

I. Teacher Preparation

A. Elementary School Licensure Requirements

1. Licensure Grade Levels¹

a. Does the state offer an Early Elementary Education credential (Preschool/Kindergarten to Grade 2/3)?	Yes	Early Childhood/Early Childhood Special Education Blended Certificate (Birth to Grade 3)
b. Does the state offer an Elementary Education credential (Kindergarten/Grade 1 to Grade 5/6)?	Yes	Standard Elementary Certificate (K-8)

2. Early Elementary²

a. Is an educational practice examination required for licensure?	Yes
b. Is an examination in reading and writing or language arts required for licensure?	Yes
c. Is a mathematics examination required for licensure?	Yes
d. Is a science examination required for licensure?	Yes

3. Elementary Education²

a. Is an educational practice examination required for licensure?	No
b. Is an examination in reading and writing or language arts required for licensure?	Yes
c. Is a mathematics examination required for licensure?	Yes
d. Is a science examination required for licensure?	Yes

4. Licensure Renewal

a. What is the period of validity for an educator's license?	Less than 5 years	
	5 years	X ¹
	Greater than 5 years	

b. Can in-service teachers receive certification credit for professional development courses/programs in Earth and Space Sciences?	Yes		
	No		
	Local issue		
	Unknown	X	

B. Elementary School Curriculum Support

1. Guidelines for Curriculum Development³

a. Does the SEA provide guidelines for curriculum development, beyond the state's science standards?	No
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b. If yes, which of the	1. Science frameworks		
	2. Curriculum maps		

following does the state provide?	3. Learning progressions		
	4. Benchmark maps		
	5. Templates for unit design		
	6. Curriculum development guides		
	7. Model units		
	8. Lesson plan templates/guides		
	9. Web-based lesson plan portals		
	10. Model lesson plans		
	11. Assessment guidelines		

2. Instructional Materials⁴

a. At what level does adoption of instructional materials occur?	State level	X
	Local level	

b. If the state is an adoption state, do adopted materials in science include those that address topics specific to the geosciences?	Yes	<p><u>Delta Education, LLC</u> Foss Modules are offered at each grade level. There are a number of modules with geoscience titles.</p> <p><u>McGraw-Hill</u> Science A Closer Look: Student Edition, K-5 General science books</p> <p><u>Houghton Mifflin Harcourt School Publishers</u> ScienceFusion, K-5 Booklets are offered at each grade level with geoscience titles.</p> <p><u>Hampton-Brown Company LLC d/b/a National Geographic School Publishing & Hampton Brown</u> Life Science Big Ideas Book, 3-5 Science Methods and Process Skills, K-2 Booklets are offered at each grade level with geoscience titles.</p> <p><u>Pearson Scott Foresman</u> Science, K-5</p>
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3. Support for New Standards⁵

a. Does that state provide resources to school systems to effectively implement the standards as they change?	Yes		No current plan to change the standards.
	No	X	
	Local issue		
	Unknown		

4. Professional Development

a. Does the SEA provide professional development that is, at least in part, specific to the geosciences?	Yes, provided by SEA	<input type="checkbox"/>	
	Yes, but independent of SEA	<input type="checkbox"/>	
	No	<input type="checkbox"/>	
	Local issue	<input type="checkbox"/>	
	Unknown	<input checked="" type="checkbox"/>	

II. Curriculum

A. Elementary School State Science Standards

1. Organization⁶

a. What is the name of the state's elementary school science standards?	Idaho Content Standards, Science
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b. What is the grade-level arrangement of the standards?	Grade specific	X
	Grade-level bands	
	Benchmark grade levels	

c. How are the standards outlined?	Overarching standard statements (level one)	X	d. What terms are used to identify each level?	Goals
	Sub-standard statements that provide more detail to the overarching standards (level two)	X		Objectives

