

TITLE	CO STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
A Chemist In the Kitchen ISBN 0022859462 6 PK ISBN 0022866175	1.1, 1.2, 2.1, 2.2, 2.3	L	680	<i>A Chemist in the Kitchen</i> defines the terms matter and chemistry, discusses elements, compounds, and mixtures, and gives procedures for several experiments that can be carried out in a kitchen.	chemist chemistry compound element mixture
A World of Microorganisms ISBN 0022846840 6 PK ISBN 0022864709	3.3, 3.4	S	720	<i>A World of Microorganisms</i> explains that microorganisms are found almost everywhere, including in and on the human body, in water, and in the soil. This book also explains how vaccines can protect against disease.	bacteria cell microbe microorganism vaccine
Acids and Bases ISBN 0022859020 6 PK ISBN 0022866191	1.1, 2.1, 2.2, 2.3	T	570	<i>Acids and Bases</i> describes the properties and uses of acids and bases and identifies the harmful effects of acid rain. The pH scale and neutralization are defined and described.	acid acidic base neutral pH
All About Elements ISBN 002285889X 6 PK ISBN 0022866140	2.1, 2.3, 5.2	M	500	<i>All About Elements</i> defines the terms matter and element, discusses historical research of elements, explains the structure of the atom, and the development of the periodic table.	atom atomic weight element periodic table property
Animal Senses ISBN 0022858989 6 PK ISBN 002286606X	3.1, 3.2, 3.4, 3.8	T	670	<i>Animal Senses</i> discusses the five commonly recognized senses and ways in which animals use these senses. It also describes other senses possessed by some animals such as the ability to detect electricity or heat.	echolocation organ sound wave taste buds tentacle

* - Also available in an English Language Learner version

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Barrier Islands * ISBN 0022858938 6 PK ISBN 0022866116	4.2, 4.5	R	710	<i>Barrier Islands</i> describes the characteristics of barrier islands and the impact that erosion and hurricanes can have on barrier islands.	barrier island erosion hurricane storm surge tide
Caves: A World of Their Own * ISBN 0022846794 6 PK ISBN 0022864660	3.1, 3.4, 4.2	Q	750	<i>Caves: A World of Their Own</i> describes how caves are formed and identifies adaptations of living things found in caves. An interview with a cave explorer allows students to learn more about careers in science.	ecosystem erosional limestone mineral solution
Constellations ISBN 0022859012 6 PK ISBN 0022866132	4.9, 5.2	T	530	<i>Constellations</i> explains that ancient Greeks were some of the first astronomers, identifies major constellations, and explains how the appearance of the night sky changes over the seasons. A star map is illustrated and explained.	astronomer astronomy constellation galaxy
Desert Animals and Plants ISBN 0022846786 6 PK ISBN 0022864652	3.1, 3.4	O	650	<i>Desert Animals and Plants</i> describes the adaptations of desert organisms such as kangaroo rats, horned lizards, pupfish, jack rabbits, saguaro cacti, and sagebrush. An explanation of how each of these organisms survives in an environment with very little water is given, and specific adaptations are pictured.	adapt cold-blooded saguaro scaly spine
Diamonds ISBN 0022846859 6 PK ISBN 0022864717	2.1, 4.3, 4.8	O	700	<i>Diamonds</i> discusses gemstones and minerals, identifies properties of diamonds, describes how diamonds are formed, and describes some uses of diamonds. Chapter 3 includes a labeled diagram of Earth's layers.	carbon gemstone kimberlite pipes mineral Moh's scale
El Nino ISBN 0022846948 6 PK ISBN 0022864792	4.2, 4.4, 4.5, 4.6, 5.2	S	720	<i>El Nino</i> describes the weather patterns associated with El Nino and La Nina and identifies the impact of global warming on these weather patterns. This book also discusses technologies used by scientists to detect coming El Nino events.	air pressure drought El Nino global warming La Nina

