

TITLE	NJ STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Alexander Graham Bell * ISBN 0022858679 6 PK ISBN 0022865810	5.2.4.A.1., 5.2.4.B.1., 5.7.2.B.1.	K	490	<i>Alexander Graham Bell</i> describes the life and inventions of Alexander Graham Bell. It explains how Bell applied scientific ideas to invent the telephone. Basic information about sound and how it travels are also included.	experiment transmitter vibrate
All About Magnets ISBN 0022846514 6 PK ISBN 0022864385	5.1.4.B.1., 5.6.2.A.1.	M	580	<i>All About Magnets</i> describes properties of magnets and Earth's magnetic field. It also explains that magnets are used for navigation, in computer disks, in maglev trains, and in the space shuttle.	magnetic magnetic field poles
Animal Parents ISBN 0022846328 6 PK ISBN 0022864210	5.5.2.A.1., 5.10.2.A.1.	H	610	<i>Animal Parents</i> describes how various animals care for their young. A variety of fish, birds, reptiles and mammals are discussed in this book.	hatch instinct survive
Animals in Danger ISBN 0022859357 6 PK ISBN 0022865586	5.5.2.B.2.	G	440	<i>Animals in Danger</i> identifies factors that endanger animals, such as pollution and destruction of habitat. Measures that can be taken to help endangered animals are also described.	DDT habitat hatch
Apple Trees ISBN 002284631X 6 PK ISBN 0022864202	5.3.4.C.1., 5.5.2.A.1., 5.10.2.B.1.	L	640	<i>Apple Trees</i> describes how apple trees change with the seasons, identifies the functions of roots, stems, and leaves, describes the process of photosynthesis, and discusses the life cycle of an apple tree.	chlorophyll photosynthesis pollinate
Beyond the Sky * ISBN 0022858644 6 PK ISBN 0022865721	5.3.4.C.1., 5.9.2.A.1., 5.9.2.A.2., 5.9.2.B.1., 5.9.2.C.1.	J	460	<i>Beyond the Sky</i> describes stars, including the Sun, and the solar system. Apparent movement of the Sun is related to the motion of Earth. Stars, tools used to observe stars, and phases of the moon are also explained.	solar system star telescope

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Bicycle Metals ISBN 0022858733 6 PK ISBN 0022865799	5.4.2.C.2., 5.10.2.B.1.	K	460	<i>Bicycle Metals</i> describes the properties of metals, explains how mixtures of metals are used, and discusses how the qualities of different metals make them well-suited for different purposes.	aluminum metal mixture
Big Orange Pumpkins ISBN 002284628X 6 PK ISBN 0022864180	5.3.4.C.1., 5.5.2.A.1., 5.10.2.B.1	H	400	<i>Big Orange Pumpkins</i> describes the functions of different plant parts, identifies the steps in a pumpkin plant's life cycle, and explains ways that humans use pumpkins.	fruit root seed
Day and Night ISBN 0022858563 6 PK ISBN 0022865713	5.3.4.C.1., 5.9.2.A.1., 5.9.2.A.2.	E	110	<i>Day and Night</i> explains how a globe is used to model Earth, and how Earth's motion relative to the Sun causes day and night.	Earth Sun tilt
Desert Life ISBN 0022858539 6 PK ISBN 0022865616	5.5.2.B.1., 5.8.2.D.1., 5.10.2.A.1.	E	390	<i>Desert Life</i> describes the climate in desert areas, identifies forms of life found in deserts, and mentions adaptations of desert plants and desert animals.	desert saguaro cactus scaly
Different Kinds of Land ISBN 0022858547 6 PK ISBN 0022865640	5.8.2.D.1.	G	320	<i>Different Kinds of Land</i> identifies different landforms, such as mountains, valleys, plains, forests and deserts.	landform mountain plain
Electricity ISBN 0022858598 6 PK ISBN 0022865802	5.10.2.B.1.	E	270	<i>Electricity</i> classifies electricity as a form of energy, explains how electricity is used in the home, and describes how batteries are used.	battery electricity energy

