
Skulls (grades K-8)

Classroom kit

NEXT GENERATION SCIENCE STANDARDS

Science and Engineering Practices (SEPs)

Developing and using models

K-2: Identify limitations of models. Develop and/or use models to describe and/or predict phenomena. Compare models to identify common features and differences.

3-5: Develop and/or use models to describe and/or predict phenomena.

6-8: Develop and/or use a model to predict and/or describe phenomena.

Using Mathematics and Computational Thinking

3-5: Organize simple data sets to reveal patterns that suggest relationships.

6-8: Use mathematical representations to describe and/or support scientific conclusions and design solutions.

Constructing Explanations

K-2: Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.

3-5: Construct an explanation of observed relationships. Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation.

6-8: Construct an explanation that includes qualitative or quantitative relationships between variables that predict(s) and/or describe(s) phenomena. Apply scientific reasoning to show why the data or evidence is adequate for the explanation for conclusion. Apply scientific ideas, principles, and/or evidence to construct, revise, and/or use an explanation for real-world phenomena.

Engaging in argument from evidence

K-2: Listen actively to arguments to indicate agreement or disagreement based on evidence, and/or to retell the main points of the argument.

3-5: Compare and refine arguments based on an evaluation of the evidence presented. Construct and/or support an argument with evidence, data, and/or a model.

6-8: Respectfully provide and receive critiques about one's explanations, procedures, models, and questions by citing relevant evidence and posing and responding to questions that elicit pertinent elaboration and detail.

Disciplinary Core Ideas (DCIs)

1-LS1.A: Structure and Function

All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air.

1-LS1.D: Information Processing

Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.

4-LS1.A: Structure and Function

Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.

4-LS1.D: Information Processing

Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions.

Crosscutting Concepts (CCCs)

Structure and Function

K-2: Students observe the shape and stability of structures of natural and designed objects are related to their function(s).

3-5: Students learn different materials have different substructures, which can sometimes be observed; and substructures have shapes and parts that serve functions.

6-8: Students analyze many complex natural and designed structures and systems to determine how they function.

Related Performance Expectations

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]

- 4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.** [Clarification Statement: Emphasis is on systems of information transfer.] [Assessment Boundary: Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.]

COMMON CORE STATE STANDARDS

Kindergarten, Grades 1, 2, and 3

Speaking and Listening Standards

1. Participate in collaborative conversations with diverse partners about kindergarten/grade 1/grade 2/grade 3 topics and texts with peers and adults in small and larger groups.

Grade 2

Language standards

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.

Grade 3

Writing standards

4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

Language standards

- 1a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.