

# Life in the Deep Sea

## Internet Resources

### Electromagnetic Spectrum

- Discovery Education Lesson Plan Library: The Electromagnetic Spectrum: Waves of Energy Objectives, materials, procedures, adaptations, discussion questions, evaluation, extensions, links, and standards  
<http://school.discoveryeducation.com/lessonplans/activities/electromagneticspectrum/>
- NASA: Understanding Light Lesson Plan  
<http://science.hq.nasa.gov/kids/imagers/teachersite/UL3.htm>
- Deep Light: NOAA and Dr. Edie Widder - How water transforms light  
<http://oceanexplorer.noaa.gov/explorations/04deepscope/background/deeplight/deeplight.html>
- WHOI Oceanus: Shedding Light on Light in the Ocean  
<http://www.whoi.edu/oceanus/viewArticle.do?id=2472>

### Deep Sea Adaptations

- <http://marinebio.org/Oceans/Deep/>
- [http://www.ted.com/talks/edith\\_widder\\_glowing\\_life\\_in\\_an\\_underwater\\_world.html](http://www.ted.com/talks/edith_widder_glowing_life_in_an_underwater_world.html)

### Bioluminescence

- <http://www.teamorca.org/cfiles/bioluminescence.cfm>
- <http://www.washingtonpost.com/wp-dyn/content/article/2010/10/11/AR2010101104495.html>
- <http://www.scientificamerican.com/article.cfm?id=edith-widder-bioluminescence>
- <http://www.lifesci.ucsb.edu/~biolum/>
- [http://siobiolum.ucsd.edu/Biolum\\_q&a.html](http://siobiolum.ucsd.edu/Biolum_q&a.html)
- [http://www.ted.com/talks/edith\\_widder\\_glowing\\_life\\_in\\_an\\_underwater\\_world.html](http://www.ted.com/talks/edith_widder_glowing_life_in_an_underwater_world.html)
- [http://www.bioscience-explained.org/ENvol1\\_1/](http://www.bioscience-explained.org/ENvol1_1/)

### Bioluminescent Art Activity

- [http://docs.google.com/viewer?a=v&q=cache:eQXktzw2HI8J:dhp.disl.org/PDFs/LightingUp.pdf+phosphorescence+lab+activity&hl=en&gl=us&pid=bl&srcid=ADGEESgzp3yLWGD13UUaeBPTzQK\\_7e26IKJmVnfQ\\_2kANE5UzDomaXoO17Vd1bVUYkepJlJnQ-IBE1vNhVArGOcEGtN9Rc0hcZ08x8AdnhsuxHRE7xWI5lroiz0VpL2HUE784cUHkGZ7&sig=AHIEtbSiImLiKaXMmVqoLtNv1CH8WTcLyg](http://docs.google.com/viewer?a=v&q=cache:eQXktzw2HI8J:dhp.disl.org/PDFs/LightingUp.pdf+phosphorescence+lab+activity&hl=en&gl=us&pid=bl&srcid=ADGEESgzp3yLWGD13UUaeBPTzQK_7e26IKJmVnfQ_2kANE5UzDomaXoO17Vd1bVUYkepJlJnQ-IBE1vNhVArGOcEGtN9Rc0hcZ08x8AdnhsuxHRE7xWI5lroiz0VpL2HUE784cUHkGZ7&sig=AHIEtbSiImLiKaXMmVqoLtNv1CH8WTcLyg)

### Dinoflagellates

- <http://explorations.ucsd.edu/biolum/>

### Misconceptions

- <http://ohiorc.org/pm/science/SciCDMisconceptions.aspx?cid=16>

- Berthelsen, B. (1999). Students Naïve Conceptions in Life Science. *MSTA Journal*, 44(1) (Spring'99), pp. 13-19. <http://www.msta-mich.org>

#### Ocean Science Lesson Plans & Resources

- NOAA Ocean Explorer <http://oceanexplorer.noaa.gov/welcome.html>
- Smithsonian Ocean Portal <http://ocean.si.edu/for-educators>
- MBARI Lesson Plans [http://www.mbari.org/earth/lesson\\_grid.htm](http://www.mbari.org/earth/lesson_grid.htm)
- NOAA Lesson Plans <http://oceanexplorer.noaa.gov/explorations/09bioluminescence/background/edu/lessonplans.html>
- NOAA Explorations <http://oceanexplorer.noaa.gov/explorations/explorations.html>
- COSEE Florida <http://www.cosee.net/about/aboutcenters/florida/>
- Smithsonian Marine Station at Fort Pierce <http://www.sms.si.edu/>
- ORCA [www.teamorca.org](http://www.teamorca.org)

#### In Print

- Herring, Peter J. “Systematic Distribution of Bioluminescence in Living Organisms.” *Journal of Bioluminescence and Chemiluminescence*. Vol. 1 (1987): 147-163.
- Marshall, N.B. *Deep-Sea Biology*. New York and London: Garland STPM Press, 1979.
- Barton, Chris. *The Day Glo Brothers*. Watertown: Charlesbridge Publishing, 2009.

