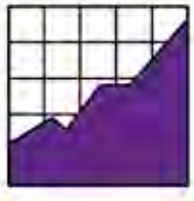
Synthesis Report 99

Science Alternate Assessments based on Alternate Achievement Standards (AA-AAS) During School Year 2014-2015



NATIONAL CENTER ON EDUCATIONAL OUTCOMES

In collaboration with:

Council of Chief State School Officers (CCSSO)

National Association of State Directors of Special Education (NASDSE)

Supported by:

U.S. Office of Special Education Programs

Synthesis Report 99

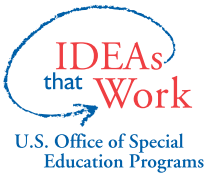
Science Alternate Assessments based on Alternate Achievement Standards (AA-AAS) During School Year 2014-2015

Christopher M. Rogers, Martha L. Thurlow, and Sheryl S. Lazarus

November 2015

Rogers, C. M., Thurlow, M. L., & Lazarus, S. S. (2015). *Science alternate assessments based on alternate achievement standards (AA-AAS) during school year 2014-2015* (Synthesis Report 99). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

The Center is supported through a Cooperative Agreement (#H326G110002) with the Research to Practice Division, Office of Special Education Programs, U.S. Department of Education. The Center is affiliated with the Institute on Community Integration at the College of Education and Human Development, University of Minnesota. The contents of this report were developed under the Cooperative Agreement from the U.S. Department of Education, but does not necessarily represent the policy or opinions of the U.S. Department of Education or Offices within it. Readers should not assume endorsement by the federal government.



Project Officer: David Egnor

NCEO Core Staff

Martha L. Thurlow, Director
Deb A. Albus
Laurene L. Christensen
Linda Goldstone
Sheryl S. Lazarus
Kristi K. Liu
Michael L. Moore
Rachel F. Quenemoen
Christopher Rogers
Vitaliy Shyyan
Yi-Chen Wu

National Center on Educational Outcomes
University of Minnesota • 207 Pattee Hall
150 Pillsbury Dr. SE • Minneapolis, MN 55455
Phone 612/626-1530 • Fax 612/624-0879
http://www.nceo.info

Executive Summary

Federal law requires that all students, including students with disabilities, participate in state assessments used for accountability purposes. It also requires states to assess students in several content areas, including science. Most students with disabilities take the general science assessment with or without accommodations, but a few students with the most significant cognitive disabilities participate in alternate assessments based on alternate achievement standards (AA-AAS).

The purpose of this analysis was to learn more about the characteristics of states' science AA-AAS in 2014-2015. Data for this report were gathered by examining information that was publicly available on state websites. Key findings include:

- Most states' science AA-AAS covered the life science/biology, earth science/earth and space science, and physical sciences/physics content domains at all grade levels.
- In many states some content domains assessed differed between the general assessment and the AA-AAS.
- In some states more content domains were covered on the AA-AAS than on the general assessment and in others fewer content domains were covered.
- More than half of the states had item-based AA-AAS, while about a third of the states used portfolios; fewer than 10 used rating scales, either alone or in combination with another approach.

Although federal regulations do allow states to define the complexity, depth, and breadth of the AA-AAS, the apparent lack of consistency in the domains assessed suggests that some students with significant cognitive disabilities may not be getting access to the same rigorous grade-appropriate content. States' evolving assessment systems provide an excellent opportunity for states and consortia to consider the content assessed by the science AA-AAS.

Table of Contents

Overview

The Elementary and Secondary Education Act (ESEA) requires that all children with disabilities are included in all state and district-wide assessment programs, and that students who are unable to participate in general assessments with or without accommodations participate in alternate assessments. Students with the most significant cognitive disabilities participate in alternate assessments based on alternate achievement standards (AA-AAS). ESEA also requires states to develop content standards and assessments for science (U.S. Department of Education, 2003, 2007). All states have had science assessments in place since the 2007-08 school year (Thurlow, Rogers, & Christensen, 2010); yet, little is known about states' science AA-AAS.

The purpose of this analysis was to document the nature of states' AA-AAS in science during the 2014-2015 school year. Three research questions are addressed in this report:

1. What science content domains were examined by the AA-AAS in science?

2. How did the AA-AAS science content domains compare with the general assessment content domains? If different, were there fewer or more content domains on the AA-AAS than the general assessments?

3. What assessment approaches did states use for students participating in the AA-AAS in science? What were the response formats on the AA-AAS in science?

Analysis Procedures

Data for this report were obtained through the examination and analysis of publicly-available information posted on state education department websites in the 50 regular states and Washington DC. Documents about states' general science assessments and science AA-AAS were downloaded between January and June, 2015 to find information about their 2014-2015 AA-AAS. Information gathered included available information about test and item specifications, test blueprints, and other relevant documents.

The procedures used in the analysis of science domains were similar to the ones used by Thurlow et al. (2010) in their analysis of states' general science assessments. The science domains for both the general and AA-AAS were coded using the same categories Thurlow et al. identified. To obtain a better understanding of how the science domains differed between a state's general science assessment and its AA-AAS, we compared the science content domains, at each of the three schooling levels, for the two assessments. Data on the AA-AAS approach types and response formats were coded using a typology developed by Quenemoen, Quenemoen, Kearns, and Kennedy (2010). Quenemoen et al. identified four assessment approaches:

(1) **Item-based testing** is a compilation of individual questions designed to collectively ascertain the knowledge and skills of students at a single discrete point in time. Item-based tests were further categorized by the types of items included on a state's assessment. For science, the three pertinent categories are:

- **Selected-response items** which typically employ multiple choice items.
- **Constructed-response items** where students produce written phrases or sentences to indicate their content knowledge.
- **Performance tasks** which are testing events that engage students in responding to a series of related questions or activities designed to evaluate students' ability to apply their knowledge in both a process- and outcome-oriented manner.

(2) The **student work product** approach is when a body of evidence is collected across a span of time. The materials assembled into the portfolios are sets of student work collected purposefully to represent a subset of learning objectives linked to state academic content standards. Quenemoen et al. (2010) distinguished between structured and unstructured portfolios, which we simplified for the purposes of this analysis to one response category: **portfolio**.

(3) The **teacher observation** approach involves third parties, rather than students themselves, documenting students' knowledge and skills through directly witnessing the knowledge and skills demonstrated by the student. Teacher observations employ checklists with **rating scales**, which were described by Quenemoen et al. as the rating of "student performance on a relatively long pre-scripted list of skills based on classroom observation" (p. 11).

Results

AA-AAS Science Academic Content Specifications

As required by regulations, all states (including Washington DC) administered a science AA-AAS during the 2014-2015 school year. The specific content covered varied across states. Table 1 shows the content domains in elementary science assessments. At the elementary level, nearly all states (*n*=49) included *life science/biology* on their AA-AAS. The other two most common domains at the elementary level were *earth science*/*earth and space science* (*n*=47) and *physical science* (*n*=43), which typically included areas of *physics* such as *objects in motion*, and often also addressed *chemistry*. About half (*n*=26) of the states incorporated test items pertaining to the *process of inquiry/investigation* on their elementary AA-AAS. More than one-third (*n*=18) of the states addressed *technology/engineering*. Almost one-fourth (*n*=12) of states covered the *nature of science/characteristics of science*. A small number of states (*n*=5) had AA-AAS items

addressing unique science content, such as *nutrition, hygiene, and physical fitness* and *science applications*. See Appendix A, Table A-1, for state-by-state details.

Table 1. AA-AAS Elementary Science Academic Content Specifications in 2014-2015

Content Domain	Number of States[a]
Earth Science / Earth & Space Science	47
Environmental / Ecological Science	9
Investigation / Inquiry Process	26
Life Science / Biology	49
Nature of Science / Characteristics of Science / History of Science	12
Personal and Social Impacts of Science	8
Physical Science / Physics / Physical & Chemical Science	43
Technology / Engineering	18
Unifying Concepts / Common Themes	2
Unique Categories / Uncategorizable	5

[a]N=51

The same three content domains that were most often included on the elementary AA-AAS were also the most frequently listed domains at the middle school level, although in a different order of frequency (see Table 2). *Earth science/earth and space science* was the most common domain (*n*=47), *physical science* was the second-most frequent (in 46 states), and *life science* was the third-most frequent (*n*=44). The remaining science domains were ranked in the same order for the middle school AA-AAS as they were at the elementary level, and the tests had similar numbers of states with each domain. The less frequent content domains in middle school AA-AAS were very similar to those at the elementary level. See Appendix A, Table A-2, for more detail.

