



**Nebraska Student-Centered Assessment System  
Alternate Assessment of Science  
Grades 5, 8, and 11**

2022  
Standard Setting Technical Report

Prepared for the  
Nebraska Department of Education

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A

## Executive Summary

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# Executive Summary

## Nebraska NSCAS Alternate Science Standard Setting

On July 26–28, 2022, NDE sponsored a standard setting for the NSCAS Alternate assessments (NSCAS-AA) of science. A committee of 16 Nebraska educators recommended cut scores for grades 5, 8, and 11. The workshop took place in Lincoln, Nebraska.

During the standard setting, educators (a) discussed the content-based expectations for students in each achievement level (i.e., *Developing*, *On Track*, and *Advanced*), and (b) engaged in the Yes/No Angoff standard setting procedure to recommend cut scores for each of the three tests that aligned to these content-based expectations. The 16 educators recommended cut scores for grades 8, then they divided into evenly sized subgroups to repeat the standard setting for grades 5 and 11.

Educators' recommended cut scores are shown in Table 1. The *impact data* associated with the cut scores are also shown in the table. Impact data are the percentages of students who would be classified in each achievement level if the recommended cut scores were implemented. The impact data are calculated from the spring 2022 administration. The Nebraska State Board of Education approved the cut scores on August 5, 2022.

**Table 1. Approved cut scores and associated impact data for NSCAS-AA Science**

Grade	Approved Cut Scores		Associated Impact Data from Spring 2022		
	On Track	Advanced	Developing	On Track	Advanced
5	200	250	53.7%	37.9%	8.4%
8	200	250	43.0%	50.0%	7.0%
11	200	250	44.6%	45.1%	10.4%

## Workshop Committee

The workshop committees comprised 16 educators recruited from across the state of Nebraska. Of the 16 participants, 14 were female; 15 were white, and one was Black. Thirteen were special education teachers, two were general education teachers, and one was a district assessment staff member. Eight participants worked in rural school systems, four in suburban systems, and four in urban systems. 38% of participants worked in education for more than 15 years and 50% for more than 10 years.

## Standard Setting Procedure

On the first day of the workshop, the NDE welcomed participants and DRC trained them in the workshop procedure. The Yes/No Angoff procedure was selected because (a) it lets educators consider the

knowledge and skills expected of students who meet the achievement requirements; (b) it allows participants to make content-based recommendations using operational test items. Participants then engaged in the following activities for grade 8.

1. Participants examined the achievement level descriptors (ALDs) and discussed the expectations of students on the threshold (point-of-entry) of meeting the requirements for each achievement level.
2. Participants studied the operational test items administered to students in spring 2022. Items were presented in the same order as they were shown to students.
3. For each item, participants considered how well each of the threshold students (i.e., students at the point-of-entry of each achievement level) would perform on the item. For each item, they estimated whether each threshold student would answer the item correctly, *yes* or *no*.
4. Participants individually engaged in three rounds of cut score recommendations, termed *Yes/No Angoff ratings* at the workshop.
5. After Round 1, participants discussed their item-level judgments in small groups (*tables*) of 4 participants, and they shared why they made their judgments how they did. Participants then worked individually to revise their judgments.
6. After Round 2, participants were shown the percent of students who would be classified in each achievement level if the committee's median Round 2 recommendations were applied to students (i.e., the *impact data*). Participants discussed their judgments as a group across tables. Participants then worked individually to revise their item-level judgments, completing Round 3.

After the process for grade 8 was complete, participants divided into two groups to repeat the process for grades 5 and 11. Participants then examined their final-round recommendations and impact data for all three grades. Table leaders examined the across-grade consistency (articulation) of the achievement standards and considered adjustments to the cut scores to promote better consistency across grades. Ultimately, the table leaders were satisfied with their recommendations from Round 3 and made no adjustments to their recommendations.

## Participant Evaluations

Participants were generally satisfied with the process and with their recommendations. In an evaluation of the process, participants were asked if they agreed with various statements, including the following.

- “The achievement standards represent a reasonable profile of achievement at each level.” 100% agreed or strongly agreed.
- “During the workshop, my opinions were considered.” 100% agreed or strongly agreed.
- “My group’s work was reflected in the presentation of recommendations.” 100% agreed or strongly agreed.

When presented with the statement, “I was confident in my recommendations for the ... cut score,” 100% agreed or strongly agreed. For the statement “The group’s recommended cut score ... is about right,” 97% agreed or strongly agreed. As a whole, the evaluation results showed that participants were generally satisfied with the standard setting process and were satisfied with their recommendations.

# B

## Methodology

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# Methodology

## Nebraska NSCAS Alternate Science Standard Setting

On July 26–28, 2022, Nebraska Department of Education (NDE) sponsored a standard setting for the Nebraska Student-Centered Assessment System (NSCAS) Alternate assessments (AA) of science. A committee of 16 Nebraska educators recommended cut scores for grades 5, 8, and 11. The workshop took place in Lincoln, Nebraska.

During the standard setting, educators (a) discussed the content-based expectations for students in each achievement level (i.e., *Developing*, *On Track*, and *Advanced*), and (b) engaged in the Yes/No Angoff standard setting procedure to recommend cut scores for each of the three tests that aligned to these content-based expectations.

This section describes the standard setting process, the materials produced to implement the workshop, and the results of the standard setting. Selected materials used for the workshop and detailed data from the workshop are presented in subsequent sections of this report.

## Background

On September 8, 2017, the Nebraska State Board of Education approved a new set of multi-dimensional content standards for science. The new standards, *Nebraska’s College and Career Ready Standards for Science* (CCR-Science), specify the knowledge and skills that students in general education science programs should learn in each grade in three dimensions of science: science and engineering practices, disciplinary core ideas, and crosscutting concepts (Nebraska Department of Education, 2017). The general-education NSCAS science tests were subsequently revised to measure the knowledge and skills specified by the new content standards.

The state’s alternate assessment has undergone similar changes over the last few years. The NSCAS-AA is designed for students with the “most significant cognitive disabilit[ies],” including those who require “extensive, pervasive, and frequent supports in order to acquire, maintain, and demonstrate performance of knowledge and skills” (Nebraska Department of Education, n.d.). These tests measure *Nebraska’s College and Career Ready Extended Indicators for Science*, a document published by the NDE in 2020.

Accordingly, the NSCAS-AA tests of science—the NSCAS-AAS—were updated to reflect the newly revised *Extended Indicators*. The revised NSCAS-AAS were administered operationally for the first time in spring 2021. Because of the updates, the NDE decided to sponsor a standard setting for the assessments.

At the standard setting, NDE sought to establish cut scores for these assessments which: (a) reflect the state’s extended content standards, (b) link students’ scores on the tests to the state’s expectations for students in each achievement level, and (c) are well articulated across grades. For each assessment, two

cut scores were established to define three achievement levels:

- *Developing*,
- *On Track*, and
- *Advanced*.

These achievement level names were newly created in school year 2021–22 to create a distinction from the older achievement standards (with achievement level names of *Below the Standards*, *Meets the Standards*, and *Exceeds the Standards*). The new achievement level names were approved by NDE prior to the standard setting and used through the standard setting workshop.

## Selecting the Standard Setting Methodology

The modified Angoff (1971) procedure is one of the most frequently implemented methods to establish achievement standards on educational assessments. In one modification, panelists review each item and estimate what proportion of a hypothetical group of threshold examinees would answer each item correctly (Livingston & Zieky, 1982; Zieky, 2012). Several modifications to this original procedure have been implemented. The Yes/No Angoff method addresses two challenges that panelists may have in applying the procedure (Impara & Plake, 1997). First, panelists may have difficulty in conceptualizing the hypothetical threshold students. Second, estimating the proportion correct may be a difficult task even for a clearly defined group of examinees. In the Yes/No method, panelists are directed to make a dichotomous (“yes” or “no”) judgment about whether the hypothetical threshold examinees would be able to answer each question correctly.

The Yes/No Angoff method is well-suited to assessments comprised entirely (or predominantly) of selected-response items, like the NSCAS-AAS, and was selected for this reason. The Yes/No Angoff method was selected over other standard setting procedures, notably item-mapping procedures like the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996). Item-mapping procedures were not selected because of the relatively low number of students who take each test.

## Achievement Level Descriptors

A clearly defined set of achievement level descriptors (ALDs) is essential to building a strong link between the *Extended Indicators* and the cut scores. In spring 2022, a committee of Nebraska educators convened to develop ALDs for the NSCAS-AA Science assessments.

### About Achievement Level Descriptors (ALDs)

Achievement level descriptors (ALDs) are a key input into any standard setting activity. ALDs summarize the knowledge, skills, and abilities expected of students in each achievement level. Egan, Schneider, and Ferrara (2012) suggest a framework of four types of ALDs, described here.

- 1) *Policy ALDs* summarize the state’s definition for each achievement level, providing information to stakeholders on the state’s suggested interpretation of each level. They are typically not

specific to any given grade or content area. The policy ALDs for NSCAS-AA are shown in Figure 1.

- 2) *Range ALDs* summarize the knowledge, skills, and understandings expected of students in a given achievement level on a specific test. The range ALDs show the types of content, as informed by the state content standards (here, the *Extended Indicators*), that should be mastered by students in each achievement level on the test at hand.
- 3) *Threshold ALDs* are based on the range ALDs and summarize the knowledge, skills, and understandings expected of students who are at the point-of-entry (the *threshold*) of each achievement level. For any given test, these descriptors show the types of skills needed just to be classified in a given achievement level (e.g., just to be classified as *On Track*).
- 4) *Reporting ALDs* are the version of the ALDs used for score reporting. Typically, a version of the policy or range ALDs are used, and the language in the reporting ALDs is adjusted to be accessible to a wide audience that may not have in-depth content knowledge. Reporting ALDs are not included in the scope of the standard setting.

## Updated Policy ALDs

Before the standard setting, NDE considered changes to the number and names of the achievement levels to be used on the state assessments. In early 2022, NDE decided to keep the number of achievement levels reported on the state alternate assessments—three levels—but updated the names of these levels to *Developing*, *On Track*, and *Advanced*.

Educators and stakeholders can use the policy ALDs to quickly understand the intended meaning behind each achievement level. NDE reviewed the policy ALDs to make sure they reflected the most up-to-date expectations for students in each level. The updated policy ALDs are shown in Figure 1.

### Figure 1. Policy ALDs for NSCAS-AA

- ***Developing:*** Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.
- ***On Track:*** On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
- ***Advanced:*** Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.

These policy ALDs were provided to educators during the development of the range ALDs and during the standard setting.

## Development of Range ALDs

In spring 2022, Data Recognition Corporation (DRC) conducted an online workshop with a committee of Nebraska educators to develop range ALDs. The purpose of this workshop was to engage educators in the development of new range ALDs that were aligned to the *Extended Indicators for Science* and to the policy ALDs.

### Range ALD Development Process

The committee worked independently and as a group to review draft ALDs, make revisions, and discuss their recommendations.

The educators who participated in the range ALD development workshop—described below—were the primary authors of the range ALDs. To help the committee with its first draft of the descriptors, DRC context experts developed a *range ALD framework* prior to the workshop. This framework was developed as a large spreadsheet for each grade level. In the spreadsheet, each column represented an achievement level, and each row represented an element from the *Extended Indicators* for the grade at hand. In each cell of the spreadsheet, DRC used the policy ALDs and *Extended Indicators* to draft a brief statement of how students in a given achievement level might be expected to perform on tasks associated with the given indicator. These draft statements comprised the range ALD framework, and the framework was presented to participants during the range ALD development workshop.

The virtual range ALD development workshop took place in two parts. In part one, the committee met after school hours to begin the range ALD development process. DRC first welcomed participants and then described the ALD development process. DRC then shared the range ALD frameworks with the educators. DRC instructed educators on how to review the draft statements included in the framework, how to suggest revisions and adjustments to the descriptors, and how to submit their comments to DRC for incorporation into the final range ALD document.

Participants were then given time to review the ALDs independently. Participants were encouraged to contact DRC with any questions they had about the range ALD framework.

In part two, again as part of a virtual workshop after school hours, DRC met with the participating educators to discuss their recommendations and comments. Working systematically, DRC collected participants' suggestions and incorporated them into the document. Afterwards, participants were dismissed from the range ALD development workshop with the thanks of NDE and DRC.

DRC incorporated participants' comments and suggestions into the range ALDs, and the range ALDs were provided to NDE for review and approval. NDE reviewed the range ALDs and approved them for use at the standard setting. Later, at the standard setting, Nebraska educators used the policy and range ALDs to understand the expectations for students in each achievement level, to create threshold ALDs, and to inform their cut score recommendations.

## Standard Setting Workshop Materials

All of the materials used at the standard setting workshop were based on test items and results from the spring 2022 administration of the science assessments.

### Extended Indicators for Science

*Nebraska's College and Career Ready Extended Indicators for Science* formed the basis for all decisions at the standard setting. These indicators, extended from *Nebraska's College and Career Ready Standards for Science*, detail the knowledge, skills, and understandings that students with the most significant cognitive disabilities should be taught in each grade. Copies of the *Extended Indicators* were distributed to workshop participants.

### Achievement Level Descriptors (ALDs)

As described under the heading "Achievement Level Descriptors," participants were provided with the policy and range ALDs. Participants considered these descriptors to create threshold ALDs during the standard setting.

### Test Forms

The test form is a key component of the Yes/No Angoff method. A test form contains the items from a test, just as a student and test administrator (i.e., the student's teacher) saw them.

At the standard setting, participants were presented with the operational items from a single form of each test. Accordingly, each form comprised 25–28 items. These items were presented in the same order as they were presented to students.

All items on the tests were worth one point. As participants studied these items, they considered the knowledge and skills that students needed to answer the item correctly and earn the point.

### Item Maps

The item map summarizes information about the items in a test form. For each item, the item map indicates: the item order, answer key, and extended content standard.

The operational item maps incorporate secure test information and are not included in this report. However, Figure 2 shows the item map that was used during the participant training session and is included for illustration.

**Figure 2. Item map used to train participants on the Yes/No Angoff Method**

Item Number	Score Key	Standard	What does this item measure? What do you know about a student who can answer this item correctly?	Training Judgments	
				On Track	Ad- vanced
1	B	E.8.10.5.B-c			
2	A	E.8.9.4.B-c			
3	C	E.8.9.4.B-b			
4	A	E.8.11.6.C-b			
5	A	E.8.10.5.C-a			
6	B	E.8.4.3.B-c			
7	C	E.8.11.6.A-a			
8	A	E.8.11.6.A-b			

### Standard Setting Hub

At the standard setting, each participant was assigned a laptop that could access *the Standard Setting Hub*, a specially designed website that contained materials accessible to standard setting participants. Participants used the Hub to access selected materials (e.g., *Extended Indicators*, ALDs), view test items, and enter standard setting judgments. Access to the Hub was limited to workshop participants by DRC.

DRC recognized that participants would benefit from having certain frequently referenced materials (e.g., ALDs) available to them in hardcopy format. These materials were provided on paper and also on the Hub.

