

National Middle School Association Middle Levels Essentials Conference
Minneapolis, MN April 4, 2008

Science Standards, Curricula, and Assessment: What, When, and How

<http://expertvoices.nsd.org/middle-school-math-science/2008/04/02/middle-school-portal-at-nmsa-essentials-conference/>

Science Standards, Curricula, and Assessment: What, When, and How Presentation and Handout

Resources of Interest

Taking Science to School: Learning and Teaching Science in Grades K-8

http://www.nap.edu/catalog.php?record_id=11625

Ready, Set, Science

http://www.nap.edu/catalog.php?record_id=11882

An Overview of E-Portfolios

<http://www.educause.edu/ir/library/pdf/ELI3001.pdf>

E-Portfolios: A Portal Site

<http://www.danwilton.com/eportfolios/>

Rubistar

<http://rubistar.4teachers.org/index.php>

National Science Education Standards

<http://www.nap.edu/readingroom/books/nse/>

AAAS Benchmarks online

<http://www.project2061.org/publications/bsl/online/bolintro.htm>

AAAS Atlas for Science Literacy

<http://www.project2061.org/publications/atlas/default.htm>

National Science Digital Library Science Literacy maps

<http://strandmaps.nsd.org/>

NSDL Middle School Portal for Science and Math Teachers

<http://msteacher.org/>

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The Four Strands of Scientific Proficiency:

Students who understand science:

1. Know, use and interpret scientific explanations of the natural world.
2. Generate and evaluate scientific evidence and explanations.
3. Understand the nature and development of scientific knowledge.
4. Participate productively in scientific practices and discourse.

Sample rubric

NMSA presentation sample

Teacher Name: **Mary LeFever**

Student Name: _____

Proficiency	4	3	2	1
Know, use and interpret scientific explanations of the natural world	Uses all relevant established science facts and theories to accurately interpret observations of current science activity.	Uses most relevant established science facts and theories to accurately interpret observations of current science activity.	Uses few relevant established science facts and theories OR inaccurately interprets observations of current science activity.	Uses few relevant established science facts and theories AND inaccurately interprets observations of current science activity.
Generate and evaluate scientific evidence and explanations	Competently produces and evaluates appropriate kinds of evidence for the given problem.	Competently produces and evaluates evidence, though omits a very germane type of evidence for the given problem.	Produces and evaluates some evidence for the given problem, though not entirely competently OR omits a very germane type of evidence.	Produces but does not evaluate evidence for the given problem OR produces and evaluates inappropriate evidence OR produces and incompetently evaluates evidence.
Understand the nature and development of scientific knowledge	Provides logical rationale for methodological choices and reasoning used to arrive at conclusions.	Provides rationale for methodological choices and reasoning used to arrive at conclusions, though not entirely logically valid.	Provides rationale for methodological choices OR reasoning used to arrive at conclusions, though not entirely logically valid.	Provides illogical or no rationale for methodological choices OR reasoning used to arrive at conclusions.
Participate productively in scientific practices and discourse	Demonstrates understanding of one's own and others' thought processes, by listening attentively and consistently responding appropriately.	Demonstrates understanding of one's own and others' thought processes, by listening attentively and sometimes responding appropriately.	Sometimes demonstrates understanding of one's own and others' thought processes. Does not consistently listen attentively and sometimes responds inappropriately.	Fails to demonstrate understanding of one's own and others' thought processes. Does not consistently listen attentively OR responds inappropriately OR does not respond at all.

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