

Dear Educator:

Thank you for signing up for *What's for Lunch*, a 60-minute program that examines how animals rely on one another for survival and what happens to an ecosystem when an animal in a food web disappears.

*What's for Lunch* will answer the following Essential and Guiding questions:

- How are plants and animals in an ecosystem connected to one another?
  - Where do plants and animals get their energy?
  - What happens to an ecosystem when one species' population changes or disappears?
  - What can we do to protect healthy food webs?

The Oregon Zoo hopes that as a result of this program, students will be able to:

- Students will be able to identify the trophic levels in a food web
- Students will be able to identify one thing that might happen to an animal if its food web is impacted
- Students will be able to name two actions they and their families can take to help protect healthy food webs
- Students will feel an increased appreciation for live animals and the Pacific Northwest ecosystem

The program is correlated to the following academic standards:

**Next Generation Science Standards:**

5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

**Oregon Social Science Standards:**

5.11. Describe how technological developments, societal decisions, and personal practices influence sustainability in the United States.

***In an effort to prepare students for their Zoo School program, please consider the following activities:***

1. Introduce students to the concept of an ecosystem and the interaction between living and non-living components.

*Terrestrial and Aquatic Ecosystems*

<http://ww2.biol.sc.edu/~bgriffen/PDFs/5thGradeLessonPlans.pdf>

2. Read aloud one of the following books about food webs.
  - *What's for Dinner? Quirky, Squirmy Poems from the Animal World* (2011) by Katherine B. Hauth.
  - *Hey Diddle Diddle: A Food Chain Tale* (2011) by Pam Kapchinske
  - *What Are Food Chains and Webs* (1998) by Bobbie Kalman

***Continue the learning after we leave your classroom with the following enrichment activities:***

1. Explore how animals become endangered and the steps people can take to protect them.  
*Science NetLinks*  
<http://sciencenetlinks.com/lessons/endangered-species-1/>
2. Introduce students to the concept of a keystone species and predict the impact they have on an ecosystem.  
*National Geographic Society*  
<http://nationalgeographic.org/activity/introduction-keystone-species/>
3. Discuss how invasive species destroy a healthy food web.  
*National Geographic Society*  
<http://nationalgeographic.org/activity/introduction-invasive-species/>
4. Organize a service project to restore our native ecosystem by removing invasive plants. A number of organizations are available to help you organize a project in your area:
  - Hillsboro Parks and Recreation – Works with teachers in the Hillsboro School District  
<https://www.hillsboro-oregon.gov/index.aspx?page=1144>
  - Metro – Works with teachers throughout the Portland Metro area  
<http://www.oregonmetro.gov/how-metro-works/volunteer-opportunities/group-volunteer-opportunities>