

TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>In the Garden</b> ISBN 0022858334 6 PK ISBN 0022865365	S.IP.01.11, S.IA.01.12, S.IA.01.13, S.IA.01.14, S.RS.01.11	B	30	<i>In the Garden</i> contrasts living and nonliving things and identifies some of the characteristics of living things, such as growth and change.	living thing plant rock
<b>A World of Animals</b> * ISBN 0022846093 6 PK ISBN 0022864016	S.IA.01.13, S.IA.01.14, S.RS.01.11, E.SE.01.12	E	600	<i>A World of Animals</i> describes adaptations of dolphins, polar bears, elephants, beavers, woodpeckers, and camels.	fin hoof hooves trunk
<b>Amazing Animals</b> ISBN 0022846115 6 PK ISBN 0022864024	S.IA.01.12, S.RS.01.11, L.OL.01.13, E.SE.01.12	G	300	<i>Amazing Animals</i> describes adaptations of animals and relates adaptations to specific environments.	gill spines webbed feet
<b>Animal Homes</b> ISBN 0022858466 6 PK ISBN 0022865403	S.IA.01.12, S.IA.01.13, S.RS.01.11, E.SE.01.12	G	190	<i>Animal Homes</i> identifies the environments, such as deserts, oceans, and forests, in which various animals make their homes.	cactus desert forest
<b>Boats Float</b> ISBN 0022846220 6 PK ISBN 0022864121	S.IP.01.11, S.IP.01.13, S.IA.01.14, P.PM.01.11, P.PM.01.22	B	BR	<i>Boats Float</i> describes solids, liquids, and gases, and defines the term <i>float</i> . It also identifies that solids have a definite shape, but liquids do not.	float gas liquid
<b>Bryce Canyon</b> ISBN 0022858474 6 PK ISBN 0022865438	S.IA.01.12, S.RS.01.11	H	240	<i>Bryce Canyon</i> explains how wind and water have shaped Bryce Canyon over time, and that similar processes shape other rocks.	rock water wind

\* - Also available in an English Language Learner version

TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>Dolphin Sounds</b> ISBN 0022858385 6 PK ISBN 0022865551	S.RS.01.11	B	120	<i>Dolphin Sounds</i> illustrates how echolocation works, and describes how dolphins use echolocation to find food.	<b>dolphin echo sound</b>
<b>Forces At Play</b> ISBN 0022861653 6 PK ISBN 0022865543	S.IP.01.11, S.IA.01.12	H	240	<i>Forces at Play</i> defines force as a push or pull, defines the term <i>work</i> , and identifies how forces are involved in baseball, basketball, and tug-of-war.	<b>force gravity work</b>
<b>Fun With Magnets</b> ISBN 0022858377 6 PK ISBN 0022865527	S.IP.01.11, S.IP.01.13, S.IP.01.16, S.IA.01.13, S.IA.01.14, P.PM.01.11	B	270	<i>Fun With Magnets</i> explains how magnets attract metal objects and can attract or repel one another. It also describes some uses of magnets.	<b>magnet metal push</b>
<b>Good to Eat *</b> ISBN 0022858393 6 PK ISBN 0022865373	S.IA.01.12, S.RS.01.11	E	230	<i>Good to Eat</i> identifies plant parts (stems, leaves, flowers, roots, fruits, and leaves) that humans use for food. The book uses lettuce, celery, broccoli, carrots, cantaloupe, and strawberries as examples.	<b>fruit root stem</b>
<b>How Does Matter Change?</b> ISBN 0022846271 6 PK ISBN 0022864172	S.IA.01.12, P.PM.01.21, P.PM.01.22	G	240	<i>How Does Matter Change?</i> describes physical changes of matter, such as changes of shape and changes of state. It also defines the term <i>matter</i> and describes solids, liquids, and gases.	<b>gas liquid matter</b>
<b>Ice Hotels</b> ISBN 0022858512 6 PK ISBN 0022865519	S.IP.01.11, S.IP.01.13, S.IA.01.12, S.IA.01.13, P.PM.01.21, P.PM.01.22	G	270	<i>Ice Hotels</i> uses pictures and descriptions of an ice hotel to highlight the differences between solids and liquids. It also points out the role of temperature change in melting.	<b>liquid melts solid</b>
<b>Land All Around</b> ISBN 0022858342 6 PK ISBN 0022865411	S.RS.01.11	B	BR	<i>Land All Around</i> describes the characteristics of mountains, valleys, and plains.	<b>mountain plain valley</b>

