

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

## First 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 4, as one or more strands will be found as a basic component of every GEMS guide.

Unit-Chapter/ Lesson	TE pages	1 <sup>st</sup> grade standard	GEMS Guide  Bold type represents a GEMS unit which addresses all standards in that standard set for the respective strand.
<b>1<sup>st</sup> grade--LIFE SCIENCE</b>			
<b>Unit A: Needs of Living Things—Chapter 1: Plants</b>			
L#1: What Are the Needs of Plants?	4-13	1 LS 2.b	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <b><i>Tree Homes</i></b>
L#2: What Are the Parts of Plants?	16-19	1 LS 2.a, 2.b, 2.e	<i>Ant Homes Under the Ground</i> ( 2.a, 2.b) <i>Buzzing a Hive</i> (2.a, 2.b) <i>Eggs Eggs Everywhere</i> (2.a, 2.b) <i>Elephants and Their Young</i> (2.a, 2.b) <i>Investigating Artifacts</i> (2.a) <i>Ladybugs</i> (2.a, 2.b) <i>Mother Opossum and Her Babies</i> (2.a, 2.b) <i>Penguins and Their Young</i> (2.a, 2.b) <i>Terrarium Habitats</i> <b><i>Tree Homes</i></b>
L#3: How Do Roots Help Plants?	20-25	1 LS 2.b, 2.e	<i>Ant Homes Under the Ground</i> (2.b) <i>Buzzing a Hive</i> (2.b) <i>Eggs Eggs Everywhere</i> (2.b) <i>Elephants and Their Young</i> (2.b) <i>Ladybugs</i> (2.b)

			<i>Mother Opossum and Her Babies (2.b)</i> <i>Penguins and Their Young (2.b)</i> <i>Terrarium Habitats</i> <b><i>Tree Homes</i></b>
L#4: How Do Leaves Help Plants?	26-31	1 LS 2.a, 2.b, 2.e	<i>Ant Homes Under the Ground ( 2.a, 2.b)</i> <i>Buzzing a Hive (2.a, 2.b)</i> <i>Eggs Eggs Everywhere (2.a, 2.b)</i> <i>Elephants and Their Young (2.a, 2.b)</i> <i>Investigating Artifacts (2.a)</i> <i>Ladybugs (2.a, 2.b)</i> <i>Mother Opossum and Her Babies (2.a, 2.b)</i> <i>Penguins and Their Young (2.a, 2.b)</i> <i>Terrarium Habitats</i> <b><i>Tree Homes</i></b>
<b>Unit A: Needs of Living Things—Chapter 2: Animals</b>			
L#1: What Are the Needs of Animals?	42-47	1 LS 2.b, 2.c	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#2: What Are the Parts of Animals?	52-57	1 LS 2.a	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Investigating Artifacts</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#3: How Do Animals Use Their Mouths?	58-63	1 LS 2.c, 2.d	<i>Animal Defenses (2.d) (PK-K guide. Some activities can be adapted to 1<sup>st</sup> grade)</i> <i>Ant Homes Under the Ground (2.c)</i> <i>Buzzing a Hive (2.c)</i> <i>Eggs Eggs Everywhere (2.c)</i> <i>Elephants and Their Young</i> <i>Ladybugs (2.c)</i> <i>Mother Opossum and Her Babies (2.c)</i> <i>Penguins and Their Young (2.c)</i> <i>Terrarium Habitats (2.c)</i> <i>Tree Homes (2.c)</i>
<b>Unit B: Where Plants and Animals Live—Chapter 3: Living Things Meet Their Needs</b>			
L#1: What Is an Environment?	80-85	1 LS 2.a, 2.b	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Investigating Artifacts (2.a)</i>

