# Nature vs. Chemistry: The Science of Bioluminescence

Name: _____ Date: _____

## Vocabulary Words: Match the definition to each word.

1. The process by which living things produce light through chemical reactions is called _____.
2. The chemicals that mix together to make light in many glowing organisms are _____ & _____.
3. Fireflies use _____ as a key ingredient to help them turn their light on and off.
4. The deep-sea fish that uses a glowing "light bulb" to attract prey is called the _____.
5. Compared to glow sticks, natural bioluminescence is more _____ because it produces almost no heat.

**Word Bank:** luciferin, efficient, oxygen, anglerfish, luciferase, bioluminescence

## Multiple Choice: Choose the correct answer from the choices for each question.

1. What is the main purpose of the anglerfish's glowing light?
   - A) To keep warm
   - B) To attract prey
   - C) To scare predators
   - D) To see in the dark

2. Which part of fireflies helps them control when their light turns on and off?
   - A) Their eyes
   - B) Their wings
   - C) Layers in their bodies and oxygen
   - D) Their legs

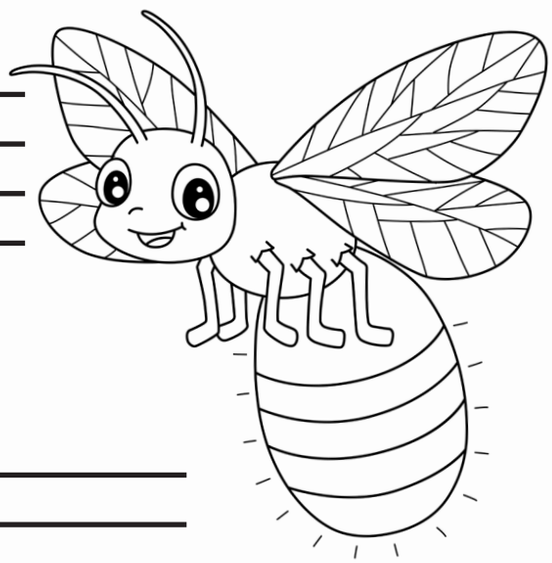
3. What did scientists name the two chemicals that help create bioluminescence?
   - A) Water and salt
   - B) Oxygen and nitrogen
   - C) Luciferin and luciferase
   - D) Hydrogen and helium

4. In which decade did researchers finally discover how bioluminescence works?
   - A) 1950s
   - B) 1960s
   - C) 1970s
   - D) 1980s

## Discussion & Reflection: Answer the following questions in complete sentences

1. How does a firefly create and control its light?

2. Why is natural bioluminescence considered more efficient than artificial glow sticks?



3. This shows me that God is (Circle the word):

Wise Powerful Caring Creative All of the above

Explain your choice: