

TITLE	OH STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
A Chemist In the Kitchen ISBN 0022859462 6 PK ISBN 0022866175	PS-1, PS-2, SI-1, SI-3, SWK-2	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	ST-1, ST-2, SI-6	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	ST-1, ST-2, SI-3, SI-6	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	PS-3	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	LS-5, SI-2	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	ESS-8, ESS-9, ESS-10	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	ESS-8, ESS-10	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	SI-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	LS-2, LS-3, LS-5	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	PS-3, ST-1, ST-2	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	ESS-1, ESS-4, ESS-6	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	ESS-8, LS-4, ST-1, ST-2	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	ESS-3, ESS-8, ESS-10	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	PS-3, ST-1, ST-2	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	LS-5	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	LS-5, ST-1, ST-2	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	ST-1, ST-2	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	ST-1, ST-2	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	ST-1, SI-2	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	ST-1, ST-2	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	ST-1, ST-2	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	LS-5	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	LS-2, LS-5	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	ESS-8, ESS-9, ESS-10, LS-4	Q	710	Rocks 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	ST-1, ST-2	L	510	Scientists and Cells 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	ESS-3, PS-5, ST-1, ST-2	N	560	Sources of Energy 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	ST-1, ST-2	K	800	The Galileo Mission to Jupiter 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	ESS-8, ESS-9, ESS-10, LS-4	S	750	The Grand Canyon 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	PS-1, PS-2, PS-3, ST-1, ST-2	R	590	The Story of Alloys 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	ST-1, ST-2	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	No correlation	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	ESS-8, ESS-10, ST-1, ST-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	ST-1, ST-2	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	PS-1, PS-3, PS-4, SWK-1	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	No correlation	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	ESS-2, ESS-3, PS-4	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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Ohio Science Academic Content Standards

Standard 1

Earth and Space Sciences

Earth Systems

- ESS-1 Explain that air surrounds us, takes up space, moves around us as wind, and may be measured using barometric pressure.
- ESS-2 Identify how water exists in the air in different forms (e.g., in clouds, fog, rain, snow and hail).
- ESS-3 Investigate how water changes from one state to another (e.g., freezing, melting, condensation and evaporation).
- ESS-4 Describe weather by measurable quantities such as temperature, wind direction, wind speed, precipitation and barometric pressure.
- ESS-5 Record local weather information on a calendar or map and describe changes over a period of time (e.g., barometric pressure, temperature, precipitation symbols and cloud conditions).
- ESS-6 Trace how weather patterns generally move from west to east in the United States.
- ESS-7 Describe the weather which accompanies cumulus, cumulonimbus, cirrus and stratus clouds.

Processes That Shape Earth

- ESS-8 Describe how wind, water and ice shape and reshape Earth's land surface by eroding rock and soil in some areas and depositing them in other areas producing characteristic landforms (e.g., dunes, deltas and glacial moraines).
- ESS-9 Identify and describe how freezing, thawing and plant growth reshape the land surface by causing the weathering of rock.
- ESS-10 Describe evidence of changes on Earth's surface in terms of slow processes (e.g., erosion, weathering, mountain building and deposition) and rapid processes (e.g. volcanic eruptions, earthquakes and landslides).

Standard 2**Life Sciences****Heredity**

LS-1 Compare the life cycles of different plants including germination, maturity, reproduction and death.

Diversity and Interdependence of Life

LS-2 Relate plant structures to their specific functions (e.g., growth, survival and reproduction).

LS-3 Classify common plants according to their characteristics (e.g., tree leaves, flowers, seeds, roots and stems).

LS-4 Observe and explore that fossils provide evidence about plants that lived long ago and the nature of the environment at that time.

LS-5 Describe how organisms interact with one another in various ways (e.g., many plants depend on animals for carrying pollen or dispersing seeds).

Standard 3**Physical Sciences****Nature of Matter**

PS-1 Identify characteristics of a simple physical change (e.g., heating or cooling can change water from one state to another and the change is reversible).

PS-2 Identify characteristics of a simple chemical change. When a new material is made by combining two or more materials, it has chemical properties that are different from the original materials (e.g., burning paper, vinegar and baking soda).

PS-3 Describe objects by the properties of the materials from which they are made and that these properties can be used to separate or sort a group of objects (e.g., paper, glass, plastic and metal).

PS-4 Explain that matter has different states (e.g., solid, liquid and gas) and that each state has distinct physical properties.

Nature of Energy

PS-5 Compare ways the temperature of an object can be changed (e.g., rubbing, heating and bending of metal).

Standard 4**Science and Technology****Understanding Technology**

- ST-1 Explain how technology from different areas (e.g., transportation, communication, nutrition, healthcare, agriculture, entertainment and manufacturing) has improved human lives.
- ST-2 Investigate how technology and inventions change to meet peoples' needs and wants.

Abilities To Do Technological Design

- ST-3 Describe, illustrate and evaluate the design process used to solve a problem.

Standard 5**Scientific Inquiry****Doing Scientific Inquiry**

- SI-1 Select the appropriate tools and use relevant safety procedures to measure and record length, weight, volume, temperature and area in metric and English units.
- SI-2 Analyze a series of events and/or simple daily or seasonal cycles, describe the patterns and infer the next likely occurrence.
- SI-3 Develop, design and conduct safe, simple investigations or experiments to answer questions.
- SI-4 Explain the importance of keeping conditions the same in an experiment.
- SI-5 Describe how comparisons may not be fair when some conditions are not kept the same between experiments.
- SI-6 Formulate instructions and communicate data in a manner that allows others to understand and repeat an investigation or experiment.

Standard 6**Scientific Ways of Knowing****Nature of Science**

SWK-1 Differentiate fact from opinion and explain that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.

SWK-2 Record the results and data from an investigation and make a reasonable explanation.

SWK-3 Explain discrepancies in an investigation using evidence to support findings.

Ethical Practices

SWK-4 Explain why keeping records of observations and investigations is important.