Lane Amazing Amusement Park: The Most Amazing Amusement Park Amazing Amusement Park: The Perfect Swing Amazing Amusement Park: The Spinning Ferris Wheel Amazing Amusement Park: Twirling Teacups Great Adventures: Animal Alarm Great Adventures: Arctic Ride Great Adventures: Boat Trip Great Adventures: Cave Car Great Adventures: The Great Desert Adventure Great Adventures: Treehouse Camp Great Adventures: Underwater Quest Science in Nature and our Daily Life: Lesson 1 Habitats Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects Science in Nature and our Daily Life: Lesson 3 Pollination Science in Nature and our Daily Life: Lesson 4 Classify and Choose Materials Science in Nature and our Daily Life: Lesson 5 Protection from Wind

FOUNDATION / PROFICIENCY LEVEL	K-2-ETS1-2.	<p>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.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Relay Race</p> <p><u>LEGO® Education SPIKE™ Essential</u> Amazing Amusement Park: Classic Carousel Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Fast Lane Amazing Amusement Park: The Most Amazing Amusement Park Amazing Amusement Park: The Perfect Swing Amazing Amusement Park: The Spinning Ferris Wheel Amazing Amusement Park: Twirling Teacups Great Adventures: Animal Alarm Great Adventures: Arctic Ride Great Adventures: Boat Trip Great Adventures: Cave Car Great Adventures: The Great Desert Adventure Great Adventures: Treehouse Camp Great Adventures: Underwater Quest Science in Nature and our Daily Life: Lesson 1 Habitats Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects Science in Nature and our Daily Life: Lesson 3 Pollination Science in Nature and our Daily Life: Lesson 4 Classify and Choose Materials Science in Nature and our Daily Life: Lesson 5 Protection from Wind</p>
FOUNDATION / PROFICIENCY LEVEL	K-2-ETS1-3.	<p>Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <p><u>LEGO® Education SPIKE™ Essential</u> Amazing Amusement Park: Snack Stand Amazing Amusement Park: The Spinning Ferris Wheel Science in Nature and our Daily Life: Lesson 1 Habitats Science in Nature and our Daily Life: Lesson 2 Redesigning to Make New Objects Science in Nature and our Daily Life: Lesson 3 Pollination Science in Nature and our Daily Life: Lesson 4 Classify and Choose Materials Science in Nature and our Daily Life: Lesson 5 Protection from Wind</p>

California Content Standards  
Science

Grade: 3 - Adopted: 2013

CONTENT STANDARD / DOMAIN / PART	CA.3-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	3-PS2.	Motion and Stability: Forces and Interactions
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-PS2-1.	<p>Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Cheering Crowd Gravity Car Derby Weightlifter</p>

FOUNDATION / PROFICIENCY LEVEL	3-PS2-2.	<p>Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.</p> <p><u>LEGO® Education BricQ Motion Essential</u>  Bobsled  Free Throw  Race Car  Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Cable Car  Happy Traveler: Get Around Town</p>
FOUNDATION / PROFICIENCY LEVEL	3-PS2-3.	<p>Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</p> <p><u>LEGO® Education BricQ Motion Essential</u>  Bobsled  Free Throw  Race Car  Track and Field</p>
CONTENT STANDARD / DOMAIN / PART	CA.3-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	3-LS1.	From Molecules to Organisms: Structures and Processes
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-LS1-1.	<p>Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Animals and Their Environments: Lesson 2 Life Cycles</p>
CONTENT STANDARD / DOMAIN / PART	CA.3-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	3-LS2.	Ecosystems: Interactions, Energy, and Dynamics
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-LS2-1.	<p>Construct an argument that some animals form groups that help members survive.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Animals and Their Environments: Lesson 3 Animal Behavior</p>
CONTENT STANDARD / DOMAIN / PART	CA.3-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	3-LS4.	Biological Evolution: Unity and Diversity
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-LS4-2.	<p>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.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Animals and Their Environments: Lesson 5 Animals in Their Habitats</p>

