

**South Dakota State Test of Educational Progress
for Alternate Assessment**

Dakota STEP-A

Technical Report: 2011 Administration

Pearson
San Antonio, TX

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CHAPTER 1: OVERVIEW

The purpose of this technical report is to provide information to South Dakota stakeholders (including test coordinators, educators, parents, and other interested citizens) and members of the Technical Advisory Committee (TAC) on the technical attributes of the South Dakota State Test of Educational Progress-Alternate Assessment (*Dakota STEP-A*).

This technical report provides information and documentation regarding the development, administration, scoring, and reporting of the *Dakota STEP-A* assessment. In addition, it provides evidence of the technical quality and psychometric data.

1.1 Purpose of the Assessment

The Individuals with Disabilities Education Act (IDEA) 2004 and No Child Left Behind Act of 2001 (NCLB, 2002) mandate that states provide an alternate assessment when implementing statewide accountability systems. In order to meet federal requirements, the assessment must be aligned to the state's content standards, must report student achievement according to established proficiency levels with the same frequency and level of detail as the state's general assessment, and must serve the same purpose as the assessment for which it is an alternate (U.S. Office of Elementary and Secondary Education, U.S. DOE, December 9, 2003).

With the passage of IDEA 2004 and clarification of NCLB requirements, the South Dakota Department of Education (SD DOE) convened stakeholders to develop the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities. The Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities for Reading, Mathematics, and Science were approved by the South Dakota Board of Education (SD BOE) in November 2007, January 2005, and January 2006, respectively.

The *Dakota STEP-A* assessment was designed to provide increasing coherence between instruction and assessment and to enable students with significant cognitive disabilities to participate in and benefit from a standards-based accountability system.

1.2 Students Tested

Students with disabilities must participate in the statewide assessment in order to measure their performance on content found in the state's content standards. This means students with disabilities who are working in the general Content Standards will take the *Dakota STEP* with or without accommodations. Students working on the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities will take the alternate assessment, *Dakota STEP-A*.

Educators use the Extended Content to align and develop instruction for students who participate in the *Dakota STEP-A* as determined by the Individualized Education Program (IEP) team. South Dakota has a clearly defined policy for inclusion in the *Dakota STEP-A* assessment entitled SD Significant Cognitive Disability Criteria. To be identified as having a significant cognitive disability, the student must meet **all** of the following criteria:

1. The student has an active IEP with annual goals and short-term objectives/benchmarks which focus on **South Dakota Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities**.
2. The student's cognitive abilities are 2.0 standard deviations or more below the mean (inclusive of the standard error of measurement).
3. The student primarily requires direct and extensive instruction to acquire, maintain, generalize, and transfer skills done in naturally occurring settings of the student's life (e.g. school, community, home, vocational/career, and recreation and leisure).

The following are guidelines to assist the IEP team in determining which students will be instructed and assessed using the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities.

- Even with modifications and accommodations, the general education standards are deemed inappropriate for the student's cognitive ability and adaptive skill levels.
- The student requires extensive direct instruction in multiple settings to apply and transfer skills.
- The student requires substantial adjustment to grade-level content standards.

Once the IEP team determines that the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities are appropriate for a student, the team discusses the relationship of grade-level standards to the Extended Content appropriate for the student in order to determine the impact on curriculum and instruction and to use the Extended Content as a basis for the development of the individualized education plan.

1.3 Organizations and Groups Involved

The South Dakota Department of Education Office of Assessment and Technology System and the Department of Special Education are responsible for the development of Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities and implementing South Dakota's policies for testing students with disabilities. Together, both groups oversee the development of the *Dakota STEP-A* assessment reports and auxiliary manuals, fulfillment of state and federal accountability requirements, development of score report interpretive guides, and supervision of the contracts with Pearson and other subcontractors. The groups conduct extensive training and professional development activities relating to the *Dakota STEP-A* assessment for teachers, school and district test coordinators, and others who administer the alternate assessment. The Special Education Unit also coordinates meetings with stakeholders at various stages of the process (e.g., development of content standards, bias and content review, alignment, and standard setting).

The University of North Carolina at Charlotte conducted alignment studies of the *Dakota STEP-A* assessment.

The Buros Institute for Assessment Consultation and Outreach (BIACO) facilitated standard-setting workshops in order to provide recommended performance-level cut points to the SD Department of Education (DOE).

Pearson is responsible for developing the assessment, conducting bias/content reviews, test construction, production and distribution of test materials, administration, and post-administration evaluation and reconciliation of Supporting Evidence documentation. Pearson ensures that alignment study results are incorporated into the assessment.

Stakeholders provide invaluable assistance to the development and refinement of the *Dakota STEP-A* assessment. While stakeholder groups vary from task to task, the SD DOE consistently ensures that all committee groups have representatives of teachers and students that are most impacted by the *Dakota STEP-A* assessment in attendance.

The SD DOE relies on the involvement of South Dakota educators who administer the test. District and school personnel serve as test coordinators and/or building coordinators. All provide feedback, both formal and informal, to the SD DOE regarding all aspects of the test administration.

CHAPTER 2: TEST DESIGN AND DEVELOPMENT

The *Dakota STEP-A* measures the academic skills of students with significant cognitive disabilities and is the required assessment for students with significant cognitive disabilities at grades 3–8 and 11. Content areas assessed in the 2011 administration include Reading and Mathematics at grades 3–8 and 11, and Science at grades 5, 8, and 11.

The South Dakota Extended Content Standards for Reading were revised, presented to, and approved by the SD BOE in November 2007. The Extended Content Standards for Reading have been expanded to include five indicators (reporting categories) to parallel the general education Academic Content Standards for Reading. The *Dakota STEP-A* Reading, Mathematics, and Science assessments administered in 2011 were the same as the ones administered in 2009.

The *Dakota STEP-A* is based on and aligned with the South Dakota Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities. This alignment linkage runs through the extensions to the grade level content standards. The South Dakota Content Standards, together with the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities, create a statewide system designed to support students, parents, teachers, and schools to uniformly promote high academic standards for all students in South Dakota. It is the intent of SD DOE that once the *STEP-A* assessment meets all the technical requirements (e.g., 2009), it will only be modified for future administrations as a result of revision to the Extended Content Standards.

2.1 Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities

As guidance and regulations became available concerning alternate academic achievement standards, the SD DOE realized the need to establish Reading, Mathematics, and Science Extended Content by grade level, linking them to the general education Content and Achievement Standards. Revised Extended Content and Alternate Academic Achievement Descriptors for Reading were approved by the SD BOE in November 2007, and the standards were implemented in the 2008-2009 school year.

The Department of Education selected a diverse group of educators to develop Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities for application to the education of students with significant cognitive disabilities. The workgroup utilized the South Dakota general education Content Standards as the foundation for the Extended Content goals and indicators. The Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities are written for each grade ranging from Kindergarten to Grade 12 and are available at <http://doe.sd.gov/contentstandards/>.

When developing the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities, the workgroup carefully divided the skills into four levels of complexity: Advancing, Applying, Developing, and Introducing. Each level of complexity was used as a guide, and the student's age-appropriate environment was considered. The categories range on a scale of more complex to less complex skills. Achievement descriptors

are organized into performance levels. These levels describe how a student at that level would be expected to perform on the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities.

Achievement Levels

The State of South Dakota has defined four levels of student achievement for the Alternate Academic Achievement Descriptors. These levels are listed beside their corresponding performance level for grade-level expectations:

Advancing = Advanced

Applying = Proficient

Developing = Basic

Introducing = Below Basic

Achievement Level Descriptors

Alternate Academic Achievement Descriptors describe each performance level and were written for each grade and standard. These descriptors indicate how a student at each level would be expected to perform on the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities. Table 2.1 provides the Alternate Academic Achievement Descriptors for grade 6 Reading as an example. Reading, Mathematics, and Science Alternate Academic Achievement Descriptors for each grade assessed with the *Dakota STEP-A* are provided in Appendix A. The activities listed in the Introducing category are not sufficient to be classified above Introducing and students so classified may actually be lower in achievement.

Table 2.1: 6th Grade Reading Alternate Academic Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Arrange word meanings using word parts. • Determine context to comprehend words. • Distinguish between direct and implied meaning to comprehend text. • Apply an element of fluency to comprehend text. • Identify a text structure in fiction, nonfiction and poetry. • Explain a literary element in text. • Identify a literary device in fiction, nonfiction and poetry. • Compare and/or contrast text from various cultures, time periods, and/ or historical events. • Compare and contrast information on a topic from one informational text. • Explain the credibility of informational texts. • Locate two or more sources to find information.
Applying	<ul style="list-style-type: none"> • Classify words using word parts and their meanings. • Recognize context used to comprehend words. • Identify meaning within text. • Identify elements of fluency to comprehend text. • Recognize a text structure in fiction, nonfiction and poetry. • Recognize literary elements in text. • Recognize literary devices in fiction, non-fiction and poetry. • Compare text from various cultures, time periods, and/ or historical events. • Compare information on a topic from informational texts. • Determine the credibility of informational texts. • Locate a source to find information.
Developing	<ul style="list-style-type: none"> • Match word parts to word meaning. • Respond to meaning within the text. • Identify meaning within text. • Match a text structure in fiction and nonfiction. • Match a literary element in text. • Match a literary device in fiction and nonfiction. • Identify text from various cultures, time periods, or historical events. • Locate information on a topic from an informational text • Identify a credible source. • Identify a source to find information.
Introducing	<ul style="list-style-type: none"> • Respond to word parts and their meanings. • Recognize meaning found in context. • Respond to meaning within the text. • Respond to elements of fluency in text. • Respond to a text structure in fiction. • Respond to a literary element in text. • Respond to a literary device in fiction, nonfiction. • Attend/respond to text read from various cultures or historical events. • Respond to information from an informational text. • Respond to a non-credible source. • Respond to an informational text.

Continuum of Frequency, Setting, and Support

Frequency, setting, and level of support are factors that should be considered during instruction and assessment in order to discriminate in performance of skills at each level. For the purpose of this document, support is defined as providing directed help or assistance through such means as encouragement, prompting, or by personally aiding the student to accomplish a task. Table 2.2 lists the continuum of frequency, setting, and support. The information in Table 2.2 shows the basis of the development for the scoring rubric, and the scoring rubric is elaborated and described in Table 5.1.

Table 2.2: Continuum of Frequency, Setting, and Support

Continuum of frequency, setting, and support.	
4	Students demonstrate knowledge and skills consistently across multiple settings without support.
3	Students demonstrate knowledge and skills more than once in more than one setting without support.
2	Students demonstrate knowledge and skills once in one setting with minimal support.
1	Students attempt to demonstrate knowledge and skills once in one setting with support.

Target Skills

Target skills, developed in the context of grade-level curriculum, were developed to provide possible activities or skills that instructors can use and a range of options for students with disabilities to access the learning standards. Target skills are available at <http://doe.sd.gov/contentstandards/>. The skills found in the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities introduce students to challenging new ideas and content, promoting movement to grade-level standards.

The examples of target skills below illustrate how students with disabilities participate in the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities and general curriculum activities in which the learning standards are addressed.

The Mathematics level achievement standard 6.A.G.1.1 reads as follows: *Students are able to identify and describe the characteristics of triangles and quadrilaterals.*

Middle school example of using a target skill: When given six pictures of geometric shapes and prompted to indicate the triangle the student will name, touch, or point to the correct picture object independently when given adequate wait time. Once the student has identified the shape the student will classify and/or sort triangles by their side length.

The Reading level achievement standard 11.A.R.5.1 reads as follows: *Identify factors that influence the credibility of information sources.*

High school example of using a target skill: Compare fiction and biography about the same person (Babe Ruth, Hillary Duff). Compare an autobiography with an encyclopedia article to determine if facts are.

An IEP team can use the target skills as examples when determining the skills that a student needs to work on to progress towards the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities, which are the basis for the assessment of the student with a severe cognitive disability.

2.2 Development of Tasks/Skills for the Rating Form

The development of tasks/skills begins with a thorough review of the content standards, the test specifications and blueprints, and the pool of tasks/skills available for use by Pearson's alternate assessment specialists. The result is a clear focus on areas in need of additional development: The "gaps," or content standards with insufficient numbers of tasks/skills within the existing pool, provide a plan for development. A sufficient number of new tasks/skills must be developed to allow for attrition throughout the content/bias and alignment review process.

Once the development plan has been reviewed and approved by the SD DOE, Pearson's alternate assessment specialists begin the development process. An initial review of the tasks/skills by alternate assessment specialists is followed by an additional review in which a content specialist analyzes the task/skill for accurate content and best testing practices. Thereafter, the tasks/skills go through an editorial review to make sure that proper vocabulary, spelling, and grammar are used. Editorial specialists also correct tasks/skills that do not conform to the current style and formatting. New tasks/skills are developed to stylistically match the existing assessment. Edited tasks/skills are then passed back to the lead alternate assessment specialist, who conducts an additional review.

All tasks/skills go through an internal review process at Pearson before they are deemed suitable for external committee reviews. This internal review phase allows the tasks/skills to be refined and aligned with content standards before they are presented to South Dakota educators and the SD DOE. The additional series of reviews continues to add value to the tasks/skills as they are scrutinized for alignment to the content standards and the absence of bias and stereotyping.

Committees of South Dakota educators convened to review tasks/skills for content alignment as well as bias and sensitivity in July 2008.

2.3 Test Design

The *Dakota STEP-A* test assesses students' achievement of the South Dakota Extended Content Standards. The following documents used for the development of the *Dakota STEP-A* assessment are available at the link below:

- Reading Extended Content – Approved Nov. 19, 2007:
http://doe.sd.gov/contentstandards/documents/ExtStandards_reading.pdf,

- Mathematics Extended Content – Approved Jan. 24, 2006:
<http://doe.sd.gov/contentstandards/documents/Math%20Standards.pdf>, and
- Science Extended Content – Approved Jan. 24, 2006:
<http://doe.sd.gov/contentstandards/documents/Science%20Standards.pdf>.

The assessment is administered in combined-content Rating Forms consisting of grade-specific subtests as shown in Table 2.3.

Table 2.3: Dakota STEP-A Subjects and Grades Tested

Test	Grade						
	3	4	5	6	7	8	11
Reading	✓	✓	✓	✓	✓	✓	✓
Mathematics	✓	✓	✓	✓	✓	✓	✓
Science	—	—	✓	—	—	✓	✓

Test Blueprints

The first step in the creation (or revision) of a standards-based assessment is the development of a *test blueprint*, which specifies the content standards to be assessed and the number of tasks/skills to assess each standard. The underlying principle guiding the creation of test blueprints is establishing a clear relationship between the assessment and the standards. The test blueprint then serves as the foundation for the entire development of task/skill and rating form creation process.

Test blueprints, which specify the content standards to be assessed and the number of tasks/skills needed to assess each standard, were developed and approved by the SD DOE for each content domain and grade level. To help ensure the reliability of scores, a sufficient number of tasks/skills addressing each content standard or indicator for which a score is to be reported (“reporting category”) must be maintained. The number of tasks/skills for each reporting category is relatively consistent within content areas and grade levels in order to establish a rational and coherent assessment system. The reporting category can be a content standard, indicator, or goal. Results for the *Dakota STEP-A* content domains are reported at the indicator (Reading) or goal (Mathematics and Science) level. Test blueprints for all content domains and grades are included in Appendix B.

In Table 2.4, the grade 3 Reading blueprint shows the target task/skill counts for each of the content standards. In addition, targets have been established to include a range of tasks/skills at various cognitive complexity levels with the goal of at least 50% of the tasks/skills assessing each content standard to be at or above the cognitive complexity of that standard.

Table 2.4: Grade 3 Reading Test Blueprint

Bloom's Depth of Knowledge Task/Skill Counts Weighting	<i>Low</i>	<i>Medium</i>		<i>High</i>			TOTAL TEST
	29%	51%		20%			
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	
	10	8	10	7	0	0	
	29%	23%	29%	20%	0%	0%	
Indicator 1	1	2	3	1	0	0	7
1.1 Application	1	2	3	1			
Indicator 2	1	2	2	2	0	0	7
2.1 Application	1	2	2	2			
2.2 *							
Indicator 3	3	1	1	2	0	0	7
3.1 Knowledge	3						
3.2 Analysis		1	1	2			
Indicator 4	4	2	1	0	0	0	7
4.1 Knowledge	4	2	1				
Indicator 5	1	1	3	2	0	0	7
5.1 Application			1	1			
5.2 Knowledge	1	1	1				
5.3 Application			1	1			
Totals	10	8	10	7	0	0	35

* represents standard not assessed.

Cells that are blank or have zero mean the standards are not assessed at that particular Bloom's level.

Cognitive Complexity

Cognitive complexity can be described in several different ways. The South Dakota content standards use Bloom's Taxonomy to describe the cognitive complexity for each standard. The cognitive complexity levels in Bloom's Taxonomy include: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. For the purpose of alignment studies, cognitive complexity levels are defined as follows:

Low level (L) – (Bloom's Taxonomy level: Knowledge)

This level requires mainly recall, remembering factual information or definitions of terms, or the display of fairly routine skills. This level tends to deal with a single idea or procedure, require a display of concrete understanding, or ask for a demonstration of something learned directly from instruction.

Moderate level (M) – (Bloom's Taxonomy levels: Comprehension and Application)

This level requires more intellectual skill than those characterized as "Low", but may seem like it is something less than "High." This level may require the application of rules that are practiced extensively in the classroom, but are now applied to a new situation.

High level (H) – (Bloom’s Taxonomy levels: **Analysis, Synthesis, and Evaluation**)

This level involves the application of ideas and procedures to solve problems or create new understandings. The situations are not habitual or routine; they are novel for most learners. Often multiple ideas are drawn upon or a high level of abstraction needs to be dealt with.

