



# Teaching Responsible Earth Education



**SUNSHIP EARTH™**

**SCIENCE – 5<sup>th</sup> grade**

**100% State Content Standards Addressed  
35% State Benchmarks Met with Relevant GLEs**

Louisiana Standards and Benchmarks with Relevant GLEs		Foundation Skills	Outdoor Classroom Activity
<b><i>Standard One: Students will do science by engaging in partial and full inquiries that are within their developmental capabilities.</i></b>			
SI-M-A5  GLE	Developing models and predictions using the relationships between data and explanations;  Science as Inquiry The Abilities To Do Scientific Inquiry 15. Identify and explain the limitations of models used to represent the natural world 16. Use evidence to make inferences and predict trends	1,2,3,4	Bucket Brigade Tools & Tasks
SI-M-A7  GLE	Communicating scientific procedures, information, and explanations;  Science as Inquiry The Abilities To Do Scientific Inquiry 19. Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations	1,3	*All Stations Endangered Species Earth Harmonies Components
SI-M-B4  GLE	Using data and logical arguments to propose, modify, or elaborate on principals and models;  Science as Inquiry Understanding Scientific Inquiry 33. Evaluate models, identify problems in design, and make	1,2,3,4	Bucket Brigade Sun's Restaurant

	recommendations for improvement		
<b>Standard Two: Students will develop an understanding of the characteristics and interrelationships of matter and energy in the physical world.</b>			
PS-M-C1	Identifying and comparing the characteristics of different types of energy	2,3,4	Food Factory
PS-M-C3	Understanding that the sun is a major source of energy and that energy arrives at the Earth's surface as light with a range of wavelengths;	2, 3, 4	Food Factory Sun's Restaurant Chain Gang Bucket Brigade Click-Shine
GLE	Science as Inquiry Transformations of Energy 11. Identify the Sun as Earth's primary energy source and give examples (e.g., photosynthesis, water cycle) to support that conclusion.		
PS-M-C7	Understanding that energy is involved in chemical reactions	2, 4	Food Factory
<b>Standard Three: Students will become aware of the characteristics and life cycle of organisms and understand their relationship to each other and to their environment.</b>			
LS-M-A3	Observing and analyzing the growth and development of selected organisms, including a seed plant, an insect with complete metamorphosis, and an amphibian;	1, 2, 3, 4	Cliff Hangers Earth Harmonies Components
GLE	Life Science Structure and Function of Living Systems 18. Describe the metamorphosis of an amphibian (e.g., frog)		
LS-M-A4	Describing the basic processes of photosynthesis and respiration and their importance to life;	1, 4, 5	Food Factory
GLE	Life Science Structure and Function of Living Systems 19. Describe the processes of photosynthesis and respiration in green plants		
LS-M-C2	Modeling and interpreting food chains and food webs;	1, 2, 3, 4	Sun's Restaurant Chain Gang Web of Life Earth Harmonies Components
GLE	Life Science Population and Ecosystems 23. Construct food chains that could be found in ponds, marshes, oceans, forests, or meadows 24. Describe the roles of producers, consumers, and decomposers in a		

	food chain 25. Compare food chains/food webs		
LS-M-C3  GLE	Investigating major ecosystems and recognizing physical properties and organisms within each;  Life Science Populations and Ecosystems 27. Compare common traits or organisms within major ecosystems	1, 2, 3, 4, 5	Tools and Tasks Echin Missing Passenger Homes for the Homeless Zorks
LS-M-C4  GLE	Explaining the interaction and interdependence of nonliving and living components within ecosystems;  Life Science Population and Ecosystems 28. Explain and give examples of predator/prey relationships	1, 2, 3, 4, 5	Missing Passenger Guess Who's Coming to Dinner Echin Club of Life Earth Harmonies Components
LS-M-D1  GLE	Describing the importance of plant and animal adaptation, including local examples;  Life Science Adaptations of Organisms 29. Describe adaptations of plants and animals that enable them to thrive in local and other natural environments	1, 3, 4, 5	All in the Life of a Zork Tools and Tasks Club of Life
LS-M-D2	Explaining how some members of a species survive under changed environmental conditions;	1, 2, 3, 4, 5	Club of Life
<b>Standard Four: Students will develop an understanding of the properties of earth materials, the structure of the Earth system, the Earth's history, and the Earth's place in the universe.</b>			
ESS-M-A4  GLE	Investigating how soils are formed from weathered rock and decomposed organic material;  Earth And Space Science Structure of the Earth 30. Identify organic and inorganic matter in soil samples with the aid of a hand lens or microscope	2, 3, 4	Soil Sinks
ESS-M-A6	Explaining the processes involved in the rock cycle;	1, 4	Soil Sinks Cliff Hangers
ESS-M-A7  GLE	Modeling how landforms result from the interaction of constructive and destructive forces;  Earth and Space Science Structures of the Earth	1, 2, 3, 4	Soil Sinks Bucket Brigade

