

SOUTH CAROLINA SCIENCE STANDARDS ALIGNMENT

Riverbanks Zoo Penguin Video Lesson Series — Complete Standards Reference

South Carolina College- and Career-Ready Science Standards 2021

This document consolidates every South Carolina science standard addressed across the four grade-band lessons built around the Riverbanks Zoo King and Rockhopper penguin video: Grades K–2 (Penguin Pals), Grades 3–5 (Comparing Two Amazing Penguins), Grades 7–8 (Penguin Adaptations in Action), and High School Biology 1 & 2 (Penguin Behavior & Adaptations). In total, the series addresses 20 performance expectations spanning Kindergarten through Biology 2.

At a Glance

- Grades K–2: 5 standards (Kindergarten, Grade 1, Grade 2)
- Grades 3–5: 5 standards (Grade 3, Grade 4, Grade 5)
- Grades 7–8: 4 standards (Grade 7, Grade 8) — Grade 6 is not addressed, as SC's 2021 standards place this life science content in Grades 7–8.
- High School: 6 standards (Biology 1 and Biology 2)

Grades K–2 — Penguin Pals

Focus: what animals need to survive, how external body parts help penguins meet those needs, and simple comparisons of life in different habitats.

Grade	Standard	Performance Expectation
K	K-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive.
K	K-ESS3-1	Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
1	1-LS1-1	Describe how the external body parts of animals help them survive, grow, and meet their needs, and how plant parts help them survive and grow.
1	1-LS1-2	Read texts and use media to determine patterns in the behavior of parents and offspring that help offspring survive.
2	2-LS4-1	Make observations of plants and animals to compare the diversity of life in different habitats.

Grades 3–5 — Comparing Two Amazing Penguins

Focus: variation in traits and its survival advantages, habitat fit, inherited traits, internal/external structures, and simple food webs.

Grade	Standard	Performance Expectation
3	3-LS4-2	Use evidence to construct an explanation for how variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
3	3-LS4-3	Construct an argument with evidence that in a particular habitat, some organisms can survive well, some survive less well, and some cannot survive at all.

Grade	Standard	Performance Expectation
3	3-LS3-1	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents, and that variation of these traits exists in a group of similar organisms.
4	4-LS1-1	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
5	5-LS2-1	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Grades 7–8 — Penguin Adaptations in Action

Focus: resource availability and population effects, patterns of species interaction, environmental/genetic influences on growth, and the mathematics of natural selection.

Grade	Standard	Performance Expectation
7	7-LS2-1	Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
7	7-LS2-2	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems (e.g., competition, predation, mutualism).
8	8-LS1-5	Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
8	8-LS4-6	Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in a population over time.

High School — Penguin Behavior & Adaptations (Biology 1 & 2)

Focus: natural selection and adaptation, carrying capacity, group behavior, ecosystem stability, and human impact on biodiversity.

Course	Standard	Performance Expectation
Biology 1	B-LS4-2	Explain how evolution results from population growth potential, heritable variation, competition for limited resources, and differential survival/reproduction.
Biology 1	B-LS4-4	Construct an explanation for how natural selection leads to adaptation of populations.
Biology 1	B-LS2-1	Use representations to explain how biotic and abiotic factors affect the carrying capacity of ecosystems.
Biology 1	B-LS2-7 / B-LS4-5	Evaluate evidence for how environmental change affects species abundance, emergence, and extinction; design a solution to reduce human impact on biodiversity.
Biology 2	B-LS2-8	Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.
Biology 2	B-LS2-6	Evaluate claims/evidence that complex interactions maintain ecosystem stability, but changing conditions can create a new ecosystem.

Full Standards List (Alphanumeric)

For quick reference or copy/paste into a curriculum map:

- K-LS1-1, K-ESS3-1
- 1-LS1-1, 1-LS1-2
- 2-LS4-1
- 3-LS3-1, 3-LS4-2, 3-LS4-3
- 4-LS1-1
- 5-LS2-1
- 7-LS2-1, 7-LS2-2
- 8-LS1-5, 8-LS4-6
- B-LS2-1, B-LS2-6, B-LS2-7, B-LS2-8, B-LS4-2, B-LS4-4, B-LS4-5