2. Content⁶

a. Are the science standards subdivided according to scientific discipline (Physical Science, Life Science, and Earth and Space Science)?	Yes	
b. Are the Earth and Space Science standards identified by core ideas in the geosciences?	Yes	At the elementary level, there are two goals for the Earth and Space Systems strand. The same two goals are presented at each grade level: 1) Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems 2) Understand Geo-chemical Cycles and Energy in the Earth System
c. Do the state's standards include current issues in the geosciences? Current issues in the geosciences can be described as Earth science processes altered by human activities or Earth science processes that affect human well-being.	Yes	In grade 3, students explain the concept of recycling as applied to natural resources. In grade 5, students identify the differences between renewable and nonrenewable resources.
d. Do the state's standards include career exploration in the geosciences?	No	

3. Development

a. When were the standards adopted or last revised?	Within the last two years (2014-2015)		All Science Standards were reviewed in April of 2010. ⁷
	Between 3-6 years ago (2010-2014)	X	
	Between 7-10 years ago (2006-2009)		
	More than 10 years ago (before 2006)		

b. Does the state have plans to review/revise its science standards?	Currently under review		Our next Science Standards Review and potential adoption is scheduled for 2015. ⁵
	Within the next 5 years (2015-2020)	X	
	Between 5 and 10 years from now (2020-2025)		
	No plan or timeline exists		
	Unknown		

B. Middle School State Science Standards

1. Content⁶

a. What is the name of the state's middle school science standards?	Idaho Content Standards, Science
b. Are Earth and Space Science topics included in the standards?	Yes
c. Is Life Science and Physical Science content included in the standards?	Yes

C. High School State Science Standards

1. Content⁶

a. What is the name of the state's high school science standards?	Idaho Content Standards, Science
b. Are Earth and Space Science topics included in the standards?	Yes
c. Is Life Science and Physical Science content included in the standards?	Yes

D. High School Course Requirements

1. Credits Required for Graduation⁸

a. What is the total number of credits required for graduation?	46 (23 year-long courses)
b. What is the number of science credits required for graduation?	6 (3 year-long courses)

2. Course Content⁸

a. Is Life Science required?	No
b. Is Physical Science required?	No
c. Is Earth Science required?	No
d. Is Environmental Science required?	No
e. Is Earth Science accepted?	Yes
f. Does Earth Science have to be lab-based?	Yes

III. Instruction

A. Elementary School Approaches to Instruction

1. State Science Standards⁶

a. Do the state's science standards provide guidelines regarding any specific approach to be used for science teaching?	Yes
b. If so, what is the term used to identify this approach?	Scientific Inquiry
c. Do the state's science standards provide a rationale for this approach?	No
d. If so, what is the rationale?	N/A

2. Guidelines for Curriculum Planning³

a. If the state offers guidelines for curriculum planning, do these advocate more specific strategies for science instruction?	No
b. If so, what are the strategies?	N/A

3. Technology⁷

a. Are decisions regarding the use of technology in elementary science classrooms made at the state level or local level?	Local level
b. What kinds of technology are being used by elementary school science teachers in the state?	Unknown

IV. Learning Contexts

A. Elementary School Classrooms

1. Class Size⁷

a. What is the average number of students in an elementary classroom?	Unknown (Local data)
b. What is the maximum allowable number of students in an elementary classroom?	Unknown (Local data)

2. Instructional Time⁷

a. At the elementary level, are teachers recommended or required to dedicate a certain amount of instructional time to science?	There is no time requirement		
	Local decision	X	
	Teachers must spend a certain amount of time teaching science.		
	Unknown		

B. Elementary School Support Services

1. Specialized Support⁷

a. Are there specific policies in place regarding English as a Second Language (ESL) and Special Education services that could impact science instruction (e.g. pull-out or push-in models)?	Local level decision	X	
	Depends on the specifications of a student's IEP or ILP		
	Teachers must follow specific practices regarding science		
	Unknown		

V. Extra-Curricular Programs

A. Elementary School Geosciences Enrichment Opportunities

1. After-School and Informal Education⁷

a. Are opportunities to engage in geoscience-related topics outside of school (e.g. after-school programs and informal education programs) being offered to students in the state?	Local decision.
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b. If so, what are they?	
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2. Remedial Education⁷

a. What remedial supports are in place for geosciences topics with which students are struggling?	Local level decision	X	
	Remediation services are being provided to students in science		
	No remediation support in science		
	Unknown		

