

DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY		
Idaho Science Content Standards – Grades 6, 7, 8		
Lesson	Standard	Descriptor
1, 2	6.S.1.2.1	Explain how observations and data are used as evidence on which to base scientific explanations and predictions.
1, 3, 4	6.S.1.2.2	Use observations to make inferences.
1, 3	6.S.1.2.3	Use models to explain or demonstrate a concept.
3, 4	6.S.1.3.1	Analyze changes that occur in and among systems.
1	6.S.1.3.2	Measure in both U.S. Customary and International System of Measurement (metric system) units with an emphasis on the metric system.
2, 3, 4	6.S.1.6.1	Write and analyze questions that can be answered by conducting scientific experiments.
3	6.S.1.6.2	Conduct scientific investigations using a control and variables. Repeat same experiment using alternate variables.
1, 3	6.S.1.6.3	Select and use appropriate tools and techniques to gather and display data.
1, 3, 4	6.S.1.6.4	Use evidence to analyze data in order to develop descriptions, explanations, predictions, and models.
1, 3, 4	6.S.1.6.5	Test a hypothesis based on observations.
1, 3, 4	6.S.1.6.6	Communicate scientific procedures and explanations.
All lessons	6.S.1.8.1	Read, give, and execute technical instructions.
1, 2	7.S.1.2.1	Describe how observations and data are evidence on which to base scientific explanations and predictions.
1, 3, 4	7.S.1.2.2	Use observations to make defendable inferences.
1, 3	7.S.1.2.3	Use models to explain or demonstrate a concept.
1, 3	7.S.1.3.3	Make metric measurements using appropriate tools.
3	7.S.1.6.1	Identify controls and variables used in scientific investigations.
1, 3, 4	7.S.1.6.2	Use appropriate tools and techniques to gather and display data.
1, 3, 4	7.S.1.6.3	Evaluate data in order to form conclusions.

IDAHO ALIGNMENT FOR NIH SUPPLEMENT DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY

1, 3, 4	7.S.1.6.4	Use evidence and critical thinking to accept or reject a hypothesis.
1, 3, 4	7.S.1.6.5	Evaluate alternative explanations or predictions.
1, 3, 4	7.S.1.6.6	Communicate and defend scientific procedures and explanations.
All lessons	7.S.1.8.1	Read and evaluate technical instructions.
All lessons	8-9.PS.1.2.1	Use observations and data as evidence on which to base scientific explanations.
1, 3	8-9.PS.1.2.2	Develop models to explain concepts or systems.
1, 3, 4	8-9.PS.1.2.3	Develop scientific explanations based on knowledge, logic, and analysis.
4	8-9.PS.1.3.1	Measure changes that can occur in and among systems.
3, 4	8-9.PS.1.3.2	Analyze changes that can occur in and among systems.
1	8-9.PS.1.3.3	Measure and calculate using the metric system.
All lessons	8-9.PS.1.6.1	Identify questions and concepts that guide scientific investigations.
1, 2, 3	8-9.PS.1.6.2	Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations.
1, 3, 4	8-9.PS.1.6.3	Use appropriate technology and mathematics to make investigations.
1, 3, 4	8-9.PS.1.6.4	Formulate scientific explanations and models using logic and evidence.
1, 3, 4	8-9.PS.1.6.5	Analyze alternative explanations and models.
1, 3, 4	8-9.PS.1.6.6	Communicate and defend a scientific argument.
1, 3	8-9.PS.1.6.7	Explain the differences among observations, hypotheses, and theories.
Idaho Mathematics Content Standards – Grades 6, 7, 8		
Lesson	Standard	Descriptor
3, 4	6.M.1.2.2	Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).
3, 4	6.M.1.2.3	Evaluate numerical expressions with whole numbers using the order of operations (excluding exponents).
3, 4	6.M.1.2.4	Select and use an appropriate method of computation from mental math, paper and pencil, calculator or a combination of the three.