Table 2. AA-AAS Middle School Science Academic Content Specifications in 2014-2015

Content Domain	Number of States[a]
Earth Science / Earth & Space Science	47
Environmental / Ecological Science	9
Investigation / Inquiry Process	25
Life Science / Biology	44
Nature of Science / Characteristics of Science / History of Science	13
Personal and Social Impacts of Science	8
Physical Science / Physics / Physical & Chemical Science	46
Technology / Engineering	17
Unifying Concepts / Common Themes	4
Unique Categories / Uncategorizable	4

[a]N=51

Table 3 shows the content domains in states' high school science AA-AAS. Nearly all states' high school AA-AAS contained *life science/biology items* (*n*=50). Many fewer states' high-school AA-AAS addressed *physical science* (*n*=34) or *earth science/earth and space science* (*n*=29) than at the middle or elementary school level. Fewer than half (*n*=23) of all states had AA-AAS items about the *investigation/inquiry process/scientific method*. Less than 30 percent of states had test content either about the *nature of science/characteristics of science/history of science* or about *technology/engineering*. A few states (n=6) had tests that included only one domain—*life science/biology*. The high school level uniquely separated *physical science*/*physics* from *chemistry* into different content domains, and *chemistry* items were included on six states' AA-AAS. The less frequently mentioned content domains in high school AA-AAS were very similar to those at the elementary and middle school levels. See Appendix A, Table A-3, for more detail.

Table 3. AA-AAS High School Science Academic Content Specifications in 2014-2015

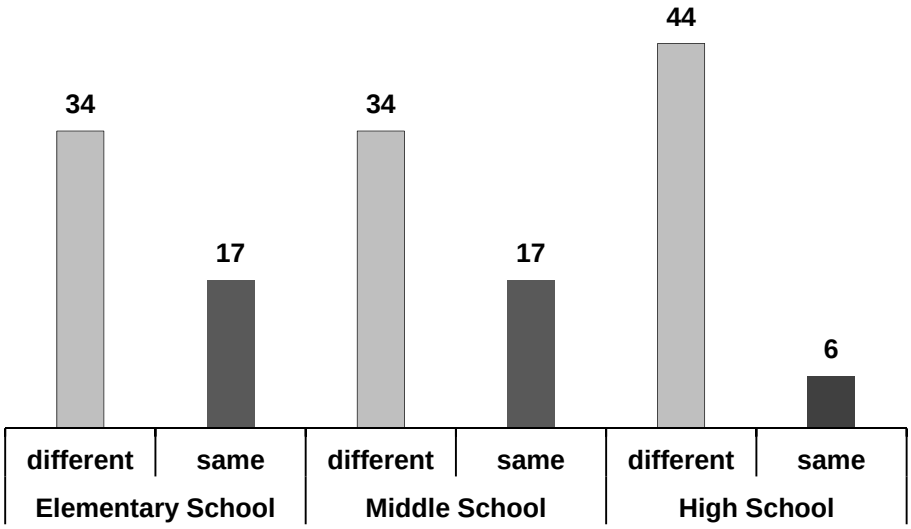
Content Domain	Number of States[a]
Chemistry	7
Earth Science / Earth & Space Science	29
Environmental / Ecological Science	11
Investigation / Inquiry Process / Scientific Method	22
Life Science / Biology	50
Nature of Science / Characteristics of Science / History of Science	14
Personal and Social Impacts of Science	8
Physical Science / Physics	35
Technology / Engineering	14
Unifying Concepts / Common Themes	3
Unique Categories / Uncategorizable	5

[a]N=51

Comparison of AA-AAS and General Assessment Science Academic Content Specifications

Figure 1 shows the summary of the comparisons of AA-AAS and general assessment domains. A majority of states had differences in content domains between the science AA-AAS and general assessment at all three schooling levels. Two-thirds (*n*=34) of states' elementary and middle school AA-AAS had science domain differences when compared with general assessments; the other 17 states' AA-AAS covered the same science domains as their general assessments. At the high school level, there were even more states (*n*=44) with content differences between the assessments. See Appendix B, Table B-1, for more detail about specific states.

Figure 1. Comparison of AA-AAS and General Assessment Science Content Domains

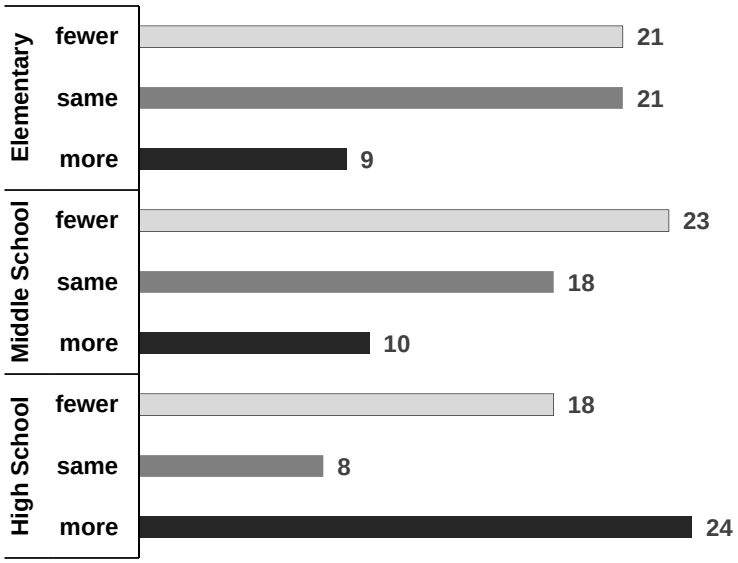


N=51. At the high school level, information for one state's domains in the general assessment could not be located.

We performed a simple independent count of the number of science domains covered by states' general assessments to measure the extent of science content differences between the AA-AAS and the general assessment. We applied the same categories of science content to the general assessments as we had in describing the AA-AAS. Consequently, when states had the same *number* of domains, even if they were different domains, the result showed that they were the same in number. These results provide a different analysis of the similarities in science content between the AA-AAS and general assessments.

Figure 2 shows how many states had fewer, the same number, and more content domains when comparing the AA-AAS to the general assessments. Comparisons at the elementary and middle school levels indicated that about 20 percent of states covered more science domains on their AA-AAS than on their general assessments. In contrast, nearly half of states (*n*=24) covered more science domains on their high school AA-AAS. Another trend was that at all three schooling levels, a substantial number of states, ranging between 18 (high school) and 23 (middle school), covered fewer science domains on their AA-AAS than on their general assessments. States that had the same number of content domains on both the AA-AAS and the general assessments showed differences between the high school and the other levels. Only 16 percent of states (*n*=8) had an identical number of domains on the high school science assessments, whereas about 40 percent had the same number of domains on the AA-AAS and general assessments for the elementary and middle school levels (*n*=21 and *n*=18, respectively).

Figure 2. Relative Number of AA-AAS Content Domains Compared to Number of General Assessment Content Domains by School Level

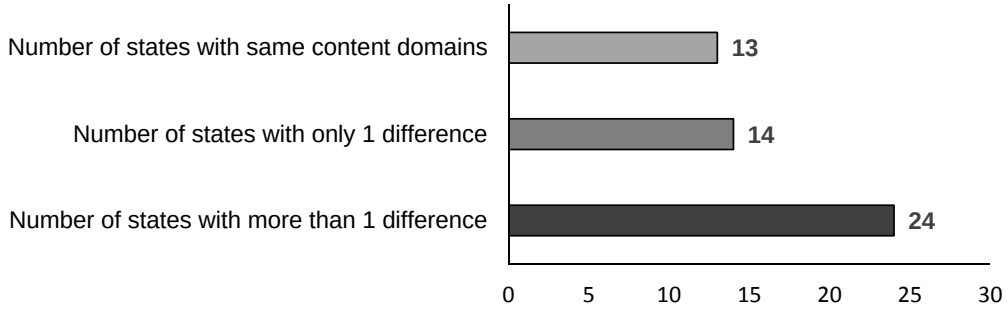


Elementary School: N=51; Middle School: N=51; High School: N=50

Additional examination yielded patterns of similarities and differences in content domains across the grade levels within each assessment type, and between the AA-AAS and the general assessment. For the AA-AAS, 18 states tested students using the same science domains for the elementary, middle school, and high school levels. For the science general assessment, 16 states tested students using the same domains at all three levels. In addition, seven states used the exact same science domains on both assessments. See Appendix B, Table B-2, for more detail about specific states.