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TITLE	NJ STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Fast Changes on Earth ISBN 0022858695 6 PK ISBN 0022865667	This book introduces information about processes that shape the earth; indicators for strand 5.8.2.C (processes that shape the earth) are introduced at a higher grade level.	L	480	<i>Fast Changes on Earth</i> describes events that rapidly change Earth, such as floods, tornadoes, earthquakes, land slides, and volcanoes. Photos illustrate each of these events.	earthquake flood landslide
Finding Fossils * ISBN 0022846395 6 PK ISBN 0022864288	5.2.4.A.1., 5.5.2.B.2.	J	750	<i>Finding Fossils</i> explains what scientists can learn by studying fossils, how fossils are found, and how scientists apply knowledge about fossils to the study of today's world.	fossil microscope paleontologist
From Seed to Tree * ISBN 0022846298 6 PK ISBN 0022864199	5.3.4.C.1., 5.8.2.B.4., 5.10.2.B.1.	J	480	<i>From Seed to Tree</i> describes the life cycle of an apple tree, identifies seasonal changes apple trees undergo, and describes ways that people use apples.	life cycle pollen sapling
From Tadpole to Frog ISBN 0022846344 6 PK ISBN 0022864237	5.3.4.C.1.	L	560	<i>From Tadpole to Frog</i> describes the life cycle of a frog, including the changes that occur when a tadpole changes to become a frog. Chapter 7 includes some fun facts about frogs.	hatch life cycle tadpole
Gases Matter * ISBN 0022858652 6 PK ISBN 0022865756	5.5.2.A.1., 5.10.2.B.1.	H	500	<i>Gases Matter</i> begins by describing solids, liquids, and gases. The properties of gases are described in detail. The carbon and nitrogen cycle are also discussed.	gas matter nitrogen

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TITLE	NJ STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Get Moving! ISBN 002284645X 6 PK ISBN 0022864334	5.7.2.A.2.	H	460	<i>Get Moving</i> describes forces, such as gravity and friction, that affect the motion of objects. Tools and machines used to change motion and apply forces are also described.	force gravity tool
Hot Air Balloons ISBN 0022858725 6 PK ISBN 0022865764	5.2.4.A.1., 5.2.4.B.1.	L	430	<i>Hot Air Balloons</i> describes the history of hot air balloons, how a hot air balloon works, and the role of heat energy in the function of a hot air balloon.	energy gas heat
Journey into Space ISBN 0022858717 6 PK ISBN 002286573X	5.2.4.A.1., 5.2.4.B.1.	K	480	<i>Journey into Space</i> explores the history of space flight beginning with the Wright brothers, and describes modern space exploration, including satellites, Moon walks, space shuttles, space probes, and the International Space Station.	astronaut probe space shuttle
Let's Recycle! * ISBN 0022846433 6 PK ISBN 0022864318	5.10.2.B.1.	K	650	<i>Let's Recycle</i> describes dumps and landfills, defines reducing and reusing, and explains the process of recycling. Actions that individuals can take to promote recycling are also described.	recycle reduce reuse
Make a Pizza * ISBN 0022858660 6 PK ISBN 0022865780	5.6.2.A.1.	J	500	<i>Make a Pizza</i> describes the changes that pizza ingredients undergo as they are mixed and cooked. Ingredients are classified as solids or liquids, and the process of boiling is described.	boil liquid solid
Matter and Change ISBN 0022858571 6 PK ISBN 0022865748	5.6.2.A.3., 5.8.2.B.2.	G	390	<i>Matter and Change</i> defines matter and describes everyday examples of solids, liquids, and gases. Changes in matter caused by heating and cooling are also described.	heat matter solid

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TITLE	NJ STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Minerals ISBN 0022846379 6 PK ISBN 0022864261	5.5.2.A.2., 5.8.2.A.1.	M		<i>Minerals</i> describes the properties of minerals and the rock cycle. Common minerals are pictured and described. Properties of minerals, such as hardness, are described.	crystal gemstone mineral
Mix It Up ISBN 002285858X 6 PK ISBN 0022865772	5.1.4.A.1., 5.1.4.A.2.	F	210	<i>Mix It Up</i> describes mixtures and solutions. Everyday examples of mixtures, such as trail mix, and solutions, such as salt water, are shown.	dissolve mixture solution
Push or Pull? * ISBN 0022846468 6 PK ISBN 0022864342	5.7.2.A.2.	J	350	<i>Push or Pull?</i> defines force as a push or pull, explains the role of forces in changing motion, and depicts everyday examples of forces changing motion.	direction force machine
Saving Animals ISBN 0022859365 6 PK ISBN 0022865594	5.5.2.B.1.	M	660	<i>Saving Animals</i> defines the term endangered and identifies some endangered animals, such as California sea otters, manatees, green sea turtles, bighorn sheep, and California condors. It also identifies steps that are being taken to save each of these animals.	endangered habitat reptile
Soil ISBN 0022846352 6 PK ISBN 0022864245	5.5.2.A.1., 5.8.2.A.1.	I	470	<i>Soil</i> differentiates soil and dirt and describes the layers of soil. It also identifies soil as a resource and describes ways that soil can be conserved.	humus mineral nutrient

