

# Grade 6 Science

## Earth Systems

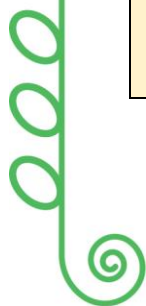
### *Activity 5: Components of an Ecosystem*

**Grade 6 Science - Living Systems**  
**Activity #5**  
**Components of an Ecosystem**

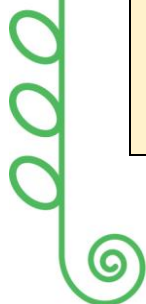
Duration: 60 minutes

Objective	Overview:
By the end of the activity, students should be able to: <ul style="list-style-type: none"><li>- Understand living and nonliving factors in an ecosystem.</li><li>- Understand how these different factors are related to each other</li></ul>	<ul style="list-style-type: none"><li>- This activity introduces students to the concept of how there are many biotic (living) and abiotic (non living) components in ecosystems. Students will explore how all of these factors influence each other and are important to the well being of an ecosystem. Through discussions, demonstrations, and hands-on activities, students will gain a deeper understanding of these relationships in an ecosystem.</li></ul>

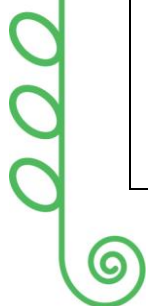
Science Guiding Question	Learning Outcome
In what ways are ecosystems complex?	Students investigate the characteristics and components of and interactions within ecosystems.
<b>Knowledge</b>	<ul style="list-style-type: none"><li>- Biotic components of an ecosystem include plants, animals, and micro-organisms.</li><li>- Abiotic components of an ecosystem include: energy from the sun, water, soil, air, temperature.</li><li>- All components of an ecosystem influence each other either directly or indirectly; e.g., animals rely on plants for food, plants need water to grow, energy from the Sun affects temperature, decomposers help return nutrients to the soil.</li></ul>
<b>Understanding</b>	<ul style="list-style-type: none"><li>- The components and characteristics of an ecosystem affect the diversity of the organisms that live in it.</li></ul>
<b>Skills and Procedures</b>	<ul style="list-style-type: none"><li>- Represent and connect the biotic and abiotic components of an ecosystem.</li></ul>



ELA Guiding Question	Learning Outcome
<ul style="list-style-type: none"> <li>- How can text form and structure improve understanding of content?</li> <li>- What relationships can be made between skillful oration and communication content, style, and delivery?</li> </ul>	<ul style="list-style-type: none"> <li>- Students analyze how text form and structure clarify information and support connecting with self, others, and the world.</li> <li>- Students connect the quality and efficacy of oral communication to oral language skills.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>- Texts can have more than one purpose and may have one that stands out.</li> <li>- Reading a variety of texts for enjoyment can support academic development.</li> <li>- Literary text forms can be digital or non-digital and include               <ul style="list-style-type: none"> <li>-articles</li> <li>-speeches</li> <li>-hybrids</li> </ul> </li> <li>- First Nations, Metis and Inuit communication processes and protocols can preserve shared knowledge and include practices such as               <ul style="list-style-type: none"> <li>-ongoing conversations</li> <li>-sharing circles</li> <li>-respectfully acknowledging all voices</li> <li>-waiting to take turns</li> <li>-active listening</li> <li>-focusing on the idea rather than on who gave the idea</li> <li>-ending with consensus</li> </ul> </li> </ul>
<b>Understanding</b>	<ul style="list-style-type: none"> <li>- Text genres, forms, and structures can enhance and influence the enjoyment and communication of ideas and information.</li> <li>- Oral traditions can enhance relationships and preserve shared knowledge.</li> </ul>
<b>Skills and Procedures</b>	<ul style="list-style-type: none"> <li>- Analyse the purpose of a variety of digital or non-digital texts.</li> <li>- Make connections between texts read for enjoyment and academic development.</li> <li>- Examine communication processes and protocols that contribute to the transmission or preservation of knowledge.</li> </ul>



Timing	Instructional Element	Student Tasks
<b>Introduction</b> (10 minutes)	<ul style="list-style-type: none"> <li>- <b>Full class discussion:</b> What makes up an ecosystem?</li> <li>- Teacher writes answers on the board: Plants, animals, water, sun, ground, bacteria, etc</li> <li>- Teacher creates a mini table on the board with one side that says biotic (living) and the other that says abiotic (non living).</li> <li>- Teacher brings students up to the board to classify the ideas that are written on the board into the two categories.</li> </ul>	<ul style="list-style-type: none"> <li>- Students participate in class discussion.</li> <li>- Students come to the board to answer questions if they are picked by the teacher.</li> </ul>
<b>Development</b> (10 minutes)	<ul style="list-style-type: none"> <li>- <b>Ecosystem Matching Game:</b></li> <li>- The teacher divides students into small groups.</li> <li>- The teacher gives each group a set of cards: some with biotic elements (ex: frog, tree, bacteria) and some with abiotic elements (ex: water, sunlight, air).</li> <li>- Students must match biotic and abiotic cards that interact (e.g., plant → sunlight, frog → water).</li> <li>- The teacher circulates to each group and asks students to explain why they matched each pair and what kind of relationship exists (ex: direct like plants needing sunlight, or indirect like worms improving soil for plants).</li> </ul>	<ul style="list-style-type: none"> <li>- Students get into groups and match their biotic and abiotic cards with each other.</li> <li>- Students are prepared to explain relationships to the teacher when the teacher visits their group.</li> </ul>
<b>Independent Work</b> (30 minutes)	<ul style="list-style-type: none"> <li>- Teacher hands out worksheet for students to complete:</li> </ul> <p><b>Use file: 05 Ecosystem Worksheet</b></p> <ul style="list-style-type: none"> <li>- After students finish the worksheet, the teacher will collect it.</li> <li>- The teacher then displays an image of a home garden on the whiteboard.</li> <li>- Teacher asks students to tell them:             <ol style="list-style-type: none"> <li>1. What are the biotic components here?</li> <li>2. What are the abiotic components?</li> <li>3. What might happen if one part of this system changed (ex: less sunlight, no insects)?</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>- Students complete the worksheet.</li> <li>- Students participate in classroom discussion.</li> </ul>



<b>Conclusion:</b> (10 minutes):	<b>Exit Ticket Question:</b> - Teacher has students write 1–2 sentences to answer: <i>How do living and nonliving parts of an ecosystem depend on each other?</i>	- Students write 1-2 sentences to complete their exit slip.
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Helpful resources:

[Understanding Ecosystems for Kids: Producers, Consumers, Decomposers - FreeSchool](#)

<https://ecokids.ca/>

<https://www.bbc.co.uk/bitesize/articles/zcgbjty>

<https://kids.nationalgeographic.com/>

<https://www.ducksters.com/>