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Fossils and Fossil Fuels ISBN 0022859004 6 PK ISBN 0022866094	2.5, 3.6, 4.1, 4.3, 4.8	T	620	<i>Fossils and Fossil Fuels</i> explains how fossils form and discusses what can be learned by studying fossils. It also describes the formation of fossil fuels, the detrimental effects of fossil fuel use, and possible alternatives to fossil fuel.	acid rain fossil fossil fuel nonrenewable sedimentary rock
Glaciers ISBN 0022846883 6 PK ISBN 0022864741	4.2, 4.4, 4.6	O	680	<i>Glaciers</i> describes different kinds of glaciers, how glaciers move, how glaciers change the land, the characteristics of an ice age, and the impact of global warming on glaciers.	glacier ice age iceberg moraine
Gold! ISBN 0022861726 6 PK ISBN 0022866167	2.1, 4.3, 4.8	T	730	<i>Gold!</i> describes the properties of gold, methods of mining for gold, reasons why gold is so valuable, and the impact of the Gold Rush on California's history. Uses of gold in medicine, telescopes, computers, telephones, and televisions are discussed	bullion geologist
Hidden Food Webs * ISBN 0022846832 6 PK ISBN 0022864695	3.1, 3.2, 3.4	Q	710	<i>Hidden Food Webs</i> describes food webs with an emphasis on the role of microorganisms in a variety of food webs. The terms producer, consumer, and decomposer are defined.	consumer decomposer food web microorganism producer
How Can We Save Them? ISBN 0022858997 6 PK ISBN 0022866086	3.1, 3.4, 3.8	U	740	<i>How Can We Save Them?</i> discusses the diversity of living things on Earth and identifies reasons why species become endangered. The impact of extinctions on ecosystems and strategies for saving endangered species are also discussed. Chapter 7 highlights actions that individuals can take to help save endangered plants and animals.	diversity endangered extinct habitat species
It's Electric * ISBN 0022846964 6 PK ISBN 0022864822	2.5, 2.6, 2.7, 4.8	Q	710	<i>It's Electric</i> describes the role of electrons in electricity, how electricity is delivered to homes, ways that consumption of electricity can be reduced, and scientists who have explored electricity. Alternative methods of producing electricity are discussed in chapter 5.	electric current electricity fossil fuel turbine volt

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Levers in Our Lives ISBN 0022859039 6 PK ISBN 002286623X	2.7, 2.8	T	520	<i>Levers in Our Lives</i> describes how levers are used, discusses the three classes of levers, and identifies everyday examples of levers. The use of levers throughout history is described, including the role levers may have played in the building of the pyramids.	effort force fulcrum lever load simple machine
Lights and White Nights * ISBN 0022858946 6 PK ISBN 0022866124	4.7, 4.9	Q	620	<i>Lights and White Nights</i> explains why Earth has seasons. It also explains how day and night at the poles are impacted by Earth's tilt on its axis, and explains how the Northern lights form.	atmosphere aurora horizon solar wind white night
Machines * ISBN 0022858970 6 PK ISBN 0022866221	2.8	R	680	<i>Machines</i> describes the six types of simple machines (inclined plane, wedge, screw, lever, wheel and axle, pulley) and ways that simple machines are combined to form compound machines. Examples of compound machines shown in the book include can openers, escalators, and bicycles.	compound machine inclined plane pulley screw simple machine
Maglev Trains ISBN 0022847014 6 PK ISBN 0022864865	2.7	S	680	<i>Maglev Trains</i> explains that maglev trains work by utilizing magnetic forces. It also describes advantages and disadvantages of this technology.	electromagnet guideway levitation magnet magnetic
Partners in Nature ISBN 0022846816 6 PK ISBN 0022864679	3.1, 3.2, 3.4	T	700	<i>Partners in Nature</i> describes commensalism, parasitism, mutualism, and symbiosis. Examples of each type of relationship are described, for example, commensalism is illustrated by the relationship between remoras and sharks.	commensalism host mutualism parasite symbiosis
Rain Forests, Coral Reefs, and Deserts ISBN 0022859411 6 PK ISBN 0022866078	3.2, 3.4	L	700	<i>Rain Forests, Coral Reefs, and Deserts</i> describes the food chains in these ecosystems and identifies threats to these ecosystems. Ways that ecosystems can be saved are also discussed.	coral reef desert ecosystem food chain rain forest

