

CHEMOSYNTHETIC FOOD WEB

{Living World

INTRODUCTION

The struggle for food is one of the most important and complex activities to occur in an ecosystem. To help simplify and understand the production and distribution of food within a community, scientists often construct a food web, a diagram that assigns species to generalized, interlinked feeding levels. Each layer of the web represents a particular role in the movement of organic energy through the community.

INTRODUCTION

Despite their unusual nature, faunas based on chemosynthesis are tied together by food webs similar to those of better-known communities. The hydrothermal vent food web below has four layers:

INTRODUCTION

Primary producers are the original source of food in the vent ecosystem, using chemical energy to create organic molecules. All other life depends on primary producers, and they have the greatest biomass in the community.

INTRODUCTION

Primary consumers get their energy directly from the primary producers by eating or living symbiotically with them.

INTRODUCTION



First order carnivores (secondary consumers) prey on the primary consumers and in turn are eaten by other animals.

INTRODUCTION

Top order carnivores (tertiary consumers) eat other consumers and carnivores but are rarely hunted by other creatures. Because they are separated from the primary food production by several layers, top order carnivores have the smallest biomass in the food web.

INSTRUCTIONS

In your groups read through all of the Organism ID cards. All of the Organisms belong to the same deep-sea hydrothermal vent community. Place cards into three groups; producers, consumers, and decomposers, and then record your findings in a chart similar to the one below. When you are finished raise your hand so I can check your answers.

INSTRUCTIONS

Once you have organized your organisms and I have agreed with you, move to step 2 on the worksheet. When you are finished raise your hand so I can check your answers.

Once this is done, finish answering all the question on the worksheet.

BE SURE TO ASK QUESTIONS IF YOU GET LOST!