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The Big Splash! * ISBN 0022858628 6 PK ISBN 0022865659	5.5.2.B.1., 5.8.2.B.1., 5.10.2.A.1.	J	500	<i>The Big Splash</i> explains why Earth is called the water planet, describes the zones of the ocean and pictures and describes forms of life found in each part of the ocean.	coral reef ocean volcano
The Camera's Eye ISBN 0022861661 6 PK ISBN 0022865829	5.4.2.C.2.	L	620	<i>The Camera's Eye</i> compares the structure of the human eye and a camera, explains how a camera works, describes the history of the camera, and discusses how modern digital cameras work.	lens pupil shutter
Tracking Weather ISBN 0022858709 6 PK ISBN 0022865691	5.8.2.B.3.	L	540	<i>Tracking Weather</i> explains how weather was forecast long ago, tools that are used to forecast weather, and technology used to learn about weather. Chapter 6 describes how scientific models are used in weather forecasting.	barometer radar satellite
Two Kinds of Forests * ISBN 002285861X 6 PK ISBN 0022865624	5.3.4.C.1., 5.5.2.B.1., 5.10.2.A.1., 5.10.2.B.1.	J	500	<i>Two Kinds of Forests</i> compares a woodland forest to a rainforest. The climates in which each type of forest is found are described, seasonal changes in forests are pictured, and adaptations such as migration and hibernation are defined.	climate hibernate migrate
Wait and See * ISBN 0022846336 6 PK ISBN 0022864229	5.3.4.C.1., 5.5.2.B.1.	J	430	<i>Wait and See</i> describes the life cycle of a bird, a butterfly, a frog, and a sea turtle.	hatching pupa tadpole
Water for Life ISBN 0022858555 6 PK ISBN 0022865675	5.6.2.A.3., 5.8.2.B.1., 5.8.2.B.2.	G	290	<i>Water for Life</i> identifies the importance of water and describes the water cycle. Different forms of precipitation, such as hail and sleet are described.	hail sleet water cycle

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TITLE	NJ STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Water Habitats ISBN 0022858687 6 PK ISBN 0022865632	5.5.2.B.1., 5.10.2.A.1.	L	470	<i>Water Habitats</i> describes the physical characteristics of oceans, lakes, ponds, river, streams, and wetlands and the living things found in each.	habitat
What Do Clouds Tell Us? * ISBN 0022858636 6 PK ISBN 0022865683	5.8.2.B.2., 5.8.2.B.3.	J	450	<i>What Do Clouds Tell Us?</i> describes how clouds form, identifies different types of clouds, and identifies the weather associated with each type of cloud.	cirrus cumulus stratus

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New Jersey Core Curriculum Standards for Science

STANDARD 5.1

(SCIENTIFIC PROCESSES) ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

5.1.4.A.**Habits of Mind**

5.1.4.A.1.

Raise questions about the world around them and be willing to seek answers through making careful observations and experimentation.

5.1.4.A.2.

Keep records that describe observations, carefully distinguish actual observations from ideas and speculations, and are understandable weeks and months later.

5.1.4.A.3.

Recognize that when a science investigation is replicated, very similar results are expected.

5.1.4.A.4.

Know that when solving a problem it is important to plan and get ideas and help from other people.

5.1.4.B.**Inquiry and Problem Solving**

5.1.4.B.1.

Develop strategies and skills for information-gathering and problem-solving, using appropriate tools and technologies.

5.1.4.B.2.

Identify the evidence used in an explanation.

5.1.4.C.**Safety**

5.1.4.C.1.

Recognize that conducting science activities requires an awareness of potential hazards and the need for safe practices.

5.1.4.C.2.

Understand and practice safety procedures for conducting science investigations.

STANDARD 5.2

(Science and Society) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.

5.2.4.A.**Cultural Contributions**

5.2.4.A.1.

Describe how people in different cultures have made and continue to make contributions to science and technology.

5.2.4.B.**Historical Perspectives**

5.2.4.B.1.

Hear, read, write, and talk about scientists and inventors in historical context.

STANDARD 5.3

(Mathematical Applications) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.

5.3.4.A.**Numerical Operations**

5.3.4.A.1.

Determine the reasonableness of estimates, measurements, and computations of quantities when doing science.

5.3.4.A.2.

Recognize and comprehend the orders of magnitude associated with large and small physical quantities.

5.3.4.A.3.

Express quantities using appropriate number formats, such as:

5.3.4.A.3.a.

Integers.

5.3.4.A.3.b.

Fractions.

5.3.4.B.**Geometry and Measurement**

5.3.4.B.1.

Select appropriate measuring instruments based on the degree of precision required.

5.3.4.B.2.