	<p>32. Demonstrate the results of constructive and destructive forces using models or illustrations</p> <p>33. Identify the processes that prevent or cause erosion</p>		
ESS-M-A10	<p>Explaining (illustrating) how water circulates -- on and through the crust, in the oceans, and in the atmosphere -- in the water cycle;</p> <p>GLE Earth and Space Science Earth in the Solar System 46. Identify and explain the interaction of the processes of the water cycle</p>	1, 4	Bucket Brigade
ESS-M-A11	<p>Understanding that the atmosphere interacts with the hydrosphere to affect weather and climate conditions;</p> <p>GLE Earth and Space Science Structures of the Earth 35. Identify the atmosphere as a mixture of gases, water vapor, and particulate matter</p>	1, 4	Bucket Brigade
ESS-M-A12	<p>Predicting weather patterns through use of a weather map;</p> <p>GLE Earth and Space Science Structure of the Earth 37. Identify typical weather map symbols and the type of weather they represent</p>	1, 2, 3, 4, 5	Weather Report
ESS-M-B1	<p>Investigating how fossils show the development of life over time;</p>	2, 3, 4	Food Factory
ESS-M-B3	<p>Understanding that earth processes such as erosion and weathering affect the Earth today and are similar to those which occurred in the past;</p> <p>GLE Earth and Space Science Earth History 38. Estimate the range of time over which natural event occur (e.g., lightning in seconds, mountain formation over millions of years)</p>	1, 2, 3, 4	Soil Sinks Cliff Hangers
ESS-M-C6	<p>Modeling and describing how radiant energy from the sun affects phenomena on the Earth's surface, such as winds, ocean currents, and the water cycle;</p>	1, 2, 3, 4	Bucket Brigade Soil Sinks

GLE	Earth And Space Science Earth in the Solar System 46. Identify and explain the interaction of the processes of the water cycle		
<b><i>Standard Five: In learning environmental science, students will develop an appreciation of the natural environment, learn the importance of quality, and acquire a sense of stewardship. As professional, and political actions affect the natural world.</i></b>			
SE-M-A1	Demonstrating knowledge that an ecosystem includes living and nonliving factors and that humans are an integral part of ecosystems;	1, 3, 4, 5	Homes for the Homeless Missing Passenger Earth Harmonies Components
SE-M-A2  GLE	Demonstrating an understanding of how carrying capacity and limiting factors affect plant and animal populations ;  Earth and Space Science Science and the Environment 48. Determine the ability of an ecosystem to support a population (carrying capacity) by identifying the resources needed by that population	1, 2, 3, 4, 5	Homes for the Homeless Model Planets Guess Who's Coming to Dinner Earth Harmonies Components
SE-M-A3  GLE	Defining the concept of pollutant and describing the effects of various pollutants on ecosystems;  Earth and Space Science Science and the Environment 49. Identify and give examples of pollutants found in water, air, and soil	1, 2, 3, 4, 5	Bucket Brigade Best Deal on Earth
SE-M-A4  GLE	Understanding that human actions can create risks and consequences in the environment;  Earth and Space Science Science and the Environment 50. Describe the consequences of several types of human activities on local ecosystems (e.g., polluting streams, regulating hunting, introducing nonnative species)	1, 2, 3, 4, 5	Bucket Brigade Best Deal on Earth Model Planets Endangered Species Earth Harmonies Components
SE-M-A5	Tracing the flow of energy through an ecosystem and demonstrating a knowledge of the roles of producers, consumers, and decomposers in the ecosystem;	1, 2, 3, 4, 5	Sun's Restaurant Chain Gang Earth Harmonies Components
SE-E-A6	Distinguishing between renewable and	1, 2, 3, 4, 5	Bucket Brigade

	nonrenewable resources and understanding that nonrenewable natural resources are not replenished through the natural cycles and thus are strictly limited in quantity;		Cradles to Coffins Best Deal on Earth Soil Sinks Earth Harmonies Components
SE-M-A7  GLE	Demonstrating knowledge of the natural cycles, such as the carbon cycle, nitrogen cycle, water cycle, and oxygen cycle; Earth and Space Science Science and the Environment 51. Describe naturally occurring cycles and identify where they are found (e.g., carbon, nitrogen, water, oxygen)	1, 2, 4	Bucket Brigade Cradles to Coffins Best Deal on Earth
SE-M-A8	Investigating and analyzing how technology affects the physical, chemical, and biological factors in an ecosystem.	1, 2, 3, 4, 5	Best Deal on Earth

