

Office of Larry E. Reider
Kern County Superintendent of Schools
Advocates for Children

Fifth Grade—Macmillan/McGraw-Hill

The GEMS guides listed below are suggested supplements to the Macmillan/McGraw-Hill curriculum. Teachers are encouraged to select the lessons from each guide they find most beneficial to their students' needs. Most guides have kits with hands-on materials available for check-out, at no charge, from KCSOS. Contact Kathy Hill at kahill@kern.org or 661.636.4640.

GEMS uses the strategies of hands-on examination and discovery throughout its program. Therefore, we have not listed the California State Standards correlation of Investigation and Exploration, Standard 6, as one or more strands will be found as a basic component of every GEMS guide.

Chapter/Lesson	TE pages	5 th grade standard	GEMS Guide
5th Grade--LIFE SCIENCE			
Chapter 1: Structure of Living Things			
L#1: Cells	24-33	5 LS 2.a	<i>Aquatic Habitats</i>
L#2: From Cells to Organisms	36-43		<i>Life Through Time</i>
L#3: Diversity of Organisms	46-57		<i>Microscopic Explorations</i>
			<i>Only One Ocean</i>
Chapter 2: Plant Structures and Functions			
L#1: Vascular Plants	70-77	5 LS 2.a	<i>Aquatic Habitats</i>
			<i>Life Through Time</i>
			<i>Microscopic Explorations</i>
			<i>Only One Ocean</i>
			<i>Terrarium Habitats</i>
L#2: Plant Transport Systems	80-97	5 LS 2.a, 2.e	<i>Aquatic Habitats (2.a)</i>
			<i>Life Through Time (2.a)</i>
			<i>Microscopic Explorations (2.a)</i>
			<i>Only One Ocean (2.a)</i>
			<i>Terrarium Habitats (2.a)</i>
L#3: Photosynthesis and Respiration	90-97	5 LS 2.f, 2.g	<i>Life Through Time</i>
			No GEMS guides were found to align with standard 2.g

Chapter 3: Human Body Systems			
L#1: The Human Body	110-117	5 LS 2.a	<i>Aquatic Habitats</i> <i>Life Through Time</i> <i>Microscopic Explorations</i> <i>Only One Ocean</i> <i>Terrarium Habitats</i>
L#2: The Digestive System	120-129	5 LS 2.c	<i>Life Through Time</i> <i>Only One Ocean</i>
L#3: The Respiratory System L#4: The Circulatory System	132-139 142-151	5 LS 2.b	<i>Aquatic Habitats</i> <i>Only One Ocean</i>
L#5: The Excretory System	154-163	5 LS 2.d	No GEMS guides were found to align with standard
5th Grade--EARTH SCIENCE			
Chapter 4: Earth's Water			
L#1: Earth: The Blue Planet	178-185	5 ES 3.a	<i>Ocean Currents</i> <i>Only One Ocean</i>
L#2: The Water Cycle	188-199	5 ES 3.b, 3.c	<i>Terrarium Habitats (3.b)</i> No GEMS guides were found to align with standard 3.c. However, <i>Convection a Current Event</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.
L#3: Freshwater Resources L#4: California's Water Supply	202-211 214-221	5 ES 3.d, 3.e	<i>Ocean Currents (3.d)</i> <i>Only One Ocean (3.d)</i>
Chapter 5: Earth's Weather			
L#1: Earth's Atmosphere	232-239	5 ES 4.e	No GEMS guides were found to align with standard
L#2: Air Currents and Wind	242-249	5 ES 4.a	<i>Ocean Currents</i> <i>Convection a Current Event</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.
L#3: Oceans and Air Temperatures	252-259	5 ES 4.b	<i>Ocean Currents</i> <i>Convection a Current Event</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.
L#4: Severe Weather	262-273	5 ES 4.c	No GEMS guides were found to align with standard
L#5: Predicting the Weather	276-285	5 ES 4.d	No GEMS guides were found to align with standard 4.d. However, <i>Convection a Current Event</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.
Chapter 6: The Solar System			
L#1: The Sun	296-303	5 ES 5.a	<i>Earth, Moon, and Stars</i> <i>Moons of Jupiter</i> <i>Messages from Space</i> <i>The Real Reasons for the Season</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.

L#2: The Structure of the Solar System	306-313	5 ES 5.b	<i>Earth, Moon, and Stars</i> <i>Moons of Jupiter</i> <i>Messages from Space</i> <i>The Real Reasons for the Season</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.
L#3: Gravity and Orbits	316-323	5 ES 5.c	<i>Earth, Moon, and Stars</i> <i>Moons of Jupiter</i> <i>The Real Reasons for the Season</i> is a 6-8 guide, and some activities may be adapted to 5 th grade enrichment level to meet this standard.

5th Grade--PHYSICAL SCIENCE

Chapter 7: Types of Matter

L#1: Properties of Matter	340-349	5 PS 1.g	<i>Crime Lab Chemistry</i>
L#2: Elements	352-359	5 PS 1.d, 1.h	<i>Ocean Currents</i> (1.h) No GEMS guides were found to align with standard 1.d
L#3: Classifying Elements	362-373	5 PS 1.b, 1.d, 1.e	<i>Crime Lab Chemistry</i> (1.b, 1.e) <i>Ocean Currents</i> (1.b) No GEMS guides were found to align with standard 1.d
L#4: Mixtures	376-385	5 PS 1.f	<i>Crime Lab Chemistry</i> <i>Stories in Stone</i>
L#5: Compounds	388-397	5 PS 1.a, 1.f	<i>Crime Lab Chemistry</i> <i>Secret Formulas</i> (1.a) (1-3 guide is easily adapted to 5 th grade level) <i>Stories in Stone</i> <i>Chemical Reactions</i> is a 6-10 guide, and some activities may be adapted to 5 th grade enrichment level to meet standard 1.a.

Chapter 8: Changes in Matter

L#1: Chemical Reactions	408-417	5 PS 1.a	<i>Crime Lab Chemistry</i> <i>Stories in Stone</i> <i>Chemical Reactions</i> is a 6-10 guide, and some activities may be adapted to 5 th grade enrichment level to meet standard 1.a.
L#2: Metals and Alloys	420-431	5 PS 1.c	No GEMS guides were found to align with standard
L#3: Salts	434-445	5 PS 1.i	<i>Microscopic Explorations</i> <i>Ocean Currents</i> <i>Secret Formulas</i> (1-3 guide is easily adapted to 5 th grade level)

5th Grade--INVESTIGATION AND EXPERIMENTATION			
<p>While the guides listed below do not address specific 5th grade standards in Life, Earth, or Physical Science, they do meet standards within the Investigation and Experimentation standard set.</p> <p style="text-align: center;"><i>Bubble-Ology</i> <i>Color Analyzers</i> <i>Electric Circuits</i> <i>Fingerprinting</i> <i>Hot Water and Warm Homes From Sunlight</i> <i>Microscopic Explorations</i> <i>Mystery Festival</i> <i>Of Cabbages and Chemistry</i> <i>Oobleck</i> <i>Paper Towel Testing</i> <i>Schoolyard Ecology</i> <i>Vitamin C Testing</i></p>			