Unit Four-Light, Sound and Communication
Duration: 26 lessons

The students will learn:

- Interaction of light with objects and properties of those objects affect what we see and how we communicate.
- Light must reflect off the surface of an object and enter our eyes for us to see the object.
- The way light reflects off different textures, the color of light shining on an object, and the color of an object affect what we see.
- Information can be digitized to allow for more effective communication over a distance.

Essential Standards:

4-PS4-2 Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
4-PS4-3 Generate and compare multiple solutions that use patterns to transfer information.
3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Tasks:
Performance Expectation

Application Concept Task

Performance Task
End of Module Task

Science and Engineering Practice

- Developing and Using Models
- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Constructing Explanations and Designing
- Solutions
- Electromagnetic Radiations
- Information Technologies and Instrumentation
- Developing Possible Solutions
- Optimizing the Design S

Cross Cutting Concepts

- Patterns
- Cause and Effect
- Systems and System Models