

# Grade 1

## Amplify Science unit name and summary

## NGSS performance expectations addressed

### Light and Sound

#### Puppet Theater Engineers

In their roles as light and sound engineers, students investigate cause and effect relationships to learn about the nature of light and sound. They apply what they learn to design shadow scenery and sound effects for a puppet show.

1-PS4-1: Waves and their Applications in Technologies for Information Transfer  
1-PS4-2: Waves and their Applications in Technologies for Information Transfer  
1-PS4-3: Waves and their Applications in Technologies for Information Transfer  
1-PS4-4: Waves and their Applications in Technologies for Information Transfer  
K-2-ETS1-1: Engineering and Design  
K-2-ETS1-2: Engineering and Design  
K-2-ETS1-3: Engineering and Design

### Spinning Earth

#### Investigating Patterns in the Sky

As emerging space scientists, students figure out how to explain why it is never the same time of day for a grandmother who lives in Asia as it is for her grandson in the United States when she calls him. Students record, organize, and analyze observations of the sun and other sky objects as they look for patterns and make sense of the cycle of daytime and nighttime.

1-ESS1-1: Earth's Place in the Universe  
1-ESS1-2: Earth's Place in the Universe

### Animal and Plant Defenses

#### Spikes, Shells, and Camouflage

Students play the roles of marine scientists. In their roles, students apply their understanding about plant and animal defense structures to explain to concerned visitors to an aquarium how a sea turtle at the aquarium can be released and will be able to defend herself and her offspring from predators in the ocean.

1-LS1-1: From Molecules to Organisms: Structures and Processes  
1-LS1-2: From Molecules to Organisms: Structures and Processes  
1-LS3-1: Heredity: Inheritance and Variation of Traits  
K-2-ETS1-1: Engineering and Design  
K-2-ETS1-2: Engineering and Design