Figure 3 shows the number of states that had similarities and differences in the content domains between the AA-AAS and general assessments. Across all grade levels, 13 states had the same content domains, 14 states had only one difference between the two tests, and 24 states had more than one difference. See Appendix B, Table B-3 for state-by-state content domain comparisons of AA-AAS and general assessments.

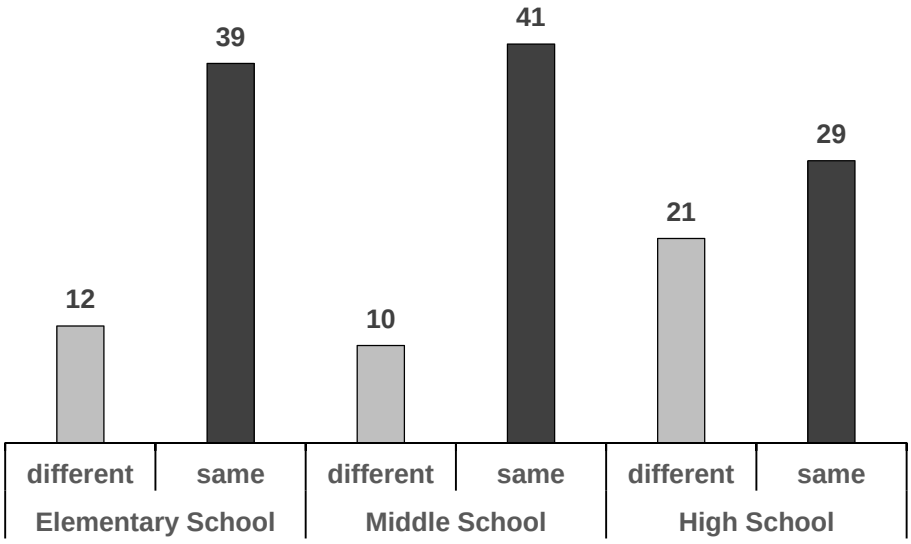
Figure 3. Content Domain Similarities and Differences between AA-AAS and General Assessments



Comparison of AA-AAS and General Assessment Science Grade Tested

Figure 4 shows the comparisons of AA-AAS and general assessment grades tested, for all 50 states and for Washington DC. Approximately 80 percent of the states' elementary and middle school general assessment and AA-AAS were given to students in the same grades. An example of a state where the assessments were administered to different grades was Wisconsin which gave science general assessments to students in grades 3 and 5, but administered the science AA-AAS to students in grade 4. At the high school level, there were similar numbers of states that administered their general assessment and AA-AAS at different grades (n=21) as states that administered the assessments at the same grades (n=29), with one state whose information was not located. Several of the states with testing at different high school grades (n=14) were states where the general assessment was not administered in a specific grade, but rather, it was to be offered after the student completed specific course content (e.g., biology); in contrast, the AA-AAS were specified for students at a certain grade, often grade 11. See Appendix B, Table B-4, for more detail about specific states.

Figure 4. Grade Comparison of AA-AAS and General Assessment by School Level



Elementary School: N=51; Middle School: N=51; High School: N=50

Assessment Approach Types and Response Formats

In applying the typology developed by Quenemoen et al. (2010), and using the approach of Thurlow et al. (2010), we examined assessment approaches of the AA-AAS and general assessment in science (see Table 5). In the 2014-2015 school year, just under half of all states (*n*=25) employed only one of the response formats associated with the item-based testing approach. Further, 20 of the 25 states used only performance tasks, and the other five states used only

selected-response items. No states used only constructed-response items. Portfolio collections of student work, as a single response format, were used by 16 states. The least common single response format, used by only three states, was teacher rating scales.

Table 5. Assessment Approach Types and Response Formats

Assessment Approach Types	Response Formats	Number of States[a]
Item-Based Testing	performance tasks only	20
	selected only	5
	constructed only	0
	selected and constructed	1
	selected and performance tasks	2
Student Work Products	portfolios only	16
Teacher Observation	rating scales only	3
Combined Approaches	performance tasks and rating scales	2
	portfolios and rating scales	2

[a]N=51

Table 5 also shows data for the states that employed combined approaches. Two approach combinations were used by two states each (i.e., performance tasks and rating scales; portfolios and rating scales). See Appendix C, Tables C-1 and C-2, for more detail about specific states.

Discussion

Almost all states' science AA-AAS covered the *life science/biology* content area across all grade levels. Many states also covered *earth science/earth and space science* and the *physical sciences/physics* at all grade levels. The content domains differed between the science general assessment and the AA-AAS in many states. Yet, in some states the AA-AAS covered more content domains than the general assessment and in others fewer content domains were covered. The apparent inconsistency in domains assessed on the AA-AAS and general assessment suggests that not all students with significant cognitive disabilities are provided with access to the same rigorous content.

This report presents a snapshot of states' science AA-AAS. Many states are in the process of transitioning to new science AA-AAS. As states develop these new assessments, it is important that they carefully review the content domains to see how they compare to the content domains for the general assessment. Federal regulations allow states to define the appropriate depth, breadth, and complexity of content coverage for the AA-AAS. Nonetheless, it is problematic

when the alternate assessment addresses different standards from those covered by the general assessment.

There was wide variation across states in the approach they used for their science AA-AAS. Item-based assessments (*n*=28) were the most common type of assessment with most of these states using performance tasks. About a third of the states (*n*=16) used portfolio assessments, which are bodies of student work. A few states used rating scales.

There are many complex issues related to the assessment of science. States have an opportunity to develop and implement better science AA-AAS that more appropriately measure what students know and can do.

References

Quenemoen, M., Quenemoen, R., Kearns, J., & Kennedy, S. (2010). *A proposed typology for characterizing states' AA-AAS: Developing a common vocabulary to describe these assessments*. Lexington, KY. Retrieved from http://www.naacpartners.org/publications/ApproachTypology.pdf

Thurlow, M., Rogers, C., & Christensen, L. (2007). *Science assessments for students with disabilities in school year 2006-2007: What we know about participation, performance, and accommodations* (Synthesis Report 77). Minneapolis, MN: University of Minnesota, National Center of Educational Outcomes. Retrieved from http://www.cehd.umn.edu/NCEO/OnlinePubs/Synthesis77/Synthesis77.pdf

U.S. Department of Education, Office of Elementary and Secondary Education (2007, April). *Final Rule 34 CFR Parts 200 and 300: Title I-Improving the academic achievement of the disadvantaged; Individuals with disabilities education act (IDEA)*. Federal Register: 72(67), Washington DC: Author.

U.S. Department of Education, Office of Elementary and Secondary Education. (2003, December). *Title I--Improving the academic achievement of the disadvantaged, final regulations.* Washington, DC: U.S. Author.