2.4 Assessment Materials

Dakota STEP-A assessment materials include the following items:

- **Grade-specific rating forms** – the rating forms contain the tasks/skills that will be rated by the teacher and one other trained professional. The last page of the rating form contains the Student Survey that is completed by Rater 1.
- **Data Collection forms** – The Data Collection forms are used to document the supporting evidence that is being supplied for each task. One data collection form is used for each piece of supporting evidence.
- **Score Resolution Worksheet** – this form is used when the teacher and the second rater’s scores do not agree.
- **Directions for Administering** – one direction for administering is created to be used across all grade levels.
- **Supporting Evidence Envelope** – printed envelope that is used to ship the supporting evidence to the scoring center.

The **Rating Form** consists of a minimum of seven tasks/skills within each content indicator. Ratings are based on each rater’s knowledge of the student’s current performance level. All tasks on the Rating Forms are completed by two trained professionals: One being the special education teacher and the other should be a professional individual that has worked with the student. Both raters present their independent evaluation on all tasks/skills on the rating forms as prescribed in the directions for administering.

Supporting Evidence is required for one task/skill in each reporting category in all content areas. Only the special education teachers are required to prepare the Supporting Evidence for one task/skill of their choice in each of the reporting categories. Then both raters independently score the Supporting Evidence collected. A resolution between both raters is required if their ratings are not the same or adjacent for the tasks/skills containing supporting evidence. Finally, the supporting evidence is received and independently scored by a third party, Pearson Performance Scoring Center (PSC), for validation purposes. Details about *Dakota STEP-A* scoring and reporting can be found in Chapter 5.

Presentation of Content

Pearson designed grade-specific Rating Forms constructed of specific tasks or skills developed by alternate assessment content specialists. The Rating Forms are utilized by special education teachers and others who work with students with disabilities to assess each student’s abilities to demonstrate their achievement relevant to the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities.

Within each grade-specific Rating Form, tasks/skills presented by content: (a) provide natural breaks for teachers; (b) allow teachers to have materials ready for a particular set of skills; and (c)

allow teachers to see the connection between the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities, instruction, and the assessment. Within each reporting category, tasks/skills are organized from lowest to highest achievement levels. Content domains and reporting categories appear in the following order on all Rating Forms and score reports:

Reading reporting categories: Grades 3-8 and 11:

- Reading Vocabulary*
- Reading Comprehension Strategies*
- Response to Literacy*
- Reading of Diverse Works, Cultures, and Time Periods*
- Reading Informational Text*

Mathematics reporting categories: Grades 3-8 and 11:

- Algebra*
- Geometry*
- Measurement*
- Number Sense*
- Statistics and Probability*

Science reporting categories: Grades 5, 8 and 11:

- Nature of Science (not assessed at grade 5)*
- Physical Science*
- Life Science (not assessed at grade 8)*
- Earth/Space Science*
- Science, Technology, Environment, and Society*

Information Collected on the Rating Forms

The Rating Forms are the basis of the evaluation of student performance on grade-level content to determine grade-level proficiency. Table 2.5 displays an example of the rating form. Task/skill scores like those in Table 2.5 range from 1-5, left-to-right, and are combined within contents to determine an Achievement Level Rating (Introducing, Developing, Applying, or Advancing).

Table 2.5: Rating Form Sample Tasks/Skills

	PERFORMANCE LEVEL					Aligned with student's IEP goals and objectives	Supporting evidence submitted
	Non-attent	Minimal	Emerging	Progressing	Accomplished		
1. Identifies places to find information (e.g., teacher, websites, books).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Divides a given set of objects into equal groups.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3. Matches coins and one-dollar bills to their values.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>

Aligned with student's IEP goals and objectives (column)

The special education teacher must indicate whether each task/skill is aligned with the student's IEP plan by checking the corresponding square (left blank if not a part of the IEP). The assessment

is not intended to be a measure of the student's progress on their IEP; the assessment measures the student's proficiency on grade-level content. The purpose for having teachers identify skills that are aligned with the student's IEP is to encourage them to collect evidence for the supporting evidence component that the student has been provided instruction on throughout the year. The information will also be used to analyze the skills being addressed for this population overall and for planning professional development.

Supporting evidence submitted (column)

The special education teacher must indicate which task/skill ratings are supported with samples of student work (supporting evidence).

In addition, special education teachers were also asked to complete the student survey located on the inside back cover of each Rating Form. The information gathered from this survey will be used to analyze the overall student population participating in the alternate assessment and to plan training and professional development. The survey is presented on the following page.

Student Survey

Dakota STEP-A Student Survey

To be completed only by Rater 1 (student's Special Education teacher)

Within each category, select one of the following statements that best describes your student.

Expressive Language (check the best description)

- Uses symbolic language to communicate. Student uses verbal or written words, signs, Braille, or language-based augmentative systems to request, initiate, and respond to questions, describe things or events, and express refusal.
- Uses intentional communication, but not at a symbolic language level. Student uses understandable communication through such modes as gestures, pictures, objects/textures, points, etc., to clearly express a variety of intentions.
- Student communicates primarily through cries, facial expressions, change in muscle tone, etc., but no clear use of objects/textures, regularized gestures, pictures, signs, etc., to communicate.

Communication System (check the best description)

The student uses an augmentative communication system in addition to or in place of oral speech.

- Yes
- No

Receptive Language (check the best description)

- Independently follows 1–2 step directions presented through words; does not need additional cues
- Requires additional cues to follow 1–2 step directions
- Alerts to sensory input from another person, but requires actual physical assistance to follow simple directions
- Uncertain response to sensory stimuli

Vision (check the best description)

- Vision within normal limits
- Corrected vision within normal limits
- Low vision; uses vision for some daily activities
- No functional use of vision for daily activities

Hearing (check the best description)

- Hearing within normal limits
- Corrected hearing within normal limits
- Hearing loss aided, but still with significant loss
- Profound loss, even with aids
- Unable to determine functional loss of hearing

Motor (check the best description)

- No significant motor dysfunction that requires adaptations
- Requires adaptations to support motor functioning (e.g., walker, adapted utensils, and/or keyboard)
- Uses wheelchair, positioning equipment, and/or assistive devices for most activities
- Requires personal assistance for most/all physical activities

Engagement (check the best description)

- Initiates and sustains social interactions
- Responds with social interaction, but does not initiate or sustain social interaction
- Alerts to others
- Does not alert to others

Health Issues/Attendance (check the best description)

- Attends at least 90% of school days
- Attends approximately 75% of school days; absences due primarily to health issues
- Attends approximately 50% or less of school days; absences due primarily to health issues
- Receives homebound instruction due to health issues
- Highly irregular attendance or homebound instruction due to issues other than health

Reading (check the best description)

- Reads fluently with critical understanding in print or Braille
- Reads fluently with basic (literal) understanding from paragraphs/short passages with narrative/informational texts in print or Braille
- Reads basic sight words, simple sentences, directions, bullets, and/or lists in print or Braille
- Aware of text/Braille, follows directionally, makes letter distinctions, or tells a story from pictures not linked to text
- No observable awareness of print or Braille

Mathematics (check the best description)

- Applies conceptual procedures to solve real-life or routine word problems from a variety of contexts
- Performs computational procedures with or without a calculator
- Counts with 1:1 correspondence to at least 10 and/or makes numbered sets of items
- Counts by rote to 5.
- No observable awareness of or use of numbers

CHAPTER 3: TEST ADMINISTRATION

The administration of the *Dakota STEP-A* is a shared and coordinated effort involving the SD DOE, Pearson, and district and school personnel. Pearson is responsible for printing and shipping test materials to districts as well as receiving and scoring materials from districts following the test administration. Table 3.1 lists the key events and dates for the 2011 *Dakota STEP-A* administration.

Table 3.1: Key Events and Dates for the 2011 *Dakota STEP-A* Administration

Dates	Activities
January 10–13, 2011	Pretest workshops
January 10–14, 2011	Delivery of <i>Dakota STEP-A</i> materials to districts
February 7–March 18, 2011	<i>Dakota STEP-A</i> test administration
March 23, 2011	Scorable materials picked up at districts
June 4, 2011	Score reports to districts

3.1 Test Coordinator and Teacher/Examiner Training

The SD DOE and Pearson jointly planned, developed, and conducted pretest training workshops in January 2011 for teachers and test coordinators at four locations across the state. Training included an overview of the test administration, completion of the Rating Form, and the collection and submission of Supporting Evidence. The Rating Forms and Supporting Evidence provided an evaluation of the student’s knowledge and ability to demonstrate his or her performance of the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities. The training power point presentation can be found in Appendix C. Participants also reviewed the *Dakota STEP-A Directions for Administering* and the *Test Coordinator’s Handbook*. The SD DOE provided additional training for test coordinators to familiarize them with procedures, accommodations, and how to handle any questions or test irregularities.

Steps to complete the assessment:

- 1. Rater 1 (Special Education teacher) identifies tasks/skills from the Rating Form for Supporting Evidence**

Rater 1 should review the Rating Form and select one task/skill from each reporting category for Reading and Mathematics at grades 3 through 8 and 11 and for Science at grades 5, 8, and 11, for which Supporting Evidence will be collected. The collection and documentation of evidence can occur throughout the test administration window (see Table 3.1).

2. Rater 1 completes the Rating Form

Once the Supporting Evidence for each task/skill has been collected and appropriately documented, Rater 1 determines the performance level for the corresponding tasks/skills on the Rating Form based on the Supporting Evidence documentation. Rater 1 also completes all remaining tasks/skills on the Rating Form.

3. Rater 2 (professionals who work with students on a regular basis) completes a second Rating Form Independently

Once Rater 1 has collected and documented all Supporting Evidence and completed the Rating Form, the second Rating Form along with the Supporting Evidence is given to the second rater for completion.

4. Score Resolution Form

Once Rater 2 has completed and returned the Rating Form to Rater 1, Rater 1 will review both Rating Forms and determine which, if any, tasks/skills require a score resolution. Any task/skill with Supporting Evidence that was not rated identically requires a resolution. For all other tasks/skills, it is up to the discretion of Rater 1 as to whether a resolution should be conducted.

3.2 Test Security Guidelines

Test administration must be completed in a timely manner and conducted in such a way as to ensure appropriate and consistent testing conditions, as well as the secure handling of all test materials. Test security guidelines prohibit activities that could result in misrepresentation of results or exposure of confidential student information.

Teachers/examiners administering assessments are not to contribute to test security practices that violate the Code of Professional Ethics set for South Dakota educators. Directions for educators can be found in the South Dakota Professional Teachers Practices and Standards Commission Administrative Rule Codes 24:08:03:01—Obligations to Students, 24:08:03:02—Obligations to the Public, and 24:08:03:03—Obligations to the Profession. The Code of Ethics for professional administrators is cited in Administrative Rule 24:11:03:01.

The SD DOE and Pearson require any person who handles test materials (including test coordinators, building coordinators, and teachers/examiners) to sign a test security agreement/affidavit prior to the test administration stating that they have been made aware of these regulations and procedures and agree to follow them. Participants involved in the development and review of test tasks/skills are required to sign a non-disclosure agreement as well. The *Test Security Agreement/Affidavit* is included in Appendix D.

Dakota STEP-A test materials must be kept in a locked secure location before, during, and after testing sessions. Upon completion of testing, all scorable documents and test materials are to be collected and returned to Pearson. Any missing documents or other potential breaches of security are to be reported to the district test coordinator. If the documents are not found or if a security breach is suspected, the SD DOE must be notified.

CHAPTER 4: ACHIEVEMENT STANDARDS

The cut points for the *Dakota STEP-A* assessment were recommended by standard-setting committees in June 2009 (BIACO, 2009). The details of the standard-setting meetings can be found in the BIACO's final report that was included in the 2009 *Dakota STEP-A* technical report. The recommended cut points were based on the four achievement levels described in the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities—Introducing (Below Basic), Developing (Basic), Applying (Proficient), and Advancing (Advanced). The achievement level descriptors are applicable to all content domains.

4.1 Achievement Levels and Descriptors

Alternate achievement level descriptors are specific for each grade level. These descriptors describe each achievement level and indicate how a student at each level would be expected to perform on grade-level standards based on the Alternate Academic Achievement Descriptors. Frequency, setting, and level of support are factors that should be considered during instruction and assessment in order to discriminate in performance of skills at each level.

Details of the Reading, Mathematics, and Science Alternate Academic Achievement Descriptors for each grade assessed with the *Dakota STEP-A* can be found in Appendix A.

4.2 Achievement Level Cut Points

South Dakota STEP-A Reading, Mathematics, and Science assessment scores are on a raw score scale. The number of points obtained by a student on an assessment serves as the score for that assessment. The number of tasks/skills and maximum possible points by content area are listed in Table 5.4a and Table 5.4b in Chapter 5.

Table 4.1 presents the final cut points approved by the SD DOE for the *Dakota STEP-A* Reading, Mathematics, and Science assessments. The final decision regarding these cut points was a policy decision made by the SD BOE. The SD BOE finalized the proposed cut points recommended by the standard-setting committee.

Table 4.1: Final Cut Points for the *Dakota STEP-A* Assessment

	Grade ¹	Developing (Basic)	Applying (Proficient)	Advancing (Advanced)
Reading	3	49	82	126
	4	49	87	127
	5	59	82	123
	6	50	85	127
	7	53	97	137
	8	69	97	136
	11	70	103	139
Mathematics	3	104	199	290
	4	123	211	290
	5	116	197	272
	6	117	191	263
	7	120	210	305
	8	118	218	308
	11	123	193	274
Science	5	150	205	281
	8	128	175	268
	11	170	307	368

¹ Note that the scores are not on the same scale across grades or across subject areas.

4.3 Achievement Level Results for 2011

Student Participation

Tables 4.2a and 4.2b summarize student participation in the 2011 administration of the *Dakota STEP-A* assessment at each grade level by gender and ethnicity.

Table 4.2a: Student Participation Demographic Data: Gender

Grade	N-Count	Female	Male
3	119	41	78
4	135	53	82
5	132	52	80
6	143	51	92
7	107	40	67
8	111	41	70
11	113	37	76
Total	860	315	545

Data file 05/24/2011.

Table 4.2b: Student Participation Demographic Data: Ethnicity

Grade	N-Count	American Indian or Alaskan Native	Asian or Pacific Islander*	Black/African American*	Hispanic*	White
3	119	39	--	--	--	67
4	135	28	--	10	--	92
5	133	28	--	--	--	93
6	144	33	--	--	--	90
7	107	26	--	--	--	69
8	111	20	--	--	--	81
11	113	22	--	--	--	86
Total	862	196	16	36	29	578

Data file 05/24/2011.

* Sample size is smaller than 10, so it is not reported due to confidentiality concerns.

Achievement Level Results

Table 4.3 provides the percentage of students classified into each achievement level on the *STEP-A* Reading, Mathematics, and Science assessments for grades 3–8 and 11. The percentage of students who were classified into the Applying level ranges from 30 to 38 for the Reading test, 19 to 30 for the Mathematics assessment, and 19 to 42 for the Science test. There were 24 to 38% of students classified into the Advancing level for Reading, 30 to 44% for Mathematics, and 21 to 26% for the Science test.

Table 4.3: Percent of Students in Each Achievement Level

	Grade	N-Count	Introducing (Below Basic)	Developing (Basic)	Applying (Proficient)	Advancing (Advanced)
Reading	3	119	13	25	32	29
	4	135	8	24	37	30
	5	133	20	12	33	35
	6	144	6	18	38	38
	7	107	9	26	34	31
	8	111	17	12	34	37
	11	113	21	25	30	24
Mathematics	3	119	17	19	29	35
	4	135	19	21	30	30
	5	133	14	27	19	40
	6	144	13	17	27	43
	7	107	11	27	21	40
	8	111	13	18	25	44
	11	113	20	22	21	36
Science	5	133	25	17	33	26
	8	111	20	17	42	21
	11	113	24	36	19	21

Data File 05/24/2011.

Table 4.4 summarizes student performance by the number and percent of students by gender in each of the four Achievement Levels. The most notable discrepancies in the classification of males and females were for all three tests, where more female students were classified into the Applying level and more male students were classified into the Advancing level.

Table 4.4: Achievement Level Results by Gender

	Gender	Introducing (Below Basic)		Developing (Basic)		Applying (Proficient)		Advancing (Advanced)		Total
		#	%	#	%	#	%	#	%	
Reading	Female	44	14	65	21	121	38	85	27	315
	Male	72	13	109	20	173	32	191	35	545
	Total	116	13	174	20	294	34	276	32	860
Mathematics	Female	60	19	60	19	89	28	106	34	315
	Male	72	13	125	23	123	23	225	41	545
	Total	132	15	185	22	212	25	331	38	860
Science	Female	30	23	29	22	45	35	26	20	130
	Male	52	23	52	23	67	30	55	24	226
	Total	82	23	81	23	112	31	81	23	356

Data file 05/24/2011.

Table 4.5: Achievement Level Results by Ethnicity

Ethnicity	Introducing (Below Basic)		Developing (Basic)		Applying (Proficient)		Advancing (Advanced)		Total	
	#	%	#	%	#	%	#	%		
Reading	Amer. Indian/ Alaskan Native	30	15	41	21	75	38	50	26	196
	Asian or Pacific Islander*	--	--	--	--	--	--	--	--	16
	Black/ African American*	--	--	--	--	15	42	13	36	36
	Hispanic*	--	--	--	--	10	34	13	45	29
	White	74	13	123	21	189	33	192	33	578
	Total	114	13	173	20	293	34	275	32	855
	Mathematics	Amer. Indian/ Alaskan Native	34	17	39	20	53	27	70	36
Asian or Pacific Islander*		--	--	--	--	--	--	--	--	16
Black/ African American*		--	--	--	--	--	--	15	42	36
Hispanic*		--	--	--	--	--	--	15	52	29
White		87	15	128	22	140	24	223	39	578
Total		131	15	182	21	213	25	329	38	855
Science		Amer. Indian/ Alaskan Native	17	24	19	27	22	31	12	17
	Asian or Pacific Islander*	--	--	--	--	--	--	--	--	--
	Black/ African American*	--	--	--	--	--	--	--	--	--
	Hispanic*	--	--	--	--	--	--	--	--	10
	White	57	22	60	23	79	30	64	25	260
	Total	81	23	82	23	111	31	81	23	355

Data file 05/24/2011.