FOUNDATION / PROFICIENCY LEVEL	3-LS4-3.	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.  <u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 5 Animals in Their Habitats
FOUNDATION / PROFICIENCY LEVEL	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.  <u>LEGO® Education BricQ Motion Essential</u> Essential Combined: Lesson 2 Safe Crossing  <u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 4 Solving Problems When Environments Change Essential Combined: Lesson 2 Safe Crossing
CONTENT STANDARD / DOMAIN / PART	CA.3-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	3-ESS3.	Earth and Human Activity
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-ESS3-1.	Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.  <u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 1 Preparing for the Weather
CONTENT STANDARD / DOMAIN / PART	CA.3-5-ETS.	ENGINEERING DESIGN
PERFORMANCE STANDARD / MODE	3-5-ETS1.	Engineering Design
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-1.	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.  <u>LEGO® Education BricQ Motion Essential</u> Race Car Track and Field  <u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 1 Preparing for the Weather Animals and Their Environments: Lesson 2 Life Cycles Animals and Their Environments: Lesson 3 Animal Behavior Animals and Their Environments: Lesson 4 Solving Problems When Environments Change Animals and Their Environments: Lesson 5 Animals in Their Habitats Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf Happy Traveler: Big Bus Happy Traveler: Cable Car Happy Traveler: Get Around Town Happy Traveler: Hovering Helicopter Happy Traveler: River Ferry Happy Traveler: Swamp Boat Happy Traveler: Taxi! Taxi! Quirky Creations: Big Little Helper - Math Extension Quirky Creations: Good Morning Machine Quirky Creations: High-Tech Playground Quirky Creations: Literary Randomizer Quirky Creations: Trash Monster Machine Quirky Creations: Winning Goal Quirky Creations: Your School Creation

FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-2.	<p>Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Race Car Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 1 Preparing for the Weather Animals and Their Environments: Lesson 2 Life Cycles Animals and Their Environments: Lesson 3 Animal Behavior Animals and Their Environments: Lesson 4 Solving Problems When Environments Change Animals and Their Environments: Lesson 5 Animals in Their Habitats Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf Happy Traveler: Big Bus Happy Traveler: Cable Car Happy Traveler: Get Around Town Happy Traveler: Hovering Helicopter Happy Traveler: River Ferry Happy Traveler: Swamp Boat Happy Traveler: Taxi! Taxi! Quirky Creations: Big Little Helper - Math Extension Quirky Creations: Good Morning Machine Quirky Creations: High-Tech Playground Quirky Creations: Literary Randomizer Quirky Creations: Trash Monster Machine Quirky Creations: Winning Goal Quirky Creations: Your School Creation</p>
FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-3.	<p>Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <p><u>LEGO® Education SPIKE™ Essential</u> Animals and Their Environments: Lesson 1 Preparing for the Weather Animals and Their Environments: Lesson 2 Life Cycles Animals and Their Environments: Lesson 3 Animal Behavior Animals and Their Environments: Lesson 4 Solving Problems When Environments Change Animals and Their Environments: Lesson 5 Animals in Their Habitats Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf Happy Traveler: Big Bus Happy Traveler: Cable Car Happy Traveler: Get Around Town Happy Traveler: Hovering Helicopter Happy Traveler: River Ferry Happy Traveler: Swamp Boat Happy Traveler: Taxi! Taxi! Quirky Creations: Big Little Helper - Math Extension Quirky Creations: Good Morning Machine Quirky Creations: High-Tech Playground Quirky Creations: Literary Randomizer Quirky Creations: Trash Monster Machine Quirky Creations: Winning Goal Quirky Creations: Your School Creation</p> <p><u>LEGO® Education BricQ Motion Essential</u> Race Car</p>