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TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>Let's Bake a Cake!</b> ISBN 0022846255 6 PK ISBN 0022864156	S.IP.01.11, S.IA.01.12	B	270	<i>Let's Bake a Cake</i> uses a discussion of baking to introduce the terms <i>melt</i> , <i>solid</i> , <i>liquid</i> , and <i>mixture</i> .	liquid melt mixture
<b>Look for Rocks *</b> ISBN 0022858407 6 PK ISBN 002286542X	S.IA.01.12, S.RS.01.11	E	90	<i>Look for Rocks</i> explains that rocks can be found in many places, such as yards, parks, and beaches, and uses photos to illustrate the characteristics of sandstone, slate, and granite.	granite sandstone slate
<b>Make It New *</b> ISBN 0022858415 6 PK ISBN 0022865454	S.RS.01.11	F	BR	<i>Make It New</i> shows that paper, glass, and cans can be recycled to make new products.	bottle can recycle
<b>Mars</b> ISBN 0022858490 6 PK ISBN 0022865497	S.IP.01.16, S.IA.01.12, E.ES.01.11	H	230	<i>Mars</i> compares and contrasts characteristics, such as size, position, temperature, and presence of water, of Earth and Mars.	planet Mars Sun
<b>Parts of Plants</b> ISBN 0022858458 6 PK ISBN 0022865381	S.IP.01.11, S.IA.01.13, S.IA.01.14, S.RS.01.11, E.ES.01.12, E.SE.01.12	H	250	<i>Parts of Plants</i> describes leaves, flowers, stems, roots, fruits, and seeds and identifies the function of each.	root seed soil
<b>Pond Life</b> ISBN 0022861645 6 PK ISBN 0022864032	S.RS.01.11, E.SE.01.12	D	390	<i>Pond Life</i> identifies some of the living things found in ponds, including plants, fish, frogs, and insects and points out that a pond is a freshwater environment.	insect living thing pond

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TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>Ready, Set, Go! *</b> ISBN 0022858423 6 PK ISBN 0022865489	S.RS.01.11	E	330	<b>Ready, Set, Go</b> explores how astronauts prepare for a flight on the space shuttle. It describes a sequence of steps using the words <i>first</i> , <i>next</i> , <i>then</i> , and <i>finally</i> .	astronaut space shuttle spacesuit
<b>Solids, Liquids, and Gases *</b> ISBN 0022846239 6 PK ISBN 002286413X	S.IP.01.11, S.IA.01.14, P.PM.01.21	E	370	<b>Solids, Liquids, and Gases</b> discusses the properties of solids, liquids, and gases and gives everyday examples of each.	gas liquid solid
<b>Sun Power</b> ISBN 0022858520 6 PK ISBN 0022865578	E.ES.01.11	G	350	<b>Sun Power</b> describes energy and explains that some energy comes from the Sun. It also discusses ways that solar energy can be used, such as heating homes and powering vehicles.	energy solar energy Sun
<b>The Four Seasons</b> ISBN 0022846182 6 PK ISBN 0022864091	S.IA.01.14, S.RS.01.11, E.ES.01.22	B	330	<b>The Four Seasons</b> describes spring, summer, fall, and winter by picturing the weather, activities, and clothing associated with each.	fall spring summer
<b>The Story of Water</b> ISBN 0022846247 6 PK ISBN 0022864148	S.IA.01.12, S.RS.01.11, L.OL.01.13, E.ES.01.11	G	370	<b>The Story of Water</b> identifies the importance of water, discusses the water cycle, and explains the role of the Sun's energy in the water cycle.	clouds gas water cycle
<b>The Tallest Tree *</b> ISBN 0022846069 6 PK ISBN 0022863974	S.IP.01.11, S.IP.01.14, S.IA.01.13, S.IA.01.14	E	470	<b>The Tallest Tree</b> explains that some seeds germinate and develop into trees, such as the General Sherman Sequoia. Illustrations allow students to compare the height of the General Sherman to other objects.	cone seedling sequoia