## Standard Setting Staff and Participants

Staff members from DRC served as facilitators and in support roles on all aspects of the standard setting workshop. These staff members did not contribute to the cut score recommendations during the workshop. The NDE staff was also present onsite to observe the workshop and participated in daily debrief meetings with DRC staff.

### NDE Staff

The NDE staff members attended the workshop to monitor the process, answer questions about the assessment and the *Extended Indicators*, and address policy concerns.

NDE was represented at the workshop by Sharon Heater, Education Specialist; and Audrey Webb, Education Specialist.

## **DRC Staff**

The DRC Standard Setting Team was composed of Ricardo Mercado, Sr. Research Director; Mayuko Simon, Ph. D., Research Scientist; Lee McKenna, Statistical Analyst; Sara Kendall, Sr. Research Analyst; and Scott Li, Statistical Analyst. Julie Pointner, Research Specialist, assisted the team from the DRC headquarters office. Prior to the standard setting, this team prepared the materials for the workshop. During the workshop, they were responsible for facilitating the workshop, training participants, entering participant results into a database, performing data analyses, and tracking secure materials. Following the workshop, the team prepared this report.

Content experts from DRC Test Development worked with workshop participants to provide content-based support: Bonnie Wright, Sr. Test Development Specialist; Wendy Ecklund, Sr. Test Development Specialist; and Steve Courtney, Sr. Project Lead. Project management for the workshop was provided by Shaundra Sand, Vice President of Education Project Management.

## **Participants**

NDE provided a list of qualified educators to serve as workshop participants. DRC invited these potential participants to the standard setting. The recruitment process strived to empanel a sample of participants for the standard setting with diverse demographics (e.g., ethnicity, gender) and diverse points-of-view (e.g., geographic location). A majority of the committee comprised special education practitioners.

The committee comprised a purposeful mix of educators with a variety of backgrounds. Special care was taken to promote geographic diversity among participants, with representation from across the state. Participants were asked to self-report their demographic characteristics (e.g., ethnicity, number of years in the profession) as part of the pre-session participant survey. The results of the participant survey can be found in Section H of this report.

### **Configuration of the Committee**

The workshop committee was composed of a total of 16 educators. All participants began the workshop by focusing on grade 8, and then the group divided into two groups to focus on grades 5 and 11, as summarized here.

- Grade 8 science (All 16 participants)
  - Grade 5 (8 participants)
  - Grade 11 science (8 participants)

## Standard Setting Workshop

The standard setting workshop took place over a three-day period. The workshop agenda is included in Section C. Participants were given a pre-session workshop evaluation to complete before standard setting began. The workshop took place in-person in Lincoln, Nebraska.

### Opening Session and Participant Training

The workshop began for all participants on July 26. All participants began the workshop with an opening session led by NDE. During this session, Ms. Heater from NDE welcomed the participants to the workshop and described the purpose of the workshop. Ms. Heater reminded participants that the *Extended Indicators* had been updated, and she described how valuable the participating educators' recommendations would be in identifying new cut scores for the tests.

Mr. Mercado from DRC then introduced the standard setting methodology. Participants were introduced to the materials that would be used during the rest of the workshop. The training presentation and selected materials are included in Section D of this report.

Participants were instructed that their goal for the workshop was to set cut scores for grades 5, 8, and 11, and that the entire group would first collaborate on cut score recommendations for grade 8. Participants understood that they would consider the knowledge and skills expected of students in each achievement level, and they would engage in the Yes/No Angoff method to make cut score judgments.

Participants were told that NDE recognized that student performance in 2022 may not be as high as teachers might have expected had the COVID-19 pandemic not occurred, but that it was important to use content as a basis for the performance standards. Participants were encouraged to imagine that students had received normal fulltime instruction in the *Extended Indicators* throughout the school year and to use the content-based expectations for these hypothetical students in each achievement level to make their cut score recommendations.

Following the training session, participants were seated at four tables (small groups) of four participants each. All participants then began the standard setting process for grade 8 science.

### Discussion of the Extended Indicators and the Threshold Students

DRC instructed participants to read the *Extended Indicators*, policy ALDs, and range ALDs; and to consider the knowledge and skills that students were expected to demonstrate at the threshold of each achievement level. Specifically, participants were asked to use the ALDs and *Extended Indicators* to develop informal threshold ALDs.

Participants engaged in structured discussions about the knowledge and skills they expected to be demonstrated by each of the two threshold students. The two threshold students were just *On Track* and just *Advanced*. To engage in these discussions, participants referred to the policy and range ALDs, the *Extended Indicators*, and their knowledge of students.

As a group, participants discussed the ALDs for each achievement level and the differences between them. During this discussion, participants considered the overall level of rigor implied by each range ALD. To focus participants on the lines of demarcation between the achievement levels, participants were asked to discuss the knowledge and skills that separated students in one achievement level from those in another. For example, participants were asked to discuss the knowledge and skills that separated the highest performing *Developing* student from the lowest performing *On Track* student. All participants were instructed to refer to the *Extended Indicators* during this discussion.

Participants recorded their expectations for students at the thresholds of each achievement level on large sheets of paper that were placed on the walls of each breakout room. Participants were encouraged to review these descriptions frequently throughout the workshop and to consider the threshold students when they made their Yes/No ratings.

By the end of this discussion, participants had thoroughly considered the policy ALDs, range ALDs, *Extended Indicators*, and threshold students; and they reached an understanding of the types of skills that the threshold student for each achievement level should have.

### **Study of the Test Books and Item Maps**

Participants at each table examined the test items in terms of what each item measured. Participants were instructed to take notes on the item maps about the knowledge and skills required to answer the items correctly.

Participants then began to consider whether each of the two threshold students should be expected to answer each item correctly. Participants were asked to wait to make their yes/no Angoff ratings until they had finished studying the items and engaged in the secondary training session.

### **Secondary Training on Yes/No Ratings**

Before starting Round 1 of the process, Mr. Mercado provided the participants with additional training for Yes/No ratings. Participants were reminded how Yes/No Angoff ratings could be represented by cut score recommendations. The training presentation and training materials are included in Section D.

Following training, participants were tested on their understanding of Yes/No Angoff ratings with a short quiz, termed a *mid-process evaluation*. Afterwards, participants were provided the correct answers for the mid-process evaluation, as well as explanations of those answers. The mid-process evaluation and results are presented in Section D of this report and under the heading "Committee Training."

### **Round 1**

Participants then made their Round 1 Yes/No Angoff ratings. Participants were informed that Yes/No Angoff rating is an individual activity. They referred to their test books, item maps, ALDs, and the *Extended Indicators*.

Participants recorded their Yes/No Angoff ratings for each item on their item maps. Participants then completed Round 1 by recording their Yes/No Angoff ratings electronically.

Participants were instructed to complete a Post-Round Survey while they waited for their fellow participants to complete their Yes/No Angoff ratings.

### **Presentation of Round 1 Recommendations**

Following Round 1, DRC calculated the Yes/No Angoff cut score recommendations. Participants were presented with a summary of their Round 1 recommendations. Specifically, participants were shown their calculated cut score recommendation, the median cut score recommendation for their table, as well as the overall median cut score recommendation for the group. Participants were also shown a histogram of the range of the group's Round 1 cut score recommendations. Detailed participant judgments and graphical representation of participant judgments are presented in Sections F and G of this report, respectively.

### **Round 2**

For each item, participants discussed the rationales behind their Round 1 Yes/No Angoff ratings. Participants were instructed to engage in a content-based discussion by focusing on the items in the test book that had the most disagreement between participants. Participants referred to their test books, item maps, ALDs, and the *Extended Indicators* throughout the discussions.

The item-level discussions took place at each table, led by the table leader. Each of the four table leaders was selected by NDE on the first day of the workshop.

Following this discussion, participants made their Round 2 Yes/No Angoff ratings. Participants were reminded that Yes/No Angoff rating is an individual activity. Participants were also reminded that they would be free to retain their Yes/No Angoff ratings for any/all items from Round 1 or to change one or more of them; however, in either case, participants would need to have content-based rationales for their decisions.

### **Presentation of Round 2 Recommendations**

Following Round 2, DRC calculated the Yes/No Angoff cut score recommendations. Participants were presented with their calculated cut score recommendation, the median cut score recommendation for their table, as well as the overall median cut score recommendation for the group, and histogram representation of the range of their cut score recommendations.

### **Round 3**

For each item, participants discussed the rationales behind their Round 2 Yes/No Angoff ratings. Participants were instructed to engage in a content-based discussion by focusing on the items in the test book that had the most disagreement between participants. Participants referred to their test books, item maps, ALDs, and the extended content standards throughout the discussions. These content-based discussions took place as a group.

Following this discussion, participants made their Round 3 Yes/No Angoff ratings. Participants were reminded that Yes/No Angoff rating is an individual activity. Participants were also reminded that they

would be free to retain their Yes/No Angoff ratings for any/all items from Round 2 or to change one or more of them; however, in either case, participants would need to have content-based rationales for their decisions.

### **Presentation of Round 3 Recommendations**

Following Round 3, DRC calculated the Yes/No Angoff cut score recommendations. Participants were presented with a summary of their Round 3 cut score recommendations and histogram representation of the range of their cut score recommendations.

### **Repeating the Process for Remaining Grades**

Participants then repeated the Yes/No Angoff method for grades 5 and 11. To do so, the group divided into two evenly sized groups of eight participants each: one group worked with Mr. McKenna and focused on grade 5, and group worked with Dr. Simon and focused on grade 11. Each of the subgroups comprised two tables of four participants each.

Participants were encouraged to consider the articulation between the achievement standards for their grades, and they were reminded that there would be an opportunity at the end of the process to suggest adjustments to the cut scores, if needed, to promote better articulation across the grades.

### **Review of Recommendations**

After making their cut score recommendations in their groups, participants were presented with the cut score recommendations for all grades. DRC also presented the impact data for each test in the content area. Impact data are the percentage of students classified in each achievement level based on a set of cut scores for the test. To calculate these impact data, DRC found the median cut score recommendations from the final round of the standard setting procedure, and then applied them to the data from the spring 2022 administration.

Participants were cautioned to consider the impact data carefully. The committee understood that the impact data were calculated from the spring 2022 administration, and that schools were likely still recovering from disruptions in normal instruction and learning due to the COVID-19 pandemic. DRC instructed participants that it was unknown whether the spring 2022 test results would be similar to those in future years, so the impact data would need to be considered cautiously. However, the impact data represented the most up-to-date representation of student performance as was available.

Participants were instructed to use impact data with care as they considered their content-based cut score recommendations. For example, participants were told that if they saw a surprising number of students classified in *Advanced* in the impact data, they should reconsider the types of knowledge, skills, and understandings they expected of the *Advanced* threshold student.

Participants were informed that they could recommend adjustments to the cut scores, if needed, to promote better articulation across grades. However, participants were cautioned against suggesting adjustments that were inconsistent with the content and that any adjusted cut score recommendation

should still be within the range of their Yes/No Angoff ratings and link the ALDs, tested content, and extended content standards.

Participants were given several minutes to discuss the impact data and to share their opinions with their table leaders. Participants were reminded that the table leaders would soon meet to discuss the recommendations, and if desired they could recommend adjustments to the recommendations.

### **Workshop Evaluation**

All participants were thanked for their time and effort during the standard setting. To conclude the workshop, participants were asked to complete a post-workshop evaluation. Participants not taking part in the table leader discussion were welcomed to leave after completing the workshop evaluation.

Selected results are presented later in this section. The complete results of the evaluations are included in Section H of this report.

### **Across-Grade Articulation Discussion**

The table leaders then convened in a single session to inspect their cut score recommendations together. DRC presented table leaders with their median final-round recommendations. The impact data associated with their median cut score recommendations were presented graphically. Table leaders were asked to share any concerns or recommendations their tables had had for their grades.

DRC reminded participants that no group reached consensus on their cut score recommendations: all groups had a diversity of cut score recommendations, even at the end of Round 3. Although the median cut score recommendations were used to calculate the impact data for presentation, any cut scores within the range of cut score recommendations made by participants would still reflect the voice of the participating educators.

DRC facilitated a wide-ranging discussion on the articulation of the cut scores. The table leaders discussed several potential adjustments to their cut scores, all to promote better articulation across grades. However, the group ultimately chose not to recommend any adjustments to the cut score recommendations. The table leaders were reminded that all recommendations would be submitted to NDE for review and eventual approval by the Nebraska State Board of Education.

### **Workshop Security**

Throughout the workshop, security was of paramount importance. At all times, DRC staff monitored the meeting rooms to prevent the removal of secure materials. At the end of each day of the workshop, each participant's materials were collected and inventoried against a master list. Between workshop days, the standard setting Hub was deactivated, and participants were not granted access to the electronic materials.

In addition, participants were required to sign non-disclosure agreements to participate in the workshop. These agreements were signed by participants and were collected by the DRC staff at the beginning of the workshop.

## Results

The standard setting was conducted according to the plans created by DRC and approved by the NDE prior to the workshop. The results of the workshop are presented in this section.

### Participants' Recommendations After Round 1

Table 1 shows participants' recommendations from Round 1 of the Yes/No Angoff procedure. The cut score recommendations are shown on the raw-score metric. During the standard setting, the raw-score (number correct) metric was used to communicate cut score recommendations to participants during the rounds of the Yes/No Angoff procedure. All of the score recommendations are presented in Section F of this report. All of the impact data shown in Table 1 and in this section are based on Nebraska students' performance in Spring 2022.

**Table 1. Recommendations from Round 1 of the science standard setting**

Grade	Cut Score Recommendations		Associated Impact Data		
	On Track	Advanced	Developing	On Track	Advanced
5	16	23	60.3%	34.4%	5.3%
8	15	22	55.7%	36.0%	8.3%
11	16	26	54.4%	41.4%	4.2%

### Participants' Recommendations After Round 2

Table 2 shows participants' recommendations from Round 2 of the Yes/No Angoff procedure. Participants' individual recommendations from all rounds may be found in Section F of this report.

**Table 2. Recommendations from Round 2 of the science standard setting**

Grade	Cut Score Recommendations		Associated Impact Data		
	On Track	Advanced	Developing	On Track	Advanced
5	15	23	53.7%	41.0%	5.3%
8	14	22	49.1%	42.5%	8.3%
11	13	24	38.3%	51.3%	10.4%

### Participants' Recommendations After Round 3

Table 3 shows participants' recommendations from Round 3 of the Yes/No Angoff procedure. When considering impact data, participants were instructed to think about the proportions of students in each achievement level for the grade at hand.

Participants' individual recommendations from all rounds may be found in Section F of this report. During the workshop, participants were shown their cut score recommendations in terms of raw score (i.e., points earned).

**Table 3. Recommendations from Round 3 of the science standard setting**

Grade	Cut Score Recommendations		Associated Impact Data		
	On Track	Advanced	Developing	On Track	Advanced
5	15	22	53.7%	37.9%	8.4%
8	13	23	43.0%	50.0%	7.0%
11	14	24	44.6%	45.1%	10.4%

### Recommendations from the Articulation Discussion

Throughout the standard setting process, participants were informed they would have an opportunity at the end of the workshop to consider the across-grade articulation of the performance standards. Participants were told that performance standards were well-articulated when the impact data associated with a set of cut scores formed a reasonable, explainable pattern across grades.