VI. Monitoring Systems

A. Elementary School Statewide Science Assessment

1. Structure and Content

a. What is the name of the statewide standardized test in science at the elementary level?	Idaho Standards Achievement Tests (ISATs) ⁹	
b. At what grade(s) is the assessment implemented?	5 ⁹	
c. Does the statewide science assessment measure achievement of the state's standards, i.e. is the assessment aligned with state standards?	Yes ⁹	
d. Is the content of the statewide science assessment sub-divided by discipline, namely Physical Science, Life Science, Earth and Space Science?	Yes ¹⁰	
e. Are there any plans for revising or changing the current elementary level science assessment?	No plans for revision	X ⁵
	Revision is planned, but timeline is unknown	
	Revision is planned with implementation date set	
	Unknown	

2. Results¹¹

a. Is student achievement measured by Performance Level Descriptors?	Yes
b. If yes, how many performance levels are there?	4

3. District Level Reporting¹²

a. At the district level, are the percentages of students performing at each PLD reported to the public?	Yes	Reports provided to parents subdivide science scores according to discipline. Similar scoring may be reported at the district or state level, but those scores are not published on the SEA website.
b. At the district level, is student achievement reported according to scientific discipline (Life Sciences, Physical Sciences, Earth and Space Sciences)?	No	
c. If yes, is this data available to the public?	N/A	

4. State Level Reporting¹¹

a. At the state level, are the percentages of students performing at each PLD reported to the public?	Yes	Reports provided to parents subdivide science scores according to discipline. Similar scoring may be reported at the district or state level, but those scores are not published on the SEA website.
b. At the state level, is student achievement reported according to scientific discipline (Life Sciences, Physical Sciences, Earth and Space Sciences)?	No	
c. If yes, is this data available to the public?	N/A	

B. Elementary School International Assessments in Science

1. TIMSS¹³

a. Has the state participated in the Trends in International Mathematics and Science Study (TIMSS)?	No
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b. If yes, in which years did the state participate?	1995	
	2003	
	2007	
	2011	

C. Middle School Statewide Science Assessment

1. Structure and Content⁹

a. What is the name of the statewide standardized test in science at the middle school level?	Idaho Standards Achievement Tests (ISATs)
b. At what grade(s) is the assessment implemented?	7
c. Does the assessment address Life Science concepts?	Yes
d. Does the assessment address Life Science concepts?	Yes
e. Does the assessment address Earth Science concepts?	Yes

C. High School Statewide Science Assessment(s)

1. Structure and Content⁹

a. What is the name of the state's standardized science assessment(s)?	Idaho Standards Achievement Tests (ISATs)	Idaho End-of-Course (EOC) Test in Biology and End-of-Course (EOC) Test in Chemistry
b. At what grade level is the assessment implemented?	10	End-of-Course
c. Does the assessment address Life Science concepts?	Yes	Yes
d. Does the assessment address Physical Science concepts?	Yes	Yes
e. Does the assessment address Earth Science concepts?	Yes	No

VII. Accountability

A. School Level

1. Individual Student

a. Does the state produce an Individual Student Report (ISR) that describes a student's performance on the state's science assessment?	Yes ¹⁴	Parents receive an Individual Student Report for the Idaho Standards Achievement Tests (ISAT). For Grade 5 students, this includes the student's performance on the Science assessment. The student's performance is reported according to strand, or Standard and includes the 5 strands or Standards listed in the Idaho Content Standards for Science: 1) Nature of Science 2) Physical Science 3) Biology 4) Earth and Space Systems 5) Personal and Social Perspectives; Technology The SEA has created an on-line tool that teachers can use to access student data, including the results on the ISAT assessments. Individual Student Reports, and Class Student Rosters can be accessed. The Reports provide scores on the ISAT, subdivided by the 5 strands or Standards listed in the Idaho Content Standards for Science:
b. Is the ISR made available to a student's parents or guardians?	Yes ¹⁴	
c. Is the ISR made available to a student's teacher?	Yes ¹⁵	
d. Does the ISR report student's performance in terms of scale score and achievement level?	Yes ¹⁵	
e. Does the ISR subdivide results by science discipline (Physical Science, Life Science, Earth and Space Science)?	Yes ¹⁵	