\* All Stations include: Sun's Restaurant, Food Factory, Chain Gang, Bucket Brigade, Cradles to Coffins, Best Deal On Earth, Club of Life, Echin, Homes for the Homeless, Guess Who's Coming to Dinner, Missing Passenger, Cliff Hangers, Soil Sinks, All in the Life of a Zork, Tools and Tasks



# Teaching Responsible Earth Education



SUNSHIP EARTH™

**ENGLISH/LANGUAGE ARTS– 5<sup>th</sup> grade**  
**86% State Content Standards Addressed**  
**37% State Benchmarks Met with Relevant GLEs**

Louisiana Standards and Benchmarks with Relevant GLEs		Foundation Skills	Outdoor Classroom Activity
<b>Standard One: Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.</b>			
ELA-1-M1	Using knowledge of word meaning and developing basic and technical vocabulary using various strategies (e.g., context clues, affixes, etymology, dictionary);	1, 4	All Stations* Lost Letters Outlook Inn Weather Reports Endangered Species Word Discoveries Menu Cards Earth Harmonies Components
GLE	Reading and Responding 3. Identify the meanings of idioms and analogies 4. Develop specific vocabulary (e.g., reading scientific, geographical, historical, and mathematical texts, as well as news and current events) for various purposes		
ELA-1-M5	Adjusting reading rate according to texts and purposes for reading:	1, 2, 4, 5	All Stations* Lost Letters Outlook Inn PO-E-Tree Weather Reports, Endangered Species Earth Harmonies Components
<b>Standard Two: Students write competently for a variety of purposes and audiences.</b>			
ELA-2-M6	Writing as a response to texts and life experiences (e.g., letters, journals, lists);	1, 2, 4	All Stations* Magic Spots PO-E-Tree Weather Reports Endangered Species Earth Harmonies

			Components
<b>Standard Three: Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.</b>			
ELA-3-M1	Writing fluidly and legibly in cursive or printed form:	1, 4	All Stations* PO-E-Tree Earth Harmonies Components
<b>Standard Four: Students demonstrate competence in speaking and listening as tools for learning and communicating</b>			
ELA-4-M1	Speaking intelligibly, using standard English pronunciation and diction;	1, 4	All Stations* PO-E-Tree Discovery Board Weather Reports Endangered Species Earth Harmonies Components
GLE	Speaking and Listening 33. Use complete sentences and standard English grammar, diction, syntax, and pronunciation when speaking		
ELA-4-M2	giving and following directions/procedures	1, 4	All Stations* Passport Office Lost Letters Micro-Parks Artists and Scientists Weather Report Endangered Species PO-E-Tree Waste Watchers Conversion Dinner Boundary Breakers Meals Earth Harmonies Components
GLE	Speaking and Listening 34. Follow procedures (e.g., read, question, write a response, form groups) from detailed oral instructions		
ELA-4-M3	using the features of speaking (e.g., audience analysis, message construction, delivery, interpretation of feedback) when giving rehearsed and unrehearsed presentations;	1, 2, 4	Po-e-tree Discovery Board Weather Reports Endangered Species Earth Harmonies Components
GLE	Speaking and Listening 36. Adjust volume and inflection to suit the audience and purpose of presentations		
ELA-4-M4	speaking and listening for a variety of audiences (e.g., classroom, real-life, workplace) and purposes (e.g., awareness, concentration, enjoyment, information, problem solving);	1, 2, 4, 5	All Stations* Passport Office Lost Letters Micro-Parks Artists and Scientists PO-E-Tree Discovery Board
GLE	Speaking and Listening		