Use a variety of measuring instruments and record measured quantities using the appropriate units.

5.3.4.C.**Patterns and Algebra**

5.3.4.C.1. Identify patterns when observing the natural and constructed world.

5.3.4.D. Data Analysis and Probability

5.3.4.D.1. Use tables and graphs to represent and interpret data.

STANDARD 5.4

(Nature and Process of Technology) All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.

5.4.2.A. Science and Technology

5.4.2.A.1. Indicators for this strand are introduced at a higher grade level.

5.4.2.B. Nature of Technology

5.4.2.B.1. Select and use simple tools and materials to complete a task.

5.4.2.C. Technological Design

5.4.2.C.1. Make a plan in order to design a solution to a problem.

5.4.2.C.2. Describe a toy or other familiar object as a system with parts that work together.

STANDARD 5.5

(Characteristics of Life) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.

5.5.2.A. Matter, Energy, and Organization in Living Systems

5.5.2.A.1. Investigate the basic needs of humans and other organisms.

5.5.2.A.2. Compare and contrast essential characteristics that distinguish living things from nonliving things.

5.5.2.B. Diversity and Biological Evolution

5.5.2.B.1. Recognize that different types of plants and animals live in different parts of the world.

5.5.2.B.2. Recognize that some kinds of organisms that once lived on earth have completely disappeared.

5.5.2.C. Reproduction and Heredity

5.5.2.C.1. Recognize that humans and other organisms resemble their parents.

STANDARD 5.6

Chemistry) All students will gain an understanding of the structure and behavior of matter.

5.6.2.A. Structure and Properties of Matter

5.6.2.A.1. Sort objects according to the materials from which they are made or their physical properties, and give a rationale for sorting.

5.6.2.A.2. Use magnifiers to observe materials, then draw and describe what more can be seen using the tools.

5.6.2.A.3. Observe that water can be a liquid or a solid and can change from one form to the other.

5.6.2.B. Chemical Reactions

5.6.2.B.1. Indicators for this strand are introduced at a higher grade level.

STANDARD 5.7

(Physics) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.

5.7.2.A. Motion and Forces

5.7.2.A.1. Distinguish among the different ways objects can move such as:

5.7.2.A.1.a. fast and slow.

5.7.2.A.1.b. in a straight line.

5.7.2.A.1.c. in a circular path.

5.7.2.A.1.d.

back and forth.

5.7.2.A.2.

Show that the position and motion of an object can be changed by pushing or pulling the object.

5.7.2.B.**Energy Transformations**

5.7.2.B.1.

Demonstrate that sound can be produced by vibrating objects.

STANDARD 5.8**(Earth Science) All students will gain an understanding of the structure, dynamics, and geophysical systems of the earth.****5.8.2.A.****Earth's Properties and Materials**

5.8.2.A.1.

Observe and describe rocks and soil.

5.8.2.B.**Atmosphere and Weather**

5.8.2.B.1.

Identify the sources and uses of water.

5.8.2.B.2.

Recognize that water can disappear (evaporate) and collect on cold surfaces (condense).

5.8.2.B.3.

Describe current weather conditions and recognize how those conditions affect our daily lives.

5.8.2.B.4.

Describe daily and seasonal changes and patterns in the weather.

5.8.2.C.**Processes that Shape the Earth**

5.8.2.C.1.

Indicators for this strand are introduced at a higher grade level.

5.8.2.D.**How We Study the Earth**

5.8.2.D.1.

Record observations that describe the features of the natural world in their local environment.

STANDARD 5.9**(Astronomy & Space Science) All students will gain an understanding of the origin, evolution, and structure of the universe.**

5.9.2.A. Earth, Moon, Sun System

5.9.2.A.1. Recognize that the sun supplies light and heat to the Earth.

5.9.2.A.2. Observe the patterns of day and night and the movements of the shadows of an objects on the Earth during the course of a day.

5.9.2.B. Solar System

5.9.2.B.1. Recognize that the sun can only be seen during the day, but the moon can be seen sometimes at night and sometimes during the day.

5.9.2.C. Stars

5.9.2.C.1. Observe that stars are many, scattered, and different in brightness.

5.9.2.C.2. Observe that the position of the stars, with respect to each other (constellations) is unchanging

5.9.2.D. Galaxies and Universe

Indicators for this strand are introduced at a higher grade level.

STANDARD 5.10 (Environmental Studies) All students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.

5.10.2.A. Natural Systems and Interactions

5.10.2.A.1. Associate organisms' basic needs with how they meet those needs within their surroundings.

5.10.2.B. Human Interactions and Impact

5.10.2.B.1. Identify various needs of humans that are supplied by the natural or constructed environment.