



## Fernbank Science Center

**Title:** The Glow of Life (2706)  
**Level:** 7<sup>th</sup> Grade  
**Location:** Local School

**Type:** Outreach  
**Length:** 55 minutes  
**Limit:** 1 class/period

### **Program Description**

Bioluminescence is a fascinating display of light produced by a living organism. It occurs in marine vertebrates, terrestrial invertebrates, fungi, and various microorganisms. Students will investigate the classification of organisms that use chemiluminescence to make their bodies glow, how and why they use this process. This class will provide practice and/or review of independent and dependent variables, controls and graphing skills. Students will conduct an experiment using light under various conditions. Data collected will be graphed. Technology will be required for the presentation, demonstration(s) and student experiments.

### ***Please Note:***

Coordination (by email) between the classroom teacher and the instructor is required prior to the date of the visit. Please contact the FSC instructor at [patricia\\_jenkins@dekalbschoolsga.org](mailto:patricia_jenkins@dekalbschoolsga.org)

### **Standards**

- S7L1. Obtain, evaluate, and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.
- S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms.
- S7L4. Obtain, evaluate, and communicate information to examine the interdependence of organisms with one another and their environments.

### **Vocabulary**

bacteria bioluminescence chemiluminescence dependent variable dinoflagellate  
ecology fungi independent variable luciferase mutualism protists symbiosis

### **Pre-Visit Activities**

What type of graph should I use

<http://www.teach-nology.com/worksheets/math/graph/reference.html>

Parts of a Bar and Line Graph

<http://www.teach-nology.com/worksheets/math/graph/parts.html>

Symbiotic relationships

<https://www.youtube.com/watch?v=GXTLvCrFI2o>

Bioluminescence

<https://www.youtube.com/watch?v=oKjFVBVGad0>

### **Post-Visit Activity**

<https://www.ixl.com/science/grade-7/identify-independent-and-dependent-variables>

**Resources:**

<http://www.teach-nology.com/worksheets/math/graph/>

<https://www.scholastic.com/teachers/sponsored-content/unexpected-math/17-18/bars-lines-and-pies/>

<https://scripps.ucsd.edu/labs/mlatz/bioluminescence/bioluminescence-questions-and-answers/>

<https://oceanexplorer.noaa.gov/facts/bioluminescence.html>

<https://biolum.eemb.ucsb.edu/>

[https://www.youtube.com/watch?v=qITCB\\_p3sIY](https://www.youtube.com/watch?v=qITCB_p3sIY)

<https://www.youtube.com/watch?v=Z4vJ8rQCNgg>

<https://oceanexplorer.noaa.gov/facts/bioluminescence.html>