	<p>38. Demonstrate active listening strategies (e.g., asking focused questions, responding to questions, making visual contact)</p> <p>39. Deliver formal and informal presentations for a variety of purposes, including:</p> <ul style="list-style-type: none"> <li>• Book reports</li> <li>• Personal experiences</li> <li>• Explanations of projects</li> </ul>		<p>Weather Reports</p> <p>Endangered Species</p> <p>Waste Watchers</p> <p>Conversion Dinner</p> <p>Boundary Breakers</p> <p>Meals</p> <p>Earth Harmonies</p> <p>Components</p>
ELA-4-M5	listening and responding to a wide variety of media (e.g., music, TV, film, speech);	1, 3, 4, 5	<p>Welcome Aboard</p> <p>Homes for the Homeless</p> <p>Convention / Closing</p> <p>Endangered Species</p> <p>Earth Harmonies</p> <p>Components</p>
ELA-4-M6	<p>participating in a variety of roles in group discussions (e.g., active listener, contributor, discussion leader, facilitator, recorder);</p> <p>Speaking and Listening</p> <p>41. Participate in group and panel discussions, including:</p> <ul style="list-style-type: none"> <li>• Applying agreed-upon rules for formal and informal discussions</li> <li>• Assuming a variety of roles (e.g., facilitator, recorder, leader, listener)</li> </ul>	1, 4, 5	<p>All Stations*</p> <p>Boundary Breakers</p> <p>Endangered Species</p> <p>Discovery Board</p> <p>Conversion Dinner</p> <p>Earth Harmonies</p> <p>Components</p>
<p><b>Standard Five: Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.</b></p>			
ELA-5-M6	<p>Interpreting graphic organizers (e.g., charts/graphs, tables/schedules, diagrams/maps, flowcharts);</p> <p>Information Resources</p> <p>48. Interpret information from a variety of grade-appropriate sources, including timelines, charts, schedules, tables, diagrams, and maps</p>	1,2,3,4,5	<p>Endangered Species</p> <p>Waste Watchers</p> <p>Earth Harmonies</p> <p>Components</p>
<p><b>Standard Seven: Students apply reasoning and problem solving skills to reading, writing, speaking, listening, viewing, and visually representing</b></p>			
ELA-7-M1	<p>using comprehension strategies (e.g., sequencing, predicting, drawing conclusions, comparing and contrasting, making inferences, determining main ideas, summarizing, recognizing literary devices,</p>	1, 2, 4	<p>All Stations*</p> <p>Menu</p> <p>Conversion Dinner</p> <p>Earth Harmonies</p> <p>Components</p>

GLE	paraphrasing) in contexts;  Reading and Responding 12. Demonstrate understanding of information in grade-appropriate texts using a variety of strategies, including: <ul style="list-style-type: none"> <li>• Sequencing events and steps in a process</li> <li>• Summarizing and paraphrasing information</li> <li>• Identifying stated and implied main ideas and supporting details for each</li> <li>• Making simple inferences and drawing conclusions</li> <li>• Predicting the outcome of a story or situation with reasonable justification</li> </ul>		
ELA-7-M2  GLE	problem solving by using reasoning skills, life experiences, accumulated knowledge, and relevant available information;  Reading and Responding 13. Examine and explain the relationship between life experiences and texts to generate solutions to problems	1, 2, 4	All Stations* Conversion Dinner Menu Mystery Passenger Earth Harmonies Components

\* All Stations include: Sun's Restaurant, Food Factory, Chain Gang, Bucket Brigade, Cradles to Coffins, Best Deal On Earth, Club of Life, Echin, Homes for the Homeless, Guess Who's Coming to Dinner, Missing Passenger, Cliff Hangers, Soil Sinks, All in the Life of a Zork, Tools and Tasks



# Teaching Responsible Earth Education



## SUNSHIP EARTH™

**SOCIAL STUDIES – 5<sup>th</sup> grade**  
**50% State Content Standards Addressed**  
**2% State Benchmarks Met with Relevant GLEs**

Louisiana Standards and Benchmarks with Relevant GLEs	Foundation Skills	Outdoor Classroom Activity
<p><b>Geography</b>  <i>Standard: Students develop special understandings of Earth's surface and the processes that shape it, the connections between people and places, and the relationship between man and his environment.</i></p>		
G-1D-M1	Analyzing and evaluating the effects of human actions upon the physical environment;	1,2,3,4,5  Echin Food Factory Chain Gang Best Deal on Earth Model Planets Endangered Species Waste Watchers Convention/Pledges Earth Harmonies Components
<p><b>Economics</b>  <i>Standard: Students develop an understanding of fundamental economic concepts as they apply to the interdependence and decision making of individuals, households, businesses, and governments in the United States and the world.</i></p>		
E-1A-M1	Describing how the scarcity of resources necessitates decision making at both personal and societal levels;	1,2,4,5  Food Factory Chain Gang Best Deal on Earth Model Planets Endangered Species Waste Watchers Convention/Pledges Earth Harmonies Components