Appendix A

AA-AAS Science Content Domains by State

Table A-1. AA-AAS Elementary Science Content Domains by State

State	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
Alabama	X		X	X			X	X	X	
Alaska	X		X	X	X	X	X	X		
Arizona	X		X	X	X	X	X			
Arkansas	X			X			X			
California	X		X	X			X			
Colorado	X			X			X			
Connecticut	X			X			X	X		
Delaware	X			X	X		X			
District of Columbia	X			X				X		
Florida	X			X	X		X			
Georgia	X			X			X			
Hawaii	X	X	X	X			X			
Idaho	X			X	X		X	X		
Illinois	X		X	X		X	X	X		
Indiana	X			X	X		X	X		
Iowa	X		X	X			X			
Kansas	X		X	X			X	X		
Kentucky	X			X			X	X		
Louisiana	X		X	X			X			
Maine			X	X						
Maryland	X	X		X			X			
Massachusetts	X			X			X	X		
Michigan	X			X			X			X[a]
Minnesota	X			X	X		X	X		
Mississippi	X		X	X			X			
Missouri	X	X	X	X		X		X		
Montana	X		X	X	X	X	X	X		
Nebraska	X		X	X	X		X	X		
Nevada					X		X			
New Hampshire	X		X	X						
New Jersey	X			X			X			
New Mexico	X		X	X		X	X			

Table A-1 (continued). AA-AAS Elementary Science Content Domains by State

State	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
New York			X	X						
North Carolina	X	X		X			X			
North Dakota	X		X	X			X	X	X	
Ohio	X			X			X			
Oklahoma	X		X	X			X			
Oregon	X			X			X	X		
Pennsylvania	X	X	X	X			X	X		
Rhode Island	X			X			X			
South Carolina	X		X	X			X			
South Dakota	X	X		X		X	X	X		
Tennessee	X			X			X			
Texas	X			X			X			
Utah	X	X	X	X						X[b]
Vermont	X			X			X			
Virginia	X		X	X			X			
Washington	X		X	X						X[c]
West Virginia					X					X[d]
Wisconsin	X	X	X	X	X	X	X			X[e]
Wyoming	X	X	X	X			X			
TOTAL	**47**	**9**	**26**	**49**	**12**	**8**	**43**	**18**	**2**	**5**

Note: The content areas are ordered alphabetically.

ES: Earth Science / Earth & Space Science

Env: Environmental / Ecological Science

Inq: Investigation / Inquiry Process

LS: Life Science / Biology

NoS: Nature of Science / Characteristics of Science / History of Science

P&SI: Personal and Social Impacts of Science

PS: Physical Science / Physics (includes Chemistry when specified)

T/E: Technology / Engineering

UC: Unifying Concepts / Common Themes

U/U: Unique Categories / Uncategorizable

[a] Constructing New and Reflecting on Scientific Knowledge

[b] Object Permanence, Nutrition, Hygiene, Physical Fitness

[c] Systems, Application

[d] Content of Science

[e] Science Applications

Table A-2. AA-AAS Middle School Science Content Domains by State

State	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
Alabama	X		X	X			X	X	X	
Alaska	X		X	X	X	X	X	X		
Arizona	X		X	X	X	X	X			
Arkansas	X			X			X			
California	X		X	X			X			
Colorado	X			X			X			
Connecticut	X			X			X	X		
Delaware	X			X	X		X			
District of Columbia							X			
Florida	X			X	X		X			
Georgia	X			X			X			
Hawaii	X	X	X	X			X			
Idaho	X			X	X		X	X		
Illinois	X		X	X		X	X	X		
Indiana	X			X	X		X	X		
Iowa	X		X	X			X			
Kansas	X		X	X			X			
Kentucky	X			X			X	X		
Louisiana	X		X	X			X			
Maine			X	X				X	X	
Maryland	X	X		X			X			
Massachusetts	X			X			X	X		
Michigan	X			X			X		X	
Minnesota	X			X	X		X	X		
Mississippi	X		X	X			X			
Missouri	X		X			X	X	X		
Montana	X		X	X	X	X	X	X		
Nebraska	X		X	X	X		X	X		
Nevada	X				X					
New Hampshire	X		X				X			
New Jersey				X			X			
New Mexico	X		X	X		X	X			
New York	X									
North Carolina	X	X		X			X			
North Dakota	X		X	X			X	X	X	
Ohio	X			X			X			

Table A-2 (continued). AA-AAS Middle School Science Content Domains by State

State	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
Oklahoma	X		X	X			X			
Oregon	X			X			X	X		
Pennsylvania	X	X	X	X			X	X		
Rhode Island	X			X			X			
South Carolina	X		X	X			X			
South Dakota	X	X			X	X	X	X		
Tennessee	X			X			X			
Texas	X			X			X			
Utah	X	X	X	X						X[a]
Vermont	X			X			X			
Virginia	X	X	X	X			X			
Washington	X		X	X			X			
West Virginia					X					X[b]
Wisconsin	X	X	X	X	X	X	X			X[c]
Wyoming	X	X	X	X			X			X[d]
TOTAL	**47**	**9**	**25**	**44**	**13**	**8**	**46**	**17**	**4**	**4**

ES: Earth Science / Earth & Space Science

Env: Environmental / Ecological Science

Inq: Investigation / Inquiry Process

LS: Life Science / Biology

NoS: Nature of Science / Characteristics of Science / History of Science

P&SI: Personal and Social Impacts of Science

PS: Physical Science / Physics (includes Chemistry when specified)

T/E: Technology / Engineering

UC: Unifying Concepts / Common Themes

U/U: Unique Categories / Uncategorizable

[a] Object Permanence, Nutrition, Hygiene, Physical Fitness

[b] Application

[c] Content of Science

[d] Science Applications

Table A-3. AA-AAS High School Science Content Domains by State

State	Ch	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
Alabama		X	X	X	X			X	X	X	
Alaska		X		X	X	X	X	X	X		
Arizona		X		X	X	X	X	X			
Arkansas					X						
California	X	X		X	X			X			
Colorado		X			X			X			
Connecticut					X						
Delaware		X	X		X	X		X			
District of Columbia					X						
Florida		X			X	X		X			
Georgia					X			X			
Hawaii		X	X	X	X			X			
Idaho		X			X	X		X	X		
Illinois		X		X	X		X	X	X		
Indiana					X	X					
Iowa		X		X	X			X			
Kansas	X	X		X	X			X	X		
Kentucky		X			X			X	X		
Louisiana				X	X			X			
Maine				X	X				X	X	
Maryland					X						
Massachusetts	X	X			X			X	X		
Michigan		X			X			X			X[a]
Minnesota					X	X			X		
Mississippi		X		X	X			X			
Missouri			X	X	X		X	X	X		
Montana		X		X	X	X	X	X	X		
Nebraska		X		X	X	X		X	X		
Nevada					X	X					
New Hampshire				X	X			X			
New Jersey			X		X			X			
New Mexico		X		X	X		X	X			
New York		X			X						
North Carolina					X						
North Dakota		X		X	X			X		X	
Ohio	X		X		X			X			
Oklahoma				X	X						

Table A-3 (continued). AA-AAS High School Science Content Domains by State

State	Ch	ES	Env	Inq	LS	NoS	P&SI	PS	T/E	UC	U/U
Oregon		X			X			X	X		
Pennsylvania	X		X		X			X			
Rhode Island		X			X			X			
South Carolina					X						
South Dakota		X	X		X	X	X	X	X		
Tennessee	X				X			X			
Texas					X						
Utah	X	X	X		X						X[b]
Vermont		X			X			X			
Virginia		X		X	X	X		X			X[c]
Washington				X	X						
West Virginia						X					X[d]
Wisconsin		X	X	X	X	X	X	X			X[e]
Wyoming		X	X	X	X			X			
TOTAL	**7**	**29**	**11**	**22**	**50**	**14**	**8**	**35**	**14**	**3**	**5**

Ch: Chemistry

ES: Earth Science / Earth & Space Science

Env: Environmental / Ecological Science

Inq: Investigation / Inquiry Process

LS: Life Science / Biology

NoS: Nature of Science / Characteristics of Science / History of Science

P&SI: Personal and Social Impacts of Science

PS: Physical Science / Physics (includes Chemistry when specified)

T/E: Technology / Engineering

UC: Unifying Concepts / Common Themes

U/U: Unique Categories / Uncategorizable

[a] Constructing new and reflecting on scientific knowledge

[b] Object permanence, Nutrition, Hygiene, Physical fitness

[c] Earth resources; Human interactions”

[d] Content of science

[e] Science applications

Appendix B

General Assessment and AA-AAS Science Comparisons

Table B-1. General Assessment and AA-AAS Science Content Domain Comparisons by State and Schooling Level

