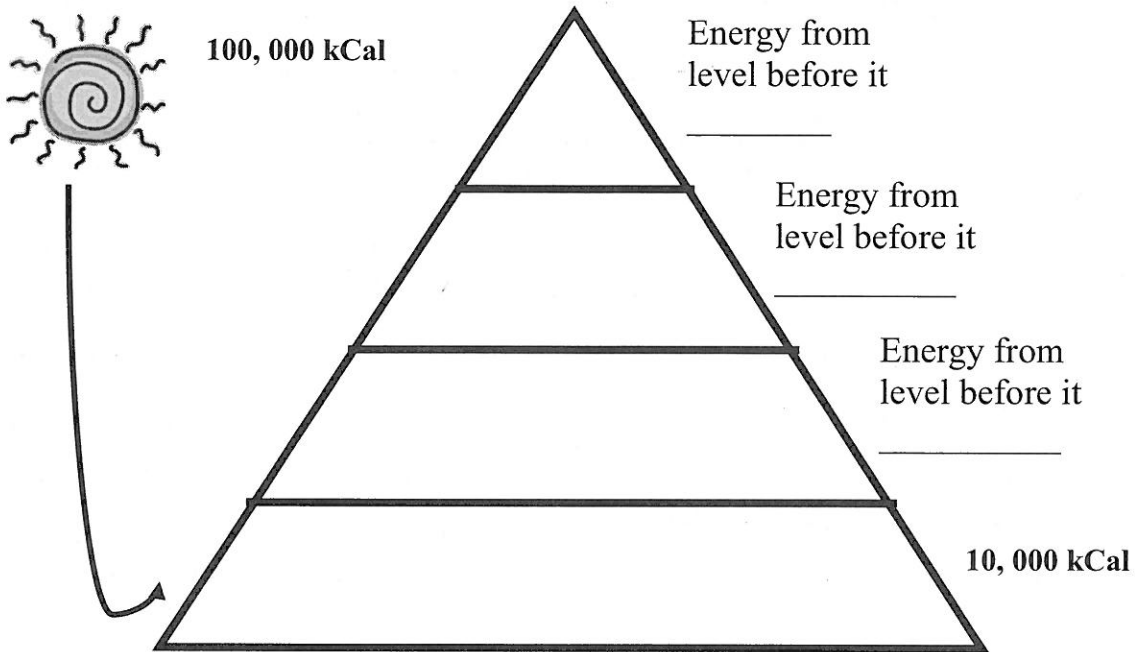


Energy through an Ecosystem

Part One: Energy Pyramids

- Label the name of each trophic level as either producers, primary consumers, secondary consumers, or tertiary consumers
- To the right of the pyramid, write how much energy is transferred from one trophic level to the next.



Part Two: Organizing a Food Web

Below is a list of organisms from a marine biome and what they eat. Using the chart below, write the name of the organism and draw the arrows to show the direction of energy transfer between these organisms in the food web.

1. Take out a sheet of notebook paper, turn your paper sideways.
2. Write 'kelp' at the bottom of your paper (kelp is a type of seaweed).
3. Write the names of the organisms that eat kelp close to the word 'kelp' and draw arrows from kelp to the animals that eat it.
4. Position the other organisms based on what they eat and draw arrows from the prey to the predator.
Remember, the arrow goes the way the energy flows.
5. Write the following next to each organism:
 - a. If it is a producer or consumer. If it is a consumer, label it as a primary consumer, secondary consumer, or tertiary consumer. Keep in mind, some organisms might fall into more than one trophic level.

Sea otter	eats	sea urchin
Squid	eats	crab, kelp
Killer whale	eats	sea otter, squid
Sea urchins	eats	kelp
Crab	eats	kelp

Part Three: Thinking Critically

1. Why is a pyramid a good shape to represent how matter and energy transfer in an ecosystem? Why not use circle or a square?

2. What happens to the energy that is not passed on to the next trophic level?

3. What trophic level is the most important? Defend your answer.

4. Explain why the producers have to be the biggest trophic level. Then explain what would happen if you had more herbivores than plants in an ecosystem.