The participants inspected the impact data associated with their recommendations. Participants and table leaders were generally satisfied with their cut score recommendations. After discussions about the cut score recommendations for each content area, each committee noted that (a) they had engaged in an in-depth, content-focused standard setting process, and (b) they were generally satisfied with their recommendations.

As a committee, the table leaders chose not to recommend adjustments to the cut score recommendations. Accordingly, the Round 3 cut score recommendations were considered the final recommendations from the standard setting committee. These recommendations are shown in Table 3.

### Placing the Cut Scores on the Test Scale

After the standard setting, the cut scores were transformed onto the test scale. Unlike the raw-score (number correct) metric, the test scale uses *scale scores* to express the amount of knowledge and skills that students have demonstrated in any given grade on the science test.

Scale scores can be expressed into two ways. First, on the *theta metric*, values around zero (0) are used to express the cut scores. Second, on the *reporting metric*, values between 100 and 300 are used to express the cut scores.

An advantage of using scale scores is comparability across test forms: if a student scores 0.400 on the grade 5 science test this year (when the score is expressed on the theta metric), and another student scores 0.400 on the grade 5 science test next year (when the test questions are different), one still knows these students have comparable levels of science knowledge and skills. This type of comparison

cannot be done with raw scores, so the bulk of the analysis on the cut scores was done with the cut scores expressed on the test scales.

Subsequent tables in this section express the cut scores on the theta metric. A discussion of how the cut scores were transformed onto the reporting metric is presented at the end of this section.

Table 4 shows participants' final recommendations from the Yes/No Angoff procedure as expressed on the theta metric. The cut scores in Tables 3 and 4 have the same underlying meaning: just as equivalent temperatures can be expressed in terms of both Fahrenheit and Celsius, the cut scores in these tables refer to the same level of science knowledge and skill. The process used to transform the raw scores into scale scores on the theta metric can be found in the program technical report.

**Table 4. Educator's final cut score recommendations for science, expressed on the theta metric, and associated impact data for science**

Grade	Theta Cut Score Recommendations		Associated Impact Data		
	On Track	Advanced	Developing	On Track	Advanced
5	0.4624	2.1662	53.7%	37.9%	8.4%
8	0.103	2.6209	43.0%	50.0%	7.0%
11	-0.0795	1.8508	44.6%	45.1%	10.4%

NDE reviewed the recommended cut scores and associated impact data as shown in Table 4. While doing so, it also considered the conditional standard errors of measurement (CSEM) values associated with each cut score, as shown in Table 5. These CSEM values quantify the level of statistical precision associated with any point on the test scale, and they can be used when considering whether to adjust sets of cut scores. The values are also expressed on the theta metric (i.e., use the same units as the cut scores when expressed on the theta metric).

**Table 5. Conditional standard error of measurement (CSEM) values associated with the cut score recommendations for science**

Grade	CSEM Values	
	On Track	Advanced
5	0.4285	0.6263
8	0.4207	0.7445
11	0.4034	0.5569

### After the Standard Setting

NDE, the Commissioner, and the State Board of Education have the responsibility to implement cut scores for the assessments, and the Department recognized that it had the latitude to interpret participants' recommendations such that the final cut scores (a) reflect the knowledge and skills expected of students in each achievement level, and (b) reflect the policy-based expectations for

educators and stakeholders across Nebraska’s testing programs. Accordingly, NDE considered whether adjustments were needed to the cut scores to reflect the policy-based expectations for the program.

Generally, cut scores implemented within a range of  $\pm 2$  CSEM of participants’ original cut score recommendations are still considered to reflect the content-based expectations articulated by educators at the standard setting. Table 6 shows the participant-recommended cut scores (on the theta metric), plus and minus zero, one and two CSEM values. Associated impact data are shown with each set of adjusted cut scores.

**Table 6. Educators’ cut score recommendations with selected CSEM-linked adjustments and associated impact data for science**

Adjustment	Grade	Adjusted Cut Scores		Associated Impact Data from Spring 2022		
		On Track	Advanced	Developing	On Track	Advanced
<b>+2 CSEM</b>	<b>5</b>	1.3194	3.4188	83.7%	15.9%	0.4%
	<b>8</b>	0.9444	4.1099	74.1%	24.6%	1.3%
	<b>11</b>	0.7273	2.9646	74.1%	23.8%	2.1%
<b>+1 CSEM</b>	<b>5</b>	0.8909	2.7925	72.7%	23.8%	3.5%
	<b>8</b>	0.5237	3.3654	62.3%	35.5%	2.2%
	<b>11</b>	0.3239	2.4077	54.4%	41.5%	4.1%
<b>No Adjust- ment</b>	<b>5</b>	0.4624	2.1662	53.7%	37.9%	8.4%
	<b>8</b>	0.103	2.6209	43.0%	50.0%	7.0%
	<b>11</b>	-0.0795	1.8508	44.6%	45.1%	10.4%
<b>-1 CSEM</b>	<b>5</b>	0.0339	1.5399	42.7%	46.3%	11.0%
	<b>8</b>	-0.3177	1.8764	32.0%	59.6%	8.3%
	<b>11</b>	-0.4829	1.2939	31.1%	54.9%	14.0%
<b>-2 CSEM</b>	<b>5</b>	-0.3946	0.9136	30.4%	42.3%	27.3%
	<b>8</b>	-0.7384	1.1319	15.4%	64.0%	20.6%
	<b>11</b>	-0.8863	0.737	11.9%	62.2%	25.9%

### Approval of Educators’ Recommended Cut Scores

After deliberation, NDE, the Commissioner, and the State Board of Education chose to accept participants’ recommendations for the NSCAS-AA Science assessments without adjustments. The Nebraska State Board of Education approved the cut scores on August 5, 2022.

### Transformation onto the Final Reporting Metric

As previously described, students’ test scores are reported to teachers and stakeholders using the reporting metric (which uses three-digit values between 100 and 300). The reporting metric is used because (a) it avoids expressing test scores in terms of positive and negative values; and (b) it is consistent with the other tests in the NSCAS program.

To help teachers and stakeholders interpret the cut scores easily, NDE chose two values that would signify the *On Track* and *Advanced* cut scores on the reporting scale. Specifically, NDE indicated that 200 would always be used for *On Track* cut scores, and 250 for *Advanced*, regardless of grade.

To transform the cut scores onto the final reporting metric, DRC transformed the approved cut scores from the theta metric (as shown in Table 4) using linear transformation. This process, like that used to convert temperature readings from Fahrenheit to Celsius, does not change the underlying meaning of the cut scores, but only changes the way the cut scores are expressed.

The final, Board-approved cut scores (and associated impact data) for the science tests are shown in Table 7.

**Table 7. Approved cut scores and associated impact data for NSCAS-AA Science**

Grade	Approved Cut Scores		Associated Impact Data from Spring 2022		
	On Track	Advanced	Developing	On Track	Advanced
5	200	250	53.7%	37.9%	8.4%
8	200	250	43.0%	50.0%	7.0%
11	200	250	44.6%	45.1%	10.4%

## Evidence of Procedural Validity

The standard setting was conducted using a diverse, well-trained committee and was perceived as valid by participants. This section supports these claims.

### Committee Diversity

As part of the post-workshop survey, participants were asked about their backgrounds. The self-reported demographic characteristics of the participants are documented in this section.

All 16 participants responded to a request to share background and demographic information. Participants were asked to report their gender, race, and ethnicity. Of the 16 participants, 14 of the participants were female and two were male. When asked to identify their race, 15 of participants identified as white and one as Black.

Participants were asked to report their current position. Of the participants, 13 reported they were currently working as a special education teacher, two were general education teachers, and one was a district assessment staff member. As previously stated, the vast majority of participants were special education practitioners.

Most participants had worked in education for more than 10 years. Of the 16 participants, eight had worked in education for more than 10 years, and six had worked in education for more than 15 years.

Half of participants worked in rural districts or LEAs: eight were from rural districts, four from suburban districts, and four from urban districts.

The full results of the participant pre- and post-workshop surveys, including participants' self-reported demographic and background information, may be found in Section H of this report.

### Committee Training

During the standard setting workshop, it was clear to the facilitators that participants understood how to make judgments as part of the standard setting methodology (e.g., Yes/No Angoff ratings).

To confirm participants' knowledge of the methodology, participants were given a short quiz, termed a *mid-process evaluation*, after training. The mid-process evaluation and detailed results are shown in Section D.

Participants answered items 1–4 on the mid-process evaluation correctly most of the time. This indicates that, on the whole, participants were well prepared to make judgments and that the training was effective. Results of the mid-process evaluation are shown in Table 8. All questions on the mid-process evaluation were scored dichotomously.

**Table 8. Participants answering each item correctly on the training quiz**

Group	Training Item			
	#1	#2	#3	#4
Science	100%	93.8%	93.8%	100%

The mid-process evaluation also asked participants if they felt the goals of the standard setting were made clear and if they felt ready to proceed. All submitted evaluations indicated the committee felt prepared and ready to proceed with Yes/No Angoff ratings.

### Participants' Perceived Validity of the Workshop

Participants indicated their perceived validity of the workshop and their recommendations as part of the post-workshop evaluation. Hambleton (2001) noted that evaluations are important evidence for establishing the validity of achievement levels.

Generally, participants were satisfied with their recommendations and with the workshop as a whole. Table 9 shows participants' level of satisfaction with their recommendations. Particularly, participants understood the connection between the threshold students and their cut score recommendations, and participants generally agreed that the final recommendations reflected the work of the standard setting committee.

**Table 9. Participants' agreement with various statements on the post-workshop evaluation regarding their satisfaction with the process and the final recommendations**

<b>Statement</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Agree + Strongly Agree</b>
The achievement standards represent a reasonable profile of achievement at each level.	0%	0%	50%	50%	100%
My opinions were valued by my group.	0%	0%	31%	69%	100%
The descriptions of the threshold students were useful during the process.	0%	0%	31%	69%	100%
The facilitator provided clear instructions.	0%	0%	19%	81%	100%
I believe this process will yield defensible cut scores.	0%	0%	31%	69%	100%

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# C

## Agenda

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## Workshop Agenda

**Nebraska Department of Education (NDE)**

**Nebraska Student-Centered Assessment System (NSCAS) Alternate  
Grades 5, 8, and 11 Alternate Science**

***Standard Setting Workshop***

**Lincoln, NE**

**July 26–28, 2022**





Welcome to the standard setting for the Nebraska Student-Centered Assessment System (NSCAS) Alternate tests for grades 5, 8, and 11 Science! The Nebraska Department of Education (NDE) and Data Recognition Corporation (DRC) thank you for your time and expertise during this important process.

Please use this agenda to orient yourself during the workshop. If you have any questions or concerns, please do not hesitate to contact a member of the workshop staff.

**Tuesday, July 26**

**Welcome!**

- 8:00 AM**      **Participant Registration and Breakfast**  
Participants check in at the reception table to sign the confidentiality agreement, receive a nametag, and collect any other necessary information.
- 8:30 AM**      **Opening Session**  
NDE welcomes participants, overviews the testing program, discusses the reasons for the standard setting, and describes the desired outcomes of the workshop.
- 9:00 AM**      **Participant Training**  
DRC introduces participants to the standard setting procedure. DRC explains how cut scores can be recommended by carefully studying the test items and considering the content-based expectations for students in each achievement level.
- After the break, complete the pre-workshop survey that is linked on the Hub.
- 10:15 AM**      **Break**

Discuss Threshold Students for Grade 8

- 10:30 AM**     **Discuss the ALDs and the Threshold Students for Grade 8**  
As a table, review and discuss the achievement level descriptors (ALDs) at your table. Take notes on the discussion for later reference.
- Find the ALDs and Extended Indicators in your packet.
  - Review the knowledge, skills, and abilities that students are expected to demonstrate in the ALDs for *On Track*. Do the same for *Advanced*.
  - Participants then engage in discussions about the skills they expect to be demonstrated by a threshold student (i.e., a student who is just barely entering an achievement level).
  - For each threshold student, create a brief, bulleted list that describes the skills expected of that student. Start with the *On Track* threshold student, then move on to the *Advanced* threshold student.
- 11:30 AM**     **Discuss the Threshold Students Across Tables for Grade 8**  
Using the ALDs and the Extended Indicators, participants discuss the threshold students across tables.
- Each table should be prepared to “report out” some of the highlights from its discussion of the threshold students.
  - During the discussion, refer to the ALDs and the Extended Indicators.
  - Take notes during the discussion and update your bulleted lists of the skills expected of each of the threshold students.
- Noon**     **Lunch**  
The group breaks for lunch for 60 minutes.
- 1:00 PM**     **Take the Student Test for Grade 8**  
Participants take a form of the student test to get a sense of what students saw on test day.
- Briefly examine the items to get a general sense of what is measured by the test and how it is measured.
  - Although some discussion about individual test items is normal, focus toward examining the test and away from prolonged debate.
  - If necessary, use the Ideas & Comments link on the Hub to record comments about test items.

- 2:00 PM**      **Orientation to the Yes/No Angoff Process**  
DRC re-describes the Yes/No Angoff process. Participants are reminded that they will think of each of the threshold students, one at a time, and consider whether the threshold student is expected to answer each item correctly. Please complete the Readiness Survey on the Hub.
- 2:30 PM**      **Break**
- 2:45 PM**      **Round 1 for Grade 8**  
Working individually, participants complete the Yes/No Angoff task for each item.
- Round 1 is an individual round. Please do not discuss your ratings with your colleagues until Round 1 is complete.
  - Record your Round 1 Yes/No Angoff ratings on your item map.
  - When you are done, please complete the post-round survey on the Hub.
- 4:30 PM**      **Dismissal**

Yes/No Angoff Rounds 2 and 3 for Grade 8

**8:00 AM Participant Registration and Breakfast**

Please be sure to sign in for the day.

**8:30 AM Feedback from Round 1 for Grade 8**

DRC shows feedback from Round 1 to the committee.

**8:45 AM Round 2 for Grade 8**

In tables, participants complete the Yes/No Angoff task for each item.

- During Round 2, you should discuss your Yes/No Angoff ratings with your colleagues. However, you do *not* have to agree on your Yes/No Angoff ratings as a table. Making Yes/No Angoff ratings is always an individual activity.
- Record your Round 2 Yes/No Angoff ratings on your rating form.
- Be sure to indicate ratings for all achievement levels, even if your rating for an item is the same as from Round 1.
- When you are finished, fill out the post-round survey on the Hub.

**10:15 AM Break**

**10:30 AM Feedback from Round 2 for Grade 8**

DRC shows feedback from Round 2 to the committee.

**10:45 AM Round 3 for Grade 8**

In tables, participants complete the Yes/No Angoff task for each item.

- During Round 3, you should discuss your Yes/No Angoff ratings with your colleagues. However, you do *not* have to agree on your Yes/No Angoff ratings as a group. Making Yes/No Angoff ratings is always an individual activity.
- Record your Round 3 Yes/No Angoff ratings on your rating form.
- Be sure to indicate ratings for all achievement levels, even if your rating for an item is the same as from Round 1 or 2.
- When you are done, please complete the post-round survey on the Hub.