* Sample size is smaller than 10, so it is not reported due to confidentiality concerns.

The score pattern at the Applying level based on the total raw score is included in the Appendix E. It shows the number of students who obtained a particular score point in the Applying level (which is equivalent to the Proficient level) with different kind of pattern. For example, how many zero to five points a student gets to obtain that particular raw score point.

CHAPTER 5: SCORING AND REPORTING

The 2011 *Dakota STEP-A* assessment consists of two components: the Rating Form and Supporting Evidence. Special education teachers were required to submit Supporting Evidence (samples of student work) that supported ratings for tasks/skills selected from the Rating Form. The scores from the Rating Form were combined to determine an Achievement Level Rating (Introducing, Developing, Applying, or Advancing).

5.1 Scoring of the Assessment

The *Dakota STEP-A* consists of a teacher-administered Rating Form with a five-point rubric that is administered within a six week testing window. The rubric consists of five performance levels—Nonexistent, Minimal, Emerging, Progressing, and Accomplished. Two Rating Forms are completed for each student.

The student's special education teacher (Rater 1) is required to independently evaluate the student's performance relative to the tasks/skills on the grade-specific Rating Form. Rater 1 is also required to document examples of each student's work and provide Supporting Evidence for one task within each of the five content-specific indicators for Reading, five goals for Mathematics, and four (for grades 5 and 8) or five (for grade 11) goals for Science. The Supporting Evidence is not scored per se; it is provided to support the rating of selected tasks/skills on the Rating Form.

Rater 2 then independently evaluates the student's performance relative to the tasks/skills on the grade-specific Rating Form. Supporting Evidence, collected and documented by Rater 1 is provided to Rater 2 (one who works with the student on a regular basis, but cannot be the student's parent) in order for Rater 2 to independently complete the second Rating Form for each student. When complete, Rater 2 returns his or her completed Rating Form and the Supporting Evidence to Rater 1 for resolution.

Rater 1 then reviews Rater 2's scores on the Rating Form and completes the Score Resolution worksheet for any variances in scores. Score resolution is required for any task/skill for which there is Supporting Evidence provided. Resolution for remaining variances is recommended, but not required. The score resolutions were entered onto the resolution worksheet only; no ratings were changed on the rating form. The teacher then prepared the materials to be returned to Pearson, where raters from Pearson Performance Scoring Center evaluated the Supporting Evidence and Data Collection Form and provided their own ratings.

Rating Form Scoring Rubric

In September 2006, a committee of South Dakota special and general education teachers was convened to review and make recommendations for changes to the Rating Form scoring rubric. The rubric was revised to reflect five levels of skill attainment and was reviewed and approved by the SD DOE for the 2011 assessment use. Table 5.1 provides the rating form scoring rubric for the *Dakota STEP-A* assessment.

Table 5.1: Rating Form Scoring Rubric

Performance Level	Performance Description
Nonexistent Score Point 1	Student may be aware of or attend to the task in a highly structured setting but is currently unable to perform any part of the skill or demonstrate any knowledge and consequently unable to attempt without full physical prompting.
Minimal Score Point 2	Student attends to a task and can respond to some part of the knowledge and skills in at least one setting given significant physical, verbal, visual, or other prompting. The student may take a long time to respond but will indicate some attempt either correct or incorrect with accuracy up to 25%.
Emerging Score Point 3	After instruction and/or modeling, student performance may be somewhat inconsistent in terms of accuracy, but student can respond to most or all of task in at least one setting with moderate prompting if necessary with accuracy generally ranging from 25–49%.
Progressing Score Point 4	Student consistently performs task in more than one setting with minimal prompting (repeat directions no more than 5 times or repeat directions in middle of task) with an accuracy level generally ranging from 50–79% if performed independently or 50–100% with minimal prompting.
Accomplished Score Point 5	The student consistently and independently performs the task across multiple settings with an accuracy level generally ranging from 80–100%.

Supporting Evidence

The Supporting Evidence component of the *Dakota STEP-A* assessment consists of samples or documentation of student work collected by the special education teacher (Rater 1) for each of the reporting categories. Supporting Evidence submissions were to be typical of student performance on a specific task or skill. They should also be clear and understandable to an independent third party evaluating the work sample.

Supporting Evidence was to be provided in any format that allowed an independent evaluator to understand the student’s performance on a particular skill, such as:

- A work sample, such as a worksheet, an essay, or a model.
- Annotated photographs that show the student accomplishing the entire task.
- Videos of the student with an explanation of the task.
- Audiotapes with scripts of oral tasks, etc.

Tasks/activities aligned to the student’s IEP should be selected for Supporting Evidence. The sample submitted should provide evidence of performance on an entire task (or as much of the task as a student accomplished). For example, if photographs are submitted, the photos should show the entire process of completing the task, not just the end product. The mode of the work sample should take into account the skill and how it is performed (e.g., on paper for written work, on videotape for visually perceptible tasks, or on audiotape for oral tasks).

Supporting Evidence was collected for each of the following content objectives:

Reading—a total of five submissions, one from each of the following content indicators for students in grades 3 through 8 and 11.

1. Reading Vocabulary
2. Reading Comprehension Strategies

3. Response to Literacy
4. Reading of Diverse Works, Cultures, and Time Periods
5. Reading Informational Text

Mathematics—a total of five submissions, one from each of the following content goals for students in grades 3 through 8 and 11.

1. Algebra
2. Geometry
3. Measurement
4. Number Sense
5. Statistics and Probability

Science—a total of four or five submissions, one from each of the following content goals for students in grades 5, 8, and 11.

1. Nature of Science (grades 8 and 11 only)
2. Physical Science (grades 5, 8, and 11 only)
3. Life Science (grades 5 and 11 only)
4. Earth/Space Science (grades 5, 8, and 11 only)
5. Science, Technology, Environment, and Society (grades 5, 8, and 11 only)

Table 5.2 also presents a summary of the number of Supporting Evidence required by content and grade level.

Table 5.2: Number of Supporting Evidence by Content and Grade

Grade	Reading	Mathematics	Science	Total Number of Supporting Evidence
	Indicators	Goals	Goals	
3	5	5	0	10
4	5	5	0	10
5	5	5	4	14
6	5	5	0	10
7	5	5	0	10
8	5	5	4	14
11	5	5	5	15

Data Collection Form

Each submission of Supporting Evidence was required to be documented fully by Rater 1 on the Data Collection Form. Rater 1 completed one Data Collection Form for each submission of Supporting Evidence. This form was used to summarize and provide documentation of the student work sample and includes the following information:

1. The content area and Rating Form task number for which the evidence is being submitted.
2. The date(s) assessed and the number of trials.
3. The range of scores obtained.

4. The setting(s) and personnel.
5. The type of evidence submitted.
6. A narrative addressing each of the following for the Supporting Evidence:
 - Description of activity
 - Student response
 - Type and level of support (prompts/cues)
 - Frequency
 - Accuracy

The Data Collection Form was designed to provide Rater 2 and the Pearson PSC with detailed documentation to support the rating of the specific task selected from the Rating Form.

Score Resolution Worksheet

Once Rater 2 completed and returned the Supporting Evidence and second Rating Form to Rater 1, Rater 1 reviewed both Rating Forms to determine which, if any, tasks required score resolution. All tasks with Supporting Evidence that were not rated identically required resolution prior to submitting evidence to Pearson for scoring. Resolution of scores for tasks without Supporting Evidence was at the discretion of Rater 1.

Raters 1 and 2 reviewed the ratings and Supporting Evidence in order to reach consensus on a score. Ratings were not changed on the Rating Forms; a Score Resolution Worksheet was completed to document the agreed-upon score.

Completing the Score Resolution Worksheet involved the following steps

1. Complete the Rater 1 and Rater 2 information as well as the student information.
2. Identify the Rating Form task number(s) for which a consensus score is reached.
3. Enter the rating(s) for each task listed by Rater 1.
4. Enter the rating(s) for each task listed by Rater 2.
5. Enter the Final Resolution Rating.

The Data Collection Form and Score Resolution Worksheet are presented on the following pages.

Data Collection Form for Supporting Evidence

Dakota STEP-A

Data Collection Form for Supporting Evidence

Student: _____ Student Information Number (SIMS): _____

Grade: _____ School: _____

Date: _____ District: _____

Content Area: _____ Rating Form Item Number: _____

Dates Assessed and Number of Trials: _____

Range of Scores Obtained: _____

Setting and Personnel: One setting (specify) Multiple settings (specify)

Type of Evidence Included:

- Work sample
- Media – photo, video, audio
- Data Collection Form
- Other: _____

Purpose of the Task and the Expected Student Performance:

Include or attach a narrative addressing each of the following for the attached piece of evidence:

- ① Description of activity
- ② Student response
- ③ Type and level of support (prompts/cues)
- ④ Frequency
- ⑤ Accuracy

Pearson Performance Scoring Center Scoring of Supporting Evidence

The following sections outline the procedures used by the Pearson PSC to verify and maintain the reliability and accuracy of the scoring process and results. The role of PSC scorers is to evaluate the Supporting Evidence submitted for each task/skill as identified on the Rating Form, the Data Collection Form, the artifact, and other documentation of work (videos, photos, graded samples of work, etc.) and determine the student's achievement level.

Recruitment of Scorers and Selection of Scoring Supervisors

Scorers were recruited from a pool of college-degreed, experienced PSC scorers. All selected were teachers, some with special education experience. After completing formal training prior to scoring, scorers were continually monitored (back-reading) for quality and accuracy during scoring. Back-reading is the process by which a scoring director reviews a percentage of each scorer's work to assess accuracy. Any issues/deficiencies discovered are corrected with individual or group training. The scoring director assigned to 2011 *Dakota STEP-A* had 20 years teaching experience and a high level of expertise in training and working with scorers and conducting back-reading.

Training of PSC Scorers

Training began with an overview of the scoring process, followed by specifics on how to score the *Dakota STEP-A* Supporting Evidence, and introduction of quality-control procedures.

Scorers were trained to score all grade levels and content areas and were encouraged to take notes throughout the training process. The *Dakota STEP-A* scoring rules were presented and scorers were also provided with:

- Directions for Administering and Rating Forms for each grade.
- The criteria for acceptable Supporting Evidence.
- An in-depth review and discussion of the scoring rules and guidelines.

Scoring Procedure for Supporting Evidence

Each artifact within the Supporting Evidence was scored and 10% of the scores were back-read. If a score or condition code could not be determined based on established scoring rules, the SD DOE was consulted. All the scoring decisions or policy rulings were documented by the scoring director.

PSC scoring was completed with no knowledge of the rating given by Rater 1 and Rater 2. The purpose of the PSC scoring of the supporting evidence is to validate the scoring provided by Rater 1 and Rater 2; therefore one PSC Reader was assigned to score the entire portfolio of Supporting Evidence for the same student.

Fields completed after PSC scoring include:

- Evidence Not Aligned to Task/Skill (N): This classification will be given when work samples submitted are not at grade level. This will be carried as a score of 1. Circle the corresponding score (1) in the PSC Rating Column.

- Incomplete Evidence (I): This classification will be given when work samples submitted are not sufficient to score. This will be carried as a score of 1. Circle the corresponding score (1) in the PSC Rating Column.
- PSC Rating: Score obtained is to be circled (0, 1, 2, 3, 4, 5).
- NWS: No Work Samples: This is to be carried as a score of 0 (zero). Circle the corresponding score (0) in the PSC Rating Column.

Final Scores

The final scores of tasks/skills without Supporting Evidence were determined based on the extent of agreement between the two raters. When the two ratings were identical, the agreed-upon score was given on the task/skill. When the two ratings differed and the teacher decided that a resolution was necessary, the resolution score was taken. When the two ratings differed and no resolution was conducted, the average of the two ratings was taken.

For tasks/skills with Supporting Evidence, score resolution was required between Rater 1 and Rater 2 if their two ratings were not identical prior to submission of documents for scoring. The PSC score was compared to the agreed rating. If the PSC score was equal or adjacent to the agreed score, then the agreed score was given on the task/skill. If the PSC score was not adjacent or equal to the agreed score between Rater 1 and Rater 2, then the PSC score was given on the task/skill. Table 5.3 presents the rules for computing the final scores for an examinee from the PSC and rater resolution scores. The table shows that the PSC score may determine what the student’s final score can be. For example, if the resolution score is 5, but PSC score is 3 or 4, the student’s final score can be 4.

Table 5.3: Resolution Scores between PSC and Rater Resolution

If Resolution Score is	and PSC Score is equal or adjacent	Final Score is then
1	1,2	1
2	1,2,3	2
3	2,3,4	3
4	3,4,5	4
5	4,5	5

NOTE: If PSC score is not equal or adjacent then PSC score will override for Final score

Every submission of Supporting Evidence received a score, including the following instances:

- **N**: Supporting Evidence not aligned to Rating Form task/skill or off grade—the score for that task/skill was forced to one (1).
- **I**: Incomplete Supporting Evidence to evaluate—the score for that task/skill was forced to one (1).
- **NWS**: No work sample—the total score for a content area reporting category was forced to zero (0).

Number of Tasks/Skills and Points Possible

Table 5.4a and 5.4b detail the number of tasks/skills within each reporting category of each grade-level Rating Form and the total points possible (based on the Rating Form rubric shown in Table 5.1). The valid task/skill values are as following:

- **Valid Task/Skill Values for tasks/skills without supporting evidence:**
1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0
- **Valid Task/Skill Values for tasks/skills with supporting evidence:**
0.0, 1.0, 2.0, 3.0, 4.0, 5.0

Table 5.4a: Tasks/Skills and Points Possible by Content Area (Grades 3–6)

	3		4		5		6	
	Tasks/ Skills	Points	Tasks/ Skills	Points	Tasks/ Skills	Points	Tasks/ Skills	Points
TOTAL READING	35	175	35	175	35	175	35	175
Reading Vocabulary	7	35	7	35	7	35	7	35
Reading Comprehension Strategies	7	35	7	35	7	35	7	35
Response to Literacy	7	35	7	35	7	35	7	35
Reading of Diverse Works, Cultures, and Time Periods	7	35	7	35	7	35	7	35
Reading Informational Text	7	35	7	35	7	35	7	35
TOTAL MATH	84	420	77	385	84	420	77	385
Algebra	28	140	21	105	28	140	21	105
Geometry	14	70	14	70	14	70	14	70
Measurement	7	35	7	35	7	35	7	35
Number Sense	21	105	21	105	21	105	21	105
Statistics and Probability	14	70	14	70	14	70	14	70
TOTAL SCIENCE					70	350		
Nature of Science					0	0		
Physical Science					21	105		
Life Science					21	105		
Earth/Space Science					14	70		
Science, Technology, Environment, and Society					14	70		
TOTAL STEP-A	119	595	112	560	189	945	112	560

Table 5.4b: Tasks/Skills and Points Possible by Content Area (Grades 7, 8, and 11)

	7		8		11	
	Tasks/ Skills	Points	Tasks/ Skills	Points	Tasks/ Skills	Points
TOTAL READING	35	175	35	175	35	175
Reading Vocabulary	7	35	7	35	7	35
Reading Comprehension Strategies	7	35	7	35	7	35
Response to Literacy	7	35	7	35	7	35
Reading of Diverse Works, Cultures, and Time Periods	7	35	7	35	7	35
Reading Informational Text	7	35	7	35	7	35
TOTAL MATH	84	420	84	420	77	385
Algebra	28	140	28	140	21	105
Geometry	14	70	14	70	14	70
Measurement	7	35	7	35	7	35
Number Sense	21	105	21	105	21	105
Statistics and Probability	14	70	14	70	14	70
TOTAL SCIENCE			63	315	84	420
Nature of Science			14	70	14	70
Physical Science			14	70	21	105
Life Science			0	0	21	105
Earth/Space Science			21	105	14	70
Science, Technology, Environment, and Society			14	70	14	70
TOTAL STEP-A	119	595	182	910	196	980

5.2 Reporting of the Assessment

Results of the *Dakota STEP-A* assessment are provided to the SD DOE in a data file from which individual parent/student reports are produced. School roster paper reports are provided to districts for distribution to schools.

School Roster Report

The School Roster Report presents a listing of students who participated in the *Dakota STEP-A* assessment with their respective scores and achievement levels for the total assessment as well as each content area and reporting category. A sample School Roster Report is presented on the following page. Three of the scores reported in the report are defined below.

Total Points Possible: Maximum score points for the total assessment, as well as each content area and reporting category.

Actual Score: Actual score points for the total assessment as well as each content area and reporting category, including any adjusted scores for tasks/skills with Supporting Evidence.

Perf. Level (Performance or Achievement Level): It is determined by the actual point value for the total assessment as well as each content area and reporting category.

School Roster Report



**SD State Test of Educational Progress – Alternate
DISTRICT ROSTER REPORT
for
CENTRAL HS**

District: ABERDEEN

Grade: 11 Test Date: 02/07/2011

Student ID (in alphabetical order)	READING						MATHEMATICS						SCIENCE					
	TOTAL READING	Reading Vocabulary	Reading Comprehension	Literary Response	Reading Discourse/Works	Informational Texts	TOTAL MATHEMATICS	Algebra	Geometry	Measurement	Number/Size	Statistics & Probability	TOTAL SCIENCE	Nature of Science	Physical Science	Life Science	Earth/Space Science	Science, Technology, Environment & Society
Total Points Possible	175	35	35	35	35	35	365	105	70	35	105	70	420	70	105	105	70	70
CCCCCCCCCC, XXXXXXXXXXXX Actual Score Perf. Level	115.0 APP	22.0	25.0	25.0	24.0	19.0	235.0 APP	58.0	46.0	22.0	58.0	52.0	322.0 APP	60.0	80.0	78.0	53.0	51.0
JLXXXXXXXX, XXXXXXXXXXXX Actual Score Perf. Level	148.0 ADV	30.0	33.0	28.0	30.0	27.0	281.0 DEV	77.0	48.0	27.0	79.0	50.0	369.0 ADV	67.0	89.0	87.0	43.0	63.0
QQXXXXXXXX, XXXXXXXXXXXX Actual Score Perf. Level	148.0 APP	30.0	33.0	28.0	30.0	27.0	281.5 ADV	77.0	48.0	27.0	79.0	50.5	369.0 ADV	67.0	89.0	87.0	43.0	63.0
BBXXXXXXXX, XXXXXXXXXXXX Actual Score Perf. Level	22.0 APP	5.0	4.0	4.0	4.0	5.0	23.0 APP	4.0	5.0	5.0	4.0	5.0	342.0 DEV	50.0	80.0	78.0	53.0	41.0
AAXXXXXXXX, XXXXXXXXXXXX Actual Score Perf. Level	132.0 ADV	27.0	27.0	28.0	25.0	25.0	301.0	82.5	55.0	27.0	79.5	57.0	389.0 ADV	47.0	89.0	97.0	68.0	83.0
CCCCCCCCCC, XXXXXXXXXXXX Actual Score Perf. Level	155.5	29.5	33.5	32.0	30.5	30.0	374.5 ADV	101.5	70.0	35.0	101.0	67.0	362.0 ADV	27.0	89.0	87.0	63.0	67.0

CHAPTER 6: RELIABILITY

A test is reliable to the extent that a student's scores are nearly the same on repeated measurements with the same test. In other words, a test is characterized as reliable if it yields consistent scores.