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TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>Things Change *</b> ISBN 0022846263 6 PK ISBN 0022864164	S.IP.01.11, S.IP.01.13, S.IA.01.13, S.IA.01.14	E	300	<i>Things Change</i> identifies changes such as boiling, freezing, melting, mixing, and growing and illustrates everyday examples of these changes.	<b>boil freeze melt</b>
<b>Two Trees</b> ISBN 0022846077 6 PK ISBN 0022863982	S.RS.01.11, E.ES.01.12, E.SE.01.12	H	430	<i>Two Trees</i> compares and contrasts trees found at the coast with trees found in the desert. Adaptations to each environment are pictured and identified.	<b>desert roots soil</b>
<b>Watch It Grow</b> ISBN 0022846050 6 PK ISBN 0022863966	S.IA.01.12, S.RS.01.11, E.ES.01.12, E.SE.01.12	B	70	<i>Watch It Grow</i> identifies what seeds and plants need to grow and develop. The germination and growth of a tomato seed illustrates this process.	<b>plant Sun water</b>
<b>Water Fun</b> ISBN 0022858350 6 PK ISBN 0022865446	S.RS.01.11	B	BR	<i>Water Fun</i> identifies recreational uses of water, points out that humans need water to drink, and explains that water should not be wasted.	<b>ocean waste water</b>
<b>What Goes Around?</b> ISBN 0022858369 6 PK ISBN 0022865470	S.RS.01.11, E.ES.01.11	B	120	<i>What Goes Around?</i> explains the motion of the Earth and Moon relative to the Sun and to one another. Diagrams shows Earth's orbit around the Sun and the Moon's orbit around Earth.	<b>Earth Moon Sun</b>
<b>What Is Wool?</b> ISBN 0022858482 6 PK ISBN 0022865462	S.IA.01.12, S.RS.01.11	H	330	<i>What Is Wool?</i> explains that wool is produced by sheep and used by humans. The process of producing clothing using wool is described.	<b>sheep wool yarn</b>

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TITLE	MI STANDARDS ADDRESSED	GR LEVEL	LEXILE LEVEL	BOOK SUMMARY	VOCABULARY
<b>What People and Animals Need</b>  ISBN 0022846085 6 PK ISBN 0022863990	S.IP.01.16, L.OL.01.13, E.SE.01.12	B	310	<i>What People and Animals Need</i> identifies that both people and animals need food, water, air, and shelter to live. The terms <i>breathe</i> , <i>energy</i> , and <i>shelter</i> are defined.	<b>breathe energy shelter</b>
<b>What Sounds Say</b> *  ISBN 002285844X 6 PK ISBN 002286556X	S.RS.01.11	F	130	<i>What Sounds Say</i> explains that sounds can be used to communicate and that some sounds, such as sirens and train whistles, are used to indicate danger.	<b>bell siren sound</b>
<b>What Would We Do Without Bees?</b> *  ISBN 0022846131 6 PK ISBN 0022864040	L.OL.01.13	E	430	<i>What Would We Do Without Bees?</i> describes the role of bees in pollination of plants and in honey production. The process of pollination of an apple tree is illustrated.	<b>honey nectar pollen</b>
<b>When the Weather Changes</b> *  ISBN 0022846190 6 PK ISBN 0022864105	S.RS.01.11, E.ES.01.22	E	230	<i>When the Weather Changes</i> describes the weather, activities, and clothing commonly associated with each season.	<b>fall season weather</b>
<b>Where Are They?</b> *  ISBN 0022858431 6 PK ISBN 0022865535	S.IP.01.11, S.IA.01.13	F	100	<i>Where Are They?</i> uses position words, such as <i>on</i> , <i>under</i> , <i>behind</i> , <i>in</i> , and <i>inside</i> to describe the position of animals relative to objects.	<b>bush egg log</b>