State	Elementary Comparison		Middle School Comparison		High School Comparison	
	Same	Different	Same	Different	Same	Different
Alabama		X		X		X
Alaska		X		X	X	
Arizona	X		X			X
Arkansas	X		X			X
California	X		X			X
Colorado		X		X		X
Connecticut		X		X		X
Delaware		X		X		X
District of Columbia		X		X		X
Florida	X		X			X
Georgia	X		X			X
Hawaii		X		X		X
Idaho		X		X		X
Illinois		X		X		X
Indiana		X		X		X
Iowa	X		X		X	
Kansas	X		X			X
Kentucky		X		X		X
Louisiana		X		X		X
Maine		X		X		X
Maryland		X		X		X
Massachusetts	X		X		X	
Michigan		X		X		X
Minnesota	X		X			X
Mississippi	X		X			X
Missouri	X		X			X
Montana		X		X		X
Nebraska	X		X		X	
Nevada		X		X		X
New Hampshire		X		X		X

Table B-1 (continued). General Assessment and AA-AAS Science Content Domain Comparisons by State and Schooling Level

State	Elementary Comparison		Middle School Comparison		High School Comparison	
	Same	Different	Same	Different	Same	Different
New Jersey		X		X		X
New Mexico	X		X		X	
New York		X		X		X
North Carolina		X		X		X
North Dakota		X		X		X
Ohio	X		X		X	
Oklahoma	X		X			X
Oregon		X		X		X
Pennsylvania		X		X		X
Rhode Island		X		X		X
South Carolina		X		X		X
South Dakota		X		X		X
Tennessee		X		X		X
Texas		X		X		X
Utah		X		X		X
Vermont		X		X		X
Virginia	X		X			X
Washington		X		X		X
West Virginia	X		X			X
Wisconsin		X		X		X
Wyoming		X		X	no info	no info
TOTAL	**17**	**34**	**17**	**34**	**6**	**44**

Table B-2. Relative Number of AA-AAS Content Domains Compared to Number of General Assessment Content Domains by State and Schooling Level

State	Elementary Comparison			Middle School Comparison			High School Comparison		
	Fewer	Same	More	Fewer	Same	More	Fewer	Same	More
Alabama			X			X			X
Alaska			X			X		X	
Arizona		X			X				X
Arkansas		X			X		X		
California		X			X		X		

Table B-2 (continued). Relative Number of AA-AAS Content Domains Compared to Number of General Assessment Content Domains by State and Schooling Level

State	Elementary Comparison			Middle School Comparison			High School Comparison		
	Fewer	Same	More	Fewer	Same	More	Fewer	Same	More
Colorado	X			X			X		
Connecticut	X			X			X		
Delaware		X			X				X
District of Columbia	X			X			X		
Florida		X			X				X
Georgia		X			X				X
Hawaii			X			X			X
Idaho	X			X				X	
Illinois	X			X			X		
Indiana	X			X					X
Iowa		X			X			X	
Kansas		X			X		X		
Kentucky		X			X				X
Louisiana	X			X					X
Maine	X			X			X		
Maryland	X			X					X
Massachusetts		X			X			X	
Michigan	X			X			X		
Minnesota		X			X				X
Mississippi		X			X				X
Missouri		X			X				X
Montana			X			X			X
Nebraska		X			X			X	
Nevada	X			X			X		
New Hampshire	X			X			X		
New Jersey	X			X					X
New Mexico		X			X			X	
New York	X			X			X		
North Carolina			X			X			X
North Dakota	X			X			X		
Ohio		X			X			X	
Oklahoma		X			X				X
Oregon	X			X			X		
Pennsylvania			X			X			X

Table B-2 (continued). Relative Number of AA-AAS Content Domains Compared to Number of General Assessment Content Domains by State and Schooling Level

State	Elementary Comparison			Middle School Comparison			High School Comparison		
	Fewer	Same	More	Fewer	Same	More	Fewer	Same	More
Rhode Island	X			X			X		
South Carolina		X		X					X
South Dakota			X			X			X
Tennessee	X			X			X		
Texas	X			X					X
Utah		X		X					X
Vermont	X			X			X		
Virginia		X				X		X	
Washington	X			X					X
West Virginia		X			X		X		
Wisconsin			X			X			X
Wyoming			X			X			
TOTAL	**21**	**21**	**9**	**23**	**18**	**10**	**18**	**8**	**24**

Table B-3. States' Content Domain Differences between AA-AAS and General Assessments

State	Number of differences in domains	AA-AAS	General Assessment
Alabama	2	Technology/Engineering, Unifying Concepts	
Alaska	1	Personal & Social Impacts	
Arizona	0		
Arkansas	3		Chemistry, Environmental/Ecological, Nature of Science
California	2		Chemistry, Environmental/Ecological
Colorado	2		Inquiry Process, Nature of Science
Connecticut	4	Technology/Engineering	Chemistry, Inquiry Process, Unique/Uncategorizable
Delaware	2	Nature of Science	Inquiry Process
District of Columbia	0		
Florida	0		
Georgia	0		
Hawaii	1	Environmental/Ecological	
Idaho	1		Personal & Social Impacts

Table B-3 (continued). States' Content Domain Differences between AA-AAS and General Assessments

State	Number of differences in domains	AA-AAS	General Assessment
Illinois	2		Environmental/Ecological, Unique/ Uncategorizable
Indiana	1		Inquiry Process
Iowa	0		
Kansas	2		Chemistry, Technology/Engineering
Kentucky	2	Technology/Engineering	Unifying Concepts
Louisiana	1		Environmental/Ecological
Maine	1		Physical Science
Maryland	1		Inquiry Process
Massachusetts	0		
Michigan	4	Unifying Concepts, Unique/Uncategorizable	Chemistry, Inquiry Process, Personal & Social Impacts
Minnesota	0		
Mississippi	0		
Missouri	0		
Montana	1	Technology/Engineering	
Nebraska	0		
Nevada	3	Nature of Science	Life Science, Technology/Engineering
New Hampshire	4	Inquiry Process	Personal & Social Impacts, Technology/Engineering, Unique/Uncategorizable
New Jersey	3		Inquiry Process, Technology/Engineering, Unique/Uncategorizable
New Mexico	0		
New York	5		Personal & Social Impacts, Physical Science, Technology/ Engineering, Unifying Concepts, Unique/Uncategorizable
North Carolina	1	Environmental/Ecological	
North Dakota	1		Nature of Science
Ohio	0		
Oklahoma	0		
Oregon	1		Inquiry Process
Pennsylvania	3	Environmental/Ecological, Inquiry Process	Nature of Science
Rhode Island	1		Inquiry Process

Table B-3 (continued). States' Content Domain Differences between AA-AAS and General Assessments

State	Number of differences in domains	AA-AAS	General Assessment
South Carolina	2	Inquiry Process	Technology/Engineering
South Dakota	1	Environmental/Ecological	
Tennessee	3		Chemistry, Inquiry Process, Technology/Engineering, Unique/ Uncategorizable
Texas	1		Inquiry Process
Utah	3	Environmental/Ecological	Chemistry, Nature of Science, Personal & Social Impacts, Physical Science
Vermont	2		Inquiry Process, Nature of Science
Virginia	3	Environmental/Ecological	Chemistry, Nature of Science
Washington	2	Unique/Uncategorizable	Technology/Engineering
West Virginia	5	Chemistry, Earth Science, Life Science, Physical Science	Unique/Uncategorizable
Wisconsin	3	Environmental/Ecological, Unique/ Uncategorizable	Unifying Concepts
Wyoming	3	Environmental/Ecological, Unique/ Uncategorizable	
Total Number of States	0=13 states, 1=14 states, 2=10 states, 3=9 states, 4=3 states, 5=2 states	1 Chemistry 1 Earth Science 8 Environmental/Ecological 3 Inquiry Process 1 Life Science 2 Nature of Science 1 Personal & Social Impacts 1 Physical Science 4 Technology/Engineering 2 Unifying Concepts 4 Unique/Uncategorizable	8 Chemistry 0 Earth Science 4 Environmental/Ecological 11 Inquiry Process 1 Life Science 7 Nature of Science 5 Personal & Social Impacts 3 Physical Science 8 Technology/Engineering 3 Unifying Concepts 7 Unique/Uncategorizable

Note: The content domains listed are additional domains that an assessment at any grade level has when compared to the other assessment at the same grade level.