It is important to note the relationship and distinction between reliability (consistency) and validity (meaningfulness). A valid test score must be reliable, but a reliable test score may not be valid. In other words, *reliability is a necessary but not sufficient condition for validity.*

- Reliability refers to the stability or consistency of assessment information, not the appropriateness of the assessment information collected.
- Reliability is a matter of degree; it does not exist on an all-or-none basis.
- Reliability is a necessary but not sufficient condition for validity. An assessment that provides inconsistent results cannot be relied upon to provide useful information. If important educational decisions are to be made from a test, the resulting score(s) must be highly reliable.

To evaluate the consistency of scores assigned by different raters, two or more raters must score the same set of student performances. Similarly, an evaluation of the consistency of scores obtained in response to different forms of a test or different collections of performance-based assessment tasks requires the administration of both test forms or collections of tasks with the same group of students. Whether the focus is on inter-rater consistency or the consistency across forms or collections of tasks, consistency may be expressed in terms of shifts in the relative standing of students in the group or in terms of the amount of variation to be expected in a student's score. We report consistency in the case of inter-rater judgments by means of a correlation coefficient and the percentage agreement; we report consistency across forms of a test by means of a correlation coefficient. Factors that can influence assessment results include the number of tasks/skills on a test and the objectivity of the scoring of the tasks/skills. In general with all things being equal, the larger the number of tasks on an assessment, the higher the reliability will be, because a longer assessment will most likely provide a better sample of the knowledge and skills being measured.

Reliability is the quantification of the consistency of results from a measurement. Measuring consistently is a necessary requirement for making meaningful score interpretations. For the *Dakota STEP-A* assessment, several aspects of reliability were considered, the first of which is the consistency of ratings in the Rating Form. For the Rating Form, reliability was measured by the consistency of ratings in a particular content area between Rater 1 and Rater 2 before resolution. Raters' agreement on the *Dakota STEP-A* assessment and on the corresponding reporting categories were calculated. The Cronbach's coefficient alpha was calculated for each of the tests and their respective reporting categories as an indication of the internal consistency of the tests. The statistics on tasks/skills were also provided on each of the *Dakota STEP-A* assessments.

Inter-rater Correlation

Inter-rater correlation was computed for the *Dakota STEP-A* Reading and Mathematics assessments for grades 3–8 and 11, and Science for grades 5, 8, and 11. Tables 6.1 to 6.3 contain the inter-rater correlation between the two ratings of Rater 1 and Rater 2 prior to the resolution.

In these tables, neither Rater 1 nor Rater 2 is a single individual across all students. In most cases, each student in the table is rated by a different pair of raters. Table 6.1 has the inter-rater correlation for the Reading assessment, Table 6.2 for the Mathematics assessment, and Table 6.3 for the Science assessment. Note that the sample sizes were relatively small for all of the grades, and the range of rater scores was large, suggesting notable differences in the capabilities of the students being rated. This possibility might explain why the standard deviation of the rater scores was relatively large.

Table 6.1: Inter-Rater Correlation of the Reading Assessment

Grade	Rater	N-count	Mean	Standard Deviation	Minimum	Maximum	Correlation
3	1	119	98.88	38.63	35	165	
	2	119	96.18	40.41	35	172	
4	1	135	102.54	37.16	35	166	
	2	135	100.83	38.14	35	170	
5	1	133	102.77	38.54	35	172	
	2	133	99.69	37.50	35	172	
6	1	144	110.64	36.68	35	175	
	2	144	110.23	37.38	35	173	
7	1	107	113.16	39.40	35	174	
	2	107	111.59	42.59	37	174	
8	1	111	115.21	37.69	35	171	
	2	111	115.22	39.00	35	171	
11	1	113	106.51	40.75	35	169	
	2	113	100.99	42.55	35	170	

Data file 05/24/2011.

Table 6.2: Inter-Rater Correlation of the Mathematics Assessment

Grade	Rater	N-count	Mean	Standard Deviation	Minimum	Maximum	Correlation
3	1	119	241.73	101.08	84	402	
	2	119	240.27	103.91	84	407	
4	1	135	235.11	90.05	77	380	
	2	135	226.49	89.52	77	377	
5	1	133	237.57	96.61	85	408	
	2	133	230.80	93.67	85	411	
6	1	144	237.72	80.87	77	379	
	2	144	233.88	83.66	77	376	
7	1	107	259.60	97.67	85	416	
	2	107	254.95	104.64	85	419	
8	1	111	264.26	95.19	84	399	
	2	111	264.56	98.03	84	416	
11	1	113	225.66	94.59	77	375	
	2	113	213.08	96.34	77	370	

Data file 05/24/2011.

Table 6.3: Inter-Rater Correlation of the Science Assessment

Grade	Rater	N-count	Standard		Minimum	Maximum	Correlation
			Mean	Deviation			
5	1	133	218.21	83.88	71	344	.96
	2	133	214.41	82.66	70	345	
8	1	111	197.45	72.94	63	309	.94
	2	111	200.82	74.36	63	310	
11	1	113	268.68	111.29	84	414	.83
	2	113	252.25	116.55	84	415	

Data file 05/24/2011.

The Pearson correlation coefficient between the two raters' scores on the Rating Form ranges from .87 to .97 for the Reading, .85 to .97 for the Mathematics, and .83 to .96 for the Science test.

Percentage of Rating Agreement

Rater agreement can be expressed in terms of perfect agreement (percentage of cases where the first rating equals the second rater's scores). High inter-rater agreement implies that the scoring process and scoring rules are being applied consistently across raters. The percentage of rater agreement prior to resolution was computed for the Reading, Mathematics, and Science assessments. The percentage of perfect agreement between the two raters ranges from 74% to 81% for the Reading, 75% to 83% for the Mathematics, and 73% to 81% for the Science assessment. Only 1 to 2 percent of ratings had 3 points difference (Reading and Mathematics grade 11, and Mathematics grade 3 had 2%), and 3% of rating had 4 points difference (Mathematics and Science grade 11 had 3%). The score value differences for each grade and subject area are shown in Table 6.4.

Tables 6.5 through 6.7 contain the percentage of rating agreement for the reporting categories for the *Dakota STEP-A* Reading, Mathematics, and Science assessments. The rating value difference listed in the tables represents the difference between two raters' scores on the reporting categories. The perfect agreement between the two raters prior to resolution ranges from 74% to 82% for Reading Vocabulary of the Reading assessment, 72% to 79% for Reading Comprehension Strategies, 72% to 79% for Response to Literacy, 73% to 83% for Reading of Diverse Works, Cultures, and Time Periods, and 71% to 82% for Reading Informational Text. Similarly, the percentage of perfect agreement between the two raters for the reporting categories of the Mathematics test was in the range of 73% to 84%, and Science assessments was in the range of 72% to 84%. There is a 1% or 2% incidence of a three-point difference in two ratings. Occasionally a 2%, 3%, or 4% incidence of a 4-point rating difference existed in two ratings for Reading, Mathematics, or Science. Task/skill rating agreement is listed in Appendix F for the *Dakota STEP-A* Reading, Mathematics, and Science assessments, respectively. Percentage of students with Supporting Evidence by task/skill is presented in Appendix G.

Table 6.4: Percentage of Rating Agreement for the *Dakota STEP-A* Assessment

Test	Grade	Rating Value Difference				
		0	1	2	3	4
Reading	3	74	20	4	1	1
	4	76	19	4	1	0
	5	79	18	2	1	0
	6	80	18	2	0	0
	7	76	18	4	1	1
	8	74	21	4	1	0
	11	81	13	3	2	2
Mathematics	3	76	17	4	2	1
	4	76	19	4	1	0
	5	80	16	3	1	0
	6	81	16	2	0	0
	7	75	18	4	1	1
	8	75	20	4	1	0
	11	83	11	2	2	3
Science	5	79	17	4	1	0
	8	73	21	4	1	0
	11	81	12	3	1	3

Data file 05/24/2011.

Table 6.5: Percentage of Rating Agreement for the Reading Reporting Categories

Grade	Reporting Category	Rating Value Difference				
		0	1	2	3	4
3	Vocabulary	79	14	4	1	2
	Comprehension	73	20	4	1	1
	Literacy	72	21	4	2	1
	Diverse Works	74	20	5	1	0
	Informational Text	71	21	6	2	0
4	Vocabulary	75	19	4	1	0
	Comprehension	77	18	4	1	0
	Literacy	78	18	3	1	0
	Diverse Works	77	18	5	1	1
	Informational Text	75	21	4	1	0
5	Vocabulary	81	16	2	1	0
	Comprehension	76	19	3	1	0
	Literacy	79	18	2	0	0
	Diverse Works	81	17	2	0	0
	Informational Text	78	18	3	1	0
6	Vocabulary	82	16	2	0	0
	Comprehension	78	20	2	0	0
	Literacy	78	19	3	0	0
	Diverse Works	79	18	2	0	0
	Informational Text	82	16	2	0	0
7	Vocabulary	76	16	5	2	2
	Comprehension	73	20	5	2	0
	Literacy	75	21	3	1	0
	Diverse Works	77	17	5	1	0
	Informational Text	77	17	4	2	1
8	Vocabulary	74	20	4	2	0
	Comprehension	72	23	3	1	0
	Literacy	73	22	4	1	0
	Diverse Works	73	21	6	1	0
	Informational Text	75	21	3	1	0
11	Vocabulary	80	14	2	2	2
	Comprehension	79	14	3	2	2
	Literacy	79	15	3	2	2
	Diverse Works	83	11	2	2	2
	Informational Text	82	12	3	2	2

Data file 05/24/2011.

Table 6.6: Percentage of Rating Agreement for the Mathematics Reporting Categories

Grade	Reporting Category	Rating Value Difference				
		0	1	2	3	4
3	Algebra	76	18	4	2	1
	Geometry	74	18	5	2	1
	Measurement	74	19	4	2	0
	Number Sense	78	15	4	1	1
	Statistic	75	18	5	1	1
4	Algebra	76	19	4	1	0
	Geometry	76	18	5	1	0
	Measurement	78	18	3	1	0
	Number Sense	78	17	3	1	0
	Statistic	73	20	5	1	0
5	Algebra	81	16	3	1	0
	Geometry	80	16	4	1	0
	Measurement	82	15	3	0	0
	Number Sense	80	16	3	1	0
	Statistic	78	17	4	1	0
6	Algebra	80	17	3	0	0
	Geometry	83	14	2	1	0
	Measurement	84	14	1	0	0
	Number Sense	81	16	2	0	0
	Statistic	80	18	2	0	0
7	Algebra	75	19	4	1	1
	Geometry	75	18	4	2	1
	Measurement	75	19	5	1	1
	Number Sense	77	17	4	1	2
	Statistic	73	20	6	1	0
8	Algebra	75	20	4	1	0
	Geometry	75	21	3	1	0
	Measurement	77	20	2	1	0
	Number Sense	73	22	4	1	0
	Statistic	76	19	4	1	0
11	Algebra	83	11	2	2	2
	Geometry	82	11	3	2	3
	Measurement	83	12	2	1	2
	Number Sense	83	10	2	1	3
	Statistic	81	12	4	1	2

Data file 05/24/2011.

Table 6.7: Percentage of Rating Agreement for the Science Reporting Categories

Grade	Reporting Category	Rating Value Difference				
		0	1	2	3	4
5	Physical Science	78	17	4	1	0
	Life Science	78	18	3	0	0
	Earth Science	80	15	4	1	0
	Science, Society	78	16	4	2	1
8	Nature Science	72	23	4	1	0
	Physical Science	76	20	4	1	0
	Earth Science	73	23	4	0	0
	Science, Society	73	20	6	1	0
11	Nature Science	84	8	3	1	4
	Physical Science	80	13	3	1	4
	Life Science	81	12	2	2	3
	Earth Science	81	12	3	1	3
	Science, Society	80	12	4	1	3

Data file 05/24/2011.

Internal Consistency and Task/Skill Statistics

Reliability indices for the *Dakota STEP-A* assessments were computed using the Cronbach's coefficient alpha. Alpha estimates reliability as a function of variation in the sample of tasks/skills used to assess an examinee's proficiency. Variation due to the occasion on which the test was taken is not included in this reliability estimate.

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum_i \sigma_i^2}{\hat{\sigma}_x^2} \right)$$

k is the number of tasks/skills in the test, σ_i^2 is the variance of the task/skill i , and $\hat{\sigma}_x^2$ is the total test variance. The overall standard error of measurement (SEM) for raw scores was computed using the traditional formula:

$$SEM = SD\sqrt{1 - reliability}$$

SD is the standard deviation of the total test. The SEM represents the uncertainty related to the raw score, which is a constant across all raw scores. It is the standard deviation of the raw scores that an examinee would hypothetically obtain if he or she took the test anew an infinite number of times (i.e., without the benefit of practice effects).

Tables 6.8 to 6.10 have the Cronbach's coefficient alpha, SEM, and other descriptive information for each reporting category and respective subject. The Cronbach's coefficient alpha for the Reading assessment is around 0.99 across the grades. For the Reading Vocabulary reporting category, the reliability is from 0.90 to 0.95. For the Reading Comprehension Strategies reporting category, the reliability ranges from 0.95 to 0.96. For the Response to Literacy reporting category, it is from 0.93 to 0.96. It is from 0.93 to 0.95 for the Reading of Diverse Works, Cultures, and Time Periods reporting category; and for the Reading Informational Text reporting category it is from

0.93 to 0.96. The SEM ranges from 3.9 to 4.9 for the Reading assessment and from 1.6 to 2.3 for the reporting categories.

The reliability coefficient for the Mathematics assessment is around 0.99, while the reliability for each of the reporting categories ranges from 0.98–0.99 (Algebra), 0.97–0.98 (Geometry), 0.93–0.95 (Measurement), 0.98–0.99 (Number of Sense), and 0.97–0.98 (Statistic) across the grades. The SEM ranges from 5.9 to 7.0 for the Mathematics test and from 1.9 to 3.7 for the reporting categories.

The reliability for the total Science assessment is around 0.99 and that for the reporting categories are all above 0.98. The SEM ranges from 5.0 to 5.8 for the Science assessment across the grades, while it ranges from 2.2 to 3.1 for the reporting categories.

Statistical Analyses

Appendix H contains the average rating on each task/skill, which includes average rating, and average rating divided by total points. Tables 6.11 and 6.12 have the descriptive statistics for the average rating on tasks/skills, and task/skill average rating divided by task/skill total points for each of the *Dakota STEP-A* assessments. The mean of the task/skill average rating ranges from 2.8 to 3.3 for the Reading assessment, 2.8 to 3.2 for the Mathematics test, and 3.1 to 3.2 for the Science assessment. The task/skill average rating divided by number of points is from 0.6 to 0.7 for the Reading test, 0.6 to 0.7 for the Mathematics assessment, and around 0.6 for the Science test.

Table 6.8: Cronbach's Coefficient Alpha for the Reading Assessment

Grade	Subject	N-Count	Number of Items	Points Possible	Mean	Standard Deviation	Reliability	SEM
3	Vocabulary	119	7	35	23.26	9.11	0.949	2.061
	Comprehension		7	35	20.82	8.39	0.948	1.922
	Literacy		7	35	18.97	8.39	0.946	1.950
	Diverse Works		7	35	16.61	7.60	0.928	2.036
	Informational Text		7	35	18.17	8.00	0.937	2.004
	Reading		7	35	97.84	39.05	0.985	4.852
4	Vocabulary	135	7	35	20.53	7.36	0.899	2.345
	Comprehension		7	35	22.56	8.14	0.950	1.813
	Literacy		7	35	19.07	7.58	0.937	1.905
	Diverse Works		7	35	19.19	8.03	0.943	1.922
	Informational Text		7	35	20.58	8.30	0.929	2.212
	Reading		7	35	101.93	37.96	0.985	4.683
5	Vocabulary	133	7	35	19.58	7.50	0.934	1.933
	Comprehension		7	35	21.90	8.04	0.946	1.865
	Literacy		7	35	19.51	7.30	0.933	1.890
	Diverse Works		7	35	18.48	7.65	0.939	1.888
	Informational Text		7	35	21.85	8.22	0.943	1.964
	Reading		7	35	101.32	37.32	0.986	4.388
6	Vocabulary	144	7	35	22.65	7.52	0.942	1.812
	Comprehension		7	35	23.52	7.33	0.947	1.690
	Literacy		7	35	22.23	7.44	0.945	1.746
	Diverse Works		7	35	21.06	7.47	0.945	1.744
	Informational Text		7	35	21.00	7.35	0.937	1.852
	Reading		7	35	110.47	35.90	0.987	4.049
7	Vocabulary	107	7	35	24.42	7.81	0.935	1.994
	Comprehension		7	35	22.64	8.63	0.964	1.648
	Literacy		7	35	21.24	8.16	0.959	1.659
	Diverse Works		7	35	21.85	8.54	0.946	1.978
	Informational Text		7	35	22.26	7.85	0.936	1.990
	Reading		7	35	112.40	39.57	0.988	4.329
8	Vocabulary	111	7	35	22.94	7.86	0.954	1.693
	Comprehension		7	35	23.94	7.82	0.958	1.605
	Literacy		7	35	23.04	7.93	0.959	1.613
	Diverse Works		7	35	23.26	7.69	0.949	1.734
	Informational Text		7	35	22.28	7.29	0.940	1.779
	Reading		7	35	115.46	37.58	0.989	3.854
11	Vocabulary	113	7	35	20.68	8.06	0.947	1.857
	Comprehension		7	35	21.41	8.12	0.960	1.618
	Literacy		7	35	21.20	8.07	0.943	1.924
	Diverse Works		7	35	20.74	7.96	0.949	1.796
	Informational Text		7	35	20.36	8.10	0.963	1.565
	Reading		7	35	104.39	39.51	0.990	3.936

Data file 05/24/2011.

