

Welcome to the Food Production Department! *PowerPoint*

Essential Question:

What is the Garden Earth Food Production Department?

At a Glance:

Learners will examine the major concepts related to the Food Production Eco-service Department by watching a introductory PowerPoint presentation with questions that follow.

Background Information:

See *Background Information: Food Production Department*

Getting Ready:

Set up the equipment necessary for showing the PowerPoint presentation. Pull the Food Production Department eco-service worker cards listed in the Resources section at the front of the module. Explain that the Food Production Department is one of many eco-service departments that make up every ecosystem on earth. Review the PowerPoint script (on the GEN CD) prior to your Club session.

Procedure:

1. Explain that the Food Production Department is one of many eco-service departments that make up every ecosystem on earth. Many (really, all) organisms live and work in this department. Show learners some of the Food Production eco-service worker cards. Briefly introduce the worker on each card. Explain that we will be learning more about these Food Production workers in this module. Ask children if they have seen any of them at our club site. What job do these animals do?
2. Present the PowerPoint presentation. (see attached script/notes) It introduces the major concepts as follows:
 - A major function of a healthy ecosystem is producing nutritious food for the animals that live there.
 - The sun is the base of all food chains.
 - Organisms have adapted to 'eat' a variety of foods.
 - Relationships between producers (plants) and consumers (animals) can be diagrammed in food chains/webs.
 - Migratory animals require suitable habitat and food in all places along their migration route.
 - Population growth and the over-consumption of resources push the limits of a sustainable agricultural system.
 - Agricultural, political, and lifestyle changes are needed to ensure enough food for all creatures on earth.
3. Guided reflection (Slide 21): Ask children what their favorite foods are. What do you think a bear's favorite foods might be? How about a fox or a rabbit? Where are each of these animals on the food chain? Next time you are eating lunch or a snack, try to think where it came from, what it might eat or what might have eaten it, if you hadn't gotten to it first.

Location: Indoors

Objectives: *Learners will:*

- 1) display curiosity about the major concepts related to the Food Production Department

Skills: communication, listening, analysis

Supplies:

- PowerPoint on CD
- LDC projector
- Monitor
- Eco-service Worker Cards (see full list after Table of Contents)

Subjects: language arts, science

Time: 20 minutes

Food Production Department PowerPoint Script/Notes

Slide:

1. Welcome to the Food Production Department!
2. Every place on Earth is an ecosystem, including our club site!
3. In today's Gen club adventure, will explore the food production eco-service...
4. ...on your club site. This is Madame Squirrel, the Food Department's manager. She helps watch over all the plants and animals on Garden Earth.
5. What do organisms need to survive? Air, Water, Food
6. Where does all the food on Earth come from?
7. The Sun!
8. Plants use the sun's energy to grow leaves, roots, and stems. Animals and fungi can use the plants as their food.
9. The sun provides the energy to fuel food chains.
10. What is special about plants? How are they able to use the sun's energy to make food for themselves?
11. Inside many plant cells are special structures called chloroplasts that can use the sun's energy to make sugars.
12. Chloroplasts can use carbon dioxide and water from the air and use the sun's energy to fuel a chemical reaction that forms sugar molecules.
13. OK, so the sun helps make plants grow, then what?
14. Animals, called herbivores, are primary consumers. They eat plants, which gives them the energy they need to survive.
15. Animals, called carnivores, are secondary consumers. They eat other animals, which gives them the energy they need to survive.
16. Other animals, also called carnivores, are tertiary consumers. They eat other carnivores for energy they need to survive.
17. Food chains show how energy moves from one group of organisms to another.

18. But nature is complicated! Energy really passes through food webs.
19. Food webs occur on land, in water, and even underground.
20. Where is my food? What happens when the food an animal eats cannot be found for the entire year in one place?
21. Migration! Animals migrate to find food. Birds ‘fly south’ for the winter.
22. Ruby-throated hummingbirds must migrate when their food (nectar-rich flowers) die back for the winter.
23. Can Madame Squirrel’s workers produce enough food for Earth’s creatures, including people?
24. Guided reflection: Ask children what their favorite foods are. What do you think a bear’s favorite foods might be? How about a fox or a rabbit? Where are each of these animals on the food chain? Next time you are eating lunch or a snack, try to think where it came from..what it might eat or what might have eaten it, if you hadn’t gotten to it first.
25. The Food Production Department provides food for more than 6 billion people
26. And must provide for the needs of all Earth’s creatures.
27. Garden Earth Issues: single variety farming (monocultures)
28. Controlling herbivores and diseases requires use of pesticides.
29. What will learn in the Food Production Department? Owl pellet dissection; plant and harvest vegetables as part of a Service Learning project
30. What can you do? Learn about different ways to grow food. Study agroecology to learn how to produce food with the health of ecosystems in mind.
31. Think about purchasing products that are grown organically
32. Make your yard or schoolyard a place that animals will love. Plant food-bearing trees and nectar plants.

Discussion/Assessment:

What is the Food Production Eco-service Department?

What animals use our school site for food?

What do you think they eat?

What does the Food Production Department provide for creatures who live on our site?