

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

## Third Grade—Houghton Mifflin

The GEMS guides listed below are suggested supplements to the Houghton Mifflin 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](mailto: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 5, as one or more strands will be found as a basic component of every GEMS guide.

Unit—Chapter/ Lesson	TE pages	3 <sup>rd</sup> grade standard	GEMS Guide  Bold type represents a GEMS unit which addresses all standards in that standard set for the respective strand.
<b>3<sup>rd</sup> Grade--LIFE SCIENCE</b>			
<b>Unit A: Survival of Living Things—Chapter 1: Adaptations to Land and Water</b>			
L#1: What Organisms Live in Forests and Grasslands?	6-13	3 LS 3.a, 3.b	<b><i>Aquatic Habitats</i></b> <i>Buzzing a Hive</i> (3.a) <i>Terrarium Habitats</i> (3.a) <i>School Yard Ecology</i> (3.b)
L#2: What Organisms Live in Tundra and Deserts?	14-21		
L#3: What Organisms Live in Water Habitats?	24-31		
<b>Unit A: Survival of Living Things—Chapter 2: When Environments Change</b>			
L#1: How Do Living Things Compete?	42-49	3 LS 3.c, 3.d	<b><i>Aquatic Habitats</i></b> <i>Buzzing A Hive</i> <i>On Sandy Shores</i> (3.d) <i>School Yard Ecology</i> (3.d) <i>Terrarium Habitats</i>
L#2: How Do Living Things Change Environments?	52-59		
<b>Unit A: Survival of Living Things--Chapter 3: Organisms of Long Ago</b>			
L#1: What Threatens the Survival of Species?	70-77	3 LS 3.d, 3.e	<b><i>Aquatic Habitats</i></b> <i>Buzzing a Hive</i> <i>On Sandy Shores</i> (3.d) <i>School Yard Ecology</i> (3.d) <i>Terrarium Habitats</i> No GEMS guides were found to align with standard 3.e

L#2: What Can Be Learned from Fossils?	78-83	3 LS 3.e	No GEMS guides were found to align with standard
L#3: How Are Extinct and Living Things Alike?	88-95		

### 3<sup>rd</sup> Grade--EARTH SCIENCE

#### Unit B: Patterns In the Sky—Chapter 4: Our Solar System

L#1: How Do Scientists Use Telescopes?	110-115	3 ES 4.c	No GEMS guides were found to align with standard 4.c <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#2: What Is the Solar System?	118-125	3 ES 4.d 3 PS 1.a	<i>Terrarium Habitats</i> (1.a) No GEMS guides were found to align with standard 4.d <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#3: What Are the Inner Planets?	126-133	3 ES 4.d	No GEMS guides were found to align with standard 4.d <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#4: What Are the Outer Planets?	134-141		

#### Unit B: Patterns In the Sky—Chapter 5: Cycles and Patterns in Space

L#1: What Causes Day and Night?	152-157	3 ES 4.e 3 PS 1.a	<i>Terrarium Habitats</i> (1.a) No GEMS guides were found to align with standard 4.e <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#2: What Causes the Seasons?	158-165	3 ES 4.d, 4.e	No GEMS guides were found to align with standard 4.d, 4.e <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#3: What Are the Phases of the Moon?	166-173	3 ES 4.b 3 PS 2.b	<i>Bubble Festival</i> (2.b) No GEMS guides were found to align with standard 4.b <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#4: What Is a Star?	176-183	3 ES 4.a	No GEMS guides were found to align with standard 4.a <i>Earth, Moon, and Stars</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.

The GEMS guide *Messages from Space* is designed for grades 5-8. However, third grade teachers may want to use it as a reference. The guide contains a scale model of the solar system, additional activities, and good background information on each planet.

## 3<sup>rd</sup> Grade--PHYSICAL SCIENCE

### Unit C: Matter—Chapter 6: Properties of Matter

L#1: What is Matter?	198-205	3 PS 1.e, 1.h	<i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids, &amp; Gases (1.e)</i> <i>Secret Formulas (1.e)</i>
L#2: What Are the Forms of Matter?	208-215	3 PS 1.e	<i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids, &amp; Gases</i> <i>Secret Formulas</i>
L#3: How Does Heat Change Matter?	216-225	3 PS 1.e, 1.f	<i>Involving Dissolving (1.e)</i> <i>Liquid Explorations (1.e)</i> <i>Matter: Solids, Liquids, &amp; Gases</i> <i>Secret Formulas (1.e)</i> <i>Oobleck (4-8 guide. Some activities can be adapted to third grade)</i>

### Unit C: Matter--Chapter 7: Chemical Changes

L#1: What are Elements?	236-245	3 PS 1.h, 1.i	<i>Involving Dissolving (1.h)</i> <i>Liquid Explorations (1.h)</i> No GEMS guides were found to align with standard 1.i
L#2: What Is a Chemical Change in Matter?	248-255	3 PS 1.g	<i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids, &amp; Gases</i> <i>Secret Formulas</i> <i>Oobleck</i> is a 4-8 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard. <i>Of Cabbages and Chemistry</i> is a 4-8 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.

### Unit D: Energy—Chapter 8: Forms of Energy

L#1: What Is Energy?	270-275	3 PS 1.a, 1.b	<i>On Sandy Shores (1.b)</i> <i>Schoolyard Ecology (1.a)</i> <i>Terrarium Habitats (1.a)</i>
L#2: How Is Energy Converted?	276-283	3 PS 1.b, 1.c	<i>On Sandy Shores (1.b)</i>
L#3: What Are Waves?	286-293	3 PS 1.d	No GEMS guides were found to align with standard
L#4: What Is Electrical Energy?	298-305	3 PS 1.c, 1.d	No GEMS guides were found to align with standards

### Unit D: Energy—Chapter 9: Light

L#1: What Is Light?	314-321	3 PS 2.a, 2.d	<i>Terrarium Habitats (2.a)</i> <i>Color Analyzers</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#2: How Is Light	322-327	3 PS 2.b,	<i>Bubble Festival (Activity 5) (2.b)</i>

Reflected?		2.d	<i>Color Analyzers</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.
L#3: What is Color?	330-335	3 PS 2.c	<i>Bubble Festival (Activity 5)</i> <i>Color Analyzers</i> is a 5-9 guide, and some activities may be adapted to 3 <sup>rd</sup> grade enrichment level to meet this standard.

### **3<sup>rd</sup> Grade--INVESTIGATION AND EXPERIMENTATION**

While the guides listed below do not address specific 3<sup>rd</sup> grade standards in Life, Earth, or Physical Science, they do meet standards within the Investigation and Experimentation standard set.

*Electric Circuits*

*Mystery Festival*