

## Ch. 3 Biosphere

### Food Web Project

Objective: Students will create a food web poster for the FWPA schoolyard biome, based on organisms they want to try to introduce. Students will demonstrate the following knowledge and skills:

Know	Understand	Do
Producers Primary, secondary, and tertiary consumers Omnivore, carnivore, herbivore Trophic level Food web Food chain Invasive species	How energy flows through a food web.  The feeding relationship between producers, primary consumers, secondary consumers, and tertiary consumers.  How food webs can be affected by invasive organisms or the removal of organisms.  How food chains make up food webs.  How different classifications of organisms are grouped into trophic levels.  How invasive species can affect a food web.	Analyze food webs to determine the feeding relationships.  Identify which organisms are producers and classify consumer levels.  Identify the trophic levels to which organisms belong.  Use a food web to predict the effects of invasive species or the removal of organisms from the food web.  Describe the energy flow in a food web.

#### Requirements:

##### 1. Food Chains

Include at **least 5 food chains**, each consisting of a producer, a primary consumer, and a secondary consumer. Label each organism with its name, and whether it is a **producer, consumer, or decomposer**. Each consumer must be labeled as an herbivore, carnivore, or omnivore.

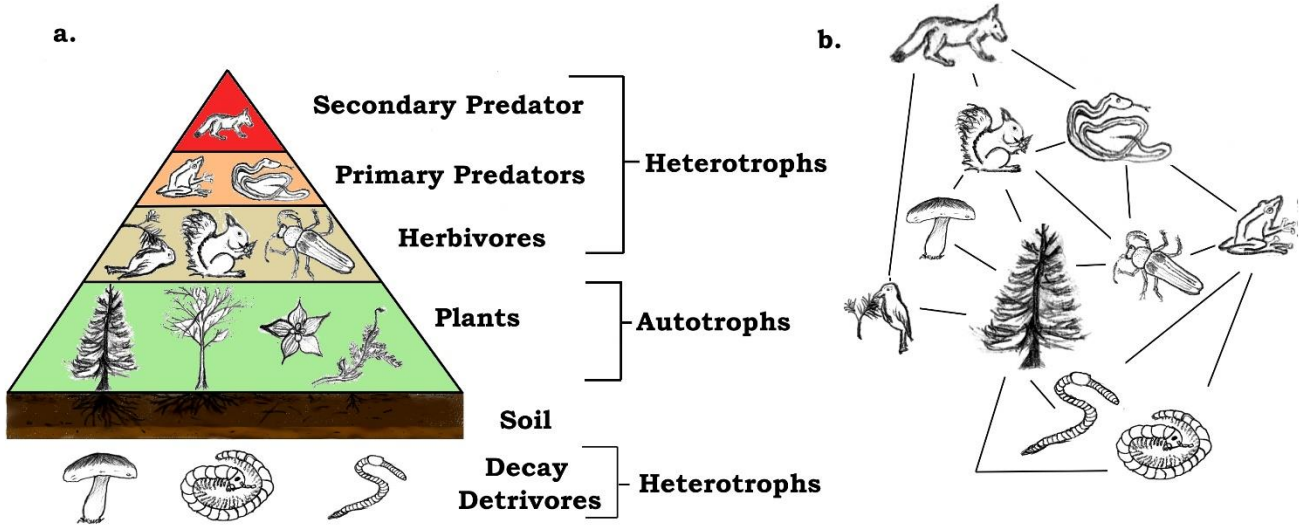
##### 2. Food Web

Create a chart to identify which organisms are *producers, primary consumers, secondary consumers, tertiary consumers*. Name at least 2 possible *decomposers* to any food web. Describe the importance of decomposers to a food web. Contrast the difference between *autotrophs, heterotrophs, and decomposers*. List which organisms fit into each category. Include pictures or drawings of the organisms and their proper scientific names.

##### 3. Energy Pyramid

Create another chart to identify which organisms fit into each *trophic level*. Drawn as a pyramid. Remember the 90/10 rule in that only about 10% of the energy from one level can be used at the next higher level.

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## 1. Feeding Relationships

Predict what would happen to feeding relationships in the food web if one organism were added.  
Predict what would happen to feeding relationships in the food web if an invasive species were introduced in this food web.

## 2. Presentation

Place poster on blue wall outside classroom with staples.

All reports, regardless of the format chosen, must be professional and include pictures, charts, flow of energy arrows, and appropriate labels of organisms.