

DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY		
Wyoming Science Content Standards: Grades 5 – 8		
Lesson	Standard	Benchmark
1, 3, 4	2.1	Students research scientific information and present findings through appropriate means.
All lessons	2.2	Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> • Ask questions that lead to an investigation. • Collect, organize, analyze and appropriately represent data. • Draw conclusions based on evidence and make connections to applied scientific concepts. • Clearly and accurately communicate the result of the investigation.
1, 3, 4	2.3	Students clearly and accurately communicate the result of their own work as well as information from other sources.
3, 4	2.4	Students recognize the relationships between science and technology in meeting human needs.
3, 4	3.1.A	Students explore how scientific knowledge changes and grows over time, and impacts personal and social decisions.
2, 3, 4	3.2.A	Students explore how scientific information is used to make decisions: the role of science in solving personal, local, and national problems.
3, 4	3.2.B	Students explore how scientific information is used to make decisions: interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.
Wyoming Mathematics Content Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Benchmark
3, 4	1.4	Students explain their choice of estimation and problem-solving strategies and justify results when performing number operations with fractions and decimals in problem-solving situations.
1	3.1	Students apply estimation and measurement of length to content problems and express the results in metric units (centimeters and meters).
3, 4	4.1	Students recognize, describe, extend, create, and generalize patterns, such as numeric sequences, by using manipulatives, numbers, graphic representations, including charts and graphs.
3	5.1	Students systematically collect, organize, and describe/represent numeric data using line graphs.
Grade 7		
3, 4	1.2	Students use basic operations with integers in problem-solving situations.
3, 4	1.4	Students explain their choice of estimation and problem-solving strategies and justify results when performing number operations with fractions and decimals in problem-solving situations appropriate to grade level. Students add and subtract fractions and mixed numbers.

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3, 4	1.5	Students multiply and divide fractions and mixed numbers.
3, 4	1.7	Students apply the order of operations (whole numbers including grouping symbols and operations, excluding roots and powers) in problem-solving situations.
3, 4	3.1	Students translate word phrases, which involve addition and subtraction, into mathematical expressions.
Grade 8		
3, 4	1.1	Students represent and apply real numbers in a variety of equivalent forms.
3, 4	1.2	Students extend understanding and use of basic arithmetic operations on rational numbers.
3, 4	1.3	Students explain their choice of estimation and problem solving strategies and justify results of solutions in problem-solving situations involving rational numbers.
3, 4	1.4	Students understand properties of operations with rational numbers.
3, 4	4.1	Students translate word phrases, which involve the four basic operations to mathematical expressions.
3, 4	5.1	Students systematically collect, organize, describe, analyze, and represent data using tables, charts, diagrams, and graphs.
Wyoming Language Arts Content Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Benchmark
2, 3, 4	1.I.A	Students use word origins and derivations to develop vocabulary.
2, 3, 4	1.I.B	Students understand grade-level-appropriate technical and subject-specific vocabulary.
2, 3, 4	1.I.C	Students comprehend main idea and supporting details in grade-level-appropriate texts through interpretation, inference, and analyzing, and read on both the literal and inferential levels, supplying textual evidence, and prior knowledge.
2, 3, 4	1.I.D	Students use reading strategies including setting a purpose, visualizing, and analyzing cause-effect relationships.
3, 4	1.III.B	Students analyze technical data in charts or graphs.
2, 3, 4	1.III.C	Students are familiar with a variety of informational modes, such as public documents, print news media, and Internet websites.
2, 3, 4	2.I.B.	Students use introduction, body, and conclusion, with supporting sentences and details to develop ideas in multi-paragraph expository and persuasive modes.
All lessons	2.I.D	Students use grade-level-appropriate conventions of capitalization, spelling, punctuation, grammar and usage such as present perfect, past perfect, and future perfect verb tenses, indefinite pronouns, verbs that agree with compound subjects, and semicolons to connect independent clauses.
2, 3, 4	2.II.C	Students write directions, explain problem and solution or procedures.
3, 4	2.II.D	Using multiple sources, students create and present informational reports, posters, maps, and/or pamphlets, using

