



Fourth Grade Curriculum Pacing Guide
Crosscutting Concepts: Energy and Matter
 Light and Sound

Estimated Time: 4 weeks

Anchoring Phenomenon	Standard	Instructional Segments	Disciplinary Core Ideas	Science and Engineering Practices	Instructional Notes
Gazing at Earth's Light Show Light Language (included within instructional segment)	S4P1a, b, c S4P2a, b	Do you see what I see? Can you hear me now?	From A Framework for K-12 Science Education : <p style="text-align: center;"><i>By the end of grade 5</i></p> PS3.B: CONSERVATION OF ENERGY AND ENERGY TRANSFER <ul style="list-style-type: none"> Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. PS4.B: ELECTROMAGNETIC RADIATION <ul style="list-style-type: none"> Because lenses bend light beams, they can be used, singly or in combination, to provide magnified images of objects too small or too far away to be seen with the naked eye. ETS1.B: DEVELOPING POSSIBLE SOLUTIONS <ul style="list-style-type: none"> There are many types of models, ranging from simple physical models to computer models. They can be used to investigate how a design might work, communicate the design to others, and compare different designs 	<ul style="list-style-type: none"> Planning and carrying out investigations Designing solutions Obtaining, evaluating, and communicating information 	Background: By the end of this unit, students are using the following language in their speaking and writing during EXPLAIN or ELABORATE. <ul style="list-style-type: none"> Interactions Reflection/reflect Refraction/ refract Opaque, translucent, transparent Lenses Vibrations Pitch Volume

This instructional segment will connect to Balanced and Unbalanced Forces.