

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

DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY		
South Dakota Science Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Supporting Skill
All lessons	6.N.1.1	Recognize scientific knowledge is not merely a set of static facts but is dynamic and affords the best current explanations.
All lessons	6.N.1.2.1	Conduct systematic scientific investigations that: use appropriate supportive technologies; manipulate one variable over time with many repeated trials to test a hypothesis; construct and interpret graphs from data to make predictions; and use research methods to investigate practical and/or personal scientific problems and questions.
3, 4	6.S.1.1	Students accurately describe how science and technology have helped society to solve problems.
Grade 7		
All lessons	7.N.2.1	Students are able to conduct scientific investigations using given procedures: use appropriate supportive technologies; control variables to test hypotheses by repeated trials; identify sources of experimental error; interpret to make predictions and/or justify conclusions; and use research methods to investigate practical and/or personal scientific problems and questions.
3, 4	7.N.2.1.2	Analyze the benefits and potential of scientific investigations.
3, 4	7.S.1.1	Students are able to describe how science and technology are used to solve problems in different professions and businesses.
Grade 8		
2, 3, 4	8.N.1.1	Students are able to differentiate among facts, predictions, theory, and law/principles in scientific investigations.
All lessons	8.N.2.1	Students are able to design a replicable scientific investigation that includes: use appropriate supportive technologies; control variables to test hypotheses by repeated trials and by identifying sources of experimental error; interpret data to justify predictions or conclusions; use research methods to investigate practical and/or personal scientific problems and questions; select appropriate scientific equipment and technologies for investigations and experiments; use proper safety procedures in all investigations; and wear appropriate attire.
All lessons	8.N.2.1.1	Evaluate the benefits and potential of scientific investigations.
3, 4	8.S.1.1	Students are able to describe how science and technology have been influenced by social needs, attitudes, and values.
South Dakota Mathematics Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Supporting Skill
3, 4	6.A.4.1	Students are able to use concrete materials, graphs and algebraic statements to represent problem situations.
3, 4	6.S.1.2	Students are able to display data using bar and line graphs and draw conclusions from data displayed in a graph.

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

Grade 7		
3, 4	7.N.2.1	Students are able to add, subtract, multiply, and divide integers and positive fractions.
3, 4	7.S.1.2	Students are able to display data, using frequency tables, line plots, stem-and-leaf plots, and make predictions from data displayed in a graph.
Grade 8		
3, 4	8.A.4.2	Students are able to describe and represent relations using tables, graphs, and rules.
3, 4	8.N.2.1	Students are able to read, write, and compute within any subset of rational numbers.
3, 4	8.N.3.1	Students are able to use various strategies to solve multi-step problems involving rational numbers.
3, 4	8.S.1.2	Students are able to use a variety of visual representations to display data to make comparisons and predictions.
South Dakota Reading, Writing, Listening, Viewing ,and Speaking Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Supporting Skill
2, 3, 4	6.R.1.1	Students can expand word meanings using word categories and word parts.
2, 3, 4	6.R.1.2	Students can utilize context to comprehend words with multiple meanings.
2, 3, 4	6.R.2.1	Students can utilize direct and implied meaning to comprehend text.
2, 3, 4	6.R.2.2	Students can demonstrate the elements of fluency to comprehend text.
2, 3, 4	6.R.5.1	Students can compare and contrast information on one topic from multiple informational texts.
2, 3, 4	6.R.5.2	Students can evaluate the credibility of informational texts.
2, 3, 4	6.R.5.3	Students can utilize sources to locate information.
2, 3, 4	6.W.1.3	Students can identify purpose and audience in writing.
2, 3, 4	6.W.1.4	Students can summarize information from references to compose text.
3, 4	6.LVS.1.2	Students can organize and present narrative and informative presentations using main ideas and supporting details.
All lessons	6.LVS.1.3	Students can identify facts and opinions in auditory and visual information.
Grade 7		
2, 3, 4	7.R.1.1	Students can analyze word parts to determine meaning and context.
2, 3, 4	7.R.2.1	Students can interpret text using comprehension strategies.
2, 3, 4	7.R.2.2	Students can read fluently to comprehend grade-level text.
2, 3, 4	7.R.5.2	Students can analyze and organize data from informational text.
3, 4	7.W.1.1	Students can compose expository and persuasive text of three paragraphs.
2, 3, 4	7.W.1.2	Students can revise word choice in writing.
2, 3, 4	7.W.1.3	Students can select language and style for writing.

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

2, 3, 4	7.W.1.4	Students can summarize and paraphrase information from references to compose text.
All lessons	7.LVS.1.1	Students can evaluate the purpose and content of the presentation using listening and viewing skills.
3, 4	7.LVS.1.3	Students can create clear and organized descriptive, informative, and narrative presentations.
All lessons	7.LVS.1.4	Students can evaluate the use of facts and opinions expressed in auditory and visual information.
Grade 8		
2, 3, 4	8.R.1.1	Students can apply contextual knowledge of word origins to extend vocabulary.
2, 3, 4	8.R.2.1	Students can analyze text using comprehension strategies.
2, 3, 4	8.R.2.2	Students can read fluently to comprehend grade-level text.
2, 3, 4	8.R.5.3	Students can combine new information with existing knowledge to enhance understanding.
2, 3, 4	8.W.1.2	Students can revise writing for ideas and content.
2, 3, 4	8.W.1.3	Students can compose text using information from multiple sources to support a topic.
All lessons	8.LVS.1.1	Students can evaluate information in auditory and visual communication.
3, 4	8.LVS.1.3	Students can integrate verbal and nonverbal techniques to deliver an oral presentation for a specific audience and purpose.
South Dakota Health Education Standards: Grades 6 – 8		
Lesson	Standard	Benchmark
4	1.2.a	Explain how health is influenced by the interaction of body systems.
3, 4	1.3.a	Determine how medical research influences health care and disease prevention.
3, 4	1.3.b	Analyze health care requirements and policies which affect safety and well being.
3, 4	1.3.c	Examine health practices which may cause and/or spread/prevent diseases.
4	2.1.c	Analyze the impact of technology on personal and family health decisions and practices.
3, 4	2.2.a	Investigate the role and organization of various community, state, and regional health agencies/services.
4	3.1.c	Analyze personal practices which promote life-long health and well being.
4	3.3.a	Describe how personal choices can impact long range health.
4	3.3.b	Demonstrate individual responsibility in health-related decisions/choices.
All lessons	4.1.b	Choose appropriate communication techniques when interacting with family, peers, and community.
3, 4	4.2.c	Use relevant and appropriate terminology when discussing health issues.
3, 4	5.1.b	Analyze information/data to support or refute the cause/effect of health issues.
4	5.2.c	Investigate the impact of past health plans/strategies on current populations/environments.