



# ISE GRADE 4 SCIENCE CURRICULUM STANDARDS / LEARNING OUTCOMES



<u>Curriculum Standards/Learning Outcomes</u>	<u>Teaching Strategies</u>	<u>Resources</u>
<p data-bbox="178 313 493 349"><b><u>Topic One: Ecosystems</u></b></p> <p data-bbox="178 381 577 417"><b>Parts of Ecosystems: Concepts</b></p> <ul data-bbox="231 417 714 617" style="list-style-type: none"><li>• The nonliving parts of an ecosystem help living things meet their needs.</li><li>• Different plants and animals live in different ecosystems.</li><li>• Organisms in an ecosystem interact and depend on each other.</li></ul> <p data-bbox="178 917 745 953"><b>Matter and Energy in Ecosystems: Concepts</b></p> <ul data-bbox="231 953 745 1218" style="list-style-type: none"><li>• All organisms in an ecosystem get the energy they need from the Sun.</li><li>• Energy in an ecosystem flows from the Sun to producers, and then from producers to consumers.</li><li>• Scavengers and decomposers help cycle energy in an ecosystem by eating the remains of dead organisms.</li></ul>	<ul data-bbox="819 417 1323 1323" style="list-style-type: none"><li>• Construct a model of the nonliving things in an ecosystem.</li><li>• Define the nonliving components of an ecosystem.</li><li>• Observe how living things in a model ecosystem meet their needs.</li><li>• Explain the relationships among an ecosystem’s living and nonliving components.</li><li>• Observe interactions between nonliving and living things in a model ecosystem.</li><li>• Study the rainforest and its fragile habitat.</li> <li>• Research organisms and model food chains and food webs.</li><li>• Describe what food chain &amp; webs are.</li><li>• Explain how energy flows from the sun to living things in an ecosystem.</li><li>• Identify scavenger and understand their role in a food web.</li><li>• Identify decomposer, including bacteria.</li><li>• Use variables in a controlled experiment.</li></ul>	<ul data-bbox="1396 417 1869 479" style="list-style-type: none"><li>• Textbook: Houghton Mifflin Grade Four Science, Unit B: Ecosystems</li></ul>



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<p><b>Adaptation and Extinction: Concepts</b></p> <ul style="list-style-type: none"><li>• Organisms adapt to their environments in order to survive.</li><li>• Organisms affect their environments in helpful and harmful ways.</li><li>• Scientists study fossils to learn about organisms that lived long ago.</li></ul>	<ul style="list-style-type: none"><li>• Observe how organisms are adapted to survive.</li><li>• Describe physical and behavioral adaptations.</li><li>• Infer the effect of change in an environment.</li><li>• Describe how organisms, including humans affect their environment.</li><li>• Explore factors that threaten the survival of species.</li><li>• Understand what scientists can learn from fossils.</li><li>• Model the formation of a fossil.</li><li>• Become familiar with the geological time scale.</li><li>• Observe the growth of bread mold under different conditions using controlled variables.</li><li>• Examine owl pellets to identify its food source.</li></ul>	



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	<ul style="list-style-type: none"><li>• Make a collage of animals that have special physical features to adapt to their environment.</li><li>• Observe how changes in the environment affect the growth of algae and infer how this may affect other organisms.</li><li>• Create and observe models of fossils to infer how scientists learn about organisms.</li></ul>	