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# Michigan Science Grade Level Content Expectations

## SCIENCE PROCESSES

### Inquiry Process

<b>K-7 Standard S.IP</b>	<b>Develop an understanding that scientific inquiry and reasoning involves observing, questioning, investigating, recording, and developing solutions to problems</b>
<b>S.IP.E.1</b>	<b>Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.</b>
S.IP.01.11	Make purposeful observation of the natural world using the appropriate senses.
S.IP.01.12	Generate questions based on observations.
S.IP.01.13	Plan and conduct simple investigations.
S.IP.01.14	Manipulate simple tools (for example: hand lens, pencils, rulers, thermometers, rain gauges, balances, non-standard objects for measurement) that aid observation and data collection.
S.IP.01.15	Make accurate measurements with appropriate (non-standard) units for the measurement tool.
S.IP.01.16	Construct simple charts from data and observations.

### Inquiry Analysis and Communication

<b>K-7 Standard S.IA</b>	<b>Develop an understanding that scientific inquiry and investigations require analysis and communication of findings, using appropriate technology.</b>
<b>S.IA.E.1</b>	<b>Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.</b>
S.IA.01.12	Share ideas about science through purposeful conversation.

- S.IA.01.13 Communicate and present findings of observations.
- S.IA.01.14 Develop strategies for information gathering (ask an expert, use a book, make observations, conduct simple investigations, and watch a video).

### Reflection and Social Implications

#### K-7 Standard S.RS

**Develop an understanding that claims and evidence for their scientific merit should be analyzed. Understand how scientists decide what constitutes scientific knowledge. Develop an understanding of the importance of reflection on scientific knowledge and its application to new situations to better understand the role of science in society and technology.**

#### S.RS.E.1

**Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history.**

- S.RS.01.11 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- S.RS.01.12 Recognize that science investigations are done more than one time.

### PHYSICAL SCIENCE

#### Properties of Matter

#### K-7 Standard P.PM

**Develop an understanding that all matter has observable attributes with physical and chemical properties that are described, measured, and compared. Understand that states of matter exist as solid, liquid, or gas; and have physical and chemical properties. Understand all matter is composed of combinations of elements, which are organized by common attributes and characteristics on the Periodic Table. Understand that substances can be classified as mixtures or compounds and according to their physical and chemical properties.**

#### P.PM.E.1

**Physical Properties- All objects and substances have physical properties that can be measured.**

- P.PM.01.11 Demonstrate the ability to sort objects according to observable attributes such as color, shape, size, sinking or floating.

- P.PM.E.2**      **States of Matter- Matter exists in several different states: solids, liquids and gases. Each state of matter has unique physical properties. Gases are easily compressed but liquids and solids do not compress easily. Solids have their own particular shapes, but liquids and gases take the shape of the container.**
- P.PM.01.21      Demonstrate that water as a solid keeps its own shape (ice).
- P.PM.01.22      Demonstrate that water as a liquid takes on the shape of various containers.
- P.PM.E.3**      **Magnets- Magnets can repel or attract other magnets. Magnets can also attract certain non-magnetic objects at a distance.**
- P.PM.01.31      Identify materials that are attracted by magnets.
- P.PM.01.32      Observe that like poles of a magnet repel and unlike poles of a magnet attract.