# Teaching Responsible Earth Education



## SUNSHIP EARTH™

**MATHEMATICS – 5<sup>TH</sup> grade**  
**50% State Content Standards Addressed**  
**28% State Benchmarks Met with Relevant GLEs**

Louisiana Standards and Benchmarks with Relevant GLEs		Foundation Skills	Outdoor Classroom Activity
<b><i>Number and Number Relations</i></b> <b><i>Standard: In problem-solving investigations, students demonstrate an understanding of the real number system and communicate the relationships within that system using a variety of techniques and tools.</i></b>			
N-4-M  GLE	Demonstrating a conceptual understanding of the meaning of the basic arithmetic operations (add, subtract, multiply and divide) and their relationships to each other;  Number and Number Relations 7. Select, sequence, and use appropriate operations to solve multi-step word problems with whole numbers.	1,2	Chain Gang Soil Sinks Hub Endangered Species
N-5-M  GLE	Applying an understanding of rational numbers and arithmetic operations to real-life situations;  Number and Number Relations 7. Select, sequence, and use appropriate operations to solve multi-step word problems with whole numbers.  8. Use the whole number system (e.g., computational fluency, place value, etc.) to solve problems in real-life and other content areas.  10. Determine when an estimate is	1,2,3,4	Chain Gang Soil Sinks Hub Endangered Species

	sufficient and when an exact answer is needed in real-life problems using whole numbers.		
N-6-M  GLE	Constructing, using, and explaining procedures to compute and estimate with rational numbers employing mental math strategies;  Number and Number Relations 9. Use mental math and estimation strategies to predict the results of computations (i.e., whole numbers, addition and subtraction of fractions) and to test the reasonableness of solutions. 10. Determine when an estimate is sufficient and when an exact answer is needed in real-life problems using whole numbers	1,2,3,4	Soil Sinks Chain Gang Sun's Restaurant Best Deal on Earth Hub Artists and Scientists Endangered Species
N-7-M	Selecting and using appropriate computational methods and tools for given situations involving rational numbers (e.g., estimation, or exact computation using mental arithmetic, calculator, computer, or paper and pencil);	2,3,4	Soil Sinks Chain Gang Sun's Restaurant Best Deal on Earth Hub Artists and Scientists Endangered Species
N-8-M	Demonstrating a conceptual understanding and applications of proportional reasoning (e.g., determining equivalent ratios, finding a missing term of a given proportion).	2,4	Bucket Brigade Soil Sinks Chain Gang Sun's Restaurant Best Deal on Earth Hub Artists and Scientists Endangered Species
<b>Measurement</b> <b>Standard: In problem-solving investigations, students demonstrate an understanding of the concepts, processes, and real-life applications of measurement.</b>			
M-1-M	Applying the concepts of length, area, surface area, volume, capacity, weight, mass, money, time, temperature, and rate to real-world experiences;	2,3,4	Best Deal on Earth Bucket Brigade Artists and Scientists Endangered Species Waste Watchers Earth Harmonies Components

M-2-M  GLE	Demonstrating an intuitive sense of measurement (e.g., estimating and determining reasonableness of measures)  Measurement 18. Estimate time, temperature, weight/mass, and length in familiar situations and explain the reasonableness of answers.	1,2,4	Endangered Species
M-3-M  GLE	Selecting appropriate units and tools for tasks by considering the purpose for the measurement and the precision required for the task (e.g., length of a room in feet rather than inches);  Measurement 20. Identify appropriate tools and units with which to measure time, mass, weight, temperature, and length.	2,3,4	Artists and Scientists Endangered Species Earth Harmonies Components
M-6-M	Demonstrating the connection of measurement to the other strands and to real-life situations;	1,2,3,4,5	Best Deal on Earth Bucket Brigade Artists and Scientists Endangered Species Waste Watchers Earth Harmonies Components
<b><i>Patterns, Relations, and Functions</i></b> <b><i>Standard: In problem-solving investigations, students demonstrate an understanding of patterns, relations, and functions that represent and explain real-world situations.</i></b>			
P-3-M	Analyzing relationships to explain how a change in one quantity results in a change in another (e.g., change in the dimensions of a rectangular solid affects the volume);	1,2,4	Chain Gang Sun's Restaurant Waste Watchers Earth Harmonies Components

\* All Stations include: Sun's Restaurant, Food Factory, Chain Gang, Bucket Brigade, Cradles to Coffins, Best Deal On Earth, Club of Life, Echin, Homes for the Homeless, Guess Who's Coming to Dinner, Missing Passenger, Cliff Hangers, Soil Sinks, All in the Life of a Zork, Tools and Tasks