

ASSESSMENT RUBRIC

| | Excellent | Good | Satisfactory | Needs Improvement |
|--|--|---|---|--|
| Lesson Background (Reproducibles 1 and 2) | <ul style="list-style-type: none"> Student demonstrates a complete understanding of background material through appropriate class discussion and participation Student demonstrates a complete understanding of the appropriate vocabulary to use for lesson | <ul style="list-style-type: none"> Student demonstrates an understanding of background material through appropriate class discussion and participation Student demonstrates an understanding of the appropriate vocabulary to use for lesson | <ul style="list-style-type: none"> Student demonstrates a limited understanding of background material through appropriate class discussion and participation Student demonstrates a limited understanding of the appropriate vocabulary to use for lesson material through appropriate class discussion and participation | <ul style="list-style-type: none"> Student demonstrates a lack of understanding of background material through appropriate class discussion and participation Student demonstrates a lack of understanding of the appropriate vocabulary to use for lesson |
| Lesson Activities (Reproducibles 3 and 4) | <ul style="list-style-type: none"> Student remains completely on task and finishes activities in timely manner Student completes activity with total accuracy and with full supporting, detailed information Student presents complete scientific accuracy in supporting details in collaborative group Student uses appropriate skills and strategies of the writing process completely | <ul style="list-style-type: none"> Student remains on task, but finishes activities with teacher's encouragement Student completes activity with some accuracy and some supporting, detailed information Student presents some scientific accuracy in supporting details in collaborative group Student uses most of the appropriate skills and strategies of the writing process | <ul style="list-style-type: none"> Student struggles to stay on task, and finishes with difficulty Student completes assignment with little accuracy and little supporting, detailed information Student presents little scientific accuracy in supporting details in collaborative group Student uses little of the appropriate skills and strategies of the writing process | <ul style="list-style-type: none"> Student lacks focus on task and does not complete activity Student either does not complete assignment and/or lacks accuracy and/or supporting, detailed information Student presents a lack of scientific accuracy in supporting details in collaborative group Student uses a lack of appropriate skills and strategies of the writing process completely |

NATIONAL STANDARDS AND BENCHMARKS

| NATIONAL STANDARDS | BENCHMARKS | LESSONS | | | |
|---|---|---------|---|---|---|
| | | 1 | 2 | 3 | 4 |
| SCIENCE | | | | | |
| Strand A: Science as Inquiry | | | | | |
| Has ability to do scientific inquiry | Knows that scientific inquiry and research lead to answers and solutions to issues scientists try to solve | x | x | x | x |
| | Thinks critically and logically to make the relationships between evidence and explanations | | | x | x |
| Has understandings about scientific inquiry | Knows how questions are to be asked and answered that allow the student to find solutions to scientific investigations | x | x | x | x |
| Strand B: Physical Science | | | | | |
| Understands the motion of objects in relation to the forces applied on that object | Knows ways in which an object's motion is affected by natural and physical forces being applied to it, i.e. gravity, centrifugal force, and inertial forces | x | x | x | x |
| Understands the concept of transfer of energy | Knows that energy is transferred (electrical, heat, light, etc.) as it moves, interacting with objects in space | x | x | x | x |
| Strand D: Earth and Space Science | | | | | |
| Understands the Earth's place in the Solar System | Knows the Earth's place in the Solar System in relation to the objects in the Solar System and universe, i.e., the Sun, Moon, planets, asteroids, comets, black holes, etc. | x | x | x | x |
| Understands that the history of the Earth has been changing in life and form | Knows that events in the past have been influenced by occasional catastrophes, i.e., impacts by asteroids or comets | x | x | x | x |
| Strand E: Science and Technology | | | | | |
| Has basic understandings about science and technology | Knows that scientific inquiry and technological design have similarities and differences, and one tends to drive the other further in advancements and in pursuit of finding solutions to scientific research | x | x | x | x |
| Strand F: Science in Personal and Social Perspectives | | | | | |
| Understands the potentiality of natural hazards to human society | Knows that natural hazards, i.e., asteroid impacts, have the potential to destroy human and wildlife habitats and the attempt to journey to one | x | | x | x |
| Strand G: History and Nature of Science | | | | | |
| Understands that science is a human endeavor | Knows that science and technology have been practiced for a long time, that there is much more about the Solar System and universe that needs to be researched, and in that, science will never be finished | x | x | x | x |
| LANGUAGE ARTS | | | | | |
| 1. Uses general skills and strategies to acquire new information | Knows how to use appropriate reading skills to interpret and comprehend scientific material | x | x | x | x |
| 4. Use of spoken, written language to communicate effectively with a variety of audiences and for different purposes | Knows how to listen and respond to information and questions discussed during lesson | x | x | x | x |
| | Knows how to communicate through speaking and in written form to effectively present conclusions and theories | x | x | x | x |
| 5. Uses a wide range of strategies during the writing process appropriately to communicate with different audiences for a variety of purposes | Knows how to communicate and use the written form to present a science-based fictional work in a creative and compelling story | | | x | x |
| 8. Uses technological and information resources for research purposes | Knows how and where to find appropriate research material for scientific inquiry, i.e., texts and Internet | x | x | x | |

SOURCES:

NCTE—The National Council of Teachers of English
www.ncte.org/about/over/standards/110846.htm

IRA—International Reading Association
www.reading.org/resources/issues/reports/learning_standards.html

NSTA—National Science Teachers Association
 National Science Education Standards
www.nap.edu/books/0309053269/html/103.html