Table 6.9: Cronbach's Coefficient Alpha for the Mathematics Assessment

Grade	Subject	N-Count	Number of Items	Points Possible	Mean	Standard Deviation	Reliability	SEM
3	Algebra	119	28	140	78.08	33.80	0.988	3.719
	Geometry		14	70	45.23	17.45	0.977	2.672
	Measurement		7	35	21.01	8.91	0.949	2.002
	Number Sense		21	105	58.34	25.36	0.981	3.497
	Statistics		14	70	38.41	17.58	0.978	2.619
	Mathematics		84	420	241.07	100.24	0.995	6.997
4	Algebra	135	21	105	64.57	25.32	0.986	2.982
	Geometry		14	70	46.24	17.19	0.975	2.704
	Measurement		7	35	21.00	8.10	0.938	2.021
	Number Sense		21	105	58.81	24.49	0.981	3.369
	Statistics		14	70	40.23	16.45	0.972	2.737
	Mathematics		77	385	230.85	89.04	0.995	6.560
5	Algebra	133	28	140	80.48	32.47	0.987	3.652
	Geometry		14	70	39.02	15.92	0.972	2.680
	Measurement		7	35	20.03	7.72	0.936	1.946
	Number Sense		21	105	55.05	23.22	0.979	3.347
	Statistics		14	70	40.13	16.41	0.976	2.552
	Mathematics		84	420	234.72	93.80	0.995	6.669
6	Algebra	144	21	105	62.50	22.04	0.978	3.248
	Geometry		14	70	45.00	15.36	0.971	2.619
	Measurement		7	35	21.70	7.54	0.926	2.055
	Number Sense		21	105	63.02	22.31	0.981	3.060
	Statistics		14	70	43.45	15.31	0.975	2.404
	Mathematics		77	385	235.67	80.83	0.994	6.206
7	Algebra	107	28	140	85.56	33.96	0.989	3.540
	Geometry		14	70	43.39	17.07	0.979	2.467
	Measurement		7	35	20.62	8.01	0.944	1.893
	Number Sense		21	105	65.53	25.77	0.985	3.150
	Statistics		14	70	41.92	16.75	0.980	2.394
	Mathematics		84	420	257.01	99.83	0.996	6.344
8	Algebra	111	28	140	88.81	31.15	0.989	3.255
	Geometry		14	70	45.14	16.07	0.980	2.288
	Measurement		7	35	22.30	8.09	0.942	1.952
	Number Sense		21	105	66.06	25.04	0.987	2.850
	Statistics		14	70	42.79	15.97	0.978	2.392
	Mathematics		84	420	265.10	94.83	0.996	5.937
11	Algebra	113	21	105	58.02	25.38	0.988	2.833
	Geometry		14	70	39.78	16.53	0.975	2.591
	Measurement		7	35	20.35	8.24	0.940	2.023
	Number Sense		21	105	60.75	26.74	0.989	2.806
	Statistics		14	70	40.31	16.66	0.978	2.462
	Mathematics		77	385	219.21	91.88	0.996	5.925

Data file 05/24/2011.

Table 6.10: Cronbach's Alpha Coefficient for the Science Assessment

Grade	Subject	N-Count	Number of Items	Points Possible	Mean	Standard Deviation	Reliability	SEM
5	Physical Science	133	21	105	64.14	24.96	0.985	3.020
	Life Science		21	105	64.79	24.96	0.985	3.073
	Earth/Space Science		14	70	41.88	16.75	0.977	2.549
	Science and Society		14	70	45.85	16.93	0.979	2.464
	Science		70	350	216.65	82.24	0.995	5.751
8	Nature of Science	111	14	70	44.59	16.59	0.982	2.208
	Physical Science		14	70	46.82	16.55	0.978	2.456
	Earth/Space Science		21	105	63.95	23.85	0.987	2.768
	Science and Society		14	70	43.60	16.69	0.983	2.194
	Science		63	315	198.96	72.34	0.995	5.045
11	Nature of Science	113	14	70	44.12	18.93	0.985	2.305
	Physical Science		21	105	63.13	27.11	0.989	2.892
	Life Science		21	105	65.81	28.31	0.991	2.680
	Earth/Space Science		14	70	43.40	18.58	0.985	2.296
	Science and Society		14	70	42.90	18.79	0.986	2.256
Science	84	420	259.36	110.75	0.997	5.688		

Data file 05/24/2011.

Table 6.11: Descriptive Statistics of Average Rating on Task/Skill

Test	Grade	Mean	Standard Deviation	Minimum	Q1 ¹	Median	Q3 ²	Maximum
Reading	3	2.8	0.5	2.0	2.4	2.7	3.1	4.0
	4	2.9	0.5	1.9	2.6	2.8	3.3	4.1
	5	2.9	0.4	2.2	2.6	2.9	3.2	3.8
	6	3.2	0.3	2.5	2.9	3.1	3.4	3.8
	7	3.2	0.5	2.5	2.9	3.1	3.5	4.4
	8	3.3	0.4	2.6	2.9	3.3	3.6	4.1
	11	3.0	0.4	2.4	2.7	2.9	3.2	4.0
Mathematics	3	2.9	0.5	1.8	2.4	2.9	3.2	4.2
	4	3.0	0.5	1.8	2.6	3.0	3.4	4.2
	5	2.8	0.5	1.8	2.4	2.8	3.1	4.2
	6	3.1	0.5	2.2	2.6	3.0	3.5	4.1
	7	3.1	0.5	2.3	2.7	3.0	3.4	4.1
	8	3.2	0.5	2.3	2.8	3.0	3.6	4.2
	11	2.8	0.4	2.2	2.5	2.7	3.1	3.8
Science	5	3.1	0.5	2.2	2.7	3.0	3.5	4.0
	8	3.2	0.4	2.4	2.9	3.1	3.5	4.2
	11	3.1	0.3	2.4	2.9	3.1	3.3	3.8

¹ Q1 is the first quartile.² Q3 is the third quartile.

Data file 05/24/2011.

Table 6.12: Summary Statistics of Task/Skill Average Rating Divided by Points on Task/Skill

Test	Grade	Mean	Standard Deviation	Minimum	Q1 ¹	Median	Q3 ²	Maximum
Reading	3	0.56	0.10	0.40	0.48	0.54	0.62	0.81
	4	0.58	0.10	0.38	0.52	0.56	0.65	0.82
	5	0.58	0.09	0.44	0.52	0.57	0.65	0.76
	6	0.63	0.07	0.49	0.57	0.62	0.69	0.76
	7	0.64	0.10	0.51	0.58	0.61	0.70	0.87
	8	0.66	0.08	0.53	0.58	0.66	0.73	0.81
	11	0.60	0.08	0.48	0.54	0.58	0.64	0.80
Mathematics	3	0.57	0.10	0.37	0.49	0.57	0.65	0.84
	4	0.60	0.10	0.37	0.53	0.60	0.69	0.85
	5	0.56	0.10	0.35	0.48	0.56	0.61	0.83
	6	0.61	0.10	0.44	0.53	0.59	0.70	0.83
	7	0.61	0.10	0.46	0.54	0.59	0.68	0.82
	8	0.63	0.11	0.45	0.55	0.60	0.72	0.83
	11	0.57	0.08	0.45	0.51	0.55	0.63	0.77
Science	5	0.62	0.10	0.43	0.54	0.61	0.69	0.81
	8	0.63	0.09	0.48	0.57	0.62	0.69	0.84
	11	0.62	0.06	0.48	0.57	0.62	0.67	0.76

¹ Q1 is the first quartile.² Q3 is the third quartile.

Data file 05/24/2011.

CHAPTER 7: VALIDITY

Validity refers to the adequacy and appropriateness of the interpretations made from test scores with regard to the intended use. Of all the essential characteristics of a good test, none surpasses validity. If a test score is not valid for the intended purpose used, it has little or no value. Validity is specific. That is, a test score may be valid for the intended purpose and not others.

There are several key aspects of validity that must be addressed.

- Validity is concerned with the general question, “To what extent will this assessment information or test score help me make appropriate inferences?”
- Validity is a matter of degree.
- Validity involves an overall evaluative judgment.
- Alignment is an important component of validity evidence.

Evidence of the validity of a score on a test or an assessment instrument generally takes two forms: (a) how the test or assessment instrument behaves given the content covered, and (b) the effects of using the information provided by the test or assessment instrument. Questions commonly asked about a test’s behavior concern its relation to other measures of a similar construct, its ability to predict future performances, and its coverage of a content domain. Questions about the use of a test typically focus on the test’s abilities to reliably differentiate individuals into groups and to guide teachers’ instructional actions with regard to the subject matter covered by the test. Some questions also arise about unintended uses of a test or an assessment instrument. For example: “Does use of the instrument result in discriminatory practices against various groups of individuals?” and “Is the test used to evaluate others, such as parents or teachers, whom it does not directly assess?” These questions concern a relatively new area of validity referred to as “consequential aspects of validity” (Messick, 1989).

Alignment and Validity

Alignment is a key element in the creation of standards-based achievement tests and rating forms. Alignment is the extent “to which expectations and assessments are in agreement and serve in conjunction with one another to guide the system toward students learning what they are expected to know and do” (Webb, Horton, & O’Neal, 2002, p.1). Determining the alignment between an assessment and the content is meant to assess an important piece of evidence in any validity argument. Lane (1999) outlined procedures for evaluating the validity of assessments designed to measure students’ mastery of state content standards. According to Lane, two forms of evidence are pertinent to determining the validity of these assessments: (a) the extent to which the state assessment reflects the state’s content standards, and (b) the extent to which the curriculum offered to students reflects the content standards. By establishing the alignment of a large-scale assessment to state standards, test developers provide important evidence of the validity of test results as a measure of students’ mastery of the core curriculum.

To evaluate the validity related evidence of the *Dakota STEP-A* assessment, alignment studies were conducted to verify that the standards-based tasks/skills of the assessment were aligned with the Extended Content and Alternate Academic Achievement Descriptors for Students with Significant Cognitive Disabilities for each corresponding subject and grade level.

The University of North Carolina conducted an alignment study of the operational *Dakota STEP-A* materials in October 2008. The evaluation was conducted based on eight criteria. The following summary is taken from the *South Dakota Alternate Assessment Based on Alternate Achievement Level Alignment Report* prepared for the South Dakota State Department of Education (Flowers, et. al., 2008).

Criterion 1: The content is academic and includes the major domains/ strands of the content area as reflected in state and national standards (e.g., reading, math, science).

For reading, math, and science almost all of the South Dakota STEPA items, alternate content standards, and alternate achievement descriptors were rated academic. Some of the science alternate achievement descriptors did not have enough detail for the content experts to rate. Most of the nonacademic science descriptors were rated as a presymbolic/concrete level of communication, which is appropriate given the characteristics of some students with significant cognitive disabilities. The only recommendation for this criteria is that the state review the science alternate achievement descriptors that were rated as “too vague” to reword for greater detail.

Criterion 2: The content is referenced to the student’s assigned grade level (based on chronological age).

All South Dakota STEP-A items were referenced to the student’s assigned grade level. In reading, all items, seven per indicator, were aligned to the five grade-level indicators of reading. For math, the grade level strands of algebra, geometry, measurement, number sense, and statistics and probability were referenced. Science items were referenced to the strands of (a) nature of science, (b) physical science, (c) life science, (d) earth/space science, and (e) science, technology, environment, and society. South Dakota intentionally designed the South Dakota STEP-A to cover the full range of grade-level content standards.

Criteria 3: The focus of achievement maintains fidelity with the content of the original grade level standards (content centrality) and when possible, the specified performance.

Almost all the content domains exceeded the 90% suggested standard for alternate assessments except for STEP-A items in reading (82%) and science (89%). The primary reason for the lack of content centrality reported by the content experts was due to a simple mismatch to the grade-level standard (i.e., content experts believed that the item was aligned with a different grade-level standard than provided by the state).

Criterion 4: The content differs from grade level in range, balance, and DOK, but matches high expectations set for students with significant cognitive disabilities.

The STEP-A across all academic domains had exceptional depth of knowledge, range-of-knowledge, and balance of representation. STEP-A items were aligned to all grade-level content standard. There were items distributed across all levels of depth of

knowledge, from awareness level to analysis/synthesis/evaluate level. The range-of-knowledge and balance of representation suggested the alternate assessments had exceptional content coverage.

Criterion 5: There is some differentiation in achievement across grade levels or grade bands.

Overall the majority of strands for the alternate content standards and AA items demonstrated differentiation in achievement across grade levels. Three strands of math (i.e., algebra, statistics and probability, and number sense) and most strands in ELA were found to have more than a few repeated or similar items across grade levels. Also *Alignment Study –South Dakota 5* most of the supporting evidence submitted by the teachers was rated age appropriate (23%) or age neutral (54%).

Criterion 6: The expected achievement for students is for the students to show learning of grade referenced academic content.

Overall the STEP-A system has the potential for high student inference about student learning academic content that is linked to grade-level content standards. In the rating scale used for the checklist tasks and pieces of evidence, more credit is given to higher levels of accuracy with less prompting. Credit also is awarded for applying skills across settings. In standard setting, consideration should be given to the inference that can be made from where cut scores are established.

Criterion 7: The potential barriers to demonstrating what students know and can do are minimized in the assessment.

The alternate assessment items were accessible to students at all levels of symbolic communication and many of the items allowed flexibility in response mode. The assessment system allows for accommodations and adaptations for all students.

Criterion 8: The instructional program promotes learning in the general curriculum.

While there clearly is training on instructional alignment provided, further development of this may be needed to help teachers link to instruction to grade-level content standards, increase expectations across grade bands, and utilize inclusive educational opportunities whenever appropriate. More information on promoting student mastery (fading prompts) and teaching across materials/activities may also be needed if recommendations are followed to change expectations for proficiency.

Table 7.1 shows the correlation of the *Dakota STEP-A* Reading, Mathematics, and Science assessments, and it also contains the descriptive statistics of the assessments. The correlation between Reading and Mathematics ranges from .94 to .96, while it ranges from .93 to .95 for Reading and Science, and .93 to .97 for the Mathematics and Science assessments across the grades. The correlation coefficient between the total raw score and reporting category score and among reporting categories is presented in Appendix I.

The high correlations between and among the *Dakota STEP-A* Reading, Mathematics, and Science assessments may indicate the following possible implications. The structure of abilities of the population of students who take the alternate assessment may be more integrated than that for the students who take the statewide assessment. The alternate assessment may measure one dominant dimension that may not be reading, mathematics, or science but something more basic and common to all three subject areas (e.g., ability to follow directions, attention, or motivation). As indicated in the Scoring section, raters 1 and 2 rate students on all three subjects. Therefore, another possible explanation for the high observed correlations may be that they are an artifact of having the same individual rate all three subjects for a student. That rating may simply reflect the same generalized perception of the student across all three tests.

Table 7.1: Correlation of the *Dakota STEP-A* Assessments

Grade	Test	N-count	Descriptive Statistics			Correlation	
			Points Possible	Mean	Standard Deviation	Mathematics	Science
3	Reading	119	175	97.84	39.05	.96	
	Mathematics	119	420	241.07	100.24		
4	Reading	135	175	101.93	37.96	.94	
	Mathematics	135	385	230.85	89.04		
5	Reading	133	175	101.32	37.32	.96	.93
	Mathematics	133	420	234.72	93.80		
	Science	133	350	216.65	82.24		
6	Reading	144	175	110.47	35.90	.96	
	Mathematics	144	385	235.67	80.83		
7	Reading	107	175	112.40	39.57	.96	
	Mathematics	107	420	257.01	99.83		
8	Reading	111	175	115.46	37.58	.96	.95
	Mathematics	111	420	265.10	94.83		
	Science	111	315	198.96	72.34		
11	Reading	113	175	104.39	39.51	.96	.95
	Mathematics	113	385	219.21	91.88		
	Science	113	420	259.36	110.75		

Data file 05/24/2011.

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APPENDIX A: Alternate Academic Achievement Descriptors

South Dakota 3rd Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Decode words to build vocabulary. • Apply comprehension strategies to explain presented text. • Fluently read text. • Describe literary elements of the main characters, plot, and setting. • Compare genres of fiction and nonfiction. • Describe a personal connection to multicultural and/or historical text. • Identify and use glossary and table of contents. • Choose reference materials, with guidance, to locate information. • Locate and use information from one reference material.
Applying	<ul style="list-style-type: none"> • Use symbols, letters, sounds, and word recognition skills to state corresponding words. • Apply comprehension strategies to restate presented text. • Fluently read representations, phrases, and sentences. • Identify literary elements of the main characters and setting. • Recognize the genres of fiction and nonfiction. • Identify a personal connection to multicultural and/or historical text. • Identify table of contents. • Locate reference materials. • Access reference materials to gain information with assistance.
Developing	<ul style="list-style-type: none"> • Identify letters and sounds within a word. • Discuss presented text. • Fluently read representations and words. • Identify a character. • Match/sort genres. • Match cultural elements. • Locate/match an organizational feature of text. • Identify reference materials. • Identify information from reference material with assistance.
Introducing	<ul style="list-style-type: none"> • Demonstrate recognition of sounds. • Attend/respond to presented text. • Attend and respond to representations and stories. • Attend/respond to the presentation of a story. • Attend/respond to presented genres. • Attend/respond to stories of different cultures. • Attend/respond to presentation of organizational features of text. • Attend/respond to presentation of reference materials. • Attend or respond to information from reference material.