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Rocks * ISBN 0022846867 6 PK ISBN 0022864725	3.6, 4.1, 4.2	Q	710	<i>Rocks</i> describes how rocks form, how they change as they move through the rock cycle, how fossils form, and careers that involve studying rocks. Igneous, metamorphic, and sedimentary rocks are described.	fossil geologist igneous metamorphic sedimentary
Scientists and Cells ISBN 0022858865 6 PK ISBN 0022866027	3.8	L	510	<i>Scientists and Cells</i> describes the invention of the microscope, the development of cell theory and germ theory, and modern research involving cells. This book emphasizes the cumulative nature of scientific discovery.	cell cell theory germ theory microscope theory
Sources of Energy ISBN 0022858903 6 PK ISBN 0022866213	2.5, 4.3, 4.8	N	560	<i>Sources of Energy</i> identifies common energy sources, such as moving water and fossil fuels and describes alternative energy sources, such as solar energy and wind energy. Diagrams show how coal is used to make electricity in power plants and how hydroelectric power plants produces electricity.	energy fossil fuel hydropower power plant solar energy
The GALILEO Mission to Jupiter ISBN 002285942X 6 PK ISBN 002286993X	4.7	K	800	<i>The Galileo Mission to Jupiter</i> describes the discoveries made by the Galileo spacecraft and highlights the role of technology in advancing science.	asteroid astronomer mission outer planet probe
The Grand Canyon ISBN 0022846913 6 PK ISBN 0022864768	3.6, 4.1, 4.2	S	750	<i>The Grand Canyon</i> explains how the Grand Canyon was formed, illustrates some of the features of the Grand Canyon, and describes some of the fossils that can be found in the Grand Canyon.	erosion fossil sandstone shale stratum
The Story of Alloys * ISBN 0022858962 6 PK ISBN 0022866183	2.1, 2.2	R	590	<i>The Story of Alloys</i> defines the term alloy, identifies the roles alloys have played in cultures throughout history, and discusses potential future uses of alloys.	alloy bronze property steel superalloy

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Thomas Edison ISBN 0022846956 6 PK ISBN 0022864814	2.6	O	700	<i>Thomas Edison</i> describes his life and inventions, such as the phonograph and the kinetograph. The cumulative nature of the development of technology is described.	kinetograph kinetoscope patent phonograph telegraph
What is a Platypus? * ISBN 0022846891 6 PK ISBN 002286475X	3.1, 3.8	R	580	<i>What On Earth is a Platypus?</i> explains how scientists determined how to classify the platypus. It explains that scientific knowledge often develops over time and is the result of the work of many people.	gland kingdom mammal organ reptile
What is Happening to the Beach? * ISBN 0022858911 6 PK ISBN 0022866035	3.4, 4.2	Q	700	<i>What is Happening to the Beach?</i> describes how erosion changes beaches and ways that people can prevent beaches from eroding too quickly.	beach dune erosion jetty seawall
What's New on Earth? * ISBN 002285892X 6 PK ISBN 0022866051	3.1, 3.4, 3.7, 3.8	R	650	<i>What's New On Earth?</i> describes some recently-discovered species and explains that the majority of Earth's species have yet to be discovered.	adaptation DNA environment rain forest species
What's the Matter? * ISBN 0022858954 6 PK ISBN 0022866159	2.1, 2.3, 2.4	R	600	<i>What's the Matter?</i> discusses matter, properties of matter, and states of matter in the context of a wide variety of sculptures.	alloy bronze neon property
Which Is Which? ISBN 0022858873 6 PK ISBN 0022866043	3.7, 3.8	L	460	<i>Which is Which?</i> explains how animals are classified and identifies differences between pairs of animals that are commonly confused.	classify genus kingdom mammal species
Why Does It Rain? ISBN 0022858881 6 PK ISBN 0022866108	2.4, 4.5, 4.6	L	500	<i>Why Does It Rain?</i> Describes the distribution of saltwater and freshwater on Earth, describes the water cycle, and discusses the processes of evaporation and condensation. The three states of water are illustrated and described.	condensation evaporation fresh water water cycle water vapor

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Colorado Model Content Standards for Science

Standard 1

Students apply the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations.

