

South Carolina Science and Science Standards: Trail Cameras -- A Look into the Wild World

Third Grade

1. Science and Engineering Practices

a. 3.S.1A.1

- i. Ask questions that can be (1) answered using scientific investigations or (2) used to refine models, explanations, or designs.

b. 3.S.1A.3

- i. Plan and conduct scientific investigations to answer questions, test predictions and develop explanations: (1) formulate scientific questions and predict possible outcomes, (2) identify materials, procedures, and variables, (3) select and use appropriate tools or instruments to collect qualitative and quantitative data, and (4) record and represent data in an appropriate form. Use appropriate safety procedures.

c. 3.S.1A.4

- i. Analyze and interpret data from observations, measurements, or investigations to understand patterns and meanings.

d. 3.S.1A.6

- i. Construct explanations of phenomena using (1) scientific evidence and models, (2) conclusions from scientific investigations, (3) predictions based on observations and measurements, or (4) data communicated in graphs, tables, or diagrams.

e. 3.S.1A.7

- i. Construct scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.

- f. 3.S.1A.8
 - i. Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions, (2) understand phenomena, (3) develop models, or (4) support explanations, claims, or designs. Communicate observations and explanations using the conventions and expectations of oral and written language.
- 2. Physical Science: Properties and Changes in Matter
 - a. 3.P.2A.1
 - i. Analyze and interpret data from observations and measurements to describe and compare the physical properties of matter (including length, mass, temperature, and volume of liquids).
- 3. Life Science: Environments and Habitats
 - a. 3.L.5B.2
 - i. Develop and use models to explain how changes in a habitat cause plants and animals to respond in different ways (such as hibernating, migrating, responding to light, death, or extinction).

Fourth Grade

- 1. Science and Engineering Practices
 - a. 4.S.1A.1
 - i. Ask questions that can be (1) answered using scientific investigations or (2) used to refine models, explanations, or designs.
 - b. 4.S.1A.3
 - i. Plan and conduct scientific investigations to answer questions, test predictions and develop explanations: (1) formulate scientific questions and predict possible outcomes, (2) identify materials, procedures, and variables, (3) select and use appropriate tools or instruments to collect

qualitative and quantitative data, and (4) record and represent data in an appropriate form. Use appropriate safety procedures.

c. 4.S.1A.4

- i. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation or graphing) to (1) reveal patterns and construct meaning or (2) support explanations, claims, or designs.

d. 4.S.1A.6

- i. Construct explanations of phenomena using (1) scientific evidence and models, (2) conclusions from scientific investigations, (3) predictions based on observations and measurements, or (4) data communicated in graphs, tables, or diagrams.

e. 4.S.1A.7

- i. Construct scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.

f. 4.S.1A.8

- i. Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions, (2) understand phenomena, (3) develop models, or (4) support explanations, claims, or designs. Communicate observations and explanations using the conventions and expectations of oral and written language.

2. Earth Science: Stars and the Solar System

a. 4.E.3B.1

- i. Analyze and interpret data from observations to describe patterns in the (1) location, (2) movement, and (3) appearance of the Moon throughout the year.

3. Life Science: Characteristics and Growth of Organisms

a. 4.L.5A.3

- i. Develop and use models to compare the stages of growth and development in various animals.
- b. 4.L.5B.3
 - i. Construct explanations for how structural adaptations (such as methods for defense, locomotion, obtaining resources, or camouflage) allow animals to survive in the environment.

Fifth Grade

1. Science and Engineering Practices

- a. 5.S.1A.1
 - i. Ask questions that can be (1) answered using scientific investigations or (2) used to refine models, explanations, or designs.
- b. 5.S.1A.3
 - i. Plan and conduct scientific investigations to answer questions, test predictions and develop explanations: (1) formulate scientific questions and predict possible outcomes, (2) identify materials, procedures, and variables, (3) select and use appropriate tools or instruments to collect qualitative and quantitative data, and (4) record and represent data in an appropriate form. Use appropriate safety procedures.
- c. 5.S.1A.4
 - i. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation or graphing) to (1) reveal patterns and construct meaning or (2) support explanations, claims, or designs.
- d. 5.S.1A.6
 - i. Construct explanations of phenomena using (1) scientific evidence and models, (2) conclusions from scientific investigations, (3) predictions

based on observations and measurements, or (4) data communicated in graphs, tables, or diagrams.

- e. 5.S.1A.7
 - i. Construct scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.
 - f. 5.S.1A.8
 - i. Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions, (2) understand phenomena, (3) develop models, or (4) support explanations, claims, or designs. Communicate observations and explanations using the conventions and expectations of oral and written language.
2. Life Science: Interdependent Relationships in Ecosystems
- a. 5.L.4A.1
 - i. Analyze and interpret data to summarize the abiotic factors (including quantity of light and water, range of temperature, salinity, and soil composition) of different terrestrial ecosystems and aquatic ecosystems.
 - b. 5.L.4A.2
 - i. Obtain and communicate information to describe and compare the biotic factors (including individual organisms, populations, and communities) of different terrestrial and aquatic ecosystems.

Sixth Grade

1. Science and Engineering Practices
- a. 6.S.1A.1
 - i. Ask questions to (1) generate hypotheses for scientific investigations, (2) refine models, explanations, or designs, or (3) extend the results of investigations or challenge claims.
 - b. 6.S.1A.2

- i. Obtain and communicate information to support claims that living organisms (1) obtain and use resources for energy, (2) respond to stimuli, (3) reproduce, and (4) grow and develop.

Seventh Grade

1. Science and Engineering Practices

a. 7.S.1A.1

- i. Ask questions to (1) generate hypotheses for scientific investigations, (2) refine models, explanations, or designs, or (3) extend the results of investigations or challenge claims.

b. 7.S.1A.2

- i. Develop, use, and refine models to (1) understand or represent phenomena, processes, and relationships, (2) test devices or solutions, or (3) communicate ideas to others.

c. 7.S.1A.3

- i. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: (1) formulate scientific questions and testable hypotheses, (2) identify materials, procedures, and variables, (3) select and use appropriate tools or instruments to collect qualitative and quantitative data, and (4) record and represent data in an appropriate form. Use appropriate safety procedures.

d. 7.S.1A.6

- i. Construct explanations of phenomena using (1) primary or secondary scientific evidence and models, (2) conclusions from scientific investigations, (3) predictions based on observations and measurements, or (4) data communicated in graphs, tables, or diagrams.

e. 7.S.1A.7

- i. Construct and analyze scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.

f. 7.S.1A.8

- i. Obtain and evaluate scientific information to (1) answer questions, (2) explain or describe phenomena, (3) develop models, (4) evaluate hypotheses, explanations, claims, or designs or (5) identify and/or fill gaps in knowledge. Communicate using the conventions and expectations of scientific writing or oral presentations by (1) evaluating grade-appropriate primary or secondary scientific literature, or (2) reporting the results of student experimental investigations.

2. Ecology: Interactions of Living Systems and the Environment

a. 7.EC.5A.1

- i. Develop and use models to describe the characteristics of the levels of organization within ecosystems (including species, populations, communities, ecosystems, and biomes).

b. 7.EC.5A.3

- i. Analyze and interpret data to predict changes in the number of organisms within a population when certain changes occur to the physical environment (such as changes due to natural hazards or limiting factors).