3.1: Introduction

Light Pollution and Observing

Module Introduction

The lights of Los Angeles illuminate the sky as well as the streets and neighborhoods [" Lightmatter la at night 001″ by Aaron Logan is licensed under CC BY 1.0]

Some of your older family members and friends probably tell "tales" of seeing billions of stars, every night, in the nighttime sky. While highly exaggerated, these tales are based in reality. Overall light pollution has dramatically increased over the years, as the pervasiveness of artificial light has brightened our streets, homes, and businesses yet, unfortunately, dimmed our chances of having the spectacular views of yesteryear.

In this lab, you will examine light pollution and issues surrounding light pollution, taking photos of light pollution around your home, local shopping centers, and on highways. You will also learn how the Moon creates a lot of light – natural light pollution – when trying to observe stars and fainter objects. (1)

Objectives

At the end of this module, students will be able to:

- Record data pertaining to light pollution and viewing of stars
- Research the effects of light pollution
- Catalogue sources of man-made light pollution
- Compare and contrast conditions of natural light pollution (1)

Outcomes

The material in this module includes content designed to meet the following course outcomes:

- Demonstrate knowledge of scientific method.
- Communicate scientific ideas through oral or written assignments.
- Interpret scientific models such as formulas, graphs, tables and schematics, draw inferences from them and recognize their limitations.
- Demonstrate the ability to think critically.
- Demonstrate the ability to use scientific and quantitative reasoning. (1)

Assigned Readings

Learning Unit 3

Assignments

- The Effects of Light Pollution Exercise
- Local Light Pollution and Observing Activity
- Lab 3 Quiz [1]

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