- 1.1 design, plan and conduct a variety of simple investigations (for example: formulate a testable question, state a hypothesis, make systematic observations, develop and communicate logical conclusions based on evidence)
- 1.2 select and use appropriate tools and technology to gather and display (for example: graphs, charts, diagrams) quantitative and qualitative data related to an investigation (for example: length, volume, and mass measuring instruments, thermometers, watches, magnifiers, microscopes, calculators, and computers)

Standard 2

Physical Science: Students know and understand common properties, forms, and changes in matter and energy. (Focus: Physics and Chemistry)

- 2.1 objects have physical properties that can be measured (for example: length, mass, volume and temperature)
- 2.2 measurable physical properties can be compared before and after effecting a change to verify a change has occurred and used to predict its outcome in similar circumstances\
- 2.3 matter is made up of parts that are too small to be seen
- 2.4 matter exists in physical states (solid, liquid, gas) and can change from one state to another
- 2.5 there are different types and sources of energy (for example: light, heat, motion)
- 2.6 electricity in circuits can produce light, heat, sound and magnetic effects
- 2.7 there are different types of forces (for example: gravity and magnetism)
- 2.8 changes in speed or direction of motion are caused by forces

Standard 3**Life Science: Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (Focus: Biology-- Anatomy, Physiology, Botany, Zoology, Ecology)**

- 3.1 each plant or animal has different structures and behaviors that serve different functions in growth, survival, and reproduction
- 3.2 green plants need energy from sunlight and various raw materials to live, and animals consume plants and other organisms to live
- 3.3 human body systems have basic structures, functions and needs (for example: digestive, respiratory, circulatory, skeletal, muscular)
- 3.4 there is interaction and interdependence between and among nonliving and living components of ecosystems (for example: food webs, symbiotic and parasitic relationships, dependence on rainfall, pollination)
- 3.5 life cycles vary from organism to organism (for example: frog, chicken, butterfly, radish, bean plant)
- 3.6 fossils can be compared to one another and to living organisms according to their similarities and differences
- 3.7 there are similarities and differences in appearance among individuals of the same population (for example: size, color, shape)
- 3.8 there are similarities and differences between organisms (for example: plants vs. animals, vertebrate vs. invertebrate)

Standard 4**Earth and Space Science: Students know and understand the processes and interactions of Earth's systems and the structure and dynamics of Earth and other objects in space. (Focus: Geology, Meteorology, Astronomy, Oceanography)**

- 4.1 fossils are evidence of past life
- 4.2 natural processes change Earth's surface (for example: weathering, erosion, mountain building, volcanic activity, earthquakes and floods)
- 4.3 many of the Earth's resources can be conserved, recycled and depleted
- 4.4 weather is different from climate

- 4.5 most of the Earth's surface is covered by water, that most of the water is salt water in the oceans, and that fresh water is found in rivers, lakes, underground sources and glaciers
- 4.6 water exists on Earth in different states (solid, liquid, gas) and changes from one state to another (for example: evaporation, condensation and precipitation)
- 4.7 there are basic components of the solar system (for example: Sun, planets, moons)
- 4.8 the Earth and Sun provide a diversity of resources (for example: soils, fuels, minerals, medicines and food)
- 4.9 the rotation of the Earth on its axis, in relation to the Sun, produces the day-and-night cycle and the orbit of the Earth around the Sun completes one year

Standard 5**Students understand that the nature of science involves a particular way of building knowledge and making meaning of the natural world**

- 5.1 when a science experiment is repeated with the same conditions, the experiment generally works the same way
- 5.2 models are used to represent events and objects (for example: comparing a map of the school to the actual school; a model of the Earth to the Earth itself)