California Content Standards  
Science  
Grade: 4 - Adopted: 2013



CONTENT STANDARD / DOMAIN / PART	CA.4-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	4-PS3.	Energy
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	4-PS3-1.	Use evidence to construct an explanation relating the speed of an object to the energy of that object.  <u>LEGO® Education BricQ Motion Essential</u> Track and Field  <u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: Mini Mini-Golf
FOUNDATION / PROFICIENCY LEVEL	4-PS3-2.	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.  <u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf
FOUNDATION / PROFICIENCY LEVEL	4-PS3-3.	Ask questions and predict outcomes about the changes in energy that occur when objects collide.  <u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension
FOUNDATION / PROFICIENCY LEVEL	4-PS3-4.	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.  <u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Junior Pinball
CONTENT STANDARD / DOMAIN / PART	CA.4-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	4-PS4.	Waves and their Applications in Technologies for Information Transfer
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	4-PS4-2.	Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.  <u>LEGO® Education SPIKE™ Essential</u> Science Connections: Lesson 1 How Eyes See

FOUNDATION / PROFICIENCY LEVEL	4-PS4-3.	<p>Generate and compare multiple solutions that use patterns to transfer information.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Big Bus  Happy Traveler: Cable Car  Happy Traveler: Get Around Town  Happy Traveler: Hovering Helicopter  Happy Traveler: River Ferry  Happy Traveler: Swamp Boat  Happy Traveler: Taxi! Taxi!  Quirky Creations: Big Little Helper - Math Extension  Quirky Creations: Good Morning Machine  Quirky Creations: High-Tech Playground  Quirky Creations: Literary Randomizer  Quirky Creations: Trash Monster Machine  Quirky Creations: Winning Goal  Quirky Creations: Your School Creation  Science Connections: Lesson 5 Information Transfer</p>
CONTENT STANDARD / DOMAIN / PART	CA.4-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	4-LS1.	From Molecules to Organisms: Structures and Processes
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	4-LS1-1.	<p>Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p><u>LEGO® Education BricQ Motion Essential</u>  Essential Combined: Lesson 1 Create A Critter</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Essential Combined: Lesson 1 Create A Critter  Science Connections: Lesson 2 Animal Structures</p>
FOUNDATION / PROFICIENCY LEVEL	4-LS1-2.	<p>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.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Science Connections: Lesson 1 How Eyes See</p>
CONTENT STANDARD / DOMAIN / PART	CA.4-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	4-ESS3.	Earth and Human Activity
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	4-ESS3-1.	<p>Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Science Connections: Lesson 3 Energy Resources</p>
FOUNDATION / PROFICIENCY LEVEL	4-ESS3-2.	<p>Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Science Connections: Lesson 4 Prepare for Natural Hazards</p>
CONTENT STANDARD / DOMAIN / PART	CA.3-5-ETS.	ENGINEERING DESIGN
PERFORMANCE STANDARD / MODE	3-5-ETS1.	Engineering Design
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:

FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-1.	<p>Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf Happy Traveler: Big Bus Happy Traveler: Cable Car Happy Traveler: Get Around Town Happy Traveler: Hovering Helicopter Happy Traveler: River Ferry Happy Traveler: Swamp Boat Happy Traveler: Taxi! Taxi! Quirky Creations: Big Little Helper - Math Extension Quirky Creations: Good Morning Machine Quirky Creations: High-Tech Playground Quirky Creations: Literary Randomizer Quirky Creations: Trash Monster Machine Quirky Creations: Winning Goal Quirky Creations: Your School Creation Science Connections: Lesson 1 How Eyes See Science Connections: Lesson 2 Animal Structures Science Connections: Lesson 3 Energy Resources Science Connections: Lesson 4 Prepare for Natural Hazards Science Connections: Lesson 5 Information Transfer</p>
FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-2.	<p>Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u> Crazy Carnival Games: A-Maze-Ing - Math Extension Crazy Carnival Games: Avoid the Edge - Math Extension Crazy Carnival Games: Bowling Fun Crazy Carnival Games: Creative Carnival Games Crazy Carnival Games: High Stick Hockey - Math Extension Crazy Carnival Games: Junior Pinball Crazy Carnival Games: Mini Mini-Golf Happy Traveler: Big Bus Happy Traveler: Cable Car Happy Traveler: Get Around Town Happy Traveler: Hovering Helicopter Happy Traveler: River Ferry Happy Traveler: Swamp Boat Happy Traveler: Taxi! Taxi! Quirky Creations: Big Little Helper - Math Extension Quirky Creations: Good Morning Machine Quirky Creations: High-Tech Playground Quirky Creations: Literary Randomizer Quirky Creations: Trash Monster Machine Quirky Creations: Winning Goal Quirky Creations: Your School Creation Science Connections: Lesson 1 How Eyes See Science Connections: Lesson 2 Animal Structures Science Connections: Lesson 3 Energy Resources Science Connections: Lesson 4 Prepare for Natural Hazards Science Connections: Lesson 5 Information Transfer</p>

FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-3.	<p>Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <p><b>LEGO® Education SPIKE™ Essential</b>  Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Big Bus  Happy Traveler: Cable Car  Happy Traveler: Get Around Town  Happy Traveler: Hovering Helicopter  Happy Traveler: River Ferry  Happy Traveler: Swamp Boat  Happy Traveler: Taxi! Taxi!  Quirky Creations: Big Little Helper - Math Extension  Quirky Creations: Good Morning Machine  Quirky Creations: High-Tech Playground  Quirky Creations: Literary Randomizer  Quirky Creations: Trash Monster Machine  Quirky Creations: Winning Goal  Quirky Creations: Your School Creation  Science Connections: Lesson 1 How Eyes See  Science Connections: Lesson 2 Animal Structures  Science Connections: Lesson 3 Energy Resources  Science Connections: Lesson 4 Prepare for Natural Hazards  Science Connections: Lesson 5 Information Transfer</p>
--------------------------------	-------------	---

California Content Standards

Science

Grade: 5 - Adopted: 2013

CONTENT STANDARD / DOMAIN / PART	CA.5-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	5-PS1.	Matter and Its Interactions
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-PS1-1.	<p>Develop a model to describe that matter is made of particles too small to be seen.</p> <p><b>LEGO® Education SPIKE™ Essential</b>  Science We Cannot See: Lesson 1 Matter</p>
CONTENT STANDARD / DOMAIN / PART	CA.5-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	5-PS2.	Motion and Stability: Forces and Interactions
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-PS2-1.	<p>Support an argument that the gravitational force exerted by Earth on objects is directed down.</p> <p><b>LEGO® Education SPIKE™ Essential</b>  Science We Cannot See: Lesson 2 Gravity</p>
CONTENT STANDARD / DOMAIN / PART	CA.5-PS.	PHYSICAL SCIENCE
PERFORMANCE STANDARD / MODE	5-PS3.	Energy
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-PS3-1.	<p>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.</p> <p><b>LEGO® Education SPIKE™ Essential</b>  Science We Cannot See: Lesson 5 Energy Flow</p>

CONTENT STANDARD / DOMAIN / PART	CA.5-LS.	LIFE SCIENCE
PERFORMANCE STANDARD / MODE	5-LS1.	From Molecules to Organisms: Structures and Processes
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-LS1-1.	Support an argument that plants get the materials they need for growth chiefly from air and water.  <u>LEGO® Education SPIKE™ Essential</u> <u>Quirky Creations: Big Little Helper - Math Extension</u>
CONTENT STANDARD / DOMAIN / PART	CA.5-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	5-ESS1.	Earth's Place in the Universe
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-ESS1-2.	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.  <u>LEGO® Education SPIKE™ Essential</u> <u>Science We Cannot See: Lesson 3 Daytime and Nighttime</u>
CONTENT STANDARD / DOMAIN / PART	CA.5-ESS.	EARTH AND SPACE SCIENCE
PERFORMANCE STANDARD / MODE	5-ESS3.	Earth and Human Activity
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:
FOUNDATION / PROFICIENCY LEVEL	5-ESS3-1.	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.  <u>LEGO® Education SPIKE™ Essential</u> <u>Essential Combined: Lesson 2 Safe Crossing</u> <u>Science We Cannot See: Lesson 4 Protect the Environment</u>  <u>LEGO® Education BricQ Motion Essential</u> <u>Essential Combined: Lesson 2 Safe Crossing</u>
CONTENT STANDARD / DOMAIN / PART	CA.3-5-ETS.	ENGINEERING DESIGN
PERFORMANCE STANDARD / MODE	3-5-ETS1.	Engineering Design
EXPECTATION / SUBSTRAND		Students who demonstrate understanding can:

FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-1.	<p>Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Big Bus  Happy Traveler: Cable Car  Happy Traveler: Get Around Town  Happy Traveler: Hovering Helicopter  Happy Traveler: River Ferry  Happy Traveler: Swamp Boat  Happy Traveler: Taxi! Taxi!  Quirky Creations: Big Little Helper - Math Extension  Quirky Creations: Good Morning Machine  Quirky Creations: High-Tech Playground  Quirky Creations: Literary Randomizer  Quirky Creations: Trash Monster Machine  Quirky Creations: Winning Goal  Quirky Creations: Your School Creation  Science We Cannot See: Lesson 1 Matter  Science We Cannot See: Lesson 2 Gravity  Science We Cannot See: Lesson 3 Daytime and Nighttime  Science We Cannot See: Lesson 4 Protect the Environment  Science We Cannot See: Lesson 5 Energy Flow</p>
FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-2.	<p>Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p><u>LEGO® Education BricQ Motion Essential</u> Track and Field</p> <p><u>LEGO® Education SPIKE™ Essential</u>  Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Big Bus  Happy Traveler: Cable Car  Happy Traveler: Get Around Town  Happy Traveler: Hovering Helicopter  Happy Traveler: River Ferry  Happy Traveler: Swamp Boat  Happy Traveler: Taxi! Taxi!  Quirky Creations: Big Little Helper - Math Extension  Quirky Creations: Good Morning Machine  Quirky Creations: High-Tech Playground  Quirky Creations: Literary Randomizer  Quirky Creations: Trash Monster Machine  Quirky Creations: Winning Goal  Quirky Creations: Your School Creation  Science We Cannot See: Lesson 1 Matter  Science We Cannot See: Lesson 2 Gravity  Science We Cannot See: Lesson 3 Daytime and Nighttime  Science We Cannot See: Lesson 4 Protect the Environment  Science We Cannot See: Lesson 5 Energy Flow</p>

FOUNDATION / PROFICIENCY LEVEL	3-5-ETS1-3.	<p>Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <p><b>LEGO® Education SPIKE™ Essential</b></p> <p>Crazy Carnival Games: A-Maze-Ing - Math Extension  Crazy Carnival Games: Avoid the Edge - Math Extension  Crazy Carnival Games: Bowling Fun  Crazy Carnival Games: Creative Carnival Games  Crazy Carnival Games: High Stick Hockey - Math Extension  Crazy Carnival Games: Junior Pinball  Crazy Carnival Games: Mini Mini-Golf  Happy Traveler: Big Bus  Happy Traveler: Cable Car  Happy Traveler: Get Around Town  Happy Traveler: Hovering Helicopter  Happy Traveler: River Ferry  Happy Traveler: Swamp Boat  Happy Traveler: Taxi! Taxi!  Quirky Creations: Big Little Helper - Math Extension  Quirky Creations: Good Morning Machine  Quirky Creations: High-Tech Playground  Quirky Creations: Literary Randomizer  Quirky Creations: Trash Monster Machine  Quirky Creations: Winning Goal  Quirky Creations: Your School Creation  Science We Cannot See: Lesson 1 Matter  Science We Cannot See: Lesson 2 Gravity  Science We Cannot See: Lesson 3 Daytime and Nighttime  Science We Cannot See: Lesson 4 Protect the Environment  Science We Cannot See: Lesson 5 Energy Flow</p>
-----------------------------------	-------------	---