



# Food Production Department

## Lesson 1 - Welcome to the Food Department! (Grade 3-5)

### Essential Questions:

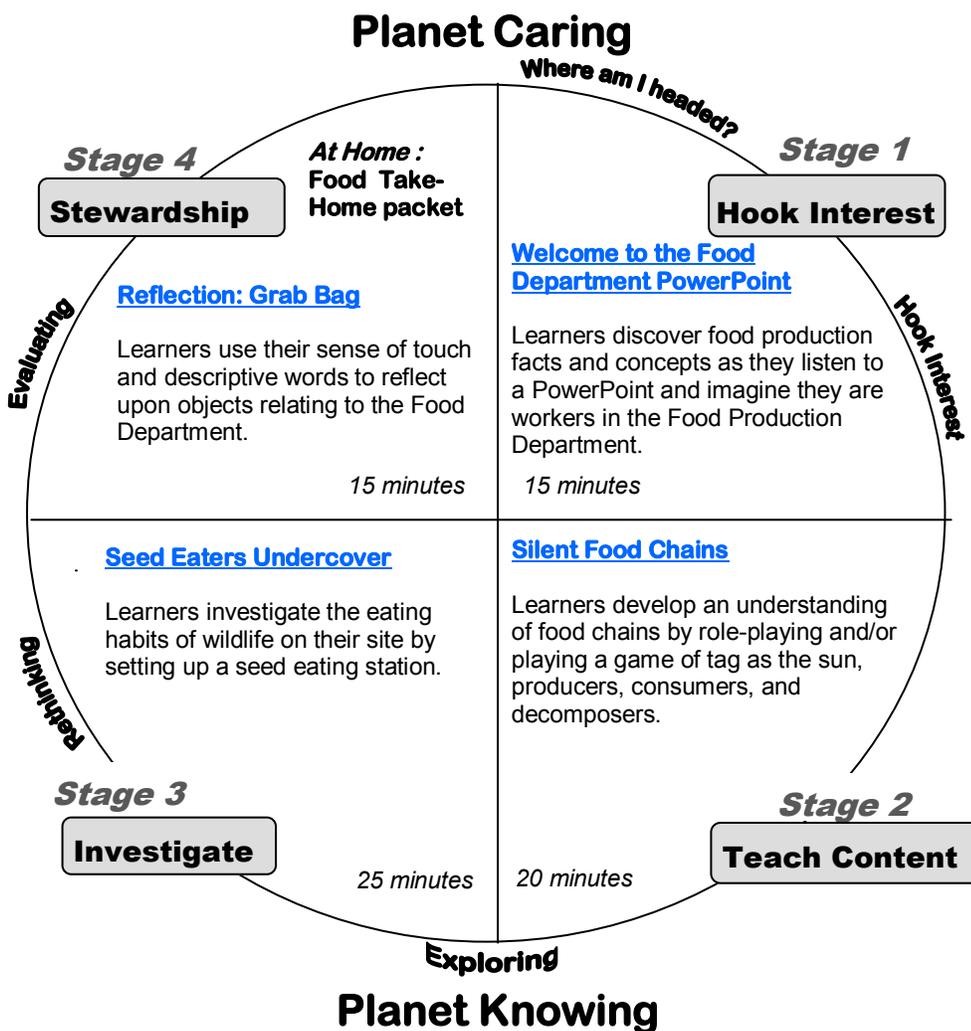
- What is the Food Department?*
- What is a food web? food chain?*
- What do animals eat? Are seed eaters specific to certain seeds?*

### At a Glance:

An interactive presentation (PowerPoint & dramatization) hooks learner interest and concern for the Food Production Department on their club site. A role-playing game teaches learners about the different components of food chains. Next, learners develop an experiment to investigate eating habits of wildlife in Seed Eaters Undercover. The lesson ends with a reflection activity using the sense of touch to review objects belonging to the Food Production Department.

### Concepts:

- 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 and will eat a variety of foods within the ecosystem.
- Relationships between producers (plants) and consumers (animals) can be diagrammed in food chains/webs.