South Dakota 4th Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify word patterns. • Use comprehension strategies to gain meaning from text. • Read aloud to construct meaning from text using a guided comprehension strategy. • Fluently read aloud and silently to comprehend text. • Discuss text structures within genres. • Describe purpose of text features. • Describe how word choice affects meaning. • Compare the characteristics of multicultural texts, historical texts, and time period texts. • Use glossary, table of contents, and index page. • Gather information from different sources.
Applying	<ul style="list-style-type: none"> • Locate different components in a word pattern. • Use personal experiences to relate to text. • Determine meaning by using comprehension strategies. • Process text/representations at fluent rate for comprehension. • Identify text structures within genres. • Identify text features. • Recognize that word choice affects meaning. • Identify a characteristic of multicultural texts, historical texts, and time period texts. • Use glossary and table of contents. • Gather information from a source.
Developing	<ul style="list-style-type: none"> • Match symbols, letters, sounds, and word recognition skills to state corresponding words. • Choose a book based upon personal experience. • Identify details from the story. • Fluently read familiar phrases. • Match/sort or categorize text structures within genres. • Match/sort or categorize text features. • Match the word that has the same meaning as presented in text. • Match/sort one or more of the characteristics of multicultural texts, historical texts, and time period texts. • Locate glossary and table of contents. • Locate a source of information.
Introducing	<ul style="list-style-type: none"> • Identify letters and sounds. • Choose a book of interest. • Attend/respond to presented text. • Use representations to make choices about books. • Respond fluently to representations/words. • Attend/respond to text structures within genres. • Attend/respond to text features. • Attend/respond to dramatization of presentation of word choice. • Attend/respond to characteristics of one of the following presented texts: multicultural, historical, or time period. • Attend/respond to an activity including information on glossary and table of contents. • Attend/respond to an activity related to gathering information.

South Dakota 5th Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify word parts and categories to determine meaning of words. • Identify word meaning using prior knowledge and context clues. • Give examples of a comprehension strategy to construct meaning. • Apply an element of fluency to comprehend text. • Distinguish between fiction, nonfiction and poetry • Identify literary elements of character, theme and setting. • Give an example of a literary device in fiction and nonfiction. • Discuss text from various cultures, time periods, and/ or geographical locations. • Select information from two reference sources. • Identify the author’s purpose in persuasive or argumentative text. • Choose two or more reference sources.
Applying	<ul style="list-style-type: none"> • Identify word parts to determine meaning of words. • Identify word meaning using prior knowledge or context clues. • Select a comprehension strategy to construct meaning. • Identify elements of fluency to comprehend text. • Recognize fiction, nonfiction and poetry. • Locate the literary elements of character and setting. • Identify a literary device within fiction and nonfiction. • Identify text from various cultures, time periods, and/ or geographical locations. • Select information from a reference source. • Identify the author’s purpose in persuasive text. • Locate a reference source.
Developing	<ul style="list-style-type: none"> • Identify word parts. • Determine word meaning using context clues. • Recognize a comprehension strategy to construct meaning. • Match an element of fluency to comprehend text. • Identify fiction and nonfiction text • Recognize the literary elements of character or setting. • Recognize a literary device in fiction and nonfiction. • Match various cultures, time periods, and/or geographical locations in text. • Identify information from a reference source. • Respond to author’s purpose in persuasive text. • Identify a reference source.
Introducing	<ul style="list-style-type: none"> • Respond to word parts to determine meaning of words. • Respond to word meaning using prior knowledge or context clues • Respond to a comprehension strategy. • Respond to an element of fluency to comprehend text. • Attend to fiction and nonfiction text • Respond to literary elements of character or setting. • Attend/respond to a literary device fiction and nonfiction. • Attend/respond to various cultures in text. • Attend/respond to information from a reference source. • Attend/respond to a persuasive text. • Attend/respond to a reference source.

South Dakota 6th Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Arrange word meanings using word parts. • Determine context to comprehend words. • Distinguish between direct and implied meaning to comprehend text. • Apply an element of fluency to comprehend text. • Identify a text structure in fiction, nonfiction and poetry. • Explain a literary element in text. • Identify a literary device in fiction, nonfiction and poetry. • Compare and/or contrast text from various cultures, time periods, and/ or historical events. • Compare and contrast information on a topic from one informational text. • Explain the credibility of informational texts. • Locate two or more sources to find information.
Applying	<ul style="list-style-type: none"> • Classify words using word parts and their meanings. • Recognize context used to comprehend words. • Identify meaning within text. • Identify elements of fluency to comprehend text. • Recognize a text structure in fiction, nonfiction and poetry. • Recognize literary elements in text. • Recognize literary devices in fiction, non-fiction and poetry. • Compare text from various cultures, time periods, and/ or historical events. • Compare information on a topic from informational texts. • Determine the credibility of informational texts. • Locate a source to find information.
Developing	<ul style="list-style-type: none"> • Match word parts to word meaning. • Respond to meaning within the text. • Identify meaning within text. • Match a text structure in fiction and nonfiction. • Match a literary element in text. • Match a literary device in fiction and nonfiction. • Identify text from various cultures, time periods, or historical events. • Locate information on a topic from an informational text • Identify a credible source. • Identify a source to find information.
Introducing	<ul style="list-style-type: none"> • Respond to word parts and their meanings. • Recognize meaning found in context. • Respond to meaning within the text. • Respond to elements of fluency in text. • Respond to a text structure in fiction. • Respond to a literary element in text. • Respond to a literary device in fiction, nonfiction. • Attend/respond to text read from various cultures or historical events. • Respond to information from an informational text. • Respond to a non-credible source. • Respond to an informational text.

South Dakota 7th Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Examine word parts to determine meaning. • Explain how word choice affects meaning. • Demonstrate meaning using comprehension strategies. • Read fluently to comprehend text ability level text. • Explain text structures in fiction, nonfiction and poetry. • Explain literary elements in fiction, non fiction and poetry. • Explain literary devices in fiction, nonfiction and poetry. • Discuss a theme in text from cultures, time periods, and/or historical events. • Select two or more reference sources which will provide the best information. • Select and classify data from informational text. • Select credible and accurate data from informational text. • Examine author's purpose in informational text.
Applying	<ul style="list-style-type: none"> • Arrange word meaning using word parts. • Identify word choice affects meaning. • Demonstrate meaning using a comprehension strategy. • Apply an element of fluency to comprehend text. • Identify text structures for fiction, nonfiction and poetry. • Identify literary elements in fiction, nonfiction and poetry. • Identify literary devices in fiction, nonfiction and poetry. • Compare/contrast text from various cultures, time periods, and/ or historical events. • Choose which reference source which will provide the best information. • Locate data from informational text. • Locate credible information in two or more sources. • Recognize author's purpose in informational text.
Developing	<ul style="list-style-type: none"> • Identify word parts and their meanings. • Recognize how word choice affects meaning. • Uses a comprehension strategy. • Recognize elements of fluency. • Match a text structure in fiction and nonfiction • Recognize a literary element in fiction, nonfiction and poetry. • Recognize a literary device in fiction and nonfiction. • Match text from various cultures, time periods, and/or historical events. • Choose a reference source to locate information. • Recognize data from an informational text. • Recognize information from a source. • Match representation depicting the author's purpose in an informational text.
Introducing	<ul style="list-style-type: none"> • Respond to root words and meaning. • Attend/respond to how word choice affects meaning. • Respond to comprehension strategies. • Respond to elements of fluency in text. • Respond to a text structure in fiction and nonfiction. • Respond to a literary element in fiction, nonfiction and poetry. • Respond to a literary device in fiction and nonfiction. • Attend/respond to text from various cultures, time periods, and/or historical events. • Attend to a reference source. • Attend to data from an informational text. • Attend to information from a source. • Attend to author's purpose in an informational text.

South Dakota 8th Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Classify words by origins to extend vocabulary. • Utilize reading strategies to increase comprehension. • Read fluently to comprehend text. • Explain the author’s use of literary elements in fiction, nonfiction, drama and poetry. • Examine one effect of the author’s use of literary devices. • Summarize literary selections about local cultures and history to create meaning. • Analyze information about a topic gathered from informational text. • Explain the differences between expository and procedural text. • Categorize new information to enhance understanding.
Applying	<ul style="list-style-type: none"> • Classify words by origins. • Demonstrate reading strategies to comprehend text. • Read fluently to comprehend ability-level text. • Identify the author’s use of literary elements in fiction, nonfiction, drama and poetry. • Identify the effects of the author’s use of literary devices. • Apply meaning from literary selections about local cultures and history to create meaning. • Read information about a topic gathered from two or more informational texts. • Recognize expository and procedural text. • Use new information to enhance understanding.
Developing	<ul style="list-style-type: none"> • Identify word origins. • Imitate reading strategies to increase comprehension. • Imitate fluency strategies to gain meaning from text. • Recognize the author’s use of literary elements in fiction, nonfiction, drama and poetry. • Recognize the effects of the author’s use of literary devices. • Develop meaning from literary selections about local cultures and history to create meaning. • Collect information about a topic gathered from informational text. • Match examples of expository and procedural text. • Identify new information to enhance understanding.
Introducing	<ul style="list-style-type: none"> • Attend/respond to word origins. • Attend/respond to reading strategies to increase comprehension. • Attend/respond to fluency strategies to gain meaning from text. • Attend to the author’s use of literary elements in fiction, nonfiction, drama and poetry. • Attend/respond to the effects of the author’s use of literary devices. • Attend/respond to meaning from literary selections about local cultures and history to create meaning. • Attend/respond to information about a topic gathered from informational text. • Attend/respond to the differences in expository and procedural text. • Attend/respond to new information to enhance understanding.

South Dakota 11th Grade Reading Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Apply cause and effect clues to define new words. • Explain how diction affects the interpretation of text. • Read fluently to comprehend text. • Identify and explain literary devices. • Give an example of a text within cultural, geographical, and historical context. • Determine factors that influence the credibility of informational sources.
Applying	<ul style="list-style-type: none"> • Use cause and effect to define new word clues. • Describe how diction affects the interpretation of text. • Read fluently to comprehend ability level text. • Explain literary devices. • Apply characteristics of a text within cultural, geographical, and historical context. • Identify factors that influence the credibility of informational sources.
Developing	<ul style="list-style-type: none"> • Match cause and effect clues to define new words. • Indicate an example of how diction affects the interpretation of text. • Apply fluency strategies to gain meaning from text. • Identify literary devices. • Recognize a text within cultural, geographical, and historical context. • Recognize factors that influence the credibility of informational sources.
Introducing	<ul style="list-style-type: none"> • Identify cause and effect clues to define new words. • Respond to how diction affects the interpretation of text. • Attend/respond to fluency strategies to gain meaning for text. • Attend/respond to literary devices. • Attend/respond to a text within cultural, geographical, and historical context. • Attend/respond to factors that influence the credibility of informational sources.

South Dakota 3rd Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Apply patterns to solve problems. • Explain the rules of 0 and 1 in addition, subtraction, and multiplication. • Apply relational symbols (<, >, =) to compare numbers. • Create and solve problems involving addition and subtraction. • Develop and explain relationships between inverse operations using manipulatives. • Create linear patterns. • Create number patterns using basic facts.
Applying	<ul style="list-style-type: none"> • Recognize, create, and extend pattern. • Use the numbers 0 and 1 in addition, subtraction, and multiplication. • Recognize relational symbols (<, >, =). • Solve problems involving addition and subtraction of whole numbers. • Develop relationships between inverse operations using manipulatives. • Extend linear patterns. • Use number patterns and relationships to learn basic facts.
Developing	<ul style="list-style-type: none"> • Recognize and create a pattern. • Use the numbers 0 and 1 in addition and subtraction. • Use concepts of equal to, greater than, and less than to compare numbers. • Recognize plus or minus symbols. • Manipulate pictures and objects to create sets and make comparisons between sets. • Tell what is missing from a pattern. • Identify and create a pattern using familiar objects.
Introducing	<ul style="list-style-type: none"> • Identify a pattern. • Use the numbers 0 and 1 in addition. • Use manipulatives to demonstrate the concepts of equal to, greater than, and less than. • Use manipulatives to demonstrate that addition is adding more and subtraction is taking away. • Match objects to create sets. • Copy a pattern. • Reproduce a pattern.

South Dakota 3rd Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Compare geometric shapes: square, circle, triangle. • Create lines, line segments, and rays. • Explain similarities and differences between geometric figures.
Applying	<ul style="list-style-type: none"> • Recognize and sort geometric shapes: square, circle, triangle, and rectangle. • Identify points, lines, line segments, and rays. • Identify similarities and differences between geometric figures.
Developing	<ul style="list-style-type: none"> • Match rectangle, circle, and square of different size and color. • Create a line segment by connecting two points. • Match and sort similar figures.
Introducing	<ul style="list-style-type: none"> • Match simple two-dimensional shapes. • Identify points. • Recognize similar figures.

South Dakota 3rd Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Relate common events with specific times on the clock. • Compare the values of quarter, dime, nickel, and penny. • Classify tools for measuring length (feet), weight (pounds), and capacity (gallons). • Select and use the appropriate measurement tools in the standard system.
Applying	<ul style="list-style-type: none"> • Read and tell time on an analog clock to the nearest hour. • Identify and name the value of a quarter, dime, nickel, and penny. • Identify U.S. Customary tools for measuring length (feet), weight (pounds), and capacity (gallons). • Identify the appropriate measurement tools in the standard system.
Developing	<ul style="list-style-type: none"> • Recognize hour and minute hands. • Identify quarter, dime, nickel, and penny. • Compare familiar objects by size, weight, and capacity. • Measure common objects.
Introducing	<ul style="list-style-type: none"> • Recognize the difference between morning, afternoon, and night. • Sort quarter, dime, nickel, and penny. • Sort familiar objects by size and weight. • Recognize measurement tools.

South Dakota 3rd Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Compare numerals to 100. • Create patterns using skip counting to solve problems. • Name and write fractions from visual representation. • Add and subtract two digit whole numbers with regrouping. • Compare estimates to actual answers.
Applying	<ul style="list-style-type: none"> • Read, write, count, and order numerals to 100. • Counts by ones, fives, and tens. • Identify and represent one half and one quarter as parts of a whole. • Add and subtract whole numbers to two digits. • Round two-digit whole numbers to the nearest tens.
Developing	<ul style="list-style-type: none"> • Read and count numerals to 100. • Counts by ones and fives. • Recognize wholes, halves and quarters. • Subtract one digit numbers. • Identify place value to tens.
Introducing	<ul style="list-style-type: none"> • Counts to 50. • Counts by ones. • Manipulate up to four parts of an object to assemble a whole. • Add one digit numbers. • Recognize the difference between an estimate and an exact amount.

South Dakota 3rd Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Create a graph from gathered data. • Analyze data on a graph, table, or chart. • Create a list of events that are certain or impossible.
Applying	<ul style="list-style-type: none"> • Answer simple questions from data represented in a graph. • Identify data on a graph, table, or chart. • Identify events that are impossible or possible by using concrete materials.
Developing	<ul style="list-style-type: none"> • Gather data on familiar objects. • Label parts of a graph, table, or chart. • List possible causes of a simple event.
Introducing	<ul style="list-style-type: none"> • Collect, sort, and organize objects by different characteristics. • Identify parts of a graph, table, or chart. • List possible outcomes of a simple event.

South Dakota 4th Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Create and solve number sentences using whole numbers. • Explain the commutative property of addition and multiplication. • Compare the relationship between addition and subtraction. • Select appropriate symbols (<, >, =) to compare numbers. • Create and solve a simple equation using variables. • Solve word problems by converting to algebraic statements. • Solve simple problems by creating number patterns.
Applying	<ul style="list-style-type: none"> • Solve number sentences using whole numbers. • Use a model to identify commutative property of addition and multiplication. • Show relationship between addition and subtraction. • Use inequalities/equalities to compare numbers. • Determine the value of variables in simple equations. • Create number sentences that represent one-step word problems using whole numbers. • Identify number patterns to solve simple problems.
Developing	<ul style="list-style-type: none"> • Solves addition and subtraction problems using a number line. • Solves addition problems. • Understand the terms and corresponding symbols for addition (+) and subtraction (-). • Understand terms and corresponding symbols for equal to, less than, and greater than. • Solve a simple equation. • Given a number sentence, solve a one-step word problem. • Identify and complete a number pattern.
Introducing	<ul style="list-style-type: none"> • Represent and differentiate simple addition and subtraction number sentences using pictures, objects, and/or manipulatives. • Understands that addition is adding to a group. • Match/manipulate pictures and objects to create sets and make comparisons between sets. • Compare sets of objects to determine more, less, or equal. • Use concrete materials to model and solve simple equations. • Solve simple number sentences using the basic operations of addition, subtraction, and multiplication with a model. • Identify a number pattern.

South Dakota 4th Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Create plane figures: pentagon, hexagon, and octagon. • Draw parallel, perpendicular, and intersecting lines. • Compare geometric figures using the terms congruent and similar.
Applying	<ul style="list-style-type: none"> • Identify the following plane figures: pentagon, hexagon, and octagon. • Identify parallel and intersecting lines. • Sort and compare geometric figures using size, shape, and orientation.
Developing	<ul style="list-style-type: none"> • Recognize and name circle, rectangle, and triangle. • Describe and draw a line. • Recognizes that a shape remains the same shape when it changes position.
Introducing	<ul style="list-style-type: none"> • Match shapes with corresponding symbols and shapes in the environment. • Identify a line. • Identify geometric figures.

