

Human Impact Lab: Lighting & Wildlife

Loggerhead Marineline Center

Loggerhead Marineline Center is an ocean conservation organization and sea turtle hospital located adjacent to one of the most important sea turtle nesting beaches in the world. The Center features an on-site campus hospital, research laboratory, educational exhibits and aquariums, and also operates the Juno Beach Pier, which hosts world-class angling and sightseeing. The Center's conservation team works with 76 local and international organizations across six continents to form partnerships and share conservation initiatives and best practices that are core to its mission of ocean conservation. The Center is expanding and has launched its Waves of Progress capital expansion campaign, designed to accelerate and amplify LMC's conservation and education impact.

Our mission is to promote conservation of ocean ecosystems with a special focus on threatened and endangered sea turtles. Our vision is to be recognized locally and internationally as the leading authority in sea turtle education, research and rehabilitation.



Lesson Objectives

- I can describe what light pollution is, and what can cause it.
- I can observe things around me that could contribute to light pollution, and explain why.
- I can identify wildlife affected by light pollution.

Vocab

- Light Pollution: brightening of the night sky caused by street lights and other man-made sources, which has a disruptive effect on natural cycles
- Dark Sky: a place where the darkness of the night sky is relatively free of artificial light.
- Wildlife: wild animals collectively; the native fauna (and sometimes flora) of a region
- Anthropogenic: originating in human activity
- Nocturnal: done, occurring, or active at night
- Circadian Rhythm: physical, mental, and behavioral changes that follow a daily cycle. They respond primarily to light and darkness in an organism's environment

Resources

- International Dark Sky Association - <https://www.darksky.org/light-pollution/>



Visit Marinelife.org to learn more about Loggerhead Marineline Center!

At-Home Lighting Survey

Directions: Use the survey link provided, and this diagram from Project WILD, to conduct your own at-home lighting survey and learn about what you can do to help minimize light pollution!

Survey Link: <https://form.jotform.com/201276074022040>

“Types of Lighting Fixtures” from <https://www.fishwildlife.org/projectwild/step-stem-and-wild-work/lights-out>

For Students

Types of Lighting Fixtures

Fixtures that produce glare and light trespass

Unshielded Floodlights or Poorly-shielded Floodlights

Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures

Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens

Unshielded Streetlight

Unshielded Bollards

Unshielded Barn Light

Louvered 'Marine' style Fixtures

Unshielded 'Period' Style Fixtures

Unshielded PAR Floodlights

Drop-Lens Canopy Fixtures

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night

Full Cutoff Fixtures

Fully Shielded Wallpack & Wall Mount Fixtures

Fully Shielded Fixtures

Full Cutoff Streetlight

Fully Shielded Barn Light

Fully Shielded Walkway Bollards

Fully Shielded Decorative Fixtures

Fully Shielded 'Period' Style Fixtures

Shielded / Properly-aimed PAR Floodlights

Flush Mounted or Side Shielded Under Canopy Fixtures

Illustrations © Bob Crelin/ BobCrelin.com. Used with permission.