Table B-4. General Assessment and AA-AAS Science Grade Levels Tested Comparisons by State and Schooling Level

State	Assessment	Grades and Schooling Levels									
		Elementary			Middle School			High School			
		3	4	5	6	7	8	9	10	11	12
Alabama	General			X		X				X	
	AA-AAS			**X**		**X**				**X**	
Alaska	General		X				X		X		
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		
Arizona	General		X				X	not specific			
	AA-AAS		**X**				**X**		**X**		
Arkansas	General			X		X				X	
	AA-AAS			**X**		**X**			**X**		
California	General			X			X		X		
	AA-AAS			**X**			**X**		**X**		
Colorado	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Connecticut	General			X			X		X		
	AA-AAS			**X**			**X**		**X**		
Delaware	General			X			X		X		
	AA-AAS			**X**			**X**		**X**		
District of Columbia	General			X			X	not specific			
	AA-AAS			**X**			**X**		**x**		
Florida	General			X			X			X	
	AA-AAS			**X**			**X**			**X**	
Georgia	General	X	X	X	X	X	X	not specific			
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Hawaii	General		X				X	not specific			
	AA-AAS		**X**				**X**		**X**		
Idaho	General			X		X		not specific			
	AA-AAS			**X**		**X**			**X**		
Illinois	General		X			X				X	
	AA-AAS		**X**			**X**				**X**	
Indiana	General		X		X			not specific			
	AA-AAS		**X**		**X**				**X**		
Iowa	General			X			X			X	
	AA-AAS			**X**			**X**			**X**	
Kansas	General		X			X				X	
	AA-AAS		**X**			**X**				**X**	

State	Assessment	Grades and Schooling Levels									
		Elementary			Middle School			High School			
		3	4	5	6	7	8	9	10	11	12
Kentucky	General		X			X		not specific			
	AA-AAS		**X**			**X**				**X**	
Louisiana	General	X	X	X	X	X	X	not specific			
	AA-AAS		**X**				**X**			**X**	
Maine	General			X			X			X	
	AA-AAS			**X**			**X**			**X**	
Maryland	General		X	X	X	X	X	not specific			
	AA-AAS			**X**			**X**		**X**		
Massachusetts	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Michigan	General		X			X				X	
	AA-AAS			**X**			**X**			**X**	
Minnesota	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Mississippi	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Missouri	General			X			X			X	
	AA-AAS			**X**			**X**			**X**	
Montana	General		X				X		X		
	AA-AAS		**X**				**X**		**X**		
Nebraska	General			X			X			X	
	AA-AAS			**X**			**X**				**X**
Nevada	General			X			X		X		
	AA-AAS			**X**			**X**			**X**	
New Hampshire	General		X				X			X	
	AA-AAS		**X**				**X**			**X**	
New Jersey	General		X				X	not specific			
	AA-AAS		**X**				**X**	**not specific**			
New Mexico	General		X			X		not specific			
	AA-AAS		**X**			**X**					**X**
New York	General		X				X	not specific			
	AA-AAS		**X**				**X**	**not specific**			
North Carolina	General			X			X	not specific			
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**not specific**			
North Dakota	General		X				X			X	
	AA-AAS		**X**				**X**			**X**	

State	Assessment	Grades and Schooling Levels									
		Elementary			Middle School			High School			
		3	4	5	6	7	8	9	10	11	12
Ohio	General			X			X	not specific			
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Oklahoma	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Oregon	General			X			X	not specific			
	AA-AAS			**X**			**X**			**X**	
Pennsylvania	General		X				X	not specific			
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**		**X**		**X**
Rhode Island	General		X				X			X	
	AA-AAS		**X**				**X**			**X**	
South Carolina	General		X	X	X	X	X	not specific			
	AA-AAS	**X[a]**	**X[a]**	**X[a]**	**X[a]**	**X[a]**	**X[a]**				
South Dakota	General			X			X			X	
	AA-AAS			**X**			**X**			**X**	
Tennessee	General	X	X	X	X	X	X	X	X	X	X
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Texas	General			X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Utah	General		X	X	X	X	X	X	X	X	X
	AA-AAS		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Vermont	General		X				X			X	
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
Virginia	General	X		X			X	not specific			
	AA-AAS			**X**			**X**	**not specific**			
Washington	General			X			X		X		
	AA-AAS			**X**			**X**	**not specific**			
West Virginia	General		X		X				X		
	AA-AAS		**X**		**X**				**X**		
Wisconsin	General	X		X			X	not specific			
	AA-AAS		**X**				**X**		**X**		
Wyoming	General		X				X	no info available			
	AA-AAS	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
TOTAL		**12 different, 39 same**			**10 different, 41 same**			**21 different, 29 same**			

Note: There is an “X” in the box when both the general assessment and AA-AAS are administered in a specific grade.

[a]Not by grade, but rather, by age, such that the SC-Alt is administered to students who meet the participation guidelines for alternate assessment and who are ages 8–13 and age 15 on September 1 of the assessment year. (These are the ages of students who are typically in grades 3–8 and 10.)

Appendix C

Assessment Approach Types and Response Formats

Table C-1. Assessment Approach Types and Response Formats by State

State	Item Based			Portfolio	Rating Scale
	Selected	Constructed	Performance Task		
Alabama				X	
Alaska	X				
Arizona	X		X		
Arkansas				X	
California			X		
Colorado	X		X		
Connecticut					X
Delaware			X		
District of Columbia				X	
Florida			X		
Georgia				X	
Hawaii			X		
Idaho				X	
Illinois			X		
Indiana					X
Iowa					X
Kansas	X				
Kentucky			X		X
Louisiana			X		
Maine				X	
Maryland				X	
Massachusetts				X	
Michigan	X				
Minnesota			X		
Mississippi				X	
Missouri				X	
Montana			X		X
Nebraska			X		
Nevada	X	X			
New Hampshire				X	

Table C-1 (continued). Assessment Approach Types and Response Formats by State

State	Item Based			Portfolio	Rating Scale
	Selected	Constructed	Performance Task		
New Jersey				X	
New Mexico	X				
New York				X	
North Carolina			X		
North Dakota			X		
Ohio			X		
Oklahoma				X	
Oregon			X		
Pennsylvania			X		
Rhode Island			X		
South Carolina			X		
South Dakota				X	X
Tennessee				X	
Texas	X				
Utah			X		
Vermont				X	X
Virginia				X	
Washington			X		
West Virginia			X		
Wisconsin			X		
Wyoming			X		
TOTAL	**8**	**1**	**24**	**18**	**7**

Note: 8 states had more than one response format.

*Additional Details and Specification are in Table C-2.

Table C-2. Details and Specifications

State	Details and Specifications
Alabama	***Rubric*** (January 2014) for extended standards identifies complexity and evidence needed to be met by portfolio.
Alaska	The ***Participation Guidelines*** document, pp. 23-31, details that either the student or the test administrator may "enter the student's response."
Arizona	According to ***AIMS A 2014 Test Administration Directions*** document, *performance tasks are standardized constructed response items. The test administrator will then input the student responses into the AIMS A application. Only this portion of the test can be entered by the test administrator at anytime during the testing window* (p. 9).
Arkansas	According to webpage about **Assessment Materials for Students with Disabilities**, the format is portfolio; although there is a "portfolio checklist." This is not a teacher rating scale but rather an organizational cover sheet to accompany each student portfolio.
California	According to webpage titled **CAPA Blueprints Preface**, *the focus for the alternate assessment describes what CAPA students should know and be able to do in relationship to the content standards. One or more focuses may be targeted for assessment in an individual task. Each standard has an equal opportunity for representation on the CAPA operational form in a given administration.*
Colorado	According to ***CoAlt Examiner's Manual Science and Social Studies***, *Selected Response items present three answer options from which the student selects an answer to the question presented. Supported Performance Tasks (SPTs) require students to complete a chart or graphic* (p. 1).
Connecticut	According to ***CMT Skills Checklist Grade 8***, *the Checklist must be completed by the student's primary special education teacher in collaboration with other team members* (p. v).
Delaware	According to ***DCAS-Alt1 Test Administration Manual Spring 2015***, *a task is a set of four to six related activities, called items. The responses to the items provide evidence of what a student knows and can do in Reading, Mathematics, Science, and Social Studies* (p. 20).
District of Columbia	**Scoring rubric** for 2013-2014 tests (including ELA, math, and science) specifies performance, level of complexity, and supports expected for targeted skills to be met by portfolio.
Florida	According to the ***Florida Alternate Assessment Administration Manual 2014-2015***, scoring rubric for performance tasks listed out the procedures for transferring students' responses from the Response Booklets (including for science) to the scannable student answer sheet, by trained administrators.
Georgia	The ***Georgia Alternate Assessment Examiner's Manual 2014-2015*** provided guidelines for compiling portfolios; the Observation Form and Interview Form in Appendix C do not ask for rating scale information, but rather provides "secondary evidence" that serves to describe the circumstances around the production of student work in the portfolio.
Hawaii	According to ***HSAA Test Administration Manual Spring 2015***, *a task is a set of four to six related activities, called items. The responses to the items provide evidence of what a student knows and can do in reading, mathematics and science* (p. 17).

