Gold Seal Lesson

Author(s):			*Lesson Title:*			
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Grade Span			*ICLE Application Model*			
K-4	*5-8*	*9-12*	*A*	*B*	*C*	*D*
XX						*XX*

Instructional Focus:

Basic Concepts and Knowledge Students develop an understanding of scientific concepts using facts, theories, principles, and models.
Science as Inquiry Students demonstrate knowledge and skills necessary to perform scientific inquiry.
Communication Students communicate and apply scientific concepts.
Writing Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Performance Task

Students write field guides to local plants or animals (non-domesticated). This is to be done in three parts.

The first part is based on students' own observations, knowledge, and hypotheses. For each plant or animal, they should provide information in the categories listed below, basing their entries first on direct observation and then on prior knowledge or hypothesis. The entries can be specific or broad, based on the level of students' knowledge. They should note entries not based on direct observation and provide a justification for them, such as observed circumstances, conditions, or behavior that supports these entries.

After their fieldwork, they should consult other sources, such as local experts, published field guides, textbooks, or encyclopedias, to verify their entries. They should then note where these sources differ from their original observations and hypotheses and provide possible explanations.

Students then create a final version based on a combination of their own observations and information from other sources.

Information to be included:

- name
- classification or other descriptor, such as other animals or plants related to it
- habitat, including specific examples of places in the local area where it may be found
- food
- predators
- behavior (such as "looks for food at night" or "blooms in the spring")
- cautionary notes ("can carry rabies" "causes itching if touched")
- when and where they saw it, and what it was doing
- a sketch and description, noting what makes it different from similar animals or plants

Teacher's notes:

1. The amount of time available should determine the number of different plants or animals the students are required to report on.
2. Students can make their own individual field guides, or they can work in groups or as a class.
3. Before beginning the field observations, students should be told about the dangers associated with touching wild animals and plants and interfering with their environments.

ICLE Essential Skills

Make observations using senses and instruments. Inferences and interpretations are arrived at based on observations. Classify observable properties and organize observations in a meaningful and logical way. (s5)
Know the classification system into which organisms are separated and grouped based on common characteristics. The classification groups include (from largest to smallest): kingdom, phylum, class, genus, and species. (s59)
Present information in well-organized fashion that will be clear to the target audience. (ela11)

Scoring Guide:

1st version (based on observation, knowledge, and hypotheses) 35 points	• Entries reflect actual observation and an effort to gather information regarding the characteristics listed. • Student recognizes and notes important elements of subject's environment (presence of potential food sources, light, water, shelter, etc.). • Hypotheses (regarding food, behavior, predators, and animal or plant relatives) are logical, based on observation and existing knowledge.
2nd version (based on additional sources) 35 points	• Student consults appropriate sources. • Student recognizes possible reasons for differences between their observations and conclusions and information from other sources, such as lack of knowledge or incomplete observation.
3rd version (based on combination of 1st and 2nd versions) 20 points	Student reconciles observations with subsequent information. For example, he or she notes habitats or food sources in addition to the ones observed, or uses sources to identify observations (e.g., habitat elements) with the most relevance.
Presentation 10 Points	• Final version is neat and well-organized. • Information is clearly labeled • Student observes rules and conventions of standard written English, including grammar, spelling, punctuation, and diction.

Keywords

English Language Arts	Mathematics	Science
Reading	**Algebra**	**Earth Science**
Writing	**Geometry**	**Life Science** **amphibians** **behavior** **classification** **ecology** **ecosystem** **five-kingdom classification** **food chain** **plants** **scientific inquiry** **zoology**
Communications	**Statistics**	**Chemistry**
Literature	**Calculus**	**Physics**
Other **Field guides**	**Trigonometry**	**Other**
	Other	