IDAHO ALIGNMENT FOR NIH SUPPLEMENT DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY

3, 4	6.M.1.2.5	Use a variety of strategies to solve real life problems.
3, 4	6.M.1.2.6	Use appropriate vocabulary and notations.
3, 4	6.M.1.3.1	Estimate to predict computation results.
3	6.M.2.1.1	Select and use appropriate units and tools to make formal measurements in both systems.
3, 4	6.M.3.4.3	Use mathematical models to show change in a real world context.
3	6.M.3.6.1	Use patterns to represent and solve simple problems.
3, 4	6.M.5.1.1	Read and interpret tables, charts, and graphs, including broken line graphs, bar graphs, frequency tables, line plots, and circle graphs.
3, 4	6.M.5.1.2	Explain and justify stated conclusions drawn from tables, charts, and graphs.
3, 4	6.M.5.2.1	Collect, organize, and display the data with appropriate notation in tables, charts, and graphs, including broken line graphs, bar graphs, frequency tables and line plots.
3, 4	6.M.5.5.1	Make predictions based on data.
3, 4	7.M.1.1.2	Solve problems requiring the conversion between simple decimals, fractions, ratios, and percents.
3, 4	7.M.1.2.2	Add, subtract, multiply, and divide whole numbers, fractions and decimals; and add, multiply, and divide integers.
3, 4	7.M.1.2.5	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.
3, 4	7.M.1.2.6	Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations.
3, 4	7.M.1.2.7	Use appropriate vocabulary and notations.
3, 4	7.M.1.3.1	Estimate to predict computation results.
3	7.M.2.1.1	Select and use appropriate units and tools to make formal measurements in both systems.
3, 4	7.M.3.4.2	Explain how a change in one quantity impacts a change in another quantity.
3, 4	7.M.3.5.1	Represent a simple set of data in a table, as a graph, and as a mathematical relationship.
3	7.M.3.6.1	Use patterns and linear functions to represent and solve simple problems.
3, 4	7.M.5.1.1	Read and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots.

IDAHO ALIGNMENT FOR NIH SUPPLEMENT DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY

3, 4	7.M.5.1.2	Explain conclusions drawn from tables, charts, and graphs.
3, 4	7.M.5.2.1	Collect, organize, and display data with appropriate notation in tables, charts and graphs, including scatter plots, broken line graphs, line plots, bar graphs, and stem-and-leaf plots.
3, 4	8.M.1.1.2	Use rational numbers, including percents and ratios, and π (pi) to solve problems.
3, 4	8.M.1.2.2	Add, subtract, multiply, and divide rational numbers.
3, 4	8.M.1.2.4	Evaluate numerical expressions with rational numbers using the order of operations.
3, 4	8.M.1.2.5	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.
3, 4	8.M.1.2.6	Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations.
3, 4	8.M.1.2.7	Use appropriate vocabulary and notations.
3, 4	8.M.1.3.1	Estimate to predict computation results.
3	8.M.2.1.1	Select and use appropriate units and tools to make formal measurements in both systems.
3, 4	8.M.3.4.2	Use relationships to explain how a change in one quantity may result in a change in another, and identify the relationship as a positive, negative, or neither.
3, 4	8.M.5.1.1	Analyze and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots.
3, 4	8.M.5.1.2	Explain and justify conclusions drawn from tables, charts, and graphs.
3, 4	8.M.5.2.1	Collect, organize, and display data with appropriate notation in tables, charts, and graphs, including scatter plots, broken line graphs, line plots, bar graphs, histograms, and stem-and-leaf plots.

Idaho Language Arts Content Standards – Grades 6, 7, 8

Lesson	Standard	Descriptor
All lessons	6.LA.1.8.3	Use words and concepts necessary for comprehending math, science, social studies, literature and other Grade 6 content area text.
All lessons	6.LA.2.1.3	Make inferences, draw conclusions and form opinions based on information gathered from text and cite evidence to support.
All lessons	6.LA.2.2.2	Generate how, why, and what-if questions for interpreting expository texts.
All lessons	6.LA.2.2.4	Follow multi-step written directions.