**11:45 AM Feedback from Round 3 for Grade 8**

DRC shows feedback from Round 3 to the committee.

**Noon Lunch**

The group breaks for lunch for 60 minutes.

*After lunch, participants reconvene in their preassigned groups, by grade level.*

- Grade 5 science
- Grade 11 science

Discuss Threshold Students for Grade 5/11

- 1:00 PM**     **Discuss the ALDs and the Threshold Students for Grade 5/11**  
As a table, review and discuss the achievement level descriptors (ALDs) at your table. Take notes on the discussion for later reference.
- Review the knowledge, skills, and abilities that students are expected to demonstrate in the ALDs for *On Track*. Do the same for *Advanced*.
  - For each of the two threshold students, create a brief, bulleted list that describes the skills expected of that student.
- 1:45 PM**     **Discuss the Threshold Students Across Tables for Grade 5/11**  
Using the ALDs and the Extended Indicators, participants discuss the threshold students across tables.
- Each table should be prepared to “report out” some of the highlights from its discussion of the threshold students.
  - During the discussion, refer to the ALDs and the Extended Indicators.
  - Take notes during the discussion and update your bulleted lists of the skills expected of each of the threshold students.
- 2:30 PM**     **Break**
- 2:45 PM**     **Examine Test Items for Grade 5/11**  
Participants examine the test items to get a sense of what students saw on test day.
- Briefly examine the items to get a general sense of what is measured by the test and how it is measured.
  - If necessary, use the Ideas & Comments link on the Hub to record comments about test items.
- 4:30 PM**     **Dismissal**

Yes/No Angoff Rounds 1 and 2 for Grade 5/11

**8:00 AM Participant Registration and Breakfast**

Please be sure to sign in for the day.

**8:30 AM Round 1 for Grade 5/11**

Working individually, participants complete the Yes/No Angoff task for each item.

- Round 1 is an individual round. Please do not discuss your ratings with your colleagues until Round 1 is complete.
- Record your Round 1 Yes/No Angoff ratings on your rating form.
- When you are finished, fill out the post-round survey on the Hub.

**10:00 AM Break**

**10:15 AM Feedback from Round 1 for Grade 5/11**

DRC shows feedback from Round 1 to the committee.

**10:30 AM Round 2 for Grade 5/11**

In tables, participants perform the Yes/No Angoff task for each item.

- During Round 2, you should discuss your Yes/No Angoff ratings with your colleagues. However, you do *not* have to agree on your Yes/No Angoff ratings as a table. Making Yes/No Angoff ratings is always an individual activity.
- Record your Round 2 Yes/No Angoff ratings on your rating form.
- Be sure to indicate ratings for all achievement levels, even if your rating for an item is the same as from Round 1.
- When you are finished, fill out the post-round survey on the Hub.

**Noon Lunch**

The group breaks for lunch for 60 minutes.

- 1:00 PM**      **Feedback from Round 2 for Grade 5/11**  
DRC shows feedback from Round 2 to the committee.
- 1:15 PM**      **Round 3 for Grade 5/11**  
In tables, participants perform the Yes/No Angoff task for each item.
- During Round 3, you should discuss your Yes/No Angoff ratings with your colleagues. However, you do *not* have to agree on your Yes/No Angoff ratings as a group. Making Yes/No Angoff ratings is always an individual activity.
  - Record your Round 3 Yes/No Angoff ratings on your rating form.
  - Be sure to indicate ratings for all achievement levels, even if your rating for an item is the same as from Round 1 or 2.
  - When you are done, please complete the post-round survey on the Hub.
- 2:30 PM**      **Break**  
After the break, the committee will reconvene in a general session.
- 3:30 PM**      **Presentation of Recommendations for All Grades**  
DRC presents a summary of the cut scores recommended in Round 3 for all grades.
- DRC encourages participants to look at the consistency of the achievement standards across grades.
- 4:00 PM**      **Workshop Evaluation**  
Participants complete an evaluation of the workshop and recommendations.
- 4:30 PM**      **Dismissal**

## Nebraska NSCAS Alternate Standard Setting for Grades 5, 8, and 11 Science



### *Agenda at a Glance*

#### **Tuesday, July 26**

- 8:00 AM Participant Registration and Breakfast
- 8:30 AM Opening Session
- 9:00 AM Participant Training
- 10:15 AM Break
- 10:30 AM Discuss the ALDs and the Threshold Students for Grade 8
- 11:30 AM Discuss the Threshold Students Across Tables for Grade 8
- Noon Lunch
- 1:00 PM Take the Student Test for Grade 8
- 2:00 PM Orientation to the Yes/No Angoff Process
- 2:30 PM Break
- 2:45 PM Round 1 for Grade 8
- 4:30 PM Dismissal

#### **Wednesday, July 27**

- 8:00 AM Participant Registration and Breakfast
- 8:30 AM Feedback from Round 1 for Grade 8
- 8:45 AM Round 2 for Grade 8
- 10:15 AM Break
- 10:30 AM Feedback from Round 2 for Grade 8
- 10:45 AM Round 3 for Grade 8
- 11:45 AM Feedback from Round 3 for Grade 8
- Noon Lunch
- 1:00 PM Discuss the ALDs and the Threshold Students for Grade 5/11
- 1:45 PM Discuss the Threshold Students Across Tables for Grade 5/11
- 2:30 PM Break
- 2:45 PM Examine Test Items for Grade 5/11
- 4:30 PM Dismissal

#### **Thursday, July 28**

- 8:00 AM Participant Registration and Breakfast
- 8:30 AM Round 1 for Grade 5/11
- 10:00 AM Break
- 10:15 AM Feedback from Round 1 for Grade 5/11
- 10:30 AM Round 2 for Grade 5/11
- Noon Lunch
- 1:00 PM Feedback from Round 2 for Grade 5/11
- 1:15 PM Round 3 for Grade 5/11
- 2:30 PM Break
- 3:30 PM Presentation of Recommendations for All Grades
- 4:00 PM Workshop Evaluation
- 4:30 PM Dismissal

# D

## Training Presentation and Materials

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# Nebraska NSCAS Alternate Science Standard Setting

Opening Session & Training  
July 26, 2022

1



**Welcome!**

Welcome to the standard setting for the  
Nebraska NSCAS Alternate science tests!

Let's take a moment to introduce  
ourselves.

2



## Training Session

Rick Mercado

Sr. Research Director  
Data Recognition Corporation

4



### Workshop Goal

To recommend cut scores that categorize students into one of three achievement levels:

- Developing
- On Track
- Advanced

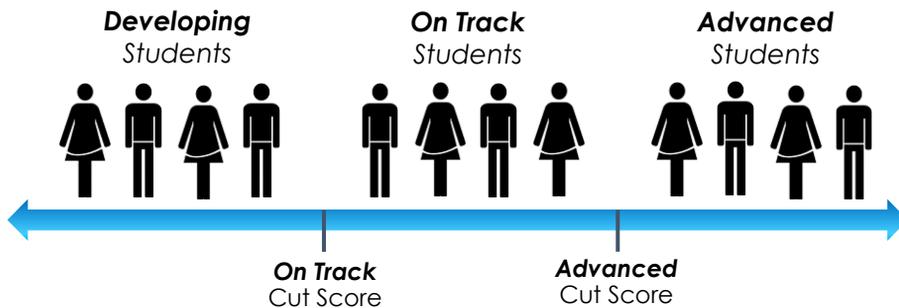
5

## Cut Scores & Achievement Levels



Two cut scores divide students' test scores into three achievement levels.

- Achievement level descriptors (ALDs) describe the *range* of student performance in each achievement level.



6

## Yes/No Angoff Standard Setting Procedure



Item-centered  
method



Content-based  
recommendations



Iterative process

7



## Committee Structure

- The entire committee will first recommend cut scores for grade 8.
- Then the group will divide into two subgroups: grade 5 and grade 11.

8

8



## Process Overview

### Today

- Orientation and training
- Discuss the threshold students
- Study the test items for Grade 8
- Refresher training on Angoff ratings
- **Round 1 Grade 8:** Recommend cut scores on your own
- Discuss **Round 1 Grade 8** recommendations at your table
- **Round 2 Grade 8:** Recommend cut scores on your own

### Tomorrow

- Discuss **Round 2 Grade 8** recommendations with your group
- **Round 3 Grade 8:** Recommend cut scores on your own
- Review the committee's recommendations for **Grade 8**
- Divide into two sub-groups
- Repeat the process for **Grade 5 or 11**

### Thursday

- Continue the process for **Grade 5 or 11**
- Review the committee's recommendations for all three grades
- Evaluate the workshop

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# Achievement Level Descriptors (ALDs)

ALDs describe the knowledge, skills, and understandings expected of students in each achievement level.

They are linked to the Extended Indicators.

ALDs describe students along the range of each level, not on the *thresholds*.

NSCAS-AA Science Achievement Level Descriptors DRAFT  
Grade 8 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
8.B.1.1.A	Identify that speed and/or direction of objects change after a collision.	Participate in and/or use the results of an investigation to describe the resulting speed and direction of two objects after a collision.	Participate in an investigation to explain the cause and effect relationship of the resulting speed and direction of two objects after a collision.
8.B.1.1.C	Identify the relative (more/less) amount of force needed to move objects of different masses.	Use the results of an investigation to identify that the more mass an object has, the more force is needed to move it.	Participate in an investigation to provide supporting evidence for the claim that the amount of force needed to move an object is dependent on the mass of the object.
8.B.1.1.D	Recognize that magnetic objects are pulled by magnetic forces and that the distance between an object and the source of the magnetic or static electric force will affect the strength of the push or pull on the object.	Use information from an investigation or an observation to describe that the push or pull of a magnetic or static electric force is affected by the strength of the magnet or charge, whether the charge is positive or negative, and the distance between the source of the force and the object.	Participate in an investigation to explain the variables that affect the strength of magnetic and static electric forces on an object across a distance.
8.B.1.1.E	Recognize that all objects will fall down as a result of gravitational force.	Use information to compare the relative strength of the gravitational force of objects with different masses.	Use information as evidence to support the claim that gravitational force affects all objects on Earth and that the strength of the force is dependent on the mass of an object.
8.B.2.2.A	Recognize a wave or recognize that waves have different amplitudes (size).	Use a given model and/or other information to compare the amplitude of waves and the amount of energy in the waves.	Use a given model to investigate and explain the relationship between the amplitude of waves and the amount of energy in the waves.
8.B.2.2.B	Identify whether light or sound passes through or is reflected by an object or material.	Use given information to identify whether sound or light waves are reflected, absorbed, or transmitted through objects and/or materials.	Participate in an investigation to explain whether sound or light waves are reflected, absorbed, or transmitted through objects and materials.
8.B.2.2.C	Identify a familiar digital or analog communication device used to send information.	Use given evidence to identify that waves (analog or digital signals) are used to send information.	Use given evidence to support the claim that information can be sent across a distance with analog or digital signals and that digital signals are a more reliable way to send information than analog signals.

DRAFT

June 2022

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# Policy Descriptors



Developing	On Track	Advanced
Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.

**Policy descriptors** give general advice on how to interpret each achievement level.

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## Activity: Spot the Differences



Developing	On Track	Advanced
Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.

Read the policy descriptors and ask yourself, **what are the differences between the achievement levels?**

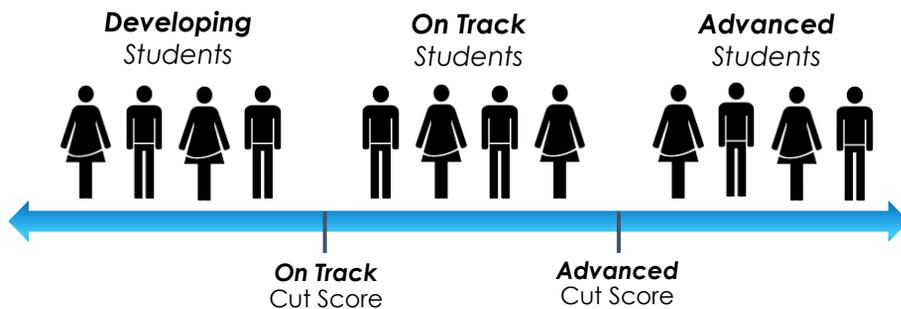
12

12

## ALDs and Achievement Levels



ALDs describe the student in the middle of each achievement level.



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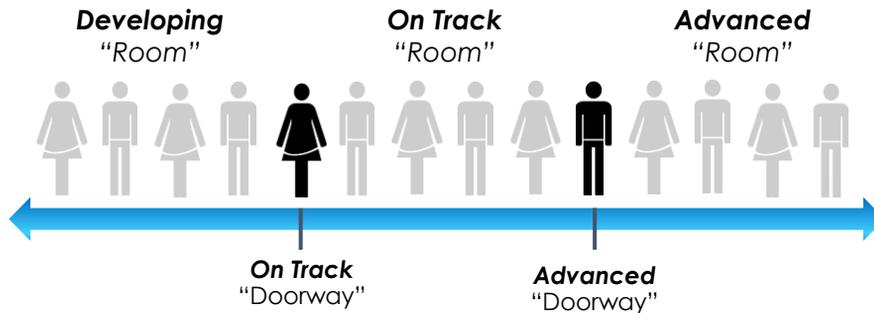
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## Rooms and Doorways



Imagine that you could watch as a student gained knowledge and skills along the test scale.

- The student might pass through a series of “rooms.”



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## Two Threshold Students



Threshold students are those leaving one level and just entering the next.

- The ALDs do *not* describe these students directly.
- There are two threshold students.

**Threshold  
On Track  
Student**



**Threshold  
Advanced  
Student**



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## Test Items



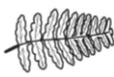
You will start your exploration of the test by studying the operational test items.

Administrator's Test Booklet	Indicator SC_E.8.10.5.B-c Recognize an Organism that Formed a Fossil DOK Level 1, Stage 2
Prepare	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student's attention to the page.</li> </ul>
SAY	(Practice Hint: Use the Color Choices option to change the background of the test window.) Here is a picture of a leaf. Indicate.
ASK	Which fossil most likely formed from this leaf? Indicate (but do not read) answers. A. seashell fossil B. leaf fossil C. fish fossil

STUDENT TEST BOOK  
Science Grade 8

Question 1

NCSAS ALTERNATE  
Indicator # SC\_E.8.10.5.B-c







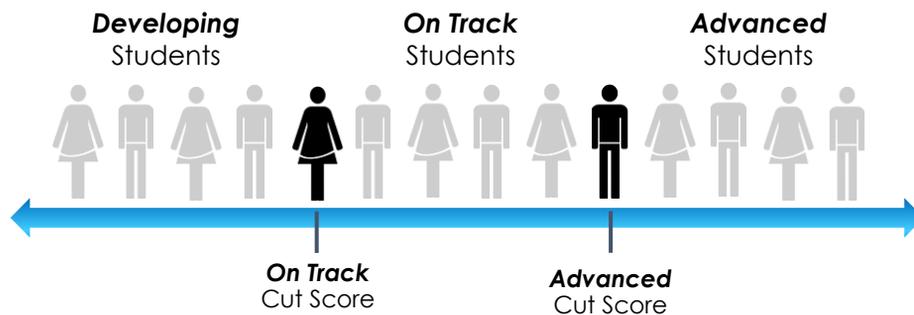


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## Cut Score Recommendations



Cut score recommendations are linked to the student *just* in each level.