			<i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#2: How Do Living Things Get Energy?	86-91	1 LS 2.b, 2.c	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#3: Where Do Animals Find Shelter?	94-99	1 LS 2.c	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#4: How Do Plants and Animals Live in Different Places?	100-105	1 LS 2.a	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Investigating Artifacts</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
<b>Unit B: Where Plants and Animals Live—Chapter 4: Kinds of Environments</b>			
L#1: What Lives Along a Coast?	116-121	1 LS 2.a	<i>Ant Homes Under the Ground</i> <i>Buzzing a Hive</i> <i>Eggs Eggs Everywhere</i> <i>Elephants and Their Young</i> <i>Investigating Artifacts</i> <i>Ladybugs</i> <i>Mother Opossum and Her Babies</i> <i>Penguins and Their Young</i> <i>Terrarium Habitats</i> <i>Tree Homes</i>
L#2: What Lives in a Stream?	124-129		
L#3: What Lives on a Mountain?	132-137		

## 1<sup>st</sup> grade--EARTH SCIENCE

### Unit C: Weather Patterns—Chapter 5: Weather

L#1: How Does Weather Change?	152-157	1 ES 3.b	No GEMS guides were found to align with standard
L#2: How Are Weather Tools Used?	160-165	1 ES 3.a	No GEMS guides were found to align with standard
L#3: What Warms Land, Air, and Water?	168-173	1 ES 3.c	<i>Terrarium Habitats</i> <i>Tree Homes (Activity 3)</i>

### Unit C: Weather Patterns—Chapter 6: Seasons

L#1: What Is Winter Weather?	182-187	1 ES 3.a, 3.b	No GEMS guides were found to align with standards
L#2: What Is Spring Weather?	188-193	1 ES 3.a, 3.b, 3.c	<i>Terrarium Habitats (3.c)</i> <i>Tree Homes (Activity 3) (3.c)</i>
L#3: What Is Summer Weather?	194-199		
L#4: What Is Fall Weather?	202-207	1 ES 3.a, 3.b	No GEMS guides were found to align with standards

## 1<sup>st</sup> grade--PHYSICAL SCIENCE

### Unit D: Materials and Their Forms—Chapter 7: Solids, Liquids, and Gases

L#1: What Are Solids?	224-229	1 PS 1.a	<i>Elephants and Their Young</i> <i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids &amp; Gases</i> <i>Penguins and Their Young</i> <i>Secret Formulas</i> <i>Sifting Through Science</i>
L#2: What Are Liquids?	232-237		
L#3: What Are Gases?	240-245		

### Unit D: Materials and Their Forms—Chapter 8: Changes in Materials

L#1: What Does Heating Do?	254-259	1 PS 1.b, 1 ES 3.c	<i>Elephants and Their Young (1.b)</i> <i>Involving Dissolving (1.b)</i> <i>Liquid Explorations (1.b)</i> <i>Matter: Solids, Liquids &amp; Gases (1.b)</i> <i>Penguins and Their Young (1.b)</i> <i>Secret Formulas (1.b)</i> <i>Terrarium Habitats (3.c)</i> <i>Tree Homes (Activity 3) (3.c)</i>
L#2: What Does Cooling Do?	262-267	1 PS 1.a, 1.b	<i>Elephants and Their Young</i> <i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids &amp; Gases</i> <i>Penguins and Their Young</i> <i>Secret Formulas</i> <i>Sifting Through Science (1.a)</i>
L#3: What Happens When You Mix Things?	268-273		
L#4: What Changes Are Not Reversible?	278-281	1 PS 1.b	<i>Elephants and Their Young</i> <i>Involving Dissolving</i> <i>Liquid Explorations</i> <i>Matter: Solids, Liquids &amp; Gases</i>

		<i>Penguins and Their Young</i> <i>Secret Formulas</i>
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<b>1<sup>st</sup> grade--INVESTIGATION AND EXPERIMENTATION</b>
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While the guide listed below does not address specific 1 <sup>st</sup> grade standards in Life, Earth, or Physical Science, it does meet standards within the Investigation and Experimentation standard set.
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<i>Bubble Festival</i>
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