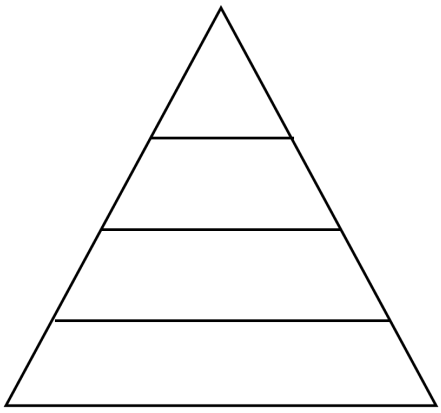
zCentral Launch Code: **E445**

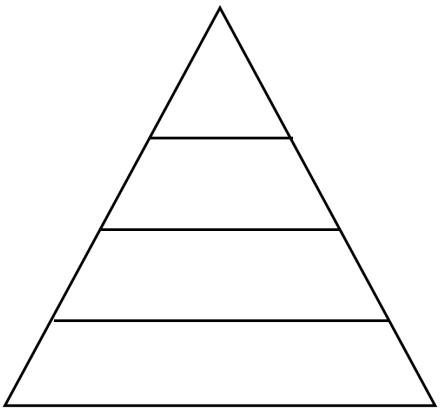
Name_____ Date_____

Exploring Ecosystems: Energy Pyramids Worksheet

Use these energy pyramids to complete the activity.



Desert



Ocean

Answer these questions to complete the energy pyramid and move through the simulation.

1. What is an energy pyramid?

2. How much energy is transferred between trophic levels?

3. List three producers in a desert ecosystem and three in an ocean ecosystem.

4. Draw one producer from each ecosystem and place them in the correct level of an energy pyramid.

5. In the desert ecosystem, read about rattlesnakes and kangaroo rats to identify the primary and secondary consumers. Draw and place them in the appropriate levels of the energy pyramid.

6. What trophic level would a red-tailed hawk belong to?

7. Draw the red-tailed hawk and place it in the appropriate level of the energy pyramid.

8. In the ocean ecosystem, read about orcas and sharks.

9. Create a drawing of an orca and a shark and place each in its correct position in the energy pyramid.

10. Which trophic level does a seal belong to?

11. Which trophic level do small fish belong to?

12. Complete the energy pyramid by drawing a fish and a seal, and place them in the correct trophic levels.

13. Calculate the amount of energy transferred to each trophic level in a desert ecosystem, starting with 10,000 joules of energy at the producer level. Use the 10% rule to show the energy transfer through primary, secondary, and tertiary consumers. Explain how this energy transfer supports the cycling of matter and flow of energy in the ecosystem.

14. Do the same for energy being transferred in the ocean ecosystem.