Chapter 10: A Time for Action

A. The Food System

Focus: organisms as parts of interconnected food webs, populations, communities and ecosystems; assessing the requirements of sustaining healthy ecosystems; human impact on ecosystems; exploring multimedia resources to construct meaning; interacting in groups to discuss and compare ideas and information; speaking and listening to make personal responses to texts, to analyze ideas and information from texts, and to synthesize and extend thinking

Up for Discussion

Engage your students in a discussion about the food they eat every day, and you’re likely to get a whole range of responses. But how many of them know—really know—where the food they eat comes from? How many of your students understand how the food system actually works?

The food system refers to all processes that are involved in feeding a given population. That means growing, harvesting, processing, packaging, transporting and marketing the food items. And don’t forget the final stages of consumption and disposal.

Back in the day—when humans operated a largely agrarian economy—individual families grew much of the food they ate. But as societies developed and as our economies became more sophisticated, the emergent division of labor meant that the task of growing food was increasingly handed off to specialists (in this case, farmers).

Fast forward a few hundred years, and pretty much every step of the food procurement process is handled by...well, by someone else. Nowadays, most of us buy our packages of perfectly shaped snap peas in the grocery store without so much as a thought about who planted the crop, how the peas were fertilized, or who loaded them onto the shipping container that brought them across to North America.

Consumers are largely dependent upon food manufacturers to meet our nutritional needs. Even if we don’t eat every meal out of a box and actually make the effort to base our diet upon whole grains and fruits and vegetables, we’re still largely reliant upon mass market processes to procure and deliver those fruits and grains. That means buying our food primarily from large corporations that engage in wide-scale commercial farming. That means putting an awful lot of trust in people you’ll never even meet.

Learning Activity

1. Put students into small groups. Have them brainstorm everything they know about the food system, including diagrams, information, questions and even things they’re not sure of.

2. Watch What’s On Your Plate (2009), a documentary produced just for kids about food politics, food miles, farms and food activism.

3. After watching the documentary, have students revisit their brainstorms and add information that they learned while watching.

4. Working independently, have each student develop an action plan that includes five clear, achievable steps that they can take to make a positive change to the way they fit into the food chain.
B. Making a Difference

Focus: habitats, communities and ecosystems; organisms as parts of interconnected food webs, populations, communities and ecosystems; interactions between organisms and the environment; assessing the requirements of sustaining healthy ecosystems; human impact on ecosystems; reading and viewing print and multimedia resources to construct meaning; collaborating with others to explore ideas and information; listening to comprehend and evaluate ideas and information; speaking and listening to synthesize and extend thinking by explaining relationships among ideas and information.

Learning Activity

Brainstorm and create an action plan with students to help protect the Great Bear Rainforest—or another issue that's important in your own community. Use Inspiration or an online brainstorming application like Bubbl (https://bubbl.us/). You could do this as a class, or in small groups. We’re leaving it open for you to develop your action plan as you see fit! Use the links below to gather information and ideas for how you can make a positive change for the Great Bear Rainforest. (If you decide to find an issue that's based in your own community, run a quick Google search to select appropriate links for your students to do their research.)

Pacific Wild
  www.pacificwild.org/site/take_action.html
  www.pacificwild.org/site/our-work/no-tankers-no-pipeline/expeditions.html

Sierra Club BC
  www.sierraclub.bc.ca/great-bear-rainforest/what-you-can-do

Coastal First Nations
  http://coastalfirstnations.ca

Salmon Are Sacred
  http://salmonaresacred.org

Ta’Kaiya Blaney, 10-year-old Sliammon activist, protesting oil tankers and pipelines in BC
  www.takaiyablaney.com/takaiyablog
  www.youtube.com/watch?v=LkjIkuC_eWM&feature=player_embedded

C. Ice Age Exploration

Focus: explaining how the Earth’s surface changes over time; exploring multimedia resources to create meaning; analyzing impacts of weather on living and non-living things; assessing survival needs and interactions between organisms and the environment.

Although scientists aren’t exactly sure how, glaciation and the movement of ice has shaped much of BC’s geography and the distribution of species over time. Have students investigate how our earth has changed and developed over time as a result of the ice ages. Start here, with a time-lapse clip that shows the advance and retreat of ice sheets across North America, beginning 120,000 years ago:
  www.youtube.com/watch?v=USIAcXfv39k&feature=related

Keep the learning going at these informative sites:
  http://library.thinkquest.org/3876/iceage.html
  www.pbs.org/wgbh/nova/earth/cause-ice-age.html (upper grades)
D. Fins, Flippers and Fast Feet

Focus: habitats, communities and ecosystems; survival needs; interactions between organisms and the environment; comparing structures and behaviors of animals and plants in different habitats and communities; reading informational and multimedia texts to create meaning; organizing information into a chart

1. Ask students to explain what an adaptation is (a characteristic or set of characteristics that helps an organism survive or reproduce in its given environment. For example, chameleons possess the adaptive characteristic of being able to change color to blend in with their surroundings, thus avoiding predators.)

2. Discuss with students that in order to survive, animals must be suitably adapted to the environments they live in. Have students examine a variety of animal adaptations, with a special focus on animals of the Great Bear Rainforest. Using *Nowhere Else on Earth* and the websites listed below, have students create an organized chart that lists the special adaptations of the following animals to their environment:

- sea wolves
- spirit bears
- deer
- eagles
- salmon
- beavers
- killer whales (orca)
- sea otters
- sunflower sea stars
- an animal of student’s choice

**Salmon**
www.sierraclub.bc.ca/seafood-and-oceans/pacific-salmon-amazing-long-distance-travellers

**Beavers**
www.digitalsportsman.com/wetlands/anim.htm

**Pacific Water Shrew**
www.sierraclub.bc.ca/endangered-species/a-special-place/some-special-species/walking-on-water-pacific-water-shrew

**Orcas**
www.k12.nf.ca/stannesacademy/AnimalAdaptations/Orca.htm

**Sunflower sea star**
www.sierraclub.bc.ca/endangered-species/a-special-place/some-special-species/sunflower-sea-star-not-just-a-pretty-pretty
Wolverines
www.sierraclub.bc.ca/flathead-river-valley/wolverine-not-a-cuddly-teddy-bear-substitute

For a more complete listing of BC’s endangered species and their adaptations to different environments, head to:
www.sierraclub.bc.ca/endangered-species/a-special-place/some-special-species

E. Making Connections

*Focus: responding to selections by explaining connections to self and world*

Here are some phrases from chapter 10 of *Nowhere Else on Earth*. For each one, have students write a short explanation of how it connects to their own life or world.

1. *Through your actions, you can inspire others around you to follow your lead.*
2. *Tell me, what is it you plan to do with your one wild and precious life?* (Quote from poet Mary Oliver)