IDAHO ALIGNMENT FOR NIH SUPPLEMENT DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY

All lessons	6.LA.3.1.4	Apply an appropriate writing format for purpose and audience.
All lessons	6.LA.3.5.2	Share writing with intended audience.
All lessons	6.LA.4.2.1	Write technical text that identifies a sequence of activities or processes.
3	6.LA.4.4.1	Write a response that identifies a text to self, text to world, and/or text to text connection.
All lessons	6.LA.5.1.1	Write fluently and legibly in print or cursive.
All lessons	6.LA.6.1.3	Listen to identify the tone, mood, and emotion conveyed in oral communications.
All lessons	6.LA.6.1.4	Listen to acquire and summarize information from a variety of sources.
All lessons	6.LA.6.2.1	Ask questions to elicit information, including evidence to support a speaker’s position.
3	6.LA.6.2.3	Organize oral presentations to maintain a clear focus.
All lessons	6.LA.6.3.2	Demonstrate understanding of graphics, pictures, and charts appropriate to grade level.
All lessons	7.LA.1.6.1	Use context clues to aid in decoding of new words.
All lessons	7.LA.1.8.3	Use prior knowledge, the text, context clues, and graphic features of text to predict, clarify, and/or expand word meanings and concepts.
All lessons	7.LA.2.1.3	Make inferences, draw conclusions and form opinions based on information gathered from text and cite evidence to support.
All lessons	7.LA.2.2.2	Generate how, why, and what-if questions for interpreting expository texts.
All lessons	7.LA.2.2.3	Summarize the main idea (literal or inferential) and critical details of expository text.
All lessons	7.LA.2.2.4	Follow multi-step written directions.
All lessons	7.LA.3.1.4	Match appropriate writing format to purpose and audience.
All lessons	7.LA.3.3.4	Apply a variety of sentence structures to improve sentence fluency and enhance writing style.
All lessons	7.LA.3.5.1	Publish writing in an appropriate format for the purpose and audience.
All lessons	7.LA.4.2.1	Write technical text that identifies a sequence of activities or processes.
All lessons	7.LA.5.1.1	Write fluently and legibly in print or cursive.
All lessons	7.LA.6.1.1	Develop appropriate interpersonal listening skills (e.g., eye contact, body language
All lessons	7.LA.6.1.4	Listen to acquire and summarize information from a variety of sources.
All lessons	7.LA.6.2.1	Ask questions to elicit information, including evidence to support a speaker’s position.
3	7.LA.6.2.2	Deliver informative presentations that: Organize and deliver relevant information about a focused topic.

IDAHO ALIGNMENT FOR NIH SUPPLEMENT DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY

3	7.LA.6.2.3	Organize oral presentations to maintain a clear focus.
All lessons	7.LA.6.3.2	Demonstrate understanding of graphics, pictures, and charts appropriate to grade level.
All lessons	8.LA.1.6.1	Use context clues to aid in decoding new words.
All lessons	8.LA.1.8.3	Define words and concepts necessary for comprehending Grade 8 content area text.
All lessons	8.LA.2.1.3	Make inferences, draw conclusions, and form opinions based on information gathered from text and cite evidence to support.
All lessons	8.LA.2.2.2	Generate how, why, and what-if questions for interpreting expository texts.
All lessons	8.LA.2.2.3	Apply central ideas (literal or inferential) and critical details to summarize information from expository text.
All lessons	8.LA.3.1.4	Match appropriate writing format to purpose and audience.
All lessons	8.LA.3.5.1	Publish writing in an appropriate format for the purpose and audience.
All lessons	8.LA.3.5.4	Share writing with intended audience.
All lessons	8.LA.4.2.1	Write technical text that identifies a sequence of activities or processes.
All lessons	8.LA.5.1.1	Write fluently and legibly in print or cursive.
All lessons	8.LA.6.1.1	Listen to acquire and summarize information from a variety of electronic or live sources.
3	8.LA.6.2.3	Organize oral presentations to maintain a clear focus.
Idaho Health Content Standards – Grades 6, 7, 8		
Lesson	Standard	Descriptor
3, 4	6.H.1.1.2	Identify prevention, causes, and treatment of diseases and disorders.
3, 4	6.H.1.1.9	Examine factors involved in selecting and using health information, products, and services.
3, 4	6.H.1.1.10	Describe environmental health issues and their relationships to a healthy lifestyle.
3, 4	6.H.4.1.1	Evaluate the validity of health information, products, and services.
3, 4	7-8.H.1.1.2	Identify the prevention, causes, symptoms, treatment, and consequences of diseases and disorders.
3, 4	7-8.H.1.1.9	Examine environmental health and recognize how it relates to a healthy lifestyle.
3, 4	7-8.H.4.1.1	Analyze the validity of health information, products, and services.
3, 4	7-8.H.4.1.2	Identify the available resources that provide health care services and information.