



GRADE 1

# Animal and Plant Defenses

## Unit storyline

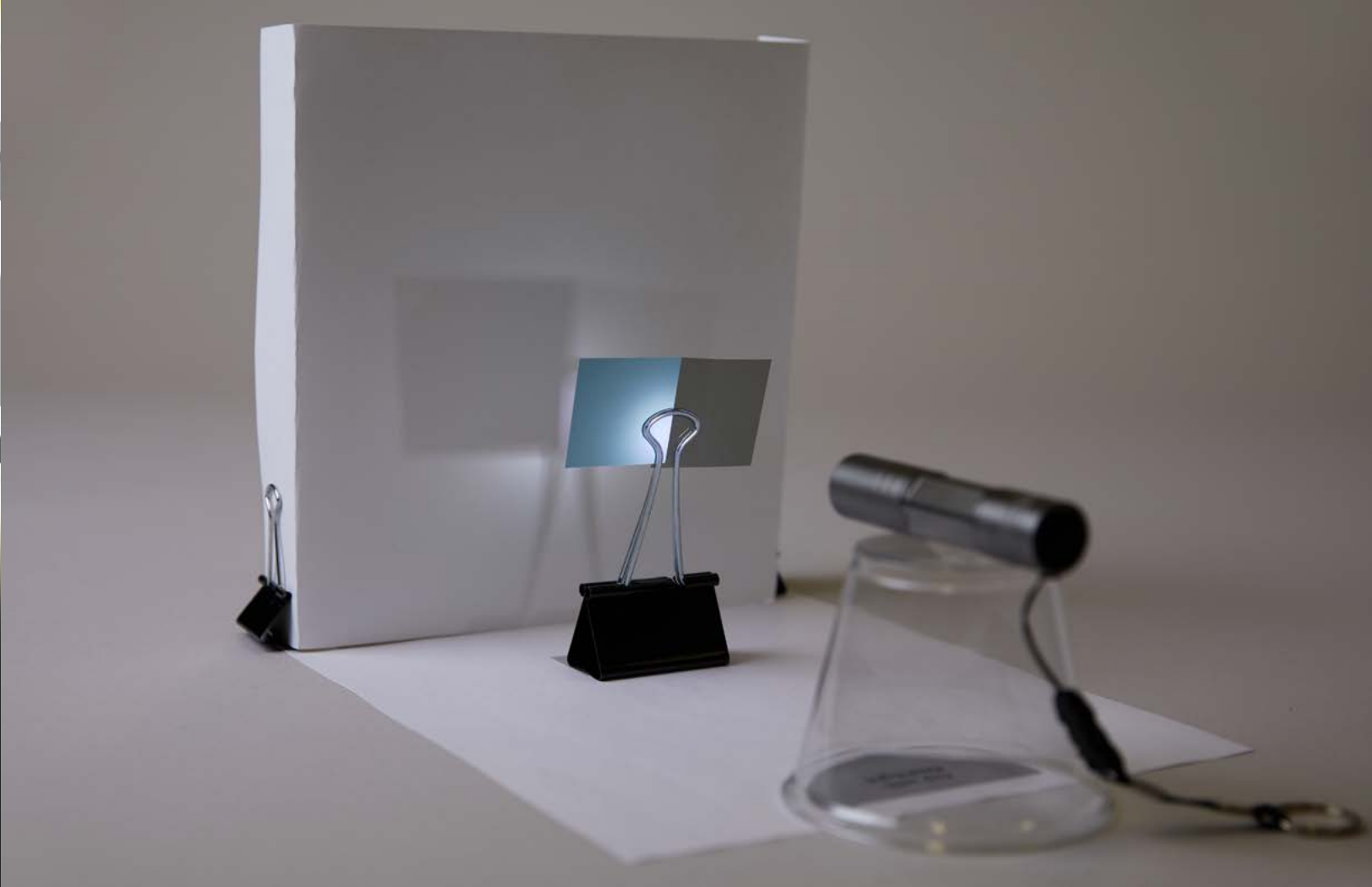
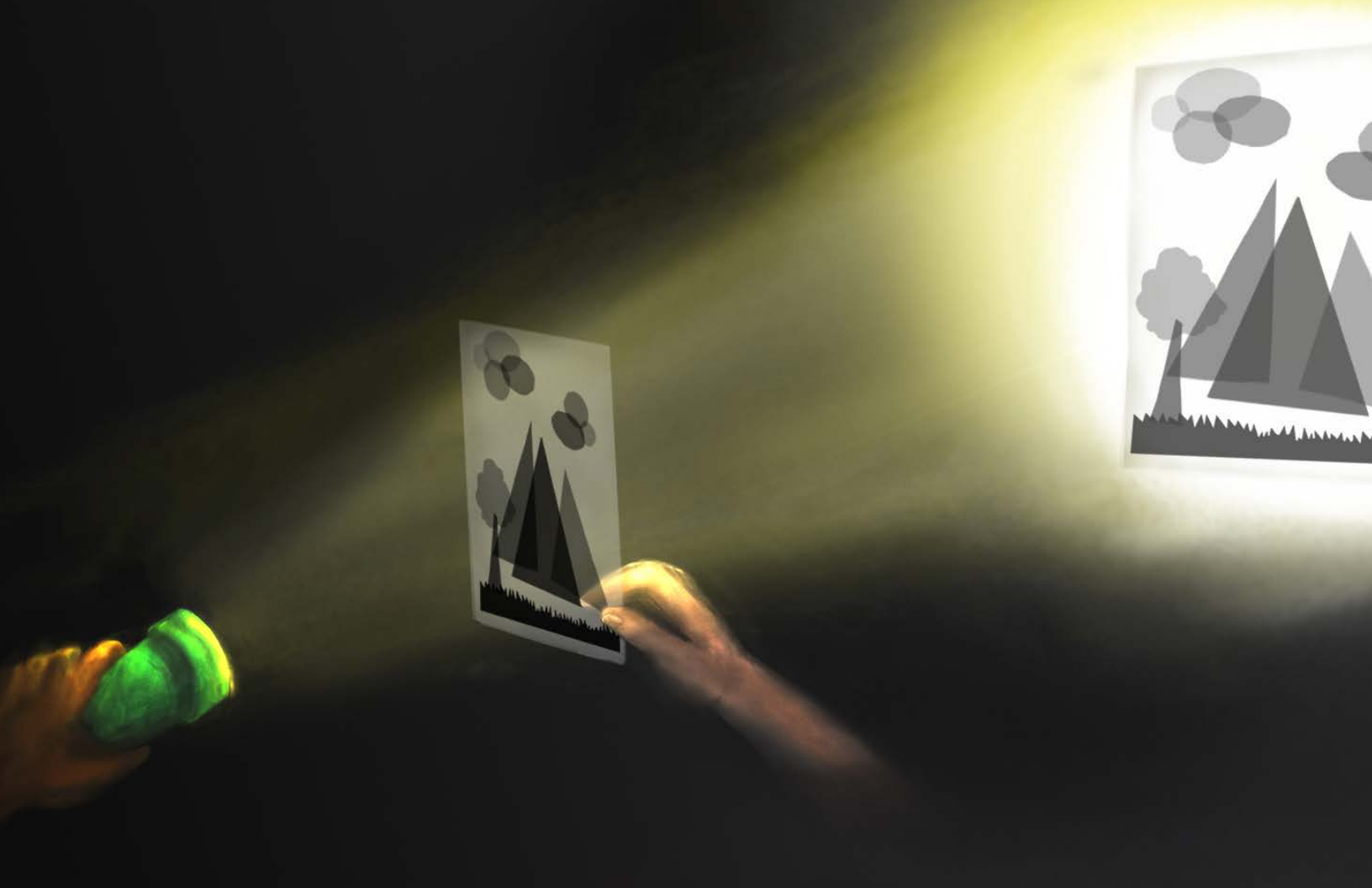
In their roles as marine scientists, students apply their understanding of how animal and plant defense structures work as they explain to aquarium visitors how a sea turtle and other sea animals at an aquarium could defend themselves from predators once they are released back into the ocean.

