

TITLE	IL STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Alexander Graham Bell * ISBN 0022858679 6 PK ISBN 0022865810	13.B.1c, 13.B.1d	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	12.D.1b, 13.B.1d	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	12.B.1b	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	12.B.1a	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	12.A.1a, 12.B.1b, 12.C.1a, 12.E.1b, 12.F.1b	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	12.F.1a, 12.F.1b	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	12.C.1b, 13.B.1d	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	12.A.1a	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	12.F.1a, 12.F.1b	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	12.B.1a, 12.E.1a	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	12.E.1a	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	12.C.1a, 13.B.1d	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	IL STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Fast Changes on Earth ISBN 0022858695 6 PK ISBN 0022865667	12.E.1a, 12.E.1b	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	12.E.1a, 13.B.1c, 13.B.1d	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	12.A.1a, 12.E.1b	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	12.A.1a, 12.B.1a	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	12.B.1b, 12.C.1b	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
Get Moving! ISBN 002284645X 6 PK ISBN 0022864334	12.D.1b	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

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TITLE	IL STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Hot Air Balloons ISBN 0022858725 6 PK ISBN 0022865764	12.C.1a, 12.C.1b, 13.B.1c	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	13.B.1c, 13.B.1d	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	13.B.1e	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	12.C.1b	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	12.C.1b	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
Minerals ISBN 0022846379 6 PK ISBN 0022864261	12.C.1b, 12.E.1a	M	400	<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

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TITLE	IL STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Mix It Up ISBN 002285858X 6 PK ISBN 0022865772	11.A.1a, 11.A.1d, 12.C.1b	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	12.D.1b	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	12.B.1a	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	12.E.1a, 12.E.1c	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
The Big Splash! * ISBN 0022858628 6 PK ISBN 0022865659	12.B.1a, 12.B.1b, 12.E.1a	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	12.A.1a, 13.B.1c, 13.B.1d	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

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TITLE	IL STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
Tracking Weather ISBN 0022858709 6 PK ISBN 0022865691	12.E.1b, 13.A.1c, 13.B.1d	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	12.B.1a, 12.E.1a, 12.E.1b	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	12.A.1a	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	12.C.1a, 12.E.1a, 12.E.1b	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
Water Habitats ISBN 0022858687 6 PK ISBN 0022865632	12.B.1a, 12.E.1a	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	12.E.1b	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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ILLINOIS LEARNING STANDARDS

STATE GOAL 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.

Why This Goal Is Important: The inquiry process prepares learners to engage in science and apply methods of technological design. This understanding will enable students to pose questions, use models to enhance understanding, make predictions, gather and work with data, use appropriate measurement methods, analyze results, draw conclusions based on evidence, communicate their methods and results, and think about the implications of scientific research and technological problem solving.

A. Know and apply the concepts, principles and processes of scientific inquiry.

11.A.1a Describe an observed event.

11.A.1b Develop questions on scientific topics.

11.A.1c Collect data for investigations using measuring instruments and technologies.

11.A.1d Record and store data using available technologies.

11.A.1e Arrange data into logical patterns and describe the patterns.

11.A.1f Compare observations of individual and group results.

B. Know and apply the concepts, principles and processes of technological design.

11.B.1a Given a simple design problem, formulate possible solutions.

11.B.1b Design a device that will be useful in solving the problem.

11.B.1c Build the device using the materials and tools provided.

11.B.1d Test the device and record results using given instruments, techniques and measurement methods.

11.B.1e Report the design of the device, the test process and the results in solving a given problem.

STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

Why This Goal Is Important: This goal is comprised of key concepts and principles in the life, physical and earth/space sciences that have considerable explanatory and predictive power for scientists and non-scientists alike. These ideas have been thoroughly studied and have stood the test of time. Knowing and being able to apply these concepts, principles and processes help students understand what they observe in nature and through scientific experimentation. A working knowledge of these concepts and principles allows students to relate new subject matter to material previously learned and to create deeper and more meaningful levels of understanding.

A. Know and apply concepts that explain how living things function, adapt and change.

12.A.1a Identify and describe the component parts of living things (e.g., birds have feathers; people have bones, blood, hair, skin) and their major functions.

12.A.1b Categorize living organisms using a variety of observable features (e.g., size, color, shape, backbone).

B. Know and apply concepts that describe how living things interact with each other and with their environment.

12.B.1a Describe and compare characteristics of living things in relationship to their environments.

12.B.1b Describe how living things depend on one another for survival.

C. Know and apply concepts that describe properties of matter and energy and the interactions between them.

12.C.1a Identify and compare sources of energy (e.g., batteries, the sun).

12.C.1b Compare large-scale physical properties of matter (e.g., size, shape, color, texture, odor).

D. Know and apply concepts that describe force and motion and the principles that explain them.

12.D.1a Identify examples of motion (e.g., moving in a straight line, vibrating, rotating).

12.D.1b Identify observable forces in nature (e.g., pushes, pulls, gravity, magnetism).

E. Know and apply concepts that describe the features and processes of the Earth and its resources.

12.E.1a Identify components and describe diverse features of the Earth's land, water and atmospheric systems.

12.E.1b Identify and describe patterns of weather and seasonal change.

12.E.1c Identify renewable and nonrenewable natural resources.

F. Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.

12.F.1a Identify and describe characteristics of the sun, Earth and moon as familiar objects in the solar system.

12.F.1b Identify daily, seasonal and annual patterns related to the Earth's rotation and revolution.

STATE GOAL 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

Why This Goal Is Important: Understanding the nature and practices of science such as ensuring the validity and replicability of results, building upon the work of others and recognizing risks involved in experimentation gives learners a useful sense of the scientific enterprise. In addition, the relationships among science, technology and society give humans the ability to change and improve their surroundings. Learners who understand this relationship will be able to appreciate the efforts and effects of scientific discovery and applications of technology on their own lives and on the society in which we live.

A. Know and apply the accepted practices of science.

13.A.1a Use basic safety practices (e.g., not tasting materials without permission, "stop/drop/roll").

13.A.1b Explain why similar results are expected when procedures are done the same way.

13.A.1c Explain how knowledge can be gained by careful observation.

B. Know and apply concepts that describe the interaction between science, technology and society.

13.B.1a Explain the uses of common scientific instruments (e.g., ruler, thermometer, balance, probe, computer).

13.B.1b Explain how using measuring tools improves the accuracy of estimates.

13.B.1c Describe contributions men and women have made to science and technology.

13.B.1d	Identify and describe ways that science and technology affect people's everyday lives (e.g., transportation, medicine, agriculture, sanitation, communication occupations).
13.B.1e	Demonstrate ways to reduce, reuse and recycle materials.