

Eatin' for Energy

An Exploration of Food Chains & Food Webs

Talk With Your Tables!

- What do you think “Eatin’ for Energy” means?
- How does it relate to what you have already learned about Ecology?
 - Use some of the new vocabulary words you have learned.
 - HINT: Think *living things, organisms, niche!*

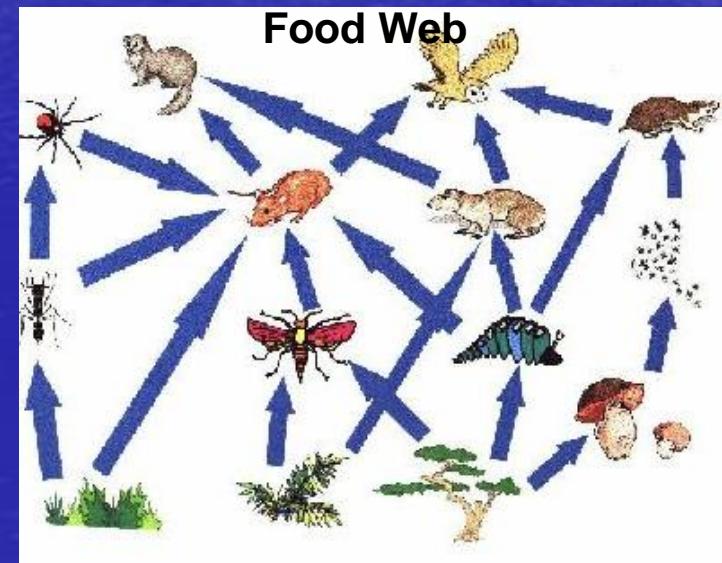
- Provide a definition for food chain in your own words:
a linear ("straight line") diagram that shows what an organism "eats" in order to get energy and what it is eaten by in its environment

- Provide a definition for food web in your own words:
a bunch of food chains combined all together. This appears to be a complete mess! 😊

Sample Food Chains

Trophic Level	Grassland Biome	Pond Biome	Ocean Biome
Primary Producer	grass ↓	algae ↓	phytoplankton ↓
Primary Consumer	grasshopper ↓	mosquito larva ↓	zooplankton ↓
Secondary Consumer	rat ↓	dragonfly larva ↓	fish ↓
Tertiary Consumer	snake ↓	fish ↓	seal ↓
Quaternary Consumer	hawk ↓	raccoon ↓	white shark ↓

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Talk at your group....

- How do these definitions compare to the ones you wrote yesterday?
- Make adjustments to your definitions, if necessary!

FOOD CHAIN: a linear ("straight line") diagram that shows what an organism "eats" in order to get energy and what it is eaten by in its environment

FOOD WEB: a bunch of food chains combined all together. This appears to be a complete mess! 😊

Let's go over yesterday's work before we move on!

1. In general, what do you notice about each of the food chains?
2. What observations can you make about animals like the shark and killer whale?
3. What observations can you make about the fur seal?
4. How do your observations (#2 & #3) help you understand food chains & food webs?

Let's go over yesterday's work before we move on! (cont.)

5. What conclusion can you make about the **living thing** at each end of the food chains you created?

6. Which picture represents the object responsible for keeping all living things alive? WHY???

7. Write a summary of what you have learned through today's activity. Be prepared to share your response with your peers. **SHARE NOW!**



Now let's build on what YOU
have discovered!!!

