

Question 1-B. Explain how autotrophs and heterotrophs differ in the way they get the energy they need. Give an example of each.

TASK 2. Marine Organism Cards

- Review the Marine Organism Cards online by clicking on the Food Web link – click on each organism to see the individual cards
- Locate the printed Marine Organism Cards and arrows provided to your group and divide the cards evenly among the members - each group member is responsible for using their cards in the activity
- **All** of the organisms on the cards are connected to one another either directly or indirectly because of their need for energy. As a group, arrange all the Organism Cards and arrows to show how you think the organisms are connected. The arrows represent the transfer of energy, and should point in the direction that energy is moving. Arrows of different lengths have been provided to make it easier to show connections between the organisms.
- Once you have arranged all your organisms as a group, answer the following questions:

Question 2-A. Write down at least 2 questions or challenges that your group faced as they discussed how all the organisms are connected.

Question 2-B. Draw a diagram below to show how your group arranged the Organism Cards and arrows – be sure to label each Organism Card.

Question 2-C. Trade a copy of your group's diagram with another group. Review how the other group arranged their organisms, and complete the following:

A) Describe at least two differences between your group's diagram and the diagram from the other group

B) Write down 2 questions your group would like to ask the other group about how they arranged their organisms.

TASK 3. Food Web Tutorial

- Return to the **online** Marine Organism Cards and click on “Begin Lesson” in the bottom right hand corner
- Proceed through the tutorial and answer the questions below at each stop before moving on to the next slide

Question 3-A. What do you think a shark eats to get the energy it needs?

Question 3-B. What do bluefish eat to get the energy they need?

Question 3-C. What do silversides eat to get the energy they need?

Question 3-D. What do copepods eat to get the energy they need?

Question 3-E. Where do phytoplankton get the energy they need?

Question 3-F. Where do you think the striped bass gets the energy it needs?

Question 3-G. Can you think of any possible feeding interactions between the organisms in the two food chains?

Task 4. Food Web Game

- At the end of the Food Web Tutorial, click “Begin Game” to enter the Food Web Game
- Follow the instructions to play the game (hint: you may want to refer to your printed Marine Organism Cards for information about the organisms)
- After you’ve completed the game and checked your answers respond to the questions below:

Question 4-A. Record your game score here: _____ pts.

How many did you get correct? _____

Question 4-B. Can you assume that all sharks would fit into the same trophic level in a marine food web? Why, or why not?

Question 4-B. Can you think of any organisms that might be missing from this food web?

Question 4-C. Do you think all organisms stay at only one trophic level in the food web throughout their lives? If not, why?