South Dakota 4th Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify equivalent periods of time and solve problems. • Count and compare collections of coins to solve problems. • Decide which U.S. Customary tools of length (feet), weight (pounds), and capacity (gallons) to use. • Measure length to the nearest 1/2 inch.
Applying	<ul style="list-style-type: none"> • Identify equivalent periods of time. • Count and compare collections of coins. • Use the U.S. Customary tools of length (feet), weight (pounds), and capacity (gallons). • Measure length to the nearest inch.
Developing	<ul style="list-style-type: none"> • Identifies parts of the day (e.g. morning, afternoon, evening), days of the week, and months of the year. • Identifies, sorts, and names coins by their value. • Describe the similarities between two pictures, objects, and/or manipulatives using measurement concepts. • Identify the appropriate measurement tools in the standard system.
Introducing	<ul style="list-style-type: none"> • Identifies today/tomorrow/yesterday on a calendar. • Identifies coins. • Compare familiar objects by size, weight, or other attributes involving measurement. • Measure length using nonstandard units.

South Dakota 4th Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Calculate and solve problems involving addition and subtraction with numbers from 1 to 100. • Find multiples of whole numbers through 10. • Identify improper fractions, proper fractions, and mixed numbers. • Recall multiplication facts through 9s. • Compare money amounts written with decimals. • Use estimates in whole numbers and money to determine if a given answer is reasonable.
Applying	<ul style="list-style-type: none"> • Read, write, order, and compare whole numbers from 1 to 100. • Count by twos, threes, fives, and tens. • Compare common fractions on a number line. • Recognize above and below zero temperatures on a thermometer. • Apply the whole number system in multiplication. • Write money as decimals with dollars and cents. • Use estimation in problem solving with a number line.
Developing	<ul style="list-style-type: none"> • Read, write, and count numbers to 100. • Counts by ones, fives, and tens. • Identify and compare parts of a whole (quarters, thirds, halves) and determine relative size of each ($1/2$, $1/3$, $1/4$) using manipulatives. • Recognize and read above zero temperatures on a thermometer. • Use repeated addition to demonstrate the multiplication process. • Recognize and use decimals. • Compare estimations with exact answers.
Introducing	<ul style="list-style-type: none"> • Counts to 100. • Counts by ones and tens. • Recognize wholes and halves. • Recognizes that a thermometer measures temperature. • Uses concrete materials to combine equal sets of groups to show repeated addition. • Recognize decimals. • Round two digit numbers.

South Dakota 4th Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Interpret data from graphical representations. • Identify and use the median to solve simple problems. • Predict the outcome of events as likely or unlikely.
Applying	<ul style="list-style-type: none"> • Represent simple data in different formats. • Identify the median when given a small order data set of whole number data points (odd number of points). • Classify events as likely or unlikely.
Developing	<ul style="list-style-type: none"> • Names the category that has the most, least, or the same on a graph. • Describe or draw conclusions about data using concrete objects and/or manipulatives. • Identify events that are impossible or possible by using concrete materials.
Introducing	<ul style="list-style-type: none"> • Collect, match, and/or sort objects with similar characteristics. • Describe characteristics of an object, picture, or a manipulative. • List possible outcomes of a simple event.

South Dakota 5th Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Use a variable to write addition and subtraction expressions. • Recognize and use the associative property of addition and multiplication. • Write addition and subtraction equations using the set of whole numbers and find a solution. • Solve and identify information needed to solve two-step word problems using whole numbers. • Solve problems using patterns involving more than one operation.
Applying	<ul style="list-style-type: none"> • Use a variable to write an addition expression. • Recognize use the associative property of addition and multiplication. • Write addition equations using the set of whole numbers and find a solution. • Identify information needed to solve two-step word problems using whole numbers. • Solve problems using patterns with whole numbers.
Developing	<ul style="list-style-type: none"> • Write an addition expression. • Demonstrate the associative property of addition by grouping items. • Identify the missing variable in an equation. • Identify information needed to solve one-step word problems using whole numbers. • Identify and continue and pattern with pictorial representations.
Introducing	<ul style="list-style-type: none"> • Identify an addition expression. • Identify groups that are equal. • Using a set of pictures or objects students will identify an equation. • Identify the numbers used in the word problem. • Demonstrate a pattern.

South Dakota 5th Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Describe and identify triangles, pyramids, rectangular prisms, and cones. • Draw, identify and describe acute, obtuse, and right angles. • Determine and draw lines of symmetry in rectangles, squares, and triangles. • Identify a turn, slide, or flip (rotation, translation, or reflection) of a given figure. • Use two-dimensional coordinate grids to find locations and simple figures.
Applying	<ul style="list-style-type: none"> • Identify the characteristics of triangles, pyramids, rectangular prisms, and cones. • Identify acute, obtuse, and right angles. • Determine lines of symmetry in rectangles, squares, and triangles. • Identify a turn or flip (rotation or reflection) of a given figure. • Use two-dimensional coordinate grids to find locations.
Developing	<ul style="list-style-type: none"> • Identify triangles, pyramids, rectangular prisms, and cones. • Identify acute, obtuse, and right angles. • Determine if the line is symmetric. • Demonstrate a turn or flip using a concrete shape. • Identify a given location simple coordinate map.
Introducing	<ul style="list-style-type: none"> • Identify triangles, rectangular prisms, and cones. • Identify angles. • Compare two parts of a whole. • Slide an object from one position to another. • Find a location when given direction words such as up, down, or over.

South Dakota 5th Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Determine elapsed time within an a.m. or p.m. period on the quarter-hour. • Solve problems involving money including making change and counting it back. • Use and convert U.S. Customary units of length (inches, feet, yard), and weight (ounces, pounds). • Use appropriate tools to measure length, weight, area, and temperature in problem solving.
Applying	<ul style="list-style-type: none"> • Determine elapsed time within an a.m. or p.m. period on the half-hour. • Solve problems involving money including making change. • Use and/or convert U.S. Customary units of measurement. • Use appropriate tools to measure length, weight, and temperature in problem solving.
Developing	<ul style="list-style-type: none"> • Determine elapsed time within an a.m. or p.m. period on the hour. • Count money. • Use U.S. Customary units of length (inches, feet, yard), and weight (ounces, pounds). • Use appropriate tools to measure length, weight, and temperature.
Introducing	<ul style="list-style-type: none"> • Identify and give the date for today, tomorrow, and yesterday. • Sort and group collections of coins. • Identify longer, shorter, heavier, or lighter. • Choose the appropriate tool needed for length, weight, or temperature.

South Dakota 5th Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Read, write, order, and compare whole numbers from .01 to 1000. • Identify factors of whole numbers up to 20. • Label negative integers on a number line. • Find the quotient of whole numbers using single-digit divisors. • Identify equivalent fractions including simplification. • Use different estimation strategies to solve problems using whole numbers.
Applying	<ul style="list-style-type: none"> • Read, write, order, and compare whole numbers up to 1000. • Distinguish if numbers are prime and identify factors for numbers. • Locate negative integers on a number line. • When given a divisor students will divide a given set of objects into groups. • Identify equivalent fractions including simplification. • Use different estimation strategies to solve problems using whole numbers.
Developing	<ul style="list-style-type: none"> • Order and compare numbers up to 1000. • Identify factors of whole numbers up to 9. • Recognize negative numbers on a thermometer. • Divide a set of given objects into groups. • Use a number line to identify equivalent fractions. • Estimate whole numbers by rounding to the nearest tens.
Introducing	<ul style="list-style-type: none"> • Order whole numbers. • Group items by a given number. • Identify numbers on a number line. • Divide a set of given objects into equal groups. • Identify a fraction of a whole. • Identify the concept of few or many.

South Dakota 5th Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Gather, graph, and draw conclusions from data. • Find the probability of a simple event doing an activity.
Applying	<ul style="list-style-type: none"> • Gather, graph, and/or interpret data. • Classify probability of simple events as certain, likely, unlikely, or impossible.
Developing	<ul style="list-style-type: none"> • Answer simple questions about the data. • Indicate if an event is possible or impossible.
Introducing	<ul style="list-style-type: none"> • Indicate greater than or less when referring to items on a graph. • Determine if an event is possible.

South Dakota 6th Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Write simple algebraic expressions involving addition or multiplication using whole numbers. • Write and solve equations involving the inverse operations of addition and subtraction using the set of whole numbers. • Identify and graph ordered pairs in quadrant 1 on a coordinate plane. • Solve one-step problems involving ratios and rates. • Use concrete materials, graphs, and algebraic statements to represent problem situations.
Applying	<ul style="list-style-type: none"> • Write simple algebraic expressions involving addition or multiplication using whole number. • Write and solve addition equations using the set of whole numbers. • Graph ordered pairs in Quadrant 1 on a coordinate plane. • Identify and write simple ratios & rates. • Use concrete materials and graphs to represent problem situations.
Developing	<ul style="list-style-type: none"> • Illustrate simple algebraic expressions involving addition using whole numbers. • Identify the missing variable in an equation. • Identify ordered pairs in Quadrant 1 on a coordinate plane. • Identify simple ratios. • Use concrete materials or select a graph that represents the problem situation.
Introducing	<ul style="list-style-type: none"> • Copy an algebraic expressions involving addition using whole numbers. • Using a set of pictures or objects students will identify an equation. • With guidance students will trace the path of ordered pairs. • Count the items used to make a ratio. • Select the correct illustration or set of concrete materials that represents the problem situation.

South Dakota 6th Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Draw, identify and describe the characteristics of triangles and quadrilaterals. • Identify and describe angles. • Use basic figures to demonstrate congruency, lines of symmetry, reflection, perpendicular lines, and parallel lines.
Applying	<ul style="list-style-type: none"> • Identify and describe the characteristics of triangles and quadrilaterals. • Identify and describe angles. • Use basic figures to demonstrate lines of symmetry, reflection, perpendicular lines, and parallel lines.
Developing	<ul style="list-style-type: none"> • Differentiate between different types of triangles and quadrilaterals. • Differentiate between different types of angles. • Identify lines of symmetry, reflection, perpendicular lines, and parallel lines in figure.
Introducing	<ul style="list-style-type: none"> • Match similar triangles and quadrilaterals. • Match similar angles. • Trace lines of symmetry, perpendicular lines, and parallel lines in figure.

South Dakota 6th Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Use and convert appropriate unit of measurement within a measurement system. • Identify the perimeter and the area of squares and rectangles.
Applying	<ul style="list-style-type: none"> • Select, use, and/or convert appropriate unit of measurement within a measurement system. • Find the perimeter and/or the area of squares and rectangles.
Developing	<ul style="list-style-type: none"> • Select and use the appropriate unit of measurement within a measurement system. • Identify the perimeter.
Introducing	<ul style="list-style-type: none"> • Select the appropriate unit of measurement within a measurement system. • Trace the perimeter.

South Dakota 6th Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Order and compare fractions, decimals and whole numbers. • Find factors up to 20 and multiples of whole numbers. • Add, multiply, and subtract decimals. • Use various strategies to solve one-step decimal problems.
Applying	<ul style="list-style-type: none"> • Order and compare whole number and decimals • Find factors and multiples of whole numbers, and identify prime numbers. • Add and subtract decimals. • Use various strategies to solve one- and two-step problems using addition and subtraction of whole numbers.
Developing	<ul style="list-style-type: none"> • Order and compare decimals and whole numbers using a number line. • Identify the missing factor using a multiplication chart and count by 2's, 3's, 5's, and/or 10's to find multiples. • Add and subtract whole numbers. • Identify what operation or operations will be used to solve the problem.
Introducing	<ul style="list-style-type: none"> • Identify greater than or less to order whole numbers. • Group items by a given number. • Indicate the concept of adding to or taking away. • Identify the numbers used to solve the problem.

South Dakota 6th Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Display the data using bar and line graphs and draw conclusions from data displayed in a graph. • Find the probability of a simple event through an activity.
Applying	<ul style="list-style-type: none"> • Interpret data using bar and line graphs and answer questions from data displayed in a graph. • Explain the probability of a simple event using manipulatives.
Developing	<ul style="list-style-type: none"> • Use graphs to answer simple questions from the data displayed in a graph. • Identify if an event is likely, certain, unlikely, or impossible.
Introducing	<ul style="list-style-type: none"> • Indicate greater than or less when referring to items on a graph. • Indicate if an event is possible or impossible.

South Dakota 7th Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Create and evaluate algebraic expressions involving addition, subtraction, and multiplication of whole numbers. • Identify and use associative, commutative, distributive, and identity properties involving whole numbers • Write and solve one-step 1st degree inequalities with one variable, using whole numbers. • Construct a graph from a table. • Create and solve multi-step problems involving rates. • Create one-step algebraic expressions representing a pattern.
Applying	<ul style="list-style-type: none"> • Write and simplify addition and subtraction algebraic expressions. • Identify and use associative, commutative, and identity properties involving whole numbers. • Write and solve one-step 1st degree equations with one variable, using whole numbers. • Identify and graph ordered pairs on a coordinate plane and inequalities on a number line. • Model and solve multi-step problems involving rates. • Use patterns to solve problems (graphs, table, and equations)
Developing	<ul style="list-style-type: none"> • When given the values for variables the student will simplify addition and subtraction algebraic expressions. • Use objects and manipulatives to demonstrate the associative and commutative and identity properties. • Use symbols and manipulatives to solve equations. • Graph a number line. • Model and solve rates with a one to one correlation. • Use manipulatives to create patterns.
Introducing	<ul style="list-style-type: none"> • Use symbolic representation of unknown or variable quantities. • Identify situations in which the order of events makes a difference and situations in which the order does not make a difference (commutative and non-commutative tasks) • Use manipulatives to complete a task or solve a problem. • When given a direction and a demonstration using a simple positional concept, student will understand that direction by giving the appropriate response. • Follow order of operations. • Given a pattern students will repeat the pattern.

South Dakota 7th Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Construct polygons with up to 10 sides. • Differentiate between geometric figures • Compare ways shapes can be transformed.
Applying	<ul style="list-style-type: none"> • Identify and describe polygons having up to 10 sides. • Identify and describe geometric figures. • Demonstrate ways that shapes can be transformed.
Developing	<ul style="list-style-type: none"> • Classify polygons having up to 10 sides. • Draw points, lines, and lines segments. • Use a variety of materials to move objects left, right, up, and down.
Introducing	<ul style="list-style-type: none"> • Classify three basic shapes (circle, triangle, square). • Identify points, lines, and lines segments. • Select identical shapes.

South Dakota 7th Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Compare units of standard and metric measurement. • Given the formulas students will find the perimeter and area of three and four sided figures.
Applying	<ul style="list-style-type: none"> • Use and convert appropriate units of standard and metric measurement. • Given the formula students will find the perimeter and area of four sided figures (quadrilaterals).
Developing	<ul style="list-style-type: none"> • Measure and determine which measurement unit is appropriate. • Given the lengths and widths of a four-sided figure (quadrilateral), students will add the four sides to determine the perimeter.
Introducing	<ul style="list-style-type: none"> • When given two pictures, objects, and/or manipulatives, students are able, to indicate which is less/more, longer/shorter. • Trace a four-sided shape (quadrilateral.)

South Dakota 7th Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Read, write, order, and compare integers, decimals and percents. • Identify the common multiples and factors of whole numbers. • Add, subtract and multiply integers and common fractions. • Use various strategies to write one-step problems involving positive fractions.
Applying	<ul style="list-style-type: none"> • Order and compare integers, decimals, and percents. • Find and use multiples and factors of whole numbers. • Add and subtract integers and positive common fractions. • Use various strategies to solve one step problems involving positive fractions.
Developing	<ul style="list-style-type: none"> • Order and compare numbers. • Student will skip count by 2, 5, and 10. • Add and subtract numbers. • Identify how many parts of a whole they have and express that in the form of a fraction.
Introducing	<ul style="list-style-type: none"> • Order numbers. • Group numbers by 2, 5 and 10. • Given a set of manipulatives, students will add manipulatives to and take manipulatives from the set. • Using manipulatives, students will separate into parts.

South Dakota 7th Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Gather and organize data to analyze mode and range. • Make predictions from data displayed in a graph. • Find the probability of a specific outcome.
Applying	<ul style="list-style-type: none"> • Gather and organize data to find mode and range. • Display data on a graph, table, or chart and make predictions from the data. • Predict a simple specific outcome.
Developing	<ul style="list-style-type: none"> • Gather and organize data. • Display data on a graph, table, or chart. • Recognize whether the outcome of a simple event is possible or impossible.
Introducing	<ul style="list-style-type: none"> • Participate in activities to gather and organize data. • Gather information to answer questions of interest. • Given a repeated action, student will predict the outcome of given action.

South Dakota 8th Grade Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Use the identity, associative, commutative, and distributive properties to simplify 1st degree algebraic expressions using whole numbers. • Write and solve one-step 1st degree equations with one variable using the set of integers. • Describe and determine linear relationships through graphs. • Explain the relationship between numbers when a change in the first variable affects the second variable. • Create tables and graphs to describe and represent relations.
Applying	<ul style="list-style-type: none"> • Identify and use the identity, associative, and communicative properties to simplify 1st degree algebraic expressions whole numbers. • Write and solve one-step 1st degree equations and inequalities with one variable, using whole numbers. • Identify linear relationships through graphs. • Demonstrate how the change in one variable affects/changes another variable in an equation. • Describe and represent relations using tables and graphs.
Developing	<ul style="list-style-type: none"> • Use objects and manipulatives to demonstrate the associative and commutative and identity properties. • Use symbols and manipulatives to solve equations and inequalities. • Extend a pattern using simple addition and subtraction. • Match/manipulate pictures and objects to create sets and make comparisons between sets. • When given data students will record onto table/graph.
Introducing	<ul style="list-style-type: none"> • Identify situations in which the order of events makes a difference and situations in which the order does not make a difference (commutative and non-commutative tasks). • Use manipulatives to complete a task or pattern. • Complete a pattern. • Acknowledge a change in patterns/sets. • Organize objects into groups.

South Dakota 8th Grade Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Classify prisms, pyramids, cylinders and cones. Solve proportions that express the relationships between corresponding parts of similar quadrilaterals and triangles
Applying	<ul style="list-style-type: none"> Identify and describe prisms, pyramids, cylinders, and cones. Identify proportions that express the relationships between corresponding parts of similar quadrilaterals and triangles.
Developing	<ul style="list-style-type: none"> Classify prisms, pyramids, cylinders and cones. Given quadrilaterals and triangles, the student will sort according to similar proportions.
Introducing	<ul style="list-style-type: none"> Match prisms, pyramids, cylinders, and cones. Given two quadrilaterals, the student will identify which object is larger/smaller.

