Web of Life

AN INTERACTIVE ACTIVITY TO UNDERSTAND FOOD WEBS & ECOSYSTEM FUNCTION

This activity is designed to get kids thinking about the connections that exist between seemingly unrelated living & non-living things in our ecosystem. Kids model these connections using the tools outlined below to create a simple model that represents this system. You can approach this activity in different ways to highlight specific features of ecosystem function. Build your web as a food web, for example, or widen your focus to include habitat needs.

What you will need:

Paper squares with a labelled picture of each of the following. (You can print these, or have your student draw them!)

- Sun
- Soil
- Water
- Grass
- Berry bushes
- A tree
- A bird (include both a large bird, like an eagle, and a small bird, like a robin)
- A deer
- A bear
- A fish (salmon works best)
- Insects

A roll of yarn

A bulletin board & push pins

Begin by looking over all of the components of your ecosystem (the labelled pictures). Arrange them in a circle as large as your bulletin board allows, in no particular order. Now, attach one end of your yarn to the push pin next to your "sun" card. This will be the beginning of your web. Have a look at your other cards. Which one depends upon its connection to the sun? Choose one, and draw your yarn over to it, looping it around the push pin. Continue on this way until you have connected your yarn to all of your cards, and then marvel at your web. Depending on your order of operations, you may end up with two cards that don't seem too connected (deer/salmon, for example). Feel free to link back to a shared connection en route to make sense of this. (Examples: Deer & salmon both need clean water! Salmon who have already spawned die and wash up on riverbanks, where they feed berry bushes. Deer feed off of these berry bushes!) Take a minute to reflect on whether anything surprised or impressed you during this activity, or if any questions have popped up.

Adaptations & Extensions

Alternate materials:

If you don't have a bulletin board or yarn on hand, this activity can easily happen on paper. Just draw the connections, and either draw a new web to show interruptions to the web or use an eraser to show broken connections. Or, place the pictures on different objects in a room in the house, and string the yarn between the objects to make a big web! (Messier, but more fun.)

Use this game to examine habitat or species loss:

This web can be a great way to model the impacts of species loss (due to extinction or extirpation). Ask: What happens when you remove one of these species? How would that impact this ecosystem? What happens to the animals/birds when you remove the trees and shrubs from the landscape?

Use this game to examine the impact of invasive species on our local ecosystems:

At Greenways, we often use this game as an introduction to discuss how invasive species can negatively impact ecosystems. It is easily modelled by introducing an invasive such as Himalayan blackberry to the web. Himalayan blackberry outcompetes native berry bushes, trees, and grasses. Show this in your web by removing those plants. Note how the yarn hangs slack, and note the connections (often food or habitat dependent) that are now interrupted, altered, or unfulfilled.

<u>This website</u> can provide some useful information on invasive species and their impacts to biodiversity, if you feel like you need a booster.

Follow up activities

Take the opportunity to take this learning out into the world by tackling some invasive species removal in your neighbourhood, researching a local species at risk, or creating more habitat in your backyard by installing bird boxes, insect nests, or planting native species.