## Featured activity:

### Introducing Modeling (Lesson 2.3)

In Chapter 2 of *Animal and Plant Defenses*, students create a series of models to explain animal and plant defense structures. Students use a ball of clay, a comb, and a variety of materials to create models of different defense structures, including shells and armor, spikes and spines, and camouflage. After creating each model, students test their designs to ensure that the structures function as animal and plant defense structures would when encountering a predator.





GRADE 1

# Light and Sound

## Unit storyline

Students take on the dual roles of light engineers and sound engineers for a puppet-show company as they investigate cause-and-effect relationships and learn about the nature of light and sound. They apply what they learn to designing shadow scenery and sound effects for a puppet show.

## Featured activity:

### Investigating Materials That Do Not Block (Lesson 3.1)

By Lesson 3.1 of *Light and Sound*, students have figured out that not all materials block light to create a dark area on a surface. Partners use their Investigation Kits to test non-blocking materials (clear plastic, tinted plastic, and wax paper) in comparison to cardboard, a known blocking material. Students use their observations of these materials comparisons to discuss what may cause variation in the brightness of the areas created on a surface.







GRADE 1

# Spinning Earth

## Unit storyline

As sky scientists, students explain why Sai, a boy who lives in a place near them, sees different things in the sky than his grandma who lives in a faraway place. 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.

## Featured activity:

### Daytime and Nighttime in Places on Earth (Lesson 2.2)

In Lesson 2.2 of *Spinning Earth*, students revisit globes they labeled with daytime and nighttime stickers based on webcam observations. Students discover a pattern — the places that were experiencing daytime during the webcam observations are located around the same part of Earth, and the places that were experiencing nighttime during the webcam observations are located around a different part of Earth. Partners work together to position their globes relative to the sun to show where Earth was facing when they made their webcam observations. Students use their new understanding to make and check predictions about whether it is daytime or nighttime at other locations on the globe.