Table C-2 (continued). Details and Specifications

State	Details and Specifications
Idaho	According to ***ISAT-Alt Portfolio Manual 2014-2015***, the portfolio can include various types of artifacts, including "student class work evidence," or "digital video clips," and/or "digital photographs" (p. 12) showing student demonstrating task completion.
Illinois	According to **webpage on Illinois Alternate Assessment (IAA**), *the IAA is a performance-based assessment that uses on demand tasks.*
Indiana	According to the **Indiana Department of Education webpage on Alternate Assessments,** *ISTAR is a teacher rated web-based, standards-referenced assessment system.*
Iowa	According to the Iowa Department of Education webpage on Iowa's AYP Alternate Assessments 1%, under the heading ***Assessment Reporting Periods & Rating Scale Requirements*** (for the Iowa Alternate Assessment Science), *teachers select Rating Scale Items within the IAAS Online System Student Profile.*
Kansas	According to the ***Kansas Assessment Examiner's Manual 2014-2015***, the Section 1: Assessment Overview section science table indicates that the KSA test is "Multiple-choice, machine-scored" and the alternate DLM Science Pilot Test is "Multiple-choice, technology-enhanced items; machine-scored" (p. 3).
Kentucky	According to the **Kentucky Department of Education webpage on Alternate K-PREP** (which included science), *attainment tasks are performance events that require students to complete a task, working step by step as directed by the teacher.* Also, the Transition Attainment Record (TAR) *is a checklist which evaluates the student's readiness in reading, mathematics, and science*.
Louisiana	According to Chapter 3: Science of ***LAA1 Assessment Guide***, *performance tasks are multi-modal tasks that are read aloud to the student by the test administrator while the student is shown pictures, symbols, tables, charts, graphs, and/or text. Student responses are scored by the test administrator using item specific scoring rubrics on a 0–2 point or 0–1 point scale, depending on whether the task provides for a partially correct response* (p. 3-2).
Maine	According to the **Maine Department of Education webpage on Personalized Alternate Assessment Portfolio**, *the Personalized Alternate Assessment Portfolio (PAAP) is an assessment that provides academic achievement reporting for our students with the most significant cognitive disabilities. Tasks are available to teachers throughout a five month window to provide multiple opportunities for science instruction to be embedded into students' daily work. . . . Students taking the PAAP provide evidence of their proficiency through completion of Alternate Grade Level Expectations (AGLEs) that are aligned to the science standards on which their grade-level peers are measured. Levels of progression are available and measured through eight Levels of Complexity (LoCs) for each AGLE.*
Maryland	According to the ***Alt-MSA 2015 Handbook***, a*s the student is receiving instruction and is being given the opportunity to demonstrate mastery of his or her MOs, a portfolio of student work (Alt-MSA artifacts) in reading, mathematics and science (grades 5, 8, 10) and other supporting information is assembled by the Test Examiner Team (TET)* (p. O-5). Artifacts can include student work, data chart "that summarizes the student's instruction and progress towards mastery of an objective" (p. 0-5). Other types of artifacts required for math and reading are also detailed, including videotapes and audiotapes.

Table C-2 (continued). Details and Specifications

State	Details and Specifications
Massachusetts	According to the ***2015 Educator's Manual for MCAS-Alt***, *the student's portfolio must include, at minimum, the primary evidence described below for each strand/ domain/conceptual category required for the assessment of a student in that grade. It is advisable to* ***include more than the minimum evidence requirement*** *to reduce the chance that a portfolio will be scored as* Incomplete*.* ***A minimum of one data chart and two pieces of additional primary evidence*** *(called the "core set of evidence") is required in each portfolio strand that together assess the "measurable outcome"* (bolding as in original; p. 33).
Michigan	According to the ***MI-Access Assessment Plan: Science***, *multiple choice items will have 3 answer choices in a text and/or picture format*.
Minnesota	According to ***Test Specifications for Science MTAS***, *test specifications for the MTAS indicate which strands, standards and benchmarks have been selected as priorities for students with the most significant cognitive disabilities. For each benchmark, task specifications clarify, define and limit how performance tasks should address the extended benchmarks; they are intended to represent essential understandings and are not intended to describe all instruction* (p. 2).
Mississippi	According to the Data Collection Requirements section of the ***Mississippi Extended Science Frameworks (MESF) for Students with Significant Cognitive Disabilities***, *the MESF (Mississippi Extended Science Frameworks) for science are aligned to the 2010 Mississippi Science Framework and specify what students should know and be able to do at the end of each assessment grade. The competencies for assessment are organized by strand and broken down into clusters. Each cluster is contains objectives that increase in complexity from an access level to most complex to provide a variety of learning opportunities. The clusters and objectives are also organized for continuity across grade levels* (p. 6).
Missouri	According to the ***MAP-A Science 2014-2015 Instructor's Guide and Implementation Manual***, *the Science MAP-A consists of data and supporting evidence collected by an instructional team. It provides information on a student's knowledge and skills in Science. It assesses accuracy, independence, and connection to the standards on four Science Alternate Performance Indicators (APIs)* (p.16).
Montana	According to the **CRT-ALT and Issues of Interrater Reliability** presentation slides, regarding approaches to alternate assessment, *Montana's choice: checklist (ITBS Alternate); performance task (CRT-Alternate)* (slide 5).
Nebraska	According to ***Update: Standards, Assessment, and Accountability (SAA) Beginning the School Year 2014-2015***, *the NeSA-AAR, NeSA-AAM and NeSA-AAS are tests of appropriate tasks, summative in nature, that provide a single snapshot of a student's performance* (p. 49).
Nevada	According to the ***Nevada AA Administration Manual 2014-2015***, *Designed specifically for students with significant cognitive disabilities, the NAA is a selected response and open-response assessment that is linked to the Nevada Academic Content Standards (NVACS) in English Language Arts (ELA), Mathematics, and Science* (p. 6).