Part 1: Analyzing and Creating Food Chains



Producers

Eaten
by

**Primary
Consumers**

Eaten
by

**Secondary
Consumers**

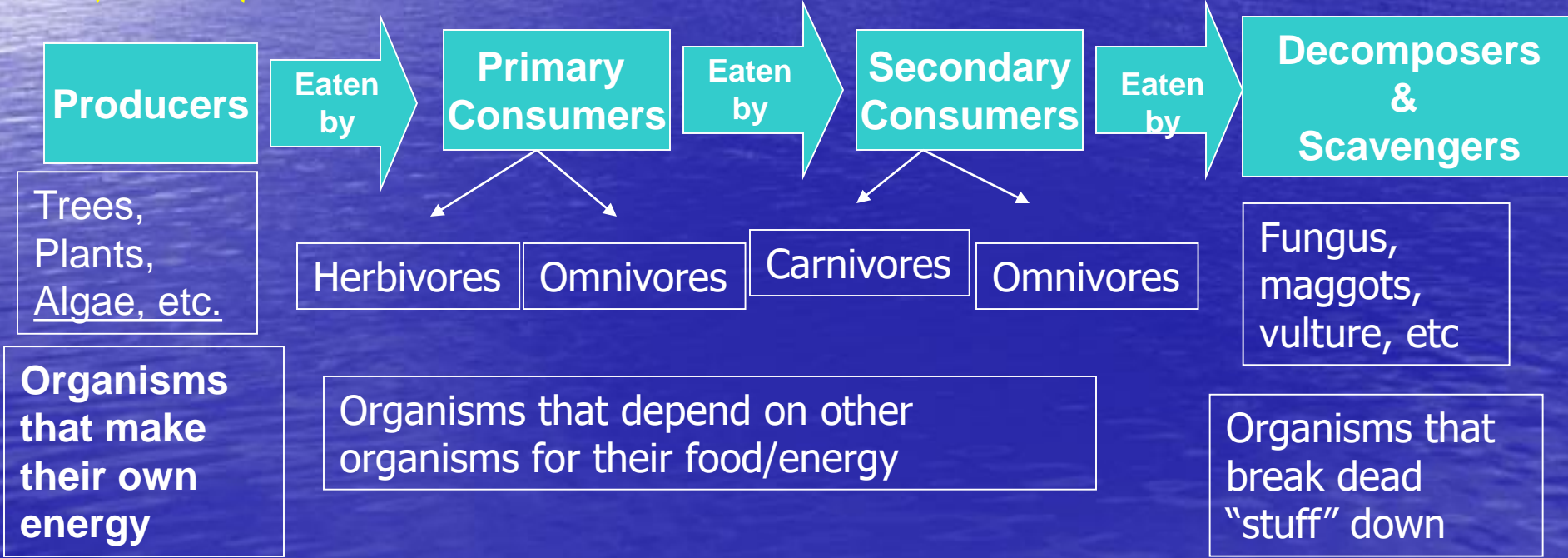
Eaten
by

**Decomposers
&
Scavengers**

Part 1: Analyzing and Creating Food Chains



Provides the ENERGY!!

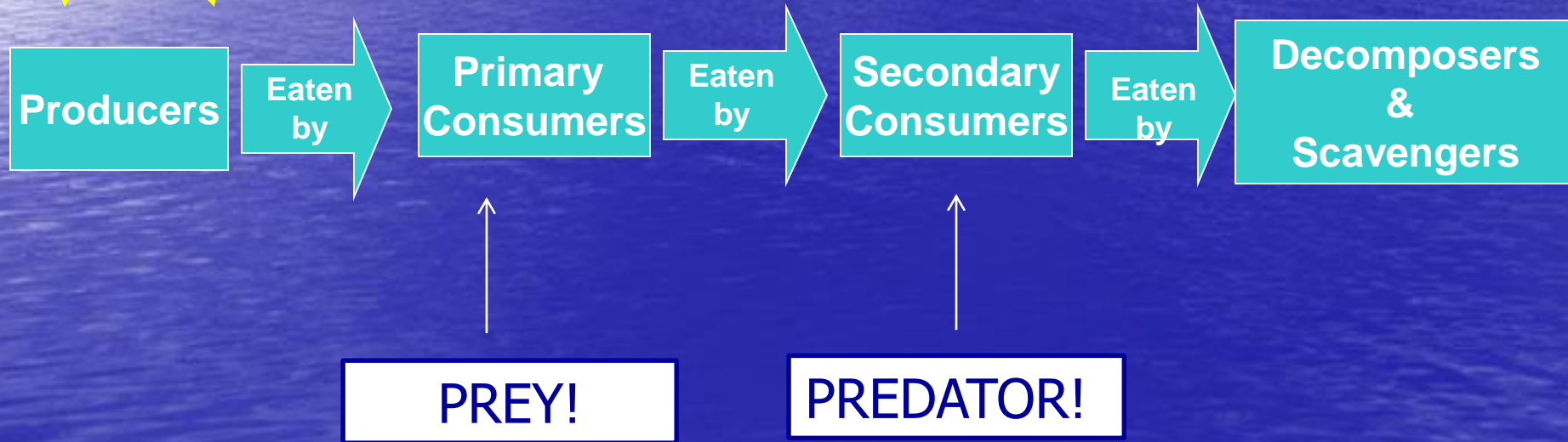


Analyzing and Creating Food Chains More...

SO, What are the predator and prey?

Predator = an ANIMAL that hunts for its food

Prey = an ANIMAL that is hunted as food



Think – Pair - Share

- Which part of the food chain are YOU?
 - Why?
 - Did you and your partner agree? Why or why not?
 - Are you always the same part? Why or why not?

Be Ready to Share!!!

Part 2: Making a Food Chain

- Cut your strips of paper
- Create 4 food chains of 4 organisms each following the format of your notes (*producer, primary consumer, secondary consumer, decomposer*)
- Get your food chains approved!
- On the back of each strip, write the organism's role (*producer, consumer, decomposer*)
- Tape or staple your strips into a chain of interlocking links
- On your paper, draw 3 of the food chains you created, and tell the role of each organism in the chain.
- Answer the questions in part 2 of your notes!

