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# Living Light: Fireflies



Fireflies give off a special light. Light which is produced by a living thing is called *bioluminescence* (bi'o-loo-mi-nes'ns). *Bio* comes from the Greek word meaning life, and *luminescence* comes from the Latin word for light. Fireflies are not the only ones to produce this special light. There are sea creatures, some plants, some other insects and a number of bacteria which all give off this light.

Firefly light is cold. Sunlight, campfires, candles, and electric lights all give off heat as they light. It is known that fireflies use their lights as mating signals, but scientists seem to think that there was another purpose for the light. Dr. William McElroy theorized that creatures that produced bioluminescence in ancient times (millions and millions of years ago) used light production as a means of getting rid of unwanted oxygen. That may have been true then, but now fireflies just use their flashing lights to signal each other on warm summer evenings.

Fireflies are not flies. They are beetles. The life span of the adult firefly is about three weeks. So not long after they signal for a mate, the females will each lay 100-200 eggs. The eggs glow with a soft light. It takes about 26 days until the eggs hatch. The larvae that hatch are called glowworms.

Heavy rains and larger insects kill many of the glowworms. The ones that survive seek damp places to live. At night they search for food, preferably slugs and snails. This makes them popular in farming areas since their prey are well-known crop pests.

The glow worm molts several times as it grows larger. It keeps on glowing and growing for a period of one to two years. The pupa stage takes place underground or in a small earthen chamber above the ground. Now it grows wings and completes its metamorphosis into an adult firefly.

After reading the article above, answer the following questions. On the lines provided to the left, write in the number of the paragraph in which you found the answer. Following the questions, write the answers in the spaces to the right.

## Firefly Facts

1. \_\_\_\_\_ What is bioluminescence? \_\_\_\_\_
2. \_\_\_\_\_ Are fireflies the only things that produce this special light? \_\_\_\_\_
3. \_\_\_\_\_ Can you get burned by a firefly? \_\_\_\_\_
4. \_\_\_\_\_ Why do fireflies give off this light? \_\_\_\_\_
5. \_\_\_\_\_ Who is Dr. William McElroy? \_\_\_\_\_
6. \_\_\_\_\_ What is the lifespan of an adult firefly? \_\_\_\_\_
7. \_\_\_\_\_ What is a glowworm? \_\_\_\_\_
8. \_\_\_\_\_ What does a glowworm eat? \_\_\_\_\_
9. \_\_\_\_\_ How long does a glowworm grow before it becomes a pupa? \_\_\_\_\_
10. \_\_\_\_\_ Is the adult stage the only stage that produces bioluminescence? \_\_\_\_\_

these are right there questions

Standards S2b, S2c, S2e, S2f, S5c, S6d, S7a, S7b, S7c, S7e, S1c

our goal is to find out about an insect that produces its own light

sally