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		strategies to write research such as evaluating and synthesizing information, incorporating notes into a finished product, including facts, details, and examples.
All lessons	3.3	Students follow directions and provide relevant feedback through note-taking or orally responding.
All lessons	3.5	Students engage in small group discussion using strategies to contribute and create consensus.
Grade 7		
2, 3, 4	1.I.B	Students understand grade-level-appropriate technical and subject-specific vocabulary.
2, 3, 4	1.I.C	Students understand and use reading strategies including setting a purpose, visualizing, finding the main idea and supporting details, and interpreting in grade-level-appropriate text.
3, 4	1.III.B	Students interpret technical data in a variety of formats.
2, 3, 4	1.III.D	Students are familiar with a variety of informational modes such as public documents, print news media, Internet websites, biographies, and interviews.
2, 3, 4	2.I.B	Students organize writing logically, chronologically, and coherently using strong beginnings, supporting sentences, appropriate transitions, and strong conclusions.
2, 3, 4	2.I.C	Students use meaningful word choice, voice, and sentence fluency.
All lessons	2.I.E	Students use grade-level-appropriate conventions of spelling, usage, punctuation, capitalization, and grammar such as infinitives and participles, pronoun-antecedent agreement, hyphens, dashes, and brackets, and word bases and affixes in spelling.
2, 3, 4	2.II.B.1	Students explain problem, solution, and procedures.
2, 3, 4	2.II.B.2	Students use a variety of strategies to identify topics to investigate such as constructing questions, narrowing the focus, and gathering information.
All lessons	3.3	Students use note-taking strategies while listening or viewing.
All lessons	3.7	Students speak and listen in small group situations to contribute and build from previous speakers.
Grade 8		
2, 3, 4	1.I.A	Students use word origins, context clues, and personal connections to develop vocabulary and understand grade-level-appropriate technical and subject specific terms.
2, 3, 4	1.I.B	Students comprehend main idea and supporting details in grade-level-appropriate text.
2, 3, 4	1.I.C	Students use strategies such as setting a purpose, predicting, cause/effect, comparing/contrasting, drawing conclusions, visualizing, and inferring to interpret and analyze text.
2, 3, 4	1.III.B	Students analyze data or make generalizations based on explicitly stated information.
2, 3, 4	1.III.C	Students support conclusions with facts and/or citations.
2, 3, 4	1.III.D	Students are familiar with a variety of informational texts modes such as documentaries, essays, interviews, speeches, newspapers, and Internet websites.
2, 3, 4	1.III.E	Students summarize and paraphrase information in chronological, sequential, or logical order.
2, 3, 4	2.I.A	Students write using a clear idea with specific details, establishing a controlling impression and a coherent thesis.

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2, 3, 4	2.I.D	Student writing is appropriate for intended audience and purposes; voice is apparent.
2, 3, 4	2.I.E	Students use meaningful word choice to achieve purpose.
All lessons	2.I.G	Students use grade-level-appropriate conventions with spelling, usage, punctuation, capitalization, and grammar such as subordinate and coordinate conjunctions, comparative adjectives, and proper pronoun case.
2, 3, 4	2.II.C	Students produce expository essays, technical writing, and reports.
All lessons	3.5	Students use strategies to contribute to group discussions, including building upon previous comments.
All lessons	3.6	Students take notes and give relevant, appropriate feedback to speakers in formal and informal settings.
Wyoming Health Education Content Standards: Grades 5 – 8		
Lesson	Standard	Benchmark
3, 4	1.6	Students demonstrate an understanding of developmentally appropriate relationships between prevention and control of disease and healthy lifestyles, health behaviors, and health risks.
3, 4	1.8	Students demonstrate an understanding of developmentally appropriate relationships between personal and community health and healthy lifestyles, health behaviors, and health risks.
3, 4	2.1	Students demonstrate the ability to utilize various sources of health information, products, and services.
3, 4	3.2	Students explain the short-term consequences of safe, risky, and harmful behaviors for adolescents.
3, 4	3.3	Students explain the importance of assuming responsibility for health behaviors.
3	4.3	Students analyze how peers, role models, family, and the community influence health enhancing behaviors, health risks, and the use of health products and services.
3, 4	4.4	Students explain the difference between internal and external influences.
3, 4	6.3	Students demonstrate the ability to apply collaborative goal setting or decision-making strategies to health issues and problems.
3, 4	7.2	Students demonstrate the ability to work cooperatively when advocating for health.