Table C-2 (continued). Details and Specifications

State	Details and Specifications
New Hampshire	According to the ***New Hampshire ALPS Science Administration Manual 2014-2015***, *The New Hampshire Science Alternate Learning Progressions (NH ALPs) Portfolio is a flexible, individualized portfolio of student video evidence samples. Data are collected from December to May for each participating student. Student video evidence samples are chosen through a collaborative team process and serve as a means of documenting the student's highest and best performance on academic standards* (p. 23). *The NH Science ALPs requires two science performance tasks per grade that show the application of science process skills to address selected content. This is begun by determining which two performance tasks are required for your student's current grade level. The requirements differ by grade level* (p. 24).
New Jersey	According to webpage titled ***Alternate Proficiency Assessment in Science (APA)***, *the Alternate Proficiency Assessment (APA) in science is a portfolio assessment designed to measure progress toward achieving New Jersey's state educational standards for those students with the most significant intellectual disabilities who are unable to participate in the New Jersey Assessment of Skills and Knowledge (NJASK) Science or the New Jersey Biology Competency Test (NJBCT)*.
New Mexico	According to the ***New Mexico Alternate Performance Assessment (NMAPA) Test Administrator Manual***, *the New Mexico Alternate Performance Assessment (NMAPA) test materials for Science and Social Studies, including the test booklets, Student Score Forms, printed materials (e.g., storybook for Social Studies), and artifacts produced as a result of test administration, are secure test materials* (p. 3). Also, *A task is a set of four to six related activities, called items. The responses to the items provide evidence of what students know and can do in Science and Social Studies* (p. 25).
New York	According to webpage titled ***New York State Alternate Assessment (NYSAA)***, *The NYSAA is a datafolio-style assessment*. *Student performance is recorded through direct observation and documentation and may include other information such as student work products, photographs, audio and videotapes.*
North Carolina	According to ***North Carolina Testing Program Summative Assessment Options, 2013-2014***, the NCEXTEND1 uses performance tasks (p. 1).
North Dakota	According to the ***North Dakota Alternate Assessment 1 (NDAA1) Teacher Feedback Survey 2013-2014 Evaluation Summary***, *the method for scoring the NDAA1 was based on collecting performance based data over four trials and collecting information on the 9 "situational" indicators (e.g., number of settings, number of integrated settings, whether student planned and monitored his/her performance, etc.). The summary indicates that this method represents an appropriate way to evaluate student performance on the State Standards* (p. 12). Also, in an unpaginated preface to the ***North Dakota State Assessment Science Fall 2014 Test Coordinator's Manual***, under the heading An Important Note to Teachers and Administrators Regarding the 2014-15 North Dakota State Assessment Program, *students eligible to participate in the science North Dakota Alternate Assessment based on alternate achievement standards (NDAA 1), will take the NDAA 1 in a form similar to previous years' NDAA 1 administrations. There will be no overt changes to the NDAA 1 test administration practices.*

Table C-2 (continued). Details and Specifications

State	Details and Specifications
Ohio	According to the ***Test Design Document Alternate Assessment for Students with Significant Cognitive Disabilities (AASCD), Science Grade 5, Grade 8, and Ohio Graduation Test (OGT)****, the Ohio Science Alternate Assessment for Students with Significant Cognitive Disabilities (AASCD) was developed for grades: 5, 8 and the Ohio Graduation Test (OGT). Each assessment contains a series of 12 performance tasks and a field-test task block. Each operational task ranges from four to six items. Each field-test task includes six to eight items. Students are not required to take every task in the assessment and will start the test at the point that is most appropriate for the student. The task at which the student begins the assessment is determined by a Student Placement Questionnaire completed by the student's teacher* (p. 3).
Oklahoma	According to the ***Oklahoma Alternate Assessment Program (OAAP) Portfolio 2014-2015 Portfolio Administration Manual***, *the OAAP Portfolio requires teachers to submit evidence demonstrating their students' levels of academic knowledge and skills through collections of academic evidence. Beginning in 2011, the OAAP Portfolio test included videos as part of evidence to be collected by teachers* (p. 4).
Oregon	According to the ***Oregon Extended Assessment Administration Manual 2014-2015***, *the OExt test structure no longer places items within tasks, but presents 5 to 8 items per page to ensure sufficient space for assessors. These items are not necessarily linked to the same content prompt but vary from item to item. Selection type responses are used so all students can access the test with varying administration techniques* (p. 8).
Pennsylvania	According to webpage titled ***Pennsylvania Alternate System of Assessment (PASA)***, *the PASA is an individually administered test given each spring to students by their teacher or another certified Test Administrator who knows the student well. Each test item represents an authentic, relevant, and age-appropriate skill related to reading, mathematics, or science. Student performance is video recorded and submitted for scoring to the contractor*.
Rhode Island	According to ***Rhode Island Alternate Assessment (RIAA) 2014-2015 Policies, Procedures, and Test Administration Guidance Documents****, the RIAA design consists of an assessment that utilizes Structured Performance Tasks (SPT), which promote integrated academic and life opportunities for students* (p. 5).
South Carolina	According to webpage titled ***South Carolina Alternate Assessments***, *the SC-Alt in science and social studies consists of a series of performance tasks that are linked to the grade level academic standards although at a less complex level.*
South Dakota	According to the ***South Dakota State Test of Educational Progress for Alternate Assessment (Dakota STEP-A) Technical Report: 2013 Administration***, the STEP-A included a rating form [see Rating Form Scoring Rubric, p. 26] and "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. 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)* (p. 26).

Table C-2 (continued). Details and Specifications

State	Details and Specifications
Tennessee	According to the webpage titled ***TCAP Assessments for Students with Disabilities***, the TCAP is comprised of portfolios.
Texas	According to the ***STAAR Alternate 2 Test Administrator Manual***, *on the STAAR Alternate 2 test, each question measures a targeted prerequisite skill. Each essence statement has four questions that form a cluster and test a common skill or concept at varying levels of difficulty. Six clusters make up a test form resulting in 24 questions per test* (p. T-6).
Utah	According to the ***Utah Alternate Assessment Administration Manual and Assessment Tasks***, *the Utah Alternate Assessment (UAA) consists of approximately 200 assessment tasks from which the IEP team selects relevant tasks for individual students. Each task is presented in a common format to provide clarity and ease of use. This common format consists of three sections: (a) Task Description, (b) Administration and Scoring, and (c) Assessment Record* (p. 11).
Vermont	According to the ***Vermont Alternate Assessment Portfolio (VTAAP) Student Performance Scoring Guide Science Content Knowledge Domains 2014-2015***, the state employed portfolios and rating scales (termed "Baseline and Endline Record forms"). Under the heading "Scoring," are these directions: *You will . . . assign ratings to each of the four scoring elements (Behavior Alignment, Application Alignment; Quantity, and Accuracy).* Also, under the heading "Targets Behaviors," are these directions: *Orient to the student Product by reading the Baseline and Endline Record forms, examining all of the evidence (worksheets, pictures, video, etc.) connected to the entry point task(s), and any other annotation* (p. 2).
Virginia	According to the ***Virginia Alternate Assessment Program Implementation Manual 2014-2015***, *the VAAP provides the student the opportunity to demonstrate what he or she knows through a non-traditional method of testing. By completing products and work samples that demonstrate his/her understanding or skill, under testing conditions, the student proves that he/she knows the content. The selection of evidence used to demonstrate student performance on the ASOL is the responsibility of the student and submitting teacher. Evidence should be viewed from a qualitative, not quantitative, perspective. Evidence submitted should clearly demonstrate the level of competency the student has in regard to each ASOL being defended. All evidence submitted must have been completed under testing conditions by the student in the presence of a teacher or other school personnel* (p. 4). Appendix E also contains the 2014-2015 Teacher Checklist for Collections of Evidence; however, this is not a teacher rating scale but rather an organizational cover sheet to accompany each student portfolio.
Washington	According to the ***WA-Access to Instruction & Measurement Alternate Assessment 2014-2015 Science Access Point Frameworks***, *the Access Point Frameworks are the underpinning for the WA-Access to Instruction & Measurement and serve as the foundation for the performance task component of the assessment* (p. 1).

Table C-2 (continued). Details and Specifications

State	Details and Specifications
West Virginia	According to webpage ***West Virginia Alternate Performance Task Assessment (APTA)***, A*PTA assesses questions in three content areas: Reading/Language Arts, Mathematics, and Science. A separate test was developed for each grade level in Reading/Language Arts and Mathematics (grades 3-8 and 11) and in Science (grades 4, 6, and 10).*
Wisconsin	According to webpage titled ***Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD)***, *the WAA-SwD includes a performance task assessment for the content areas of science for 4th, 8th, and 10th grades. These are linked with the state's content standards through the Wisconsin Extended Grade Band Standards* . . .
Wyoming	According to the ***Test Design Document Wyoming Alternate Assessment for Students with Significant Cognitive Disabilities (Wy-ALT) Science***, *each assessment contains a series of 12 performance tasks. Each operational task ranges from four to six items. The items become increasingly more complex and difficult within a task; the tasks become increasingly more complex as the student moves through the test form. Students are not required to take every task in the assessment and will start the test at the point that is most appropriate for the student* (p. 3).

COLLEGE OF EDUCATION
+ HUMAN DEVELOPMENT

UNIVERSITY OF MINNESOTA

NCEO is an affiliated center of the Institute on Community Integration