South Dakota 8th Grade Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Differentiate proportional measurement problems with rational numbers. Find perimeter/circumference and area of circles and triangles.
Applying	<ul style="list-style-type: none"> Solve proportional measurement problems with rational number measurements. When given formulas students will find circumference/perimeter and area of circles and triangles.
Developing	<ul style="list-style-type: none"> Solve time and calendar problems. Compare and order concrete circles and triangles.
Introducing	<ul style="list-style-type: none"> Participate in measurement activities with other students. Participate in measurement activities with other students in order to identify measurement symbols.

South Dakota 8th Grade Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Represent numbers in a variety of forms and identify the subsets of rational numbers. • Read, write, and compute within any subset of rational numbers. • Use various strategies to solve multi-step problems involving rational numbers.
Applying	<ul style="list-style-type: none"> • Represent numbers in a variety of forms and identify the subsets of rational numbers. • Read, write, and compute within any subset of positive rational numbers. • Use various strategies to solve multi-step problems involving positive rational numbers.
Developing	<ul style="list-style-type: none"> • Order and compare numbers. • Read and write any subset of positive rational numbers. • Use various strategies to solve one-step problems involving positive rational numbers.
Introducing	<ul style="list-style-type: none"> • Count numbers. • Use manipulatives and separate them into parts. • Solve addition and subtraction problems up to five.

South Dakota 8th Grade Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Find the median of a set of data. • Create a variety of visual representations to display data to make comparisons and predictions. • Compare probability for independent events.
Applying	<ul style="list-style-type: none"> • Order numbers to find a median, mode, and range of an odd set of data. • Use a variety of visual representations to display data to make comparisons. • Find and compute probability.
Developing	<ul style="list-style-type: none"> • Order a set of numbers to 20. • Use a variety of visual representations to display data. • List possible outcomes of a simple event and make predictions about which outcome is more or less likely to occur.
Introducing	<ul style="list-style-type: none"> • Count to 10. • Using manipulative, students will identify which group has the most/least in a set of collected data. • Predict the outcome of a given event.

South Dakota HS Algebra Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Uses properties of real numbers; including the distributive property. • Solves multi-step, single variables and first-degree equations. • Solves inequalities (properties, variables, symbols) with representations • Create linear models using independent and dependent variables. • Explains the rule of the pattern.
Applying	<ul style="list-style-type: none"> • Uses properties to simplify first degree algebraic expressions using identities, commutative, associative, properties using fractions, and decimals. • Solves two step, first degree equations (properties, variables, symbols) • Translates verbal/written expression into an algebraic inequality. • Interpret and develop relationships between problems with constant rate of change. • Complete the next three numbers in a given pattern (graphs, tables, equations)
Developing	<ul style="list-style-type: none"> • Uses properties to simplify first degree algebraic expressions using identities, commutative, associative, properties using whole numbers. • Solves one-step, first degree equations (properties, variables, symbols) • Understands inequalities (properties, variables, symbols) with representations (The student puts the correct symbol in the problem.) • Graph or table to illustrate constant rates of change. • Distinguish if a pattern exists (graphs, tables, equations)
Introducing	<ul style="list-style-type: none"> • Recognize equivalent expressions. • Recognizes a first degree equation. • Recognizes greater than or less than on a number line. • Recognizes various rates of change. • Explores various patterns.

South Dakota HS Geometry Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Apply the properties of triangles and quadrilaterals to find unknown parts Given a two dimensional representation the student will create a three dimensional figure. Translates two dimensional figures. Will write and solve proportions from word problems.
Applying	<ul style="list-style-type: none"> Identify similarities and differences of angles/lengths of sides of triangles and quadrilaterals (3 and 4 sided figures). Traces a mirror image vertically or horizontally. Will write and solve equivalent proportions through visual groupings.
Developing	<ul style="list-style-type: none"> Define the characteristics of triangles and quadrilaterals. Will identify and explain the differences between a two dimensional and three dimensional shapes. Identifies a vertical and horizontal reflection Solve proportions.
Introducing	<ul style="list-style-type: none"> Classifies types of triangles and quadrilaterals Will identify the name of the 3-dimensional shape when given visual representation (cone, prism, and cylinder). Identifies a properly reflected image. Demonstrates how to reduce fractions.

South Dakota HS Measurement Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Applies the metric system of measurement. Graph suitable units when describing rate of change. Choose from formulas provided, students will solve circumference, area and perimeter from a given visual geometric figure.
Applying	<ul style="list-style-type: none"> Applies appropriate labels and scales for length, weight, and volume in English units. Use suitable units when describing rate of change. When given formulas, students will solve circumference, area and perimeter from a given visual geometric figure.
Developing	<ul style="list-style-type: none"> Converts measures of lengths, or weight, or volumes to different units. Student will extract appropriate information from a real-life situation. Identifies the correct formulas for different geometric figures.
Introducing	<ul style="list-style-type: none"> Defines the different units of measurement and recognizes the appropriate tools for measurement. Student will recognize a rate of change in a given situation. Calculates the perimeter of quadrilaterals.

South Dakota HS Number Sense Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify equivalent representations of numbers using fractions, decimals, diagrams, percents and numbers with exponents. • Apply the concept of place value, magnitude, and relative magnitude using percents, fractions, diagrams, decimals and numbers of exponents. • Add, subtract, multiply, and divide real numbers including integral exponents. • Uses estimation strategies in problem situations to predict results and to check the reasonableness of results.
Applying	<ul style="list-style-type: none"> • Identify equivalent representations of numbers using fractions, decimals, diagrams and percents. • Apply the concept of place value, magnitude, and relative magnitude using percents, fractions, diagrams and decimals. • Add and subtract real numbers with or without a calculator. • Uses estimation strategies in problem situations to predict results.
Developing	<ul style="list-style-type: none"> • Identify equivalent representations of numbers using decimals, diagrams and percents. • Apply the concept of place value, magnitude, and relative magnitude using percents, diagrams and decimals. • Subtracts real numbers • Rounds to appropriate decimal place value.
Introducing	<ul style="list-style-type: none"> • Identify equivalent representations of numbers using decimals and diagrams. • Apply the concept of place value, magnitude, and relative magnitude using diagrams and decimals. • Adds real numbers. • Rounds to nearest whole number.

South Dakota HS Statistics and Probability Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Gather, organize and draw conclusions from data. • Compare multiple one-variable data sets using interquartile range, mean, mode, and median. • Creates a graph using different graphical forms. • Predicts and compare outcomes based on theoretical and experimental probability.
Applying	<ul style="list-style-type: none"> • Gather and organize data. • Compare multiple one-variable data sets, using range, mean, mode, and median. • Interpret data in a variety of graphical forms and draw conclusions. • Distinguish between experimental and theoretical probability.
Developing	<ul style="list-style-type: none"> • Organizes given data in a logical manner. • Compare multiple one-variable data sets using range, mode, and medians of an odd numbered set. • Read data in a variety of graphical forms • Records accurate information from possible outcomes.
Introducing	<ul style="list-style-type: none"> • Sorts relevant from irrelevant information from a given scenario. • Compare multiple one-variable data sets using range and mode. • Identifies the different types of graphs (bar, line, pie, and pictograph). • Explores what events are predictable.

South Dakota 5th Grade Physical Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Compare weight. • Demonstrate how objects stop. • Label a simple machine. • Use a thermometer. • Identify that the sun produces light and heat. • Recognize that the spectrum of light contains colors.
Applying	<ul style="list-style-type: none"> • Recognize that matter has weight. • Identify how objects stop. • Recognize that simple machines exist. • Recognize how a thermometer works. • Manipulate tools to adjust the amount of light. • Label the colors found in the spectrum of light.
Developing	<ul style="list-style-type: none"> • Utilize a balance scale. • Distinguish how objects move on different surfaces. • Locate a simple machine. • Locate a thermometer. • Identify that the sun produces light. • Recognize the colors found in the spectrum of light.
Introducing	<ul style="list-style-type: none"> • Respond to various weights. • Respond to different textures. • Explore simple machines. • Demonstrate a response to hot and cold. • Respond to the sun. • Respond to colors.

South Dakota 5th Grade Life Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify a diagram to show how plants get food. • Recognize that offspring resemble their parents. • Identify structures involved in plant reproduction. • Identify parts of an ecosystem. • Identify an energy pyramid. • Recognize how living things react to seasonal changes.
Applying	<ul style="list-style-type: none"> • Recognize that plants need food. • Identify pictures of offspring and their parents. • Identify basic parts of a plant. • Identify that animals rely on plants to survive in the ecosystem. • Recognize that living things rely on each other within the energy pyramid. • Recognize how humans react to seasonal changes.
Developing	<ul style="list-style-type: none"> • Identify a plant. • Recognize identical physical characteristics of offspring and their parents by visual aids. • Recognize the basic parts of a plant. • Recognize the components of the ecosystem. • Identify components within the energy pyramid. • Identify items related to a season.
Introducing	<ul style="list-style-type: none"> • Explore visual and or tactile aids of plants. • Respond to illustrations of parents and their offspring. • Explore basic parts of a plant. • Attend to stimuli of ecosystems. • Explore various components of the energy pyramid. • Explore items related to seasons.

South Dakota 5th Grade Earth/Space Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Identify the crust, mantle, and core of the earth. Locate five planets of the solar system. Describe what causes day and night on Earth.
Applying	<ul style="list-style-type: none"> Identify the crust and mantle of the earth. Locate three planets of the solar system. Recognize that the earth's rotation creates day and night.
Developing	<ul style="list-style-type: none"> Recognize images of the crust and mantle of the earth. Locate the sun, moon, and Earth. Recognize that the earth is constantly spinning.
Introducing	<ul style="list-style-type: none"> Explore the earth's crust. Show a response to the sun, moon, and Earth. Engage an object in a spinning motion.

South Dakota 5th Grade Science, Technology, Environment, and Society Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Identify that there is more than one mode of modern transportation. Recognize that scientific problems exist. Identify different animal wildlife habitats.
Applying	<ul style="list-style-type: none"> Identify one mode of modern transportation. Indicate that a problem exists. Identify an animal with its specific habitat.
Developing	<ul style="list-style-type: none"> Recognize modes of modern transportation Identify a problem from stimuli. Recognize an animal to its specific habitat.
Introducing	<ul style="list-style-type: none"> Explore modes of modern transportation. Engage in an activity that identifies problems. Explore wildlife.

South Dakota 8th Grade Nature of Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Compare fact and prediction in scientific investigations. • Follow instructions with prompts to conduct a systematic scientific investigation.
Applying	<ul style="list-style-type: none"> • Distinguish between fact and prediction in scientific investigations. • Participate in a systematic scientific investigation.
Developing	<ul style="list-style-type: none"> • Recognize a fact in scientific investigations. • Follow simple instructions of a systematic scientific investigation.
Introducing	<ul style="list-style-type: none"> • Attend to facts and predictions. • Attend to a demonstration of a systematic scientific investigation.

South Dakota 8th Grade Physical Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Demonstrate how mixtures are made. • Use the Periodic Table to identify the first 18 elements. • Explain why matter changes.
Applying	<ul style="list-style-type: none"> • Recognize mixtures. • Use the Periodic Table to identify the first 8 elements. • Recognize that matter changes.
Developing	<ul style="list-style-type: none"> • Select mixtures. • Use color coded cards to identify elements. • Observe matter.
Introducing	<ul style="list-style-type: none"> • Explore mixtures. • Attend to the activities about the Periodic Table. • Introduced to different forms of matter.

South Dakota 8th Grade Earth/Space Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Distinguish between rocks. • Identify major tectonic plates. • List factors that create weather. • Classify effects of currents and waves in the ocean. • Identify the differences between weathering and erosion. • Sequence order of the planets according to size. • Explain how the tilt of the Earth is the cause of the seasons.
Applying	<ul style="list-style-type: none"> • Identify rocks. • Recognize the major tectonic plates. • Label factors that create weather. • Identify effects of currents and waves in the ocean. • Recognize the differences between weathering and erosion. • Compare the planets of our solar system according to size. • Recognize how the tilt of the Earth is the cause of winter and summer.
Developing	<ul style="list-style-type: none"> • Explore different textures of rocks. • Recognize the Earth's crust is made up of plates. • Indicate current weather conditions. • Recognize bodies of water have waves • Identify erosion. • State the solar system is made up of planets. • Identify the four seasons.
Introducing	<ul style="list-style-type: none"> • Manipulate different rocks. • Explore the different plates of the Earth. • Experience different weather conditions. • Explore waves. • Manipulate objects that have been eroded. • Attend to the concept of planets. • Explore conditions of the different seasons.

South Dakota 8th Grade Science, Technology, Environment, and Society Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Given a discovery, explain how it meets the needs of society. • Identify problems created by humans in the local environment.
Applying	<ul style="list-style-type: none"> • Identify that science has been influenced by social needs. • Recognize problems/solutions created by humans.
Developing	<ul style="list-style-type: none"> • Recognize social needs. • Recognize problems.
Introducing	<ul style="list-style-type: none"> • Attend to activities that involve objects that meet their social needs. • Attend to problems.

South Dakota 9-12 Nature of Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Identify a scientific discovery and recognize the discovery to everyday life. • State and test a hypothesis. • Follow the process of scientific investigation. • Practice safe and effective laboratory techniques.
Applying	<ul style="list-style-type: none"> • Identify a scientific discovery. • Describe a hypothesis. • Develop a scientific investigation with supervision. • Practice safe laboratory techniques.
Developing	<ul style="list-style-type: none"> • Recognize scientific discoveries. • Recognize a problem. • Participate in simple scientific experiments. • Recognize simple safety equipment.
Introducing	<ul style="list-style-type: none"> • Observe scientific discoveries. • Experience cause and effect situations. • Observe a simple scientific experiment. • Observe safe laboratory techniques.

South Dakota 9-12 Physical Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Use the Periodic Table to recognize the properties of the elements. • Recognize atoms combine in different ways. • Recognize that changes in conditions will affect reaction rates. • Balance previously written equations. • Explain whether a physical or chemical change has occurred. • Calculate speed. • Explain the causes of motion. • Demonstrate an understanding of work, energy and power. • Demonstrate changes in energy. • Recognize different parts of the waves. • Demonstrate electrical circuits.
Applying	<ul style="list-style-type: none"> • Compare elements of the Periodic Table. • Construct models of atoms and compounds. • Recognize the difference between a chemical and physical change. • Demonstrate knowledge of the Law of Conservation of Matter. • Identify chemical and physical changes. • Demonstrate an understanding of speed. • Predict motion. • Relate energy to work. • Differentiate between forms of energy. • Describe characteristics of waves. • Observe and discuss electrical circuits.
Developing	<ul style="list-style-type: none"> • Identify elements of the Periodic Table. • Discriminate between atoms and compounds. • Recognize when a change takes place. • Recognize that matter can not be destroyed. • Explain simple changes. • Compare speeds. • Recognize forces effect objects. • Demonstrate work. • Identify different forms of energy. • Observe different types of waves. • Explore different charged objects.
Introducing	<ul style="list-style-type: none"> • Access the Periodic Table. • Exposed to different substances. • Exposed to different reactions. • Exposed to different types of matter. • Observe change. • Exposed to time and distance through activities. • Explore the motion of objects. • Participate in movement activities. • Experience the effects of energy. • Manipulate different types of waves. • Observe effects of charge.

South Dakota 9-12 Life Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> • Relate basic cell functions to basic cell structures. • Classify several organisms in to groups. • Explain why different organisms have different structures. • Define the concept of dominant and recessive. • Give a reason why organisms can become extinct. • Describe populations and communities.
Applying	<ul style="list-style-type: none"> • Identify different cellular structures. • Recognize organisms are classified based on characteristics. • Identify how structure and function are related to each other. • Recognize traits are inherited. • Recognize organisms can become extinct. • Illustrate a food chain and food web.
Developing	<ul style="list-style-type: none"> • Recognize a cell and that it is made up of small parts. • Recognize animals/plants have similarities and differences. • Recognize animals/plants have similar structures for similar uses. • Recognize animals of same species have differences. • Recognize an animal that is extinct. • Identify a community.
Introducing	<ul style="list-style-type: none"> • Attend to the concept of cells. • Explore different types of animals/plants. • Introduced to different types of animals/plants. • Explore different types of traits. • Attend to presentation on extinct animals. • Observe different types of populations.

South Dakota 9-12 Earth/Space Science Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Summarize a cycle between living and non-living systems. Explain the effects of pollutions. Describe the effects of humans on the environment. Describe a planet's motion within a solar system.
Applying	<ul style="list-style-type: none"> Identify cycles. Describe the effects of pollution. Identify changes in the environment due to human activity. Describe a planet's motion.
Developing	<ul style="list-style-type: none"> Recognize cycles. Identify different types of pollution. Recognize land, ocean, and atmospheric changes due to human activity. Demonstrate how an object rotates.
Introducing	<ul style="list-style-type: none"> Attend to living and non-living. Explore an environment that can become polluted. Explore living conditions. Explore characteristics of a planet.

South Dakota 9-12 Science, Technology, Environment, and Society Alternate Achievement Descriptors

Levels	Descriptors
Advancing	<ul style="list-style-type: none"> Identify current ethical situations in science. Explain the impact of science on their lives and in their community. Describe consequences of a technological issue. Explain a technological limitation. Identify benefits of recycling.
Applying	<ul style="list-style-type: none"> Discuss fact and opinion as related to science Describe the impact of science on their lives. Describe technological issues. Recognize a cause of technological limits. Relate recycling to their lives.
Developing	<ul style="list-style-type: none"> Identify true and false statements as related to science. State a simple scientific discovery has impacted life. Indicate types of technology. Define limits. Recognize recycling symbols.
Introducing	<ul style="list-style-type: none"> Respond to yes/no questions. Explore simple scientific discoveries. Use technology. Observe various technological devices. Participate in recycling.