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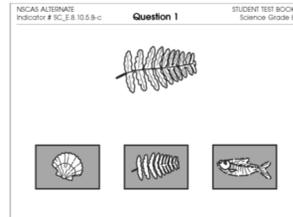
## Threshold Students and Test Items



You will consider the two threshold students.

You will think about the types of knowledge and skills they can demonstrate on the test.

You will then ask whether each threshold student should answer each item correctly.



**Threshold On Track Student**  
Rating: NO



**Threshold Advanced Student**  
Rating: YES



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## Three Rounds For Each Grade



### Round 1

- Discuss the threshold students for Grade 8
- Study the test items
- Make cut score recommendations on your own

### Round 2

- See feedback on the recommendations from Round 1 for Grade 8
- Discuss your recommendations at your table
- Make cut score recommendations on your own

### Round 3

- See feedback on the impact of the cut scores on students for Grade 8
- Discuss your recommendations with your group
- Make cut score recommendations on your own

### Repeat

- Repeat the process for Grade 5 or 11

### Review

- Review recommended cut scores for all grades
- Evaluate the workshop

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## Roles and Responsibilities

You will recommend achievement standards to NDE.

During the workshop, remember to:

- Contribute to discussions at your table
- Participate in group-wide discussions
- Make your cut score recommendations independently
- Ask a member of staff any questions
- Use workshop materials only in meeting rooms
- Keep workshop conversations confidential

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## Workshop Security

Always leave the workshop materials in the meeting rooms.

*Feel free to make notes on your printed workshop materials. Your facilitator will collect all the materials at the end of the workshop.*

Do not share or discuss the contents of the materials outside your meeting room.

*Do not access the electronic materials after the workshop.*

You are welcome to use your personal electronic devices when you are **away** from the meeting tables.

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# Training Materials

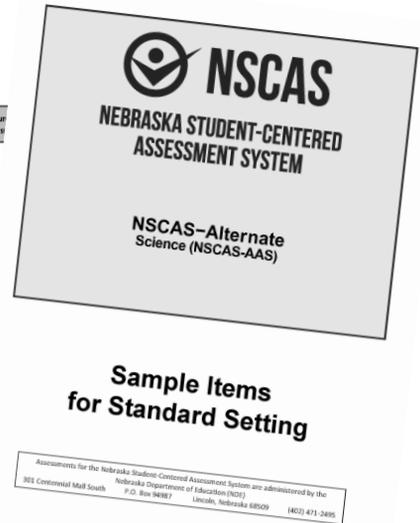


- Item map
- Training items

Nebraska NSCAS Alternate Science Standard Setting  
Item Map for Training

Item Number	Score Key	Standard	What does this item measure a student who can answer
1	B	E.8.10.5.B-c	
2	A	E.8.9.4.B-c	
3	C	E.8.9.4.B-b	
4	A	E.8.11.6.C-b	
5	A	E.8.10.5.C-a	
6	B	E.8.4.3.B-c	
7	C	E.8.11.6.A-a	
8	A	E.8.11.6.A-b	

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# Item Map



Nebraska NSCAS Alternate Science Standard Setting  
Item Map for Training

Name: \_\_\_\_\_

Item Number	Score Key	Standard	What does this item measure? What do you know about a student who can answer this item correctly?	Training Judgments	
				On Track	Advanced
1	B	E.8.10.5.B-c			
2	A	E.8.9.4.B-c			
3	C	E.8.9.4.B-b			
4	A	E.8.11.6.C-b			
5	A	E.8.10.5.C-a			
6	B	E.8.4.3.B-c			

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## Examining an Item

Make a brief note to yourself about what the item measures.

- What knowledge and skills does a student need to have in order to answer the item correctly?
- If a student answers the item correctly, what do you know about the student?

NSCAS Alternate Administration Manual		Science-Grade 8
Administrator's Test Booklet	Indicator SC_E.8.10.5.B-c Recognize an Organism that Formed a Fossil DOK Level 1, Stage 2	
Prepare	<ul style="list-style-type: none"> <li>• Place student's test page in front of the student.</li> <li>• Call student's attention to the page.</li> </ul>	
SAY	(Practice Hint: Use the Color Choices option to change the background of the test window.) Here is a picture of a leaf. Indicate.	
ASK	Which fossil most likely formed from this leaf? Indicate (but do not read) answers. A. seashell fossil B. leaf fossil C. fish fossil	

NSCAS ALTERNATE Indicator # SC\_E.8.10.5.B-c **Question 1** STUDENT TEST BOOK Science Grade 8

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## Consider the Threshold Student

You will consider the two threshold students, one at a time.

You will consider whether the threshold student should be expected to answer the item correctly or not.

- Consider what the threshold student *should* know in relationship to the extended indicators and the ALDs.
- This may be different than what typical students *can* do right now.

NSCAS ALTERNATE Indicator # SC\_E.8.10.5.B-c **Question 1** STUDENT TEST BOOK Science Grade 8

**Threshold  
On Track  
Student**  
Rating: Yes or No?



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## Recording Your Yes/No Angoff Ratings



Record your Yes/No Angoff ratings on your item map.

- Use the ALDs, the extended indicators, the threshold students, the test items, and your professional judgment as guides.
- Think of the threshold *On Track* student and make ratings for all the items. Then repeat the process for the threshold *Advanced* student.

Use numbers to symbolize your judgments.

- 1 for Yes
- 0 for No

Item Number	Training Judgments	
	On Track	Ad- vanced
1	0	1
2	0	0
3	1	1
4	1	1
5	0	0
6	0	1

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## Cut Score Recommendations



Your cut score recommendations are equal to the number of yes judgments for each threshold student.

- The median cut score recommendation is taken as the committee's recommendation.

Item Number	Training Judgments	
	On Track	Ad- vanced
1	0	1
2	0	0
3	1	1
4	1	1
5	0	0
6	0	1

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## Recording Judgments

In the actual workshop, the items will be provided on paper, but most other materials will be electronic.

- Materials are provided on a private website called the Hub.
- You will record your item notes and ratings on an online item map.



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## Pacing

Some people will take longer than others to study the test items and make their Yes/No Angoff judgments.

- During conversations, please be considerate of others at your table and in the room.
- If you finish earlier than your neighbors, you may wish to check-in with your facilitator, leave your materials at your table, and take a short break.

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## Recap Today

### Steps in Round 1:

- Discuss expectations for the two threshold students
- Review each test item
- Ask yourself how each threshold student would perform on the test items
- Record Yes/No Angoff ratings on the item map
- Complete the post-round survey

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## Practice Exercise



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## Consider the Threshold Student



Read the ALDs for Developing and On Track. **What knowledge and skills would you expect of the threshold On Track student?**

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level:	Students at this level:	Students at this level:
SC.8.1.1.A	Identify that speed and/or direction of objects change after a collision.	Participate in and/or use the results of an investigation to describe the resulting speed and direction of two objects after a collision.	Participate in an investigation to explain the cause and effect relationship of the resulting speed and direction of two objects after a collision.
SC.8.1.1.C	Identify the relative (more/less) amount of force needed to move objects of different masses.	Use the results of an investigation to identify that the more mass an object has, the more force is needed to move it.	Participate in an investigation to provide supporting evidence or the claim that the amount of force needed to move an object is dependent on the mass of the object.
SC.8.1.1.D	Recognize that magnetic objects are pulled by magnetic forces and that the distance between an object and the source of the magnetic or static electric force will affect the strength of the push or pull on the object.	Use information from an investigation or an observation to describe that the push or pull of a magnetic or static electric force is affected by the strength of the magnet or charge, whether the charge is positive or negative, and the distance between the source of the force and the object.	Participate in an investigation to explain the variables that affect the strength of magnetic and static electric forces on an object across a distance.
SC.8.1.1.E	Recognize that all objects will fall down as a result of gravitational force.	Use information to compare the relative strength of the gravitational force of objects with different masses.	Use information as evidence to support the claim that gravitational force affects all objects on Earth and that the strength of the force is dependent on the mass of an object.

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## Examine Items Using Item Map



For each item...

- Consider what the item measures. *Take a brief note on the item map.*

Nebraska NSCAS Alternate Science Standard Setting  
**Item Map for Training**

Name: \_\_\_\_\_

Item Number	Score Key	Standard	What does this item measure? What do you know about a student who can answer this item correctly?	Training Judgments	
				On Track	Ad- vanced
1	B	E.8.10.5.B-c			
2	A	E.8.9.4.B-c			
3	C	E.8.9.4.B-b			
4	A	E.8.11.5.C-b			

33

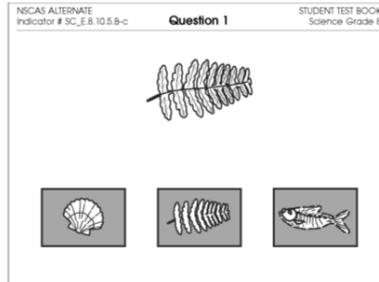
## Make Ratings for the Threshold *On Track* Student



Consider the threshold *On Track* student.

Consider whether the threshold *On Track* student should be expected to answer the item correctly or not.

- Consider what the threshold student *should* know in relationship to the extended indicators and the ALDs.



**Threshold  
On Track  
Student**  
Rating: Yes or No?



34

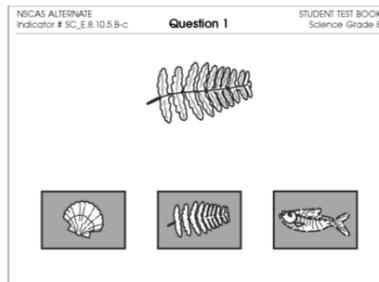
## Make Ratings for the Threshold *Advanced* Student



After you have finished making ratings for all the items, then repeat the process for the threshold *Advanced* student.

Consider whether the threshold *Advanced* student should be expected to answer the item correctly or not.

- Consider what the threshold student *should* know in relationship to the extended indicators and the ALDs.



**Threshold  
Advanced  
Student**  
Rating: Yes or No?



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## Process Recap

1. Study the items and think about what they measure.
2. Think about the threshold *On Track* student. For each item, consider whether the student should be expected to answer the item correctly, *yes* or *no*.
3. Repeat the process for the threshold *Advanced* student.
4. Record your ratings on your item map as you go.

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## A Few Tips

- Your ratings for the threshold *Advanced* student should be greater than (or equal to) those for the threshold *On Track* student.
- Consider all of the parts of an item as you make your ratings.
- It is reasonable to expect that some items are so hard that the threshold *Advanced* student will not answer the items correctly.

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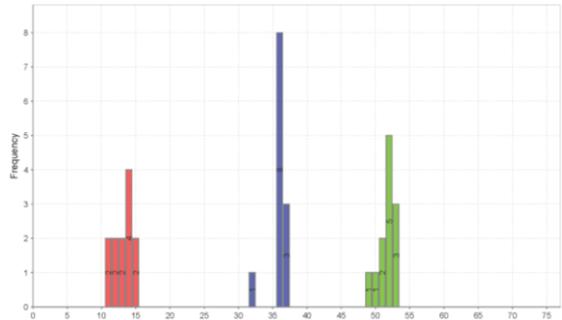
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## After Round 1



After Round 1, you will see:

- the medians from the group's Round 1 recommendations
- a histogram of the recommended cut scores



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## Using the Feedback



Compare your cut score recommendations with your tablemates' recommendations.

Consider the stringency of your recommendations.

- Talk with your tablemates about the items and ratings.
- Then make your Round 2 judgments.
- You do *not* have to agree with your colleagues.

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## Discussion of Round 1 Recommendations

---



In the actual workshop, you will discuss your Round 1 ratings at your table.

Feel free to discuss:

- Your judgments and your rationales behind them
- Ratings that you had a particularly hard time making
- How similar or different your ratings were from your colleagues'

After discussion, you will have a second opportunity to make Yes/No Angoff ratings.

- You can change any, all, or none of your ratings
- Making Yes/No Angoff ratings is always an individual activity

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## Suggestions for Discussions



Practice active listening.

Be open to changing your mind.

Work to understand your colleagues' rationales for their judgments.

In a respectful manner, feel free to ask questions of your colleagues.

Do not discuss your ratings until everyone at the table has made theirs.

Keep the contents of your discussions private.

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## After Round 2

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After Round 2, you will see additional feedback.

- You will see an updated chart of the cut score recommendations made by the committee.

You will also see *impact data*.

- Impact data are the percentages of students who would be classified in each achievement level based on the recommended cut scores.

As a content-based process, this committee will focus mostly on the knowledge and skills expected of students in each achievement level.

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## Round 3

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After Round 2, you will discuss your ratings *across tables*.

- Your table will report-out and share a bit of the discussions that happened after Round 1.
- Be sure to share any items for which (a) your table had good discussions about; or (b) conversations that led you to shifting your ratings in Round 2.

Then you will make Round 3 judgments.

- Making extended Angoff ratings is always an individual activity.

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## Repeat the Process

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### Round 1

- Discuss the threshold students
- Study the test items
- Make cut score recommendations on your own

### Round 2

- See feedback on the recommendations from Round 1
- Discuss your recommendations at your table
- Make cut score recommendations on your own

### Round 3

- See feedback on the impact of the cut scores on students
- Discuss your recommendations with your group
- Make cut score recommendations on your own

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## Reviewing the Recommendations

---

After the process is complete, your facilitator will show you the final-round recommendations from all three grades.

- You will be asked to look at the articulation of the achievement standards across grades and test levels.
- You may wish to consider adjustments to your recommendations to improve the articulation across grades and test levels.

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## After the Workshop

Your recommendations will be considered by NDE.

- The recommendations will be considered by the NDE and its advisors.

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## Workshop Structure

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Discuss threshold students for grade 8  
Study test items and make Round 1 judgments  
Discuss Round 1 at tables  
Make Round 2 judgments  
Discuss Round 2 as a group  
Make Round 3 judgments  
Repeat the process for grade 5 or 11  
Review recommendations

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## Accessing Workshop Materials

The Hub is a participants-only website that holds workshop materials.

- Please do *not* share the Hub with anyone outside the workshop.
- To access the Hub, use the shortcut on your desktop.

You will use the Hub to access item maps, items, surveys, and more!



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## Health & Safety

Throughout the workshop, please:

- Keep a reasonable physical distance from your colleagues.
- Participate actively in your group's discussions.
- Do not use personal electronic devices at your table.
- Do not remove workshop materials from the room.
- Contact DRC if you feel unwell.

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## Coming Up: Threshold Student Discussion

In your breakout rooms, you will work with your colleagues to develop informal descriptors for the two threshold students.