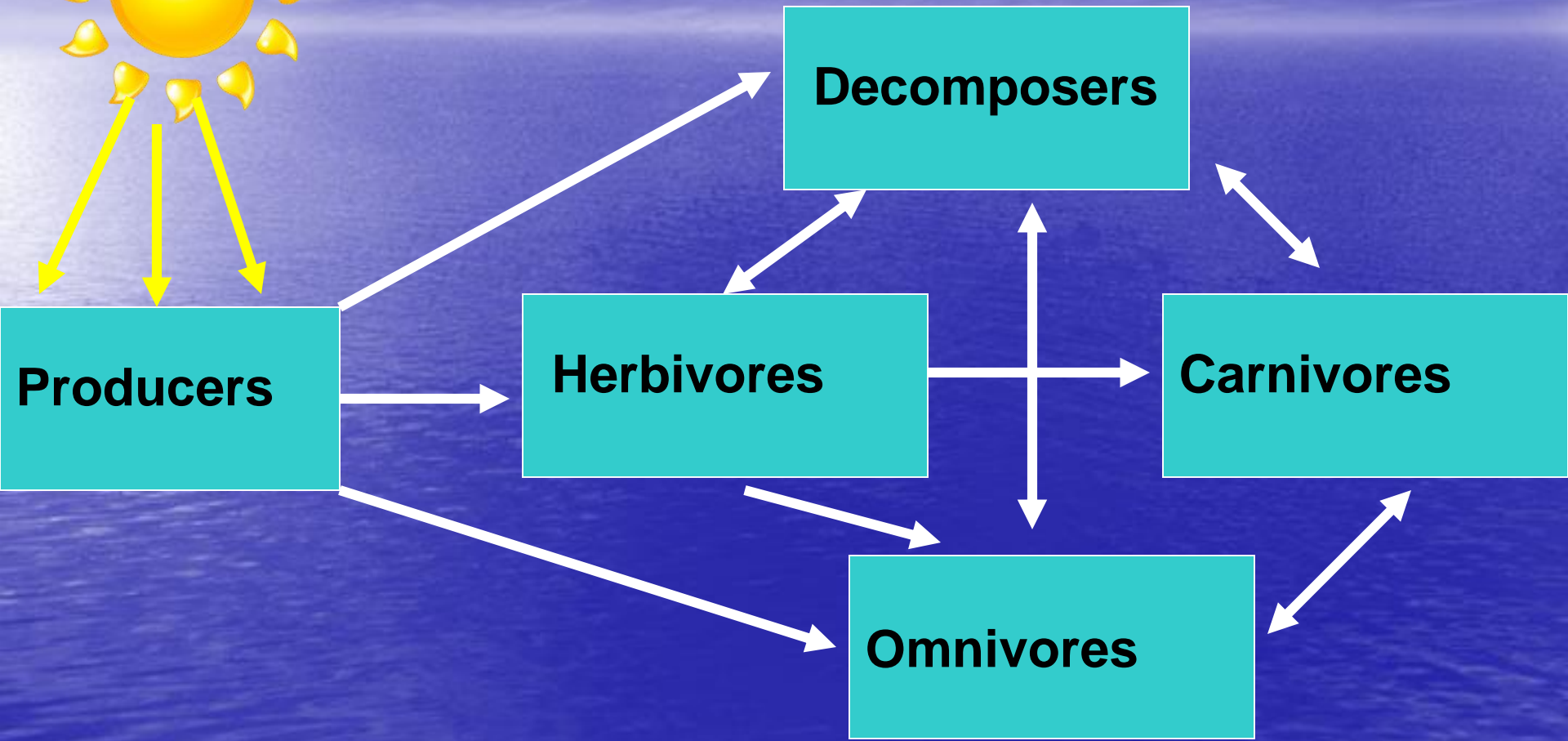
Follow-up

- Why couldn't you make one long chain of all your cards?
- What was the longest chain you could make? Explain.
- What would happen if one of your "links" were missing?
- What would happen if there were too many of one of the "links"?

Rate Your Learning!

- How well do you think you understand the concept of Food Chains?
 - 4: "I totally got this. I can explain it to my little brother when I get home"
 - 3: "I'm ready for the Quiz!"
 - 2: "Anyone wanna study a little before the quiz?"
 - 1: "Food Chains have to do with Ecology, right?"

Part 3: Analyzing & Creating Food Webs



Make your Food Web!

- Combine the food chains that you just created into one big food web for your group!
- Draw the food web you created (the best that you can) in the space on your note sheet.

Our Food Web:



Part 4: Conclusions

1. What is necessary for all food chains and food webs?
Energy from the sun
2. Compare and contrast food chains and food webs.
Both show the relationships among predators and prey and producers, but food webs are much more complex and accurate, showing a lot of chains combined.
3. Analyze the importance of protecting all living things.
4. Predict what would happen to food chains, food webs, and ecosystems if an endangered animal becomes extinct.

Rate Your Learning!

- How well do you think you understand the concepts of Food Chains AND Food Webs?
 - 4: “I totally got this. I can explain it to my little brother when I get home”
 - 3: “I’m ready for the Quiz!”
 - 2: “Anyone wanna study a little before the quiz?”
 - 1: “Food Webs have to do with spiders, right?”