## **LIFE SCIENCE**

### **Organization of Living Things**

**K-7 Standard  
L.OL**

**Develop an understanding that plants and animals (including humans) have basic requirements for maintaining life which include the need for air, water and a source of energy. Understand that all life forms can be classified as producers, consumers, or decomposers as they are all part of a global food chain where food/energy is supplied by plants which need light to produce food/energy. Develop an understanding that plants and animals can be classified by observable traits and physical characteristics. Understand that all living organisms are composed of cells and they exhibit cell growth and division. Understand that all plants and animals have a definite life cycle, body parts, and systems to perform specific life functions.**

**L.OL.E.1**

**Life Requirements- Organisms have basic needs. Animals and plants need air, water, and food. Plants also require light. Plants and animals use food as a source of energy and as a source of building material for growth and repair.**

L.OL.01.13

Identify the needs of animals.

**L.OL.E.2**

**Life Cycles- Plants and animals have life cycles. Both plants and animals begin life and develop into adults, reproduce, and eventually die. The details of this life cycle are different for different organisms.**

L.OL.01.21

Describe the life cycle of animals including the following stages: egg, young, adult; egg, larva, pupa, adult.

**Heredity****K-7 Standard  
L.HE**

**Develop an understanding that all life forms must reproduce to survive. Understand that characteristics of mature plants and animals may be inherited or acquired and that only inherited traits are passed on to their young. Understand that inherited traits can be influenced by changes in the environment and by genetics.**

**L.HE.E.1**

**Observable Characteristics- Plants and animals share many, but not all, characteristics of their parents.**

L.HE.01.11

Identify characteristics (for example: body coverings, beak shape, number of legs, body parts) that are passed on from parents to young.

L.HE.01.12

Classify young animals based on characteristics that are passed on from parents (for example: dogs/puppies, cats/kittens, cows/calves, chicken/chicks).

**EARTH SCIENCE****Earth Systems****K-7 Standard  
E.ES**

**Develop an understanding of the warming of the Earth by the sun as the major source of energy for phenomenon on Earth and how the sun's warming relates to weather, climate, seasons, and the water cycle. Understand how human interaction and use of natural resources affects the environment.**

**E.ES.E.1**

**Solar Energy- The sun warms the land, air and water and helps plants grow.**

E.ES.01.11

Identify the sun as the most important source of heat which warms the land, air, and water of the Earth.

E.ES.01.12

Demonstrate the importance of sunlight and warmth in plant growth.

**E.ES.E.2****Weather- Weather changes from day to day and over the seasons.**

E.ES.01.21

Compare daily changes in the weather related to temperature (cold, hot, warm, cool); cloud cover (cloudy, partly cloudy, foggy) precipitation (rain, snow, hail, freezing rain); wind (breezy, windy, calm).

E.ES.01.22

Describe and compare weather related to the four seasons in terms of temperature, cloud cover, precipitation, and wind.

E.ES.01.23

Describe severe weather events.

E.ES.01.24

Describe precautions that should be taken for human safety during severe weather conditions (thunderstorms, lightning, tornadoes, high winds, blizzards, hurricanes).

**E.ES.E.3****Weather Measurement- Scientists use tools for observing, recording, and predicting weather changes.**

E.ES.01.31

Identify the tools that might be used to measure temperature, precipitation, cloud cover and wind.

E.ES.01.32

Observe and collect data of weather conditions over a period of time.

**Solid Earth****K-7 Standard  
E.SE**

**Develop an understanding of the properties of earth materials and how those properties make materials useful. Understand gradual and rapid changes in earth materials and features of the surface of Earth. Understand magnetic properties of Earth.**

**E.SE.E.1**

**Earth Materials- Earth materials that occur in nature include rocks, minerals, soils, water, and the gases of the atmosphere. Some Earth materials have properties which sustain plant and animal life.**

E.SE.01.12

Describe how Earth materials contribute to the growth of plant and animal life.