

Grade 3

Amplify Science unit name and summary

NGSS performance expectations addressed

Balancing Forces

Investigating Floating Trains

In their roles as consulting scientists, students are challenged to figure out how a floating train works in order to explain it to the citizens of the fictional city of Faraday. They apply ideas about non-touching forces as well as balanced and unbalanced forces.

3-PS2-1: Motion and Stability: Forces and Interactions
3-PS2-2: Motion and Stability: Forces and Interactions
3-PS2-3: Motion and Stability: Forces and Interactions
3-PS2-4: Motion and Stability: Forces and Interactions
3-5-ETS1-1: Engineering and Design
3-5-ETS1-2: Engineering and Design

Weather and Climate

Establishing an Orangutan Colony

As weather scientists for a nature conservation group, students determine which of four fictional islands will be the best location for an orangutan reserve. They analyze and interpret weather data in order to compare and construct arguments about the weather patterns for a particular location in the world over a given span of time.

3-ESS2-1: Earth's Systems
3-ESS2-2: Earth's Systems
3-ESS3-1: Earth and Human Activity
3-LS4-3: Biological Evolution: Unity and Diversity
3-5-ETS1-1: Engineering and Design
3-5-ETS1-2: Engineering and Design
3-5-ETS1-3: Engineering and Design

Environments and Survival

Snail Trait Biomimicry

As engineers that specialize in biomimicry, designing structures that are modeled on organisms in the natural world, students investigate the adaptive traits of the Grove Snail population, and use what they learn to design a protective shell to transport endangered sea turtle eggs.

3-LS4-1: Biological Evolution: Unity and Diversity
3-LS4-2: Biological Evolution: Unity and Diversity
3-LS4-4: Biological Evolution: Unity and Diversity
3-LS4-3: Biological Evolution: Unity and Diversity
3-5-ETS1-1: Engineering and Design
3-5-ETS1-2: Engineering and Design
3-5-ETS1-3: Engineering and Design

Inheritance and Traits

Variation in Wolves

Students play the roles of wildlife biologists working in Greystone National Park, as they study two wolf packs and are challenged to figure out why an adoptive wolf in one of the packs has the traits it does. Students investigate variation between and within different species, inherited and acquired traits, and conclude the unit by writing an explanation of the origin of the adoptive wolf's traits for the visitors in Greystone National Park.

3-LS1-1: From Molecules to Organisms: Structures and Processes
3-LS2-1: Ecosystems: Interactions, Energy, and Dynamics
3-LS3-1: Heredity: Inheritance and Variation of Traits
3-LS3-2: Heredity: Inheritance and Variation of Traits