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<p>Description: Students use drawings created in the <i>Ecosystem Explorers</i> activity to create a model of their ecosystem and to show how the components of an ecosystem depend upon each other. By looking at this interdependence, students increase their awareness of the importance of individual species or elements of the habitat area in maintaining a healthy ecosystem.</p>	<p>Vocabulary Ecosystem: <i>the complex of a community of organisms and its environment functioning as an ecological unit</i> Ecosystem components: <i>major parts of an ecosystem made up of living (plants and animals) and non-living (air, sun, water, rock) factors</i></p>
<p>Objectives:</p> <ul style="list-style-type: none"> • Students use models to understand the interdependence between components in an ecosystem. • Students understand that changes in an ecosystem will have an effect on the individual components, and that these changes can be positive and negative. 	<p>Washington State EALRs Arts 1.2 Develops arts skills and techniques. Communication 1.2 Listen and observe to gain and interpret information. Science 1.3.10 Understand how organisms in ecosystems interact with and respond to their environment and other organisms. Explain how an organism’s role and non-living factors contribute to the stability of an ecosystem. 2.1.4 Understand that models represent real objects, events, or processes. Create a simple model to represent common objects, events, systems, or processes. Investigate phenomena using a simple physical model or simulation. Describe reasons for using a model to investigate phenomena.</p> <p>Science Kit: Ecosystems</p>
<p>Print Materials:</p> <ul style="list-style-type: none"> • ‘How-to-do Activity: Web of Life Model’ <p>Teacher supplied:</p> <ul style="list-style-type: none"> • Student worksheet sets from <i>Ecosystem Explorers</i> activity: 1 per student • Scissors: 1 per student • String, thumbtacks, tape or similar materials to create model (see ‘How-to-do Activity’) • Field guides, encyclopedias, and other related research materials 	

Before activity Locate an area in your classroom in which to create a ‘Web of Life’ display from the drawings students made in *Ecosystem Explorers* activity (see ‘How-to-do Activity’). A chalkboard or large bulletin board is ideal. Since this activity will have more effect if it can be added to over a period time, select the space accordingly.

Activity:

- In the classroom, ask students to give examples of producers, consumers or decomposers that they drew during the *Ecosystem Explorers* activity. Have each student quietly consider what one of these depends upon in the habitat area for food, shelter, and water. Discuss using examples such as: A fern depends on rainfall for water (did anyone draw rainfall?) and soil for nutrients (did anyone draw soil?) and sun rays for photosynthesis (did anyone draw the sun or sunrays?). A sow bug depends on dead leaves for food and shelter (did anyone draw dead leaves?) Little yellow bird depends on sow bug for food, and a tree for shelter (did anyone draw a tree?).
- Say, “We’re going to look at how the ecosystem components you’ve drawn relate to each other.” Ask students to cut out the circles containing their ecosystem component drawings. Help them mount the drawings to the display area (using tape, thumbtacks, staples, etc.). Identify the consumers and discuss the different things they eat.
- Use string to connect the interdependent components, as students are able to identify them. Use field observations, ‘Habitat Hunt’ cards from *Habitat Hunt* activity or refer to other resources to identify the food, shelter and water sources for individual species to create the connections.
- Ask, “What is missing?” Allow students to draw missing components if they realize their importance and they exist in the habitat area.
- Over time, as students go into the habitat area and discover new ecosystem components, they can draw and add them to the web of life model, deepening its complexity.
- Ask, “What will happen if we remove [name a component] from this ecosystem? What if there is a major change to the habitat (e.g., water is diverted or polluted, maple tree is removed). How many other things will this effect? What will happen if we add a new component [name one, especially a new food source or predator]? How will this affect the habitat area?”
- Ask, “How does this information about connections relate to habitat restoration?” (choice of plants, addition of habitat features, water features, etc) “How does it relate to our behavior in the habitat area? Our stewardship of habitat areas?” (avoid killing or damaging things; prevent harm to water, wildlife, plants, etc)
- Summarize: There are many interconnections within a habitat, some of which are not immediately apparent, but can be learned through observations. Each of these has a place within the web of life. Each component has an effect on the whole web of life within a habitat area.