

**Intermediate Science 7**  
**Unit 1: Interactions In An Ecosystem**  
**Topic 4: Roles Of Organisms In Ecosystems**

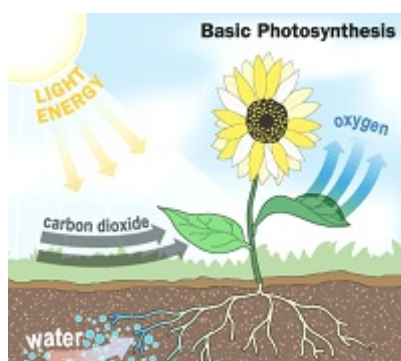


Student Name \_\_\_\_\_

How a living thing gets energy can be used to classify it. An organism can be classified as:

1) **Producer:** refers to organisms that are able to make their own food.

**Photosynthesis:** process occurring in green plants that uses the sun's energy to convert water and carbon dioxide into food and oxygen.



2) **Consumer :** an organism that obtains its food by eating other animals. Three Types Of Consumers:

**Herbivores:** which eat producers.

**Carnivores:** that eat herbivores

**Omnivore:** which eat both plant and animal material.

3) **Decomposer:** feed by producing weak acids that break down dead tissue into smaller part chemical particles. This process releases nutrient materials gases into the soil, water, and air, where they can be used by producers. In this way, every organism that dies is recycled. The nutrient materials are never used up.

### What Is A Niche?

**Niche:** refers to the jobs, or roles of an organism make up. In nature, each species plays a particular part in the ecosystem it shares with other organisms. Some are producers, some are consumers, some are decomposers, and so on.

A complete description of an organism's ecological niche includes:

Where and when it mates

When it feeds / where it feeds

What it eats

What eats it

How it competes etc

To provide a description of a ecological niche, consider what would happen if the organism was removed from its habitat

## PART A: MULTIPLE CHOICE

*Instructions: Shade the letter of the correct answer on the computer scorable answer sheet provided*

1. All the energy in a food chain originates from:
  - (A) A plant
  - (B) Farmers
  - (C) The Sun
  - (D) An electric outlet
  
2. What are organisms that manufacture their own food by using energy provided by sunlight?
  - (A) Consumers
  - (B) Decomposers
  - (C) Producers
  - (D) Niche
  
3. Producers are an important part of the food chain. What are producers?
  - (A) Animals
  - (B) Humans
  - (C) Insects
  - (D) Plants
  
4. What is the source of energy for plant photosynthesis?
  - (A) Clouds
  - (B) Dirt
  - (C) The Sun
  - (D) Water
  
5. Plants and animals are very important to each other. Animals provide plants carbon dioxide. What do plants provide animals?
  - (A) Chlorophyll
  - (B) Oxygen
  - (C) Photosynthesis
  - (D) Water
  
6. Which kind of organism would be most likely to perform photosynthesis?
  - (A) Consumers
  - (B) Decomposers
  - (C) Producers
  - (D) Niche
  
7. Herbivores, carnivores, and omnivores are all
  - (A) Consumers
  - (B) Decomposers
  - (C) Producers
  - (D) Niche

8. Which eats only plant foods?
- (A) Carnivore
  - (B) Herbivore
  - (C) Omnivore
  - (D) Producer
9. Which of the following best describe humans and bears?
- (A) Carnivore
  - (B) Herbivore
  - (C) Omnivore
  - (D) Producer
10. Which of the following is an example of a carnivore?
- (A) Dandelion
  - (B) Lion
  - (C) Mushroom
  - (D) Rabbit
11. What name is given to organisms that breakdown waste and dead animals?
- (A) Consumers
  - (B) Decomposers
  - (C) Producers
  - (D) Niche
12. Which of the following is an example of a decomposer?
- (A) Dandelion
  - (B) Lion
  - (C) Mushroom
  - (D) Rabbit
13. Which term refers to the role of an organism within its community?
- (A) Habitat
  - (B) Ecosystem
  - (C) Niche
  - (D) Photosynthesis
14. A description of an organisms ecological niche includes \_\_\_\_\_.
- (A) Where it lives
  - (B) Its role in the community
  - (C) Its interactions with other species
  - (D) All of the above
15. Which of the following relations "correctly" describes the niche of a squirrel?
- (A) It lives in a forest
  - (B) It lives in a forest and eats seeds
  - (C) It eats seeds and is eaten by a weasel
  - (D) It lives in a forest and eats seeds and is eaten by a weasel

**PART B: MATCHING**

Fill in the blanks on the left with the terms on the right. Please, place your answers on the scantron

16. ____ Producer	A. The role of an organism in an ecosystem
17. ____ Photosynthesis	B. Plants that use energy from the sun to make nutrients they need to survive.
18. ____ Consumer	C. Organisms that break down the cells of dead or waste materials and absorb their nutrients.
19. ____ Decomposer	D. Organisms that eat food made by producers. (Primary Consumer eats plants, Secondary Consumer eats meat)
20. ____ Niche	E. The process by which organisms make their own food.

**PART C: WRITTEN RESPONSE**

1. What do herbivores eat?

---

2. What do carnivores eat?

---







3. What is the role of producers?

---







4. What are decomposers?

---

5. Classify each of the following as either a producer, consumer or decomposer: dandelion, robin, grass, grasshopper, butterfly, cod, algae, spruce, spruce budworm, lobster.

 tree _____	 robin _____
 grasshopper _____	 earthworm _____
 dung beetle _____	 shark _____

6. Classify each of the following as either a herbivore, carnivore or omnivore:

 <p>human</p> <p>_____</p>	 <p>zebra</p> <p>_____</p>
 <p>white-tailed deer</p> <p>_____</p>	 <p>hummingbird</p> <p>_____</p>
 <p>eagle</p> <p>_____</p>	 <p>dragonfly</p> <p>_____</p>

7. Describe the niche of a polar bear.

---

---

---

---

---

---

8. Is it possible for two organisms to live in the same habitat, but have different niches? Explain.

---

---

---

---

---

---