

## BIOLUMINESCENCE

P1: Have you ever seen a small glowing light in a forest at night and thought your eyes were playing tricks on you? Don't worry, you were not imagining things! You probably saw a firefly. Some animals **possess** the ability to glow or light up. These remarkable creatures are called bioluminescent animals.

P2: Bioluminescence happens when a living creature sends out light from its body. This is caused by a chemical reaction. During this reaction, chemical energy is converted to light energy. This allows the animal to glow. A diverse range of animals—and even some plants—can produce light this way. Some of these animals live on land. There are also bioluminescent animals in the ocean. Regardless of where they live, all bioluminescent animals can choose when to light up. They can turn on and turn off their ability to glow just like a light switch.

P3: Bioluminescent animals light up for different reasons. Some animals use their lights to communicate. Fireflies warn other fireflies of danger by flashing the lights in their tails. They also use their lights to attract potential mates. Some animals use their lights to catch prey. Glow-worms make sticky threads that are similar to the threads spiders make webs with. These threads hang from the tops of caves. The glow-worms then light up to attract other insects. The insects fly over and get stuck in the threads. The trapped creatures become tasty treats for the glow-worms. Other animals use their lights to avoid becoming dinner. Some kinds of jellyfish and squid light up to camouflage themselves in bright water. Their lights make them difficult to see. So predators swim by and leave them alone.

P4: Scientists have been studying bioluminescence in animals for medical purposes. This has helped them create new methods to test people for cancer using light. They have also discovered new ways to detect infections, and better ways to track the progress of serious diseases like Alzheimer's. So not only are bioluminescent animals amazing to watch, they are also helping to improve things for the human race!

Choose the words with similar meanings from the box:

Hide – Various – Have – Hunter - Development

1. You can't apply for this job if you don't **possess** a college degree. ( )
2. The **progress** of science has changed people's daily lives. ( )
3. The army wore green and brown clothing to **camouflage** themselves in the forest. ( )
4. We watched a documentary about **predators** that kill other animals at night. ( )
5. This gallery has a **diverse** collection of modern art. ( )

### Paragraph Summary

1. \_\_\_\_\_ animals are creatures that possess the ability to produce \_\_\_\_\_.
2. A(n) \_\_\_\_\_ reaction allows bioluminescent animals to control when they \_\_\_\_\_.
3. Animals use their lights to communicate, attract \_\_\_\_\_, catch prey, and protect themselves from \_\_\_\_\_.
4. By studying bioluminescence in animals, \_\_\_\_\_ have created new methods to test for cancer and detect \_\_\_\_\_.

### What is the passage mainly about?

- a. creating bioluminescence in animals for medical reasons
- b. creatures possessing the ability to send out light from their bodies
- c. the reactions of bioluminescent animals to light
- d. communication between animals on land and in the sea

**The main purpose of the fourth paragraph is to**

- a. discuss new methods to track bioluminescence in animals
- b. raise questions about using animals for scientific purposes
- c. show how bioluminescence in animals is helping people
- d. explain the methods scientists use to study bioluminescence in animals

**The word converted in the passage is closest in meaning to**

- a. changed
- b. chased
- c. controlled
- d. marked

**Which is NOT true about bioluminescence?**

- a. A chemical reaction causes bioluminescence in animals.
- b. Bioluminescent animals can light up whenever they want to.
- c. Bioluminescence allows some animals to camouflage themselves.
- d. Plants' way of producing light is different from that of animals.

**For what purpose do fireflies light up?**

- a. to track predators
- b. to trap other insects in sticky threads
- c. to find other fireflies to mate with
- d. to camouflage themselves

**What can be inferred about animals' bioluminescent abilities?**

- a. They make it easier for animals to swim.
- b. Animals use them to survive in nature.
- c. Some types of squid use them to attract jellyfish.
- d. Glow-worms' threads have them too.

**Bioluminescence in Animals (Match. Put the number)**

- |  |  |
|--|--|
| 1- A chemical reaction                       | ( ) to attract and trap other insects.             |
| 2- Fireflies use their lights                | ( ) to warn of possible danger.                    |
| 3- Fireflies light up                        | ( ) to find new medical methods to help humans.    |
| 4- Glow-worms                                | ( ) to search for potential mates.                 |
| 5- and then use their lights                 | ( ) hang sticky threads                            |
| 6- Some jellyfish and squid use their lights | ( ) helps animals produce light with their bodies. |
| 7- Scientists study bioluminescence          | ( ) to camouflage themselves from predators.       |

Choose the best words to fill in the blanks.

1. On a safari in Africa, we saw a lion hunting for \_\_\_\_\_.
  - a. predators
  - b. squid
  - c. prey
  - d. tourists
2. The doctor put a bandage on the man's cut to keep it free from \_\_\_\_\_.
  - a. creatures
  - b. reaction
  - c. insects
  - d. infection
3. The company had a meeting to talk about new ways to attract \_\_\_\_\_ customers.
  - a. potential
  - b. impossible
  - c. confused
  - d. imaginary

Choose the words with similar meanings to the underlined words.

4. Peacocks use their big, beautiful tails to attract mates.
  - a. siblings
  - b. owners
  - c. enemies
  - d. partners
5. Firefighters broke the door down to save the trapped people in the building.
  - a. caught
  - b. freed
  - c. dropped
  - d. released
6. These amazing machines convert wind energy into electricity.
  - a. remain
  - b. protect
  - c. change
  - d. fix

Choose the words with opposite meanings to the underlined words.

7. The boys covered themselves with branches and leaves to camouflage themselves.

- a. trick
- b. reveal
- c. collect
- d. increase

8. The newspapers praised the violinist's remarkable musical talent.

- a. simple
- b. shiny
- c. normal
- d. useful

9. The scientists used their best telescope to track the movement of the comet.

- a. ignore
- b. change
- c. notice
- d. describe

Complete each sentence with one of the words from the box

**Word bank:** trick, glow, progress, possess, chemical, sticky

10. Please use this cloth to clean the \_\_\_\_\_ drops of juice off the table.

11. You are not allowed to drive a car unless you \_\_\_\_\_ a driver's license.

12. Joe's teachers are concerned about the slow \_\_\_\_\_ he is making.