There are two threshold students:

- Threshold On Track
- Threshold Advanced

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## Threshold Student Descriptors

You will work in your tables to develop threshold student descriptors.

Start with the threshold On Track student.

Develop a bulleted list of 6-8 expected characteristics of the threshold student.

- Each element should be content-based and describe what the threshold student *should* be able to do.

Then repeat the process for the threshold Advanced.

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## Example: Threshold Student Descriptors



Revisit the grade 8 ALDs. What is a possible expectation for the threshold On Track student? How about the Threshold Advanced student?

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level:</b>	<b>Students at this level:</b>	<b>Students at this level:</b>
SC.8.1.1.A	Identify that speed and/or direction of objects change after a collision.	Participate in and/or use the results of an investigation to describe the resulting speed and direction of two objects after a collision.	Participate in an investigation to explain the cause and effect relationship of the resulting speed and direction of two objects after a collision.
SC.8.1.1.C	Identify the relative (more/less) amount of force needed to move objects of different masses.	Use the results of an investigation to identify that the more mass an object has, the more force is needed to move it.	Participate in an investigation to provide supporting evidence for the claim that the amount of force needed to move an object is dependent on the mass of the object.
SC.8.1.1.D	Recognize that magnetic objects are pulled by magnetic forces and that the distance between an object and the source of the magnetic or static electric force will affect the strength of the push or pull on the object.	Use information from an investigation or an observation to describe that the push or pull of a magnetic or static electric force is affected by the strength of the magnet or charge, whether the charge is positive or negative, and the distance between the source of the force and the object.	Participate in an investigation to explain the variables that affect the strength of magnetic and static electric forces on an object across a distance.
SC.8.1.1.E	Recognize that all objects will fall down as a result of gravitational force.	Use information to compare the relative strength of the gravitational force of objects with different masses.	Use information as evidence to support the claim that gravitational force affects all objects on Earth and that the strength of the force is dependent on the mass of an object.

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### Example Threshold Student Expectations



*Example from grade 8 physical science:  
"Use investigations to explain that the amount of force required to move an object depends on the mass of the object."*

Threshold Example – Threshold On Track:  
**Students can use observations of an investigation involving objects of vastly different masses to identify that more force is needed to move an object with more mass.**

Threshold Example – Threshold Advanced:  
**Students can participate in a guided investigation to identify the relationship between the mass of an object and the amount of force needed to move it.**

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## Threshold Student Descriptor Timing

Use the time to develop the two threshold student descriptors with your tablemates.

Then the committee will take about 30 minutes to discuss the threshold student descriptors across tables.

Threshold student descriptors are living documents: you will be able to reference (and update) them throughout the workshop.

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## Do you have any questions?

*If questions come up later, ask your facilitator or use the **Ideas & Comments** link on the Hub.*



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## Yes/No Angoff Refresher Training

Nebraska NSCAS Alternate Science Standard Setting

July 26, 2022

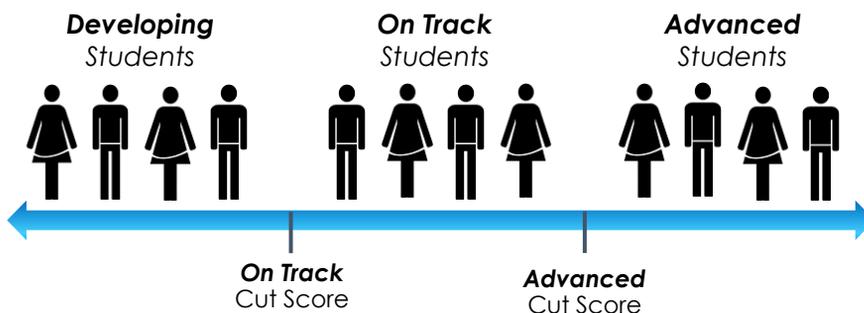
56

### Cut Scores & Achievement Levels



Two *cut scores* divide students' test scores into three achievement levels.

- Achievement level descriptors (ALDs) describe the *range* of student performance in each achievement level.

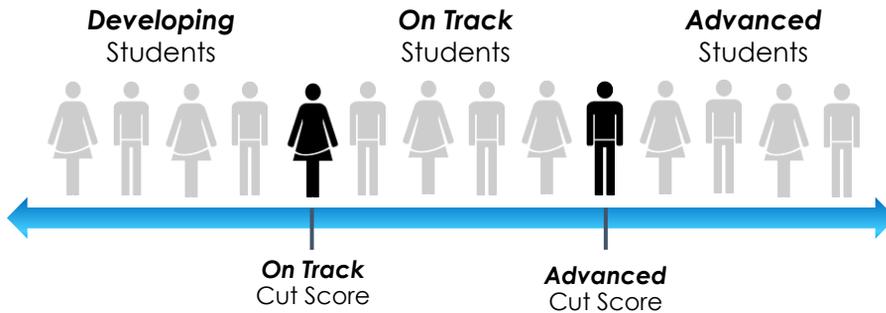


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## Cut Score Recommendations



Cut score recommendations are linked to the student *just* in each level.



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## Process Recap



1. Study the items and think about what they measure.
2. Think about the threshold *On Track* student. For each item, consider whether the student should be expected to answer the item correctly, *yes* or *no*.
3. Repeat the process for the threshold *Advanced* student.
4. Record your ratings on your item map as you go.

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## A Few Tips

- Your ratings for the threshold *Advanced* student should be greater than (or equal to) those for the threshold *On Track* student.
- Consider all of the parts of an item as you make your ratings.
- It is reasonable to expect that some items are so hard that the threshold *Advanced* student will not answer the items correctly.

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## A Little Practice



Imagine we're examining items and making Yes/No Angoff judgments for a set of test items.

We start with the threshold *On Track* student.

**Imagine that we think the threshold *On Track* student would answer the item correctly. How would we record this on the item map?**

Item Number	Training Judgments	
	On Track	Ad- vanced
1		
2		
3		
4		
5		
6		

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## A Little More Practice



Imagine we're examining items and making Yes/No Angoff judgments for a set of test items.

We start with the threshold *On Track* student.

Imagine that we think the threshold *On Track* student would answer the item correctly. How would we record this on the item map?

**What ratings are possible for the threshold *Advanced* student for that item?**

Item Number	Training Judgments	
	On Track	Ad- vanced
1	1	
2		
3		
4		
5		
6		

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## Greater Than or Equal To



We assume that students in higher achievement levels will be able to do everything that students in lower levels can do, plus more.

**This means that your ratings for the threshold *Advanced* student should be greater than (or equal to) those for the threshold *On Track* student.**

Item Number	Training Judgments	
	On Track	Ad- vanced
1	1	1
2	0	1
3	0	0
4		
5		
6		

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## Thinking About the *Advanced* Student



It can be tempting to assume that the threshold *Advanced* student will always answer items correctly.

**Remember that your judgments are associated with the threshold students.**

Always consider the items themselves. It is reasonable to expect that there are some items (perhaps many!) on which the threshold *Advanced* student will earn fewer points.

Item Number	Training Judgments	
	On Track	Ad- vanced
1	1	1
2	0	1
3	0	1
4	1	1
5	0	1
6	0	1

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## Post-Round Survey



You will record judgments on your electronic item map.

Then you will complete the Post-Round Survey.

- The Post-Round Survey is linked on the Hub.



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## Pacing

Some people will take longer than others to study the test items and make their judgments.

- During conversations, please be considerate of others at your table and in the room.
- If you finish earlier than your neighbors, you may wish to check-in with your facilitator, leave your materials at your table, and take a short break.

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## Rounds

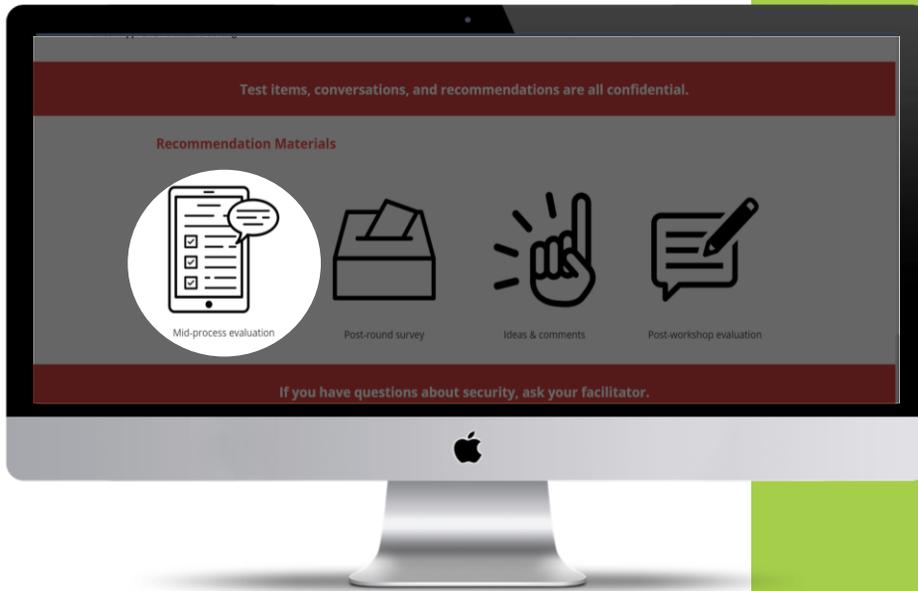
**Round 1:** Make judgments on your own

**Round 2:** See feedback, discuss with your tablemates, make judgments on your own

**Round 3:** See feedback, discuss with the group, make judgments on your own

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## Mid-Process Evaluation



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# Thanks



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# Articulation Discussion

Nebraska NSCAS Alternate Science Standard Setting

July 28, 2022

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## Articulation Questions

---



What reactions do have to these questions?

1. What pattern(s) do we see in the impact data across grades, and is the pattern reasonable and explainable?
2. What questions do we have about the cut scores that the other group recommended?
3. What flexibility do we have around our cut score recommendations?

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## Potential Adjustments

Based on this discussion, do you recommend any adjustments to the cut scores?

Remember that:

- All cut scores must be consistent with the tested content and content-based expectations for students
- Adjustments should only be recommended if there is a compelling reason to do so (e.g., no “preferential” changes)
- Adjustments are *not* required

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## Materials Collection & Wrap-Up

Please listen to the facilitator for important information about materials collection.

Complete your articulation evaluation before you leave.

Thank you for your participation!

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Nebraska NSCAS Alternate Science Standard Setting  
**Item Map for Training**

Name: \_\_\_\_\_

Item Number	Score Key	Standard	What does this item measure? What do you know about a student who can answer this item correctly?	Training Judgments	
				On Track	Advanced
1	B	E.8.10.5.B-c			
2	A	E.8.9.4.B-c			
3	C	E.8.9.4.B-b			
4	A	E.8.11.6.C-b			
5	A	E.8.10.5.C-a			
6	B	E.8.4.3.B-c			
7	C	E.8.11.6.A-a			
8	A	E.8.11.6.A-b			



# NEBRASKA STUDENT-CENTERED ASSESSMENT SYSTEM

## NSCAS–Alternate Science (NSCAS-AAS)

# Sample Items for Standard Setting

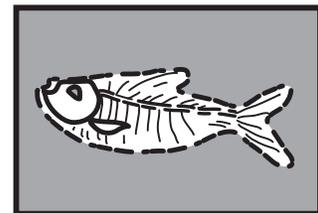
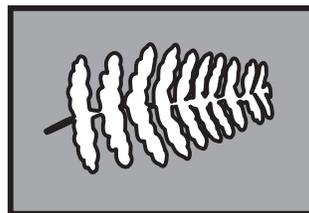
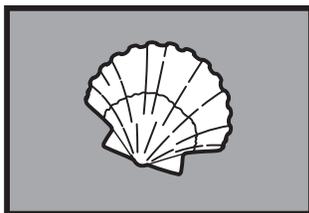
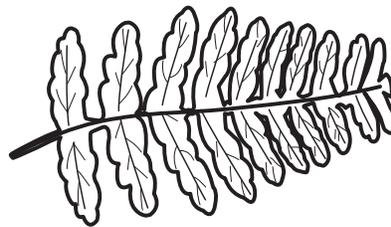
Assessments for the Nebraska Student-Centered Assessment System are administered by the  
Nebraska Department of Education (NDE)  
301 Centennial Mall South      P.O. Box 94987      Lincoln, Nebraska 68509      (402) 471-2495

<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.10.5.B-c Recognize an Organism that Formed a Fossil DOK Level 1, Stage 2</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student’s attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Color Choices option to change the background of the test window.)</b>  <b>Here is a picture of a leaf. Indicate.</b></p>
<b>ASK</b>	<p><b>Which fossil most likely formed from this leaf?</b>  <i>Indicate (but do not read) answers.</i>          A. seashell fossil          B. leaf fossil          C. fish fossil</p>

NSCAS ALTERNATE  
Indicator # SC\_E.8.10.5.B-c

### Question 1

STUDENT TEST BOOK  
Science Grade 8



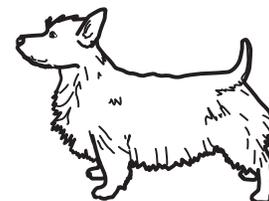
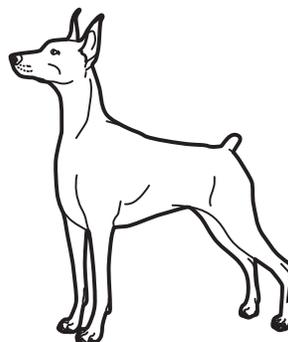
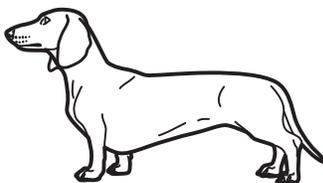
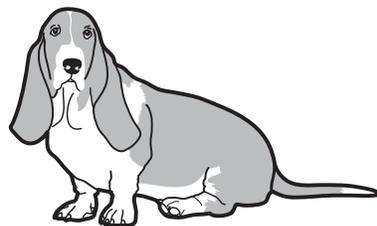
<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.9.4.B-c</b> <b>Trait That Fits Need</b> <b>DOK Level 1, Stage 3</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student’s attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Masking tool to block off parts of a test question.)</b>  <b>Follow along as I read these sentences. Indicate.</b>  <b>The long, floppy ears of this dog prevent insects from crawling into the dog’s ears. Indicate ears.</b></p>
<b>ASK</b>	<p><b>Which picture shows a dog with ears that prevent insects from crawling into them?</b>  <i>Indicate (but do not read) answers.</i></p> <p>A. dog with long ears          B. dog with pointy ears          C. dog with straight ears</p>

NSCAS ALTERNATE  
 Indicator # SC\_E.8.9.4.B-c

**Question 2**

STUDENT TEST BOOK  
 Science Grade 8

The long, floppy ears of this dog prevent insects from crawling into the dog’s ears.