2. Teacher Appraisal¹⁶

a. Are students' results on the statewide science assessment a component of teacher evaluation?	No
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B. District Level

1. District Accreditation

a. Are student outcomes in statewide science assessments at the elementary level part of accreditation of public schools at the district level?	Yes	
	No	
	At a future point	
	Local decision	
	Unknown	X

C. State Level

1. Statewide Monitoring

a. Are student outcomes in statewide science assessments at the elementary level used in monitoring the adequacy of state educational systems?	Unknown	
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2. Trends in Student Outcomes¹⁷

a. Does the SEA report to the public performance results on the state science assessment over time?	Yes
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b. If yes, how many years of achievement data are available?	3 years (2011-2012 to 2013-2014)		
	4-7 years (2007-2008 to 2013-2014)	X	7 years of data (2007-2014)
	8 to 10 years (2004-2005 to 2013-2014)		
	11 or more years (before 2004-2005)		

c. Are the results also subdivided by science discipline (Life Sciences, Physical Sciences, Earth and Space Sciences)?	No
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¹ Idaho State Department of Education, Teacher Certification, Certification and Endorsement Requirements, PDF: http://www.sde.idaho.gov/site/teacher_certification/

² Educational Testing Service, The PRAXIS Series, Idaho Test Requirements: <https://www.ets.org/praxis/idaho/requirements/>

³ Idaho State Department of Education, Science: <http://www.sde.idaho.gov/site/science/>

⁴ Idaho State Department of Education, Adoption Guide, Science: http://www.sde.idaho.gov/site/curricular_materials/adoption_guide.htm

⁵ Idaho State Department of Education, EOCs and Science ISATs, Common Questions Related To Science Assessments: <http://www.sde.idaho.gov/site/assessment/eocScience.htm>

⁶ Idaho State Department of Education, Content, Idaho Content Standards with Limits, Science, Science Content Standards, Science Content Standards by Grade Level:

http://www.sde.idaho.gov/site/content_standards/science_standards.htm

⁷ Idaho State Department of Education (personal communication).

⁸ Idaho State Board of Education, Rules Governing Thoroughness, High School Graduation Requirements: <http://adminrules.idaho.gov/rules/current/08/0203.pdf>

⁹ Idaho State Department of Education, Idaho Standards Achievement Tests (ISATs): <http://www.sde.idaho.gov/site/assessment/ISAT/>

¹⁰ Idaho State Department of Education, ISAT Blueprints: <http://www.sde.idaho.gov/site/assessment/ISAT/blueprints.htm>

¹¹ Idaho State Department of Education, ISAT Results, 2014, State, 2014 NCLB State Report of Scores and Demographics: <http://www.sde.idaho.gov/site/assessment/ISAT/results.htm>

¹² Idaho State Department of Education, ISAT Results, 2014, District, 2014 NCLB District Report of Scores and Demographics: <http://www.sde.idaho.gov/site/assessment/ISAT/results.htm>

¹³ U.S. Dept. of Education, Institute of Education Sciences, National Center for Education Statistics, Trends in International Mathematics and Science Study (TIMSS), State and District Participation in TIMSS:

<https://nces.ed.gov/TIMSS/benchmark.asp>

¹⁴ Idaho State Department of Education, ISAT Test Administration, 2013 ISAT Parent Brochure: <http://www.sde.idaho.gov/site/assessment/ISAT/testAdmin.htm>

¹⁵ Idaho State Department of Education, ISAT, Technical Reports/Test Development, Technical Reports, ISAT 2013 Technical Report, PDF: <http://www.sde.idaho.gov/site/assessment/ISAT/technicalReports.htm>

¹⁶ Idaho State Department of Education, Measuring Student Achievement, Mass District Designed Measures, PDF: <http://www.sde.idaho.gov/site/teacherEval/studentGrowth.htm>

¹⁷ Idaho State Department of Education, ISAT Results: <http://www.sde.idaho.gov/site/assessment/ISAT/results.htm>