### Objectives

#### Learners ...

- 1) display curiosity about the major concepts related to the Food Production Department.
- 2) explain the concept of a 'food chain'.
- 3) work as a team to determine the order of components in a food chain.
- 4) investigate eating habits of seed eating animals on their school site
- 5) discover if seeds disappear more quickly in the open or under cover
- 6) determine if the size of an entry hole on a container with seeds determines how quickly seeds disappear
- 7) reflect upon what they have learned about the food production eco-service.

# PROCEDURES IN BRIEF: Lesson 1—Welcome to the Food Department!

## Stage 1. Welcome to the Food Department

### PowerPoint

#### Procedure:

1. Explain that the Food Production Department is one of many eco-service departments that make up every eco-system on earth. 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. Ask the children if they have seen any of them at our club site. What job do these animals do?
2. Present the PowerPoint presentation. It introduces the major concepts of the Food Production Department 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 pushes the limits of a sustainable agricultural system.
  - Agricultural, political, and lifestyle changes are needed to ensure enough food for all creatures on earth.

#### Supplies

- PowerPoint on CD
- LDC projector
- Monitor
- Eco-service Worker Cards (see manual for complete list)

## Stage 2. Silent Food Chains

#### Procedure:

1. Explain the concept of a food chain to learners. Talk through the links in a simple food chain. Discuss that animals must eat other organisms in order to survive. Plants, however, can make their own food using the energy of the sun, water, and carbon dioxide.
2. Group learners so that there are five to a team.
3. Give each team a set of food chain cards.
4. Explain that each team will need to line up in the correct order of the food chain. The teams will need to figure out the order without speaking.
5. Once all teams have decided upon an order, ask them to explain the order to the other groups or you can time them to see how fast they can do it.

#### Supplies

- Food chain cards

#### Variations:

- *Noisy Food Chains*: learners make up appropriate sound effects or actions related to their food chain card (organism).
- *Food Web Tag*: according to their food chain card, learners tag an organism lower than them on the food chain and avoid those above them—those that eat them.

## Stage 3. Seed Eaters Undercover

#### Procedure:

1. Learners will devise an experiment to investigate the seed eating habits of different animals. Place some seeds in the open, under a piece of cardboard or newspaper, and in a box with an entry hole. Check stations every day for 1 (or more) weeks. Record the number and kinds of seeds left at each station before and after animals have had an opportunity to visit. Look for signs of different animals such as tracks and animal poop.
2. Put equal numbers of the same kind of seeds in containers with different entry holes (big or small; covered by a flap of fabric or open, on the top, bottom or side of containers) to compare how quickly the seeds disappear.
3. Put a known number of seeds in piles of different materials (ie. twigs, leaves, pebbles) to see how many disappear from each and how quickly they disappear. Compare this with the disappearance of the same seeds when they are not buried.

#### Supplies

- small cardboard boxes
- seeds of different sizes

#### CAUTION!

- Use small quantities of baits so that animals don't become dependent on the food you are providing, and so you don't attract foreign animals to the site.
- Never feed any animal directly by hand.
- Never approach or touch a wild animal.

## Stage 4. REFLECT: Grab Bag

#### Procedure:

1. Place a number of items that relate to the Food Production Department in a bag or box that conceals their identity but allows students to reach in and explore the objects. Some suggested items include: acorn, leaf, snake skin, mushroom, animal skull, berries, bag of soil, etc.
2. Taking turns, have students reach in and feel an object. Using descriptive language, have students describe the object to their classmates and try to guess what the object is.
3. Take the object out of the bag/box and discuss what the object is and how it relates to their learning experience. Use the Reflection Questions to expand upon the reflection process.
4. If time permits, mention other aspects of the Food Production Department that are important and use the reflection questions to continue your discussion.

#### Supplies

- Bag or box that conceals contents
- Food Production Department objects: acorn, leaf, snake skin, mushroom, animal skull, berries, bag of soil, etc.

Complete lesson write-ups are available in the GEN manuals.