<b>Administrator's Test Booklet</b>	<b>Indicator SC_E.8.9.4.B-b Inheritance and Variation of Traits DOK Level 1, Stage 3</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student's attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Line Guide tool to help you keep track of each line in a story.)</b>  <b>Follow along as I read these sentences. Indicate.</b>  <b>The corn plant has changed over time. In the past, corn plants produced small cobs of corn with only a few kernels. Over time, farmers replanted only plants that produced large cobs of corn with many kernels.</b></p>
<b>ASK</b>	<p><b>Which cob of corn is likely to produce large cobs with many kernels?</b>  <i>Indicate (but do not read) answers.</i></p> <p>A. <i>small corn cob</i>  B. <i>medium corn cob</i>  C. <i>large corn cob</i></p>

NSCAS ALTERNATE  
Indicator # SC\_E.8.9.4.B-b

### Question 3

STUDENT TEST BOOK  
Science Grade 8

The corn plant has changed over time. In the past, corn plants produced small cobs of corn with only a few kernels. Over time, farmers replanted only plants that produced large cobs of corn with many kernels.

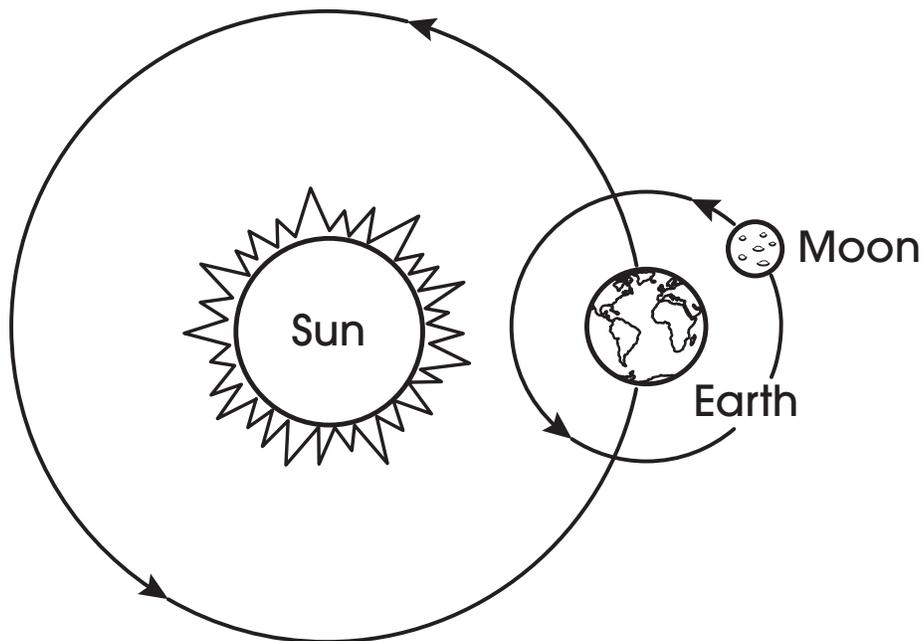


<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.11.6.C-b Identify Relative Size of Sun, Earth, and Moon DOK Level 1, Stage 3</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>• <i>Place student test page in front of the student.</i></li> <li>• <i>Call student’s attention to the page.</i></li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Magnifier tool to increase the size of words and pictures.)</b>  <b>This picture shows the Sun (<i>indicate</i>), Earth (<i>indicate</i>), and the Moon (<i>indicate</i>) that are part of the solar system.</b></p>
<b>ASK</b>	<p><b>Which of these objects in our solar system is the smallest?</b>  <i>Indicate and read answers.</i>  A. <b>Moon</b>  B. <b>Earth</b>  C. <b>Sun</b></p>

NSCAS ALTERNATE  
Indicator # SC\_E.8.11.6.C-b

**Question 4**

STUDENT TEST BOOK  
Science Grade 8



**Moon**

**Earth**

**Sun**

<b>Administrator's Test Booklet</b>	<b>Indicator SC_E.8.10.5.C-a Traits Helpful/Harmful for Survival DOK Level 1, Stage 3</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>• <i>Place student test page in front of the student.</i></li> <li>• <i>Call student's attention to the page.</i></li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Line Guide tool to help you keep track of each line in a story.)</b>  <b>Follow along as I read this paragraph. <i>Indicate.</i></b>  <b>Giraffes have long necks that help them reach leaves to eat high in trees. Giraffes have patterned fur that helps them blend in the shade of trees for safety. Giraffes also have split hooves on their feet that help them walk easily.</b></p>
<b>ASK</b>	<p><b>Which trait helps a giraffe reach the leaves high in trees?</b>  <i>Indicate and read answers.</i></p> <p>A. <b>long neck</b>  B. <b>patterned fur</b>  C. <b>split hooves</b></p>

NSCAS ALTERNATE  
Indicator # SC\_E.8.10.5.C-a

### Question 5

STUDENT TEST BOOK  
Science Grade 8

Giraffes have long necks that help them reach leaves to eat high in trees. Giraffes have patterned fur that helps them blend in the shade of trees for safety. Giraffes also have split hooves on their feet that help them walk easily.

**long neck**

**patterned fur**

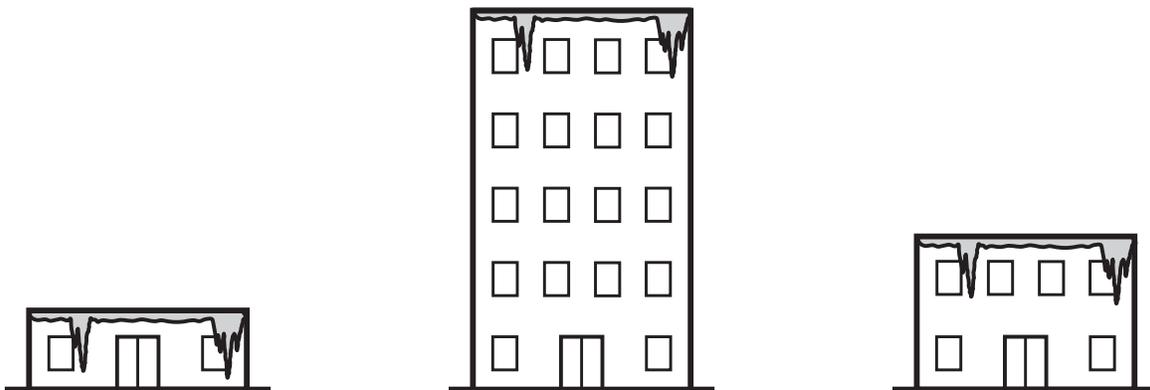
**split hooves**

<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.4.3.B-c Potential Energy DOK Level 1, Stage 3</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>• Place student test page in front of the student.</li> <li>• Call student’s attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Masking tool to block off parts of a test question.)</b>  <b>Here are pictures of three buildings with icicles hanging from the roof. Indicate.</b>  <b>An icicle that is on top of the highest building will have the greatest potential energy.</b></p>
<b>ASK</b>	<p><b>An icicle that is on which building has the greatest potential energy?</b>  <i>Indicate (but do not read) answers.</i>  A. one-story building  B. five-story building  C. two-story building</p>

NSCAS ALTERNATE  
Indicator # SC\_E.8.4.3.B-c

### Question 6

STUDENT TEST BOOK  
Science Grade 8



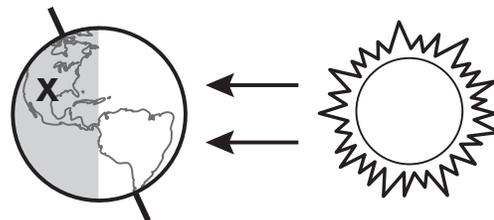
<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.11.6.A-a</b> <b>Tilt of Earth</b> <b>DOK Level 2, Stage 4</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student’s attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Magnifier tool to increase the size of words and pictures.)</b></p> <p>Here is a model of Earth and the Sun. <i>Indicate.</i></p> <p>Follow along as I read these sentences. <i>Indicate.</i></p> <p>The axis of Earth is tilted so that the northern part of Earth tilts away from the Sun. It is winter in Nebraska when the northern part of Earth is tilted away from the Sun.</p> <p>The X on Earth shows where Nebraska is located. <i>Indicate.</i></p>
<b>ASK</b>	<p><b>According to this model, what is the season in Nebraska?</b></p> <p><i>Indicate and read answers.</i></p> <p>A. <b>spring</b></p> <p>B. <b>summer</b></p> <p>C. <b>winter</b></p>

NSCAS ALTERNATE  
 Indicator # SC\_E.8.11.6.A-a

**Question 7**

STUDENT TEST BOOK  
 Science Grade 8

The axis of Earth is tilted so that the northern part of Earth tilts away from the Sun. It is winter in Nebraska when the northern part of Earth is tilted away from the Sun.



**spring**

**summer**

**winter**

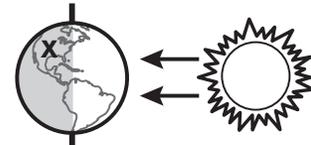
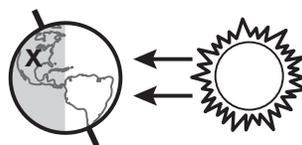
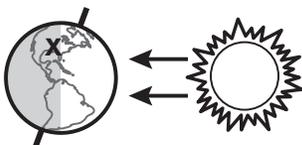
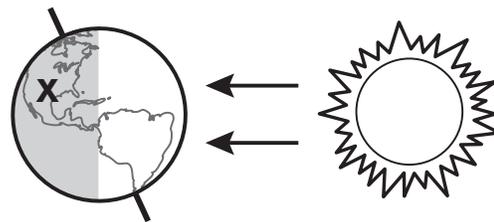
<b>Administrator’s Test Booklet</b>	<b>Indicator SC_E.8.11.6.A-b</b> <b>Tilt of Earth</b> <b>DOK Level 2, Stage 4</b>
<b>Prepare</b>	<ul style="list-style-type: none"> <li>Place student test page in front of the student.</li> <li>Call student’s attention to the page.</li> </ul>
<b>SAY</b>	<p><b>(Practice Hint: Use the Line Guide tool to help you keep track of each line in a story.)</b></p> <p><b>Here is a model of Earth and the Sun. Indicate.</b></p> <p><b>Follow along as I read these sentences. Indicate.</b></p> <p><b>The axis of Earth is tilted so that the northern part of Earth tilts away from the Sun. It is winter in Nebraska when the northern part of Earth is tilted away from the Sun.</b></p> <p><b>The X on Earth shows where Nebraska is located. Indicate.</b></p>
<b>ASK</b>	<p><b>Which model shows Earth and the Sun when it is summer in Nebraska?</b></p> <p><i>Indicate (but do not read) answers.</i></p> <p>A. model with rays to Northern Hemisphere</p> <p>B. model with rays to Southern Hemisphere</p> <p>C. model with rays to equator</p>

NSCAS ALTERNATE  
 Indicator # SC\_E.8.11.6.A-b

**Question 8**

STUDENT TEST BOOK  
 Science Grade 8

The axis of Earth is tilted so that the northern part of Earth tilts away from the Sun. It is winter in Nebraska when the northern part of Earth is tilted away from the Sun.



**NSCAS–Alternate**

**Excerpts from the  
Grades 6-8 OTT  
Administration Manual**

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## Mid-Process Evaluation for Yes/No Angoff

This section of the evaluation asks a few questions about the Yes/No Angoff process, just to make sure everyone understands the process. Don't worry; you learned everything you needed to know during the training.

Try your best on the questions. You'll see the answers after you finish the evaluation.

What is your full name? \*

Your answer \_\_\_\_\_

A participant is considering her Angoff ratings. Read the questions below and choose the best answer.

The correct responses for these questions will be shown after you submit the survey.

When making her ratings, which of these students should the participant mostly keep in mind? \* 1 point

- Threshold students
- Mid-range students
- High-achieving students

The participant thinks the threshold On Track student will get an item correct. She enters a 1 for threshold On Track for that item. What does her rating mean? \* 1 point

- The threshold On Track student will probably earn one point on the item.
- The threshold On Track student MUST earn at least one point on the item to be in On Track.
- Students in Advanced will probably earn one point on the item, but not any students in On Track.

The participant thinks that the threshold On Track student should be able to answer a given item correctly. Based ONLY on this rating, what can you assume about the threshold Advanced student's performance on that same item? \* 1 point

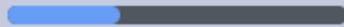
- The threshold Advanced student should also be able to answer the item correctly.
- The threshold Advanced student would not be able to answer the item correctly.
- There is no connection between the ratings for the threshold On Track and Advanced students.

For another item, the participant marks "0" for both of the threshold students. What does this mean?

\* 1 point

- The item must measure knowledge and skills that are not included in the extended indicators.
- The item is so easy that nearly all students will answer the question correctly.
- The item measures knowledge and skills beyond that expected of the threshold Advanced student.

Next



Page 1 of 3

Clear form



## Mid-Process Evaluation for Yes/No Angoff

### About Your Experience So Far

For this section, think about your experiences with the opening training, the achievement level descriptors (ALDs), and this supplemental training.

Please consider the statements below and mark your level of agreement or disagreement you have with each. \*

	Strongly Disagree	Disagree	Agree	Strongly Agree
The training provided a clear description of the workshop goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training session leader clearly explained the standard setting procedure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The training session leader clearly explained the materials used in the standard setting process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training addressed many of my questions and concerns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The practice exercises were useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The opening session provided a clear overview of the standard setting process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My role in the standard setting was well described.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel prepared to complete the standard setting task.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The achievement level descriptors (ALDs) are clear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adequate information was provided regarding the ALDs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The ALDs communicate a reasonable profile of students' achievement at each level.



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Clear form



## Mid-Process Evaluation for Yes/No Angoff

### Readiness

Before the committee begins Round 1, the facilitators want to make sure everyone feels reasonably comfortable with the process. In this section, indicate whether you are ready to proceed.

Are you ready to proceed with Round 1? \*

- Yes, I am ready.
- Not yet: I have questions.

If not ready to proceed, please write your questions here. Questions will be addressed as a group.

Your answer

---

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[Submit](#)

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[Clear form](#)

# NSCAS Alternate Science Mid-Process Evaluation

**Legend:** Correct: ■ Incorrect: ■ Distractors Chosen More than Correct Answer: ■ Changed Answer:

**When making her ratings, which of these students should the participant mostly keep in mind?**

Response	Frequency	Percent	
<b>* <i>Threshold students</i></b>	16	100.00	<div style="width: 100%; height: 15px; background-color: green; border: 1px solid black;"></div>
Mid-range students	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>
High-achieving students	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>

**What does her rating mean?**

Response	Frequency	Percent	
<b>* <i>The threshold On Track student will probably earn one point on the item.</i></b>	15	93.75	<div style="width: 93.75%; height: 15px; background-color: green; border: 1px solid black;"></div>
The threshold On Track student MUST earn at least one point on the item to be in On Track.	1	6.25	<div style="width: 6.25%; height: 15px; background-color: red; border: 1px solid black;"></div>
Students in Advanced will probably earn one point on the item but not any students in On Track.	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>

**Based ONLY on this rating, what can you assume about the threshold Advanced student's performance on that same item?**

Response	Frequency	Percent	
<b>* <i>The threshold Advanced student should also be able to answer the item correctly.</i></b>	15	93.75	<div style="width: 93.75%; height: 15px; background-color: green; border: 1px solid black;"></div>
The threshold Advanced student would not be able to answer the item correctly.	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>
There is no connection between the ratings for the threshold On Track and Advanced students.	1	6.25	<div style="width: 6.25%; height: 15px; background-color: red; border: 1px solid black;"></div>

**For another item, the participant marks "0" for both of the threshold students. What does this mean?**

Response	Frequency	Percent	
The item must measure knowledge and skills that are not included in the extended indicators.	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>
The item is so easy that nearly all students will answer the question correctly.	0	0.00	<div style="width: 0%; height: 15px; background-color: white; border: 1px solid black;"></div>
<b>* <i>The item measures knowledge and skills beyond that expected of the threshold Advanced student.</i></b>	16	100.00	<div style="width: 100%; height: 15px; background-color: green; border: 1px solid black;"></div>

# NSCAS Alternate Science Mid-Process Evaluation

**The training provided a clear description of the workshop goals.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	2	12.50	
Strongly Agree	13	81.25	

**The training session leader clearly explained the standard setting procedure.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	3	18.75	
Strongly Agree	12	75.00	

**The training session leader clearly explained the materials used in the standard setting process.**

Response	Frequency	Percent	Mean: 3.75
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	1	6.25	
Strongly Agree	14	87.50	

**The training addressed many of my questions and concerns.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	2	12.50	
Strongly Agree	13	81.25	

**The practice exercises were useful.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	3	18.75	
Strongly Agree	12	75.00	

**The opening session provided a clear overview of the standard setting process.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	
Disagree	1	6.25	
Agree	3	18.75	
Strongly Agree	12	75.00	

**My role in the standard setting was well described.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	
Disagree	1	6.25	
Agree	4	25.00	
Strongly Agree	11	68.75	

**I feel prepared to complete the standard setting task.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	
Disagree	1	6.25	
Agree	6	37.50	
Strongly Agree	9	56.25	

**The achievement level descriptors (ALDs) are clear.**

Response	Frequency	Percent	Mean: 3.25
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	9	56.25	
Strongly Agree	6	37.50	

**Adequate information was provided regarding the ALDs.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	5	31.25	
Strongly Agree	10	62.50	

**The ALDs communicate a reasonable profile of students' achievement at each level.**

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	1	6.25	
Disagree	0	0.00	
Agree	7	43.75	
Strongly Agree	8	50.00	

**Are you ready to proceed with Round 1?**

Response	Frequency	Percent	Mean: 1.00
Yes I am ready.	16	100.00	
Not yet: I have questions.	0	0.00	

## **E**

### Achievement Level Descriptors (ALDs)

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## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 5 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level	Students at this level	Students at this level
SC.5.3.1.A	Recognize the difference between part of an object and a whole object, or identify when an object is made of smaller parts.	Identify that matter is made of tiny particles too small to be seen without magnification.	Develop a model or participate in an investigation to explain that matter is made of particles too small to be seen without magnification.
SC.5.3.1.B	Recognize that a scale is used to measure weight. Identify that a substance (e.g., water) has the same weight as a solid and a liquid.	Use data and other information to identify that a substance has the same weight when heated or cooled and that weight of an object or substance as a whole is equal to the weight of its individual parts.	Participate in an investigation or make an observation to explain conservation of matter and that heating, cooling, and mixing substances does not change the weight of a substance.
SC.5.3.1.C	Identify physical properties of materials (color, shape, size, weight).	Use physical properties to identify or categorize materials (color, shape, size, texture, weight).	Use an observation and/or a given model to identify materials based on physical properties including color, shape, size, texture, weight, and temperature.
SC.5.3.1.D	Recognize that combining two substances can produce a mixture.	Use given information to compare the observable properties of substances before and after they are mixed to provide evidence whether or not a new substance was formed.	Participate in an investigation to determine and explain whether or not a new substance was formed as a result of mixing two substances.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 5 Life Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level	Students at this level	Students at this level
SC.5.8.2.A	Recognize that all animals, including humans, must have food for energy to survive.	Identify that all animals, including humans, need energy from food for healing, growing, moving, and staying warm.	Use a given model to explain that all animals, including humans, use food energy for survival including healing, growing, moving, and staying warm.
SC.5.8.2.B	Identify that plants need air and water to survive (live and grow).	Identify supporting evidence that plants get materials for survival from air and water.	Use evidence to explain that plants get materials they need to survive primarily from air and water.
SC.5.8.2.C	Use given information to identify that animals depend on other organisms for food, or identify a given organism's source of food.	Use a simple given model (e.g., food chain) to identify the movement of matter among plants and animals.	Use information and/or a given model to explain the movement of matter among plants and animals.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 5 Earth and Space Sciences

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
SC.5.11.3.A	Identify that a dropped object falls down to the ground due to gravity.	Use information and/or an observation of falling objects to identify that objects are pulled downward toward Earth by gravity.	Use data and an observation to explain that gravity is a force that pulls objects on Earth downward/toward the ground.
SC.5.11.3.B	Recognize that the Sun is a bright star.	Use a given model to identify that the Sun appears brighter than other stars because it is closer to Earth.	Use a given model to explain the difference in the apparent brightness of the Sun and other stars is due to their distance from Earth.
SC.5.11.3.C	Recognize a pattern related to the day/night cycle (i.e., the Sun is present in the local sky during the day) or recognize the difference in the amount of sunlight in the summer compared to the winter.	Identify the cyclical pattern of the location of the Sun in the local sky (sunrise, noon, sunset) and/or the difference in the hours of daylight and darkness as the seasons change.	Use data from an observation to investigate and explain cyclical patterns in the Sun as related to the day/noon/night cycle and the relative number of hours of daylight during each season.
SC.5.13.4.A	Identify a part of a given Earth system (i.e., geosphere [land], biosphere [organisms], hydrosphere [water], atmosphere [air]).	Identify the interaction of two Earth systems that could result in a natural Earth process or given change.	Use a given model of a natural Earth process to identify ways that two Earth systems interact and identify an observable change that can occur as a result of the interaction.
SC.5.13.4.B	Recognize water and identify a body of water as saltwater or fresh water.	Use information (e.g., graphs, charts) to identify whether there is a larger supply of saltwater or fresh water on Earth and identify the sources of both types of water.	Create or use a graph and/or chart to explain the distribution of water on Earth as mostly saltwater (about 97%) found in oceans and that the fresh water supply (about 3%) is found in lakes, rivers, groundwater, and glaciers.
SC.5.13.4.C	Recognize that Earth's resources (e.g., water, wood, fossil fuels) are limited and identify a way to personally conserve a natural resource.	Identify multiple ways to reduce, reuse, and recycle natural resources.	Describe an environment in which natural resources are found and explain ways the environment and natural resources can be protected or conserved.
SC.5.13.4.E	Recognize how a tool or material can be used to solve a real-world problem.	Identify tools and materials that could be used to design a solution to a simple real-world problem when given one or more criteria or constraint.	Design a solution to a problem that meets given criteria, constraints on materials, time, and/or cost limits.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 8 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
SC.8.1.1.A	Identify that speed and/or direction of objects change after a collision.	Participate in and/or use the results of an investigation to describe the resulting speed and direction of two objects after a collision.	Participate in an investigation to explain the cause and effect relationship of the resulting speed and direction of two objects after a collision.
SC.8.1.1.C	Identify the relative (more/less) amount of force needed to move objects of different masses.	Use the results of an investigation to identify that the more mass an object has, the more force is needed to move it.	Participate in an investigation to provide supporting evidence for the claim that the amount of force needed to move an object is dependent on the mass of the object.
SC.8.1.1.D	Recognize that magnetic objects are pulled by magnetic forces and that the distance between an object and the source of the magnetic or static electric force will affect the strength of the push or pull on the object.	Use information from an investigation or an observation to describe that the push or pull of a magnetic or static electric force is affected by the strength of the magnet or charge, whether the charge is positive or negative, and the distance between the source of the force and the object.	Participate in an investigation to explain the variables that affect the strength of magnetic and static electric forces on an object across a distance.
SC.8.1.1.E	Recognize that all objects will fall down as a result of gravitational force.	Use information to compare the relative strength of the gravitational force of objects with different masses.	Use information as evidence to support the claim that gravitational force affects all objects on Earth and that the strength of the force is dependent on the mass of an object.
SC.8.2.2.A	Recognize a wave or recognize that waves have different amplitudes (sizes).	Use a given model and/or other information to compare the amplitude of waves and the amount of energy in the waves.	Use a given model to investigate and explain the relationship between the amplitude of waves and the amount of energy in the waves.
SC.8.2.2.B	Identify whether light or sound passes through or is reflected by an object or material.	Use given information to identify whether sound or light waves are reflected, absorbed, or transmitted through objects and/or materials.	Participate in an investigation to explain whether sound or light waves are reflected, absorbed, or transmitted through objects and materials.
SC.8.2.2.C	Identify a familiar digital or analog communication device used to send information.	Use given evidence to identify that waves (analog or digital signals) are used to send information.	Use given evidence to support the claim that information can be sent across a distance with analog or digital signals and that digital signals are a more reliable way to send information than analog signals.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 8 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level	Students at this level	Students at this level
<b>SC.8.4.3.A</b>	Identify that objects with more mass or objects traveling at a greater speed will have more kinetic (motion) energy.	Use data to identify that the mass of an object and/or the speed an object is traveling affects the amount of kinetic energy.	Use data to explain the relationship between the mass of an object and/or the speed an object is traveling to the amount of kinetic energy.
<b>SC.8.4.3.B</b>	Recognize that objects at greater heights have more potential (stored) energy.	Use data to identify that the amount of potential (stored) energy in a stationary object increases with increasing height and decreases with decreasing height.	Use data and/or a given model to explain the relationship between the height of an object and the amount of potential energy.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 8 Life Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
<b>SC.8.9.4.A</b>	Identify a difference in the physical traits of two organisms of the same species.	Identify whether or not an organism's ability to survive is impacted by a given change in a physical trait.	Use a given model to explain that changes in the physical traits of organisms of the same species may have harmful, beneficial, or no effect on the organisms' ability to survive.
<b>SC.8.9.4.B</b>	Identify an organism with a given desirable trait or an organism that fits a given need.	Recognize desirable or undesirable physical traits in organisms and identify a way that humans select a desirable physical trait for future generations of offspring.	Use given information to explain that humans select or influence the physical traits of plants and animals to meet a given human need.
<b>SC.8.10.5.A</b>	Identify a fossil that could be found in a given environment.	Use a given fossil to identify that different environments and organisms previously existed at given locations.	Use fossil records and/or other data to explain changes in Earth's environment and life forms over time.
<b>SC.8.10.5.B</b>	Identify similar physical traits between modern organisms and fossils.	Identify similarities and differences that indicate whether or not an organism could be related to the fossil.	Use a given model and/or other information about fossils to explain possible relationships between organisms.
<b>SC.8.10.5.C</b>	Identify an organism with a specific physical trait that helps the organism survive in a specific environment.	Identify a trait that is helpful or harmful to a given organism's survival and/or ability to reproduce in a specific environment.	Use given information as evidence to explain that physical traits of organisms help them survive and reproduce in a specific environment.
<b>SC.8.10.5.D</b>	Recognize that the number of organisms with a beneficial trait will increase in population over time.	Use data to determine whether the number of organisms with or without a specific physical trait will likely increase or decrease in population over time.	Use data and/or other information to explain that organisms with beneficial physical traits are better able to survive, reproduce, and increase in population over time.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 8 Earth and Space Sciences

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level	Students at this level	Students at this level
<b>SC.8.11.6.A</b>	Recognize that the Moon has phases (i.e., new, half, full) or identify the recurring seasons of summer and winter.	Identify the Moon's recurring phases (i.e., new, quarter, half, full) that occur monthly and the four seasons that occur yearly.	Use a given model of the Earth-Sun-Moon system to explain the cycles that create observable monthly lunar patterns and yearly seasonal patterns on Earth.
<b>SC.8.11.6.B</b>	Identify the Sun, the Moon, and Earth as parts of the solar system or that they orbit together.	Identify that the pull of gravity is the force keeping the Sun, the Moon, and Earth in predictable orbits.	Use a given model to explain the role of gravity in maintaining the orbital paths of the Moon around Earth and Earth around the Sun.
<b>SC.8.11.6.C</b>	Identify the smallest or largest object in the Earth-Sun-Moon system.	Use a given scaled model to compare the sizes of the Sun, the Moon, and Earth.	Use a given scaled model to compare and describe the relative sizes of the Sun, planets, and moons in the solar system.
<b>SC.8.14.7.A</b>	Identify the oldest or youngest layer in a given model of rock strata with more than two distinct layers.	Identify that Earth's surface is made of rock layers and that younger rock layers are formed on top of older rock layers.	Use a given model to explain that the Earth's surface is made of rock layers and the age of the layers is relative to their position within rock strata.
<b>SC.8.10.5.C</b>	Identify an organism with a specific physical trait that helps the organism survive in a specific environment.	Identify a trait that is helpful or harmful to a given organism's survival and/or ability to reproduce in a specific environment.	Use given information as evidence to explain that physical traits of organisms help them survive and reproduce in a specific environment.
<b>SC.8.10.5.D</b>	Recognize that the number of organisms with a beneficial trait will increase in population over time.	Use data to determine whether the number of organisms with or without a specific physical trait will likely increase or decrease in population over time.	Use data and/or other information to explain that organisms with beneficial physical traits are better able to survive, reproduce, and increase in population over time.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 11 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
SC.HS.1.1.A	Recognize that an object with a larger mass requires more force to move than an object with a smaller mass.	Use an observation to identify that mass and speed affect the force of an object.	Use given data and/or other information to describe the relationship of mass and speed to produce the force of an object.
SC.HS.1.1.B	Identify the result of two objects with the same speed, but different masses colliding or two objects with the same mass, but different speeds colliding.	Use a given model to describe the result of two objects with the same mass and/or the same speed colliding.	Participate in an investigation to explain the result of two objects colliding.
SC.HS.1.1.C	Identify whether or not a given design solution changed the force of an object during a collision.	Use evidence from a given design solution to identify the relative resulting force (more or less) of an object during a collision.	Use data and/or other information from an investigation to explain how or why a design solution minimizes the force of an object during a collision.
SC.HS.3.3.B	Identify the spacing of particles in a liquid or solid.	Use a given model to determine whether the spacing and arrangement of particles represents a solid, liquid, or gas.	Use a given model to compare and describe the spacing and arrangement of particles in solids, liquids, and gases.
SC.HS.3.3.D	Recognize a metal from a nonmetal.	Identify a difference between metals and nonmetals in allowing heat and energy to pass through.	Identify and/or explain the differences between metals and nonmetals in allowing heat and energy to pass through.
SC.HS.4.4.A	Identify a device that converts electrical energy into heat or light energy.	Identify whether a given device converts electrical energy into heat, light, or sound energy.	Use a given model to identify and/or explain that electrical energy can be converted into heat, light, or sound energy.
SC.HS.4.4.E	Identify a tool that can be used to measure thermal energy.	Identify an object that retains thermal energy for a fixed amount of time (e.g., thermos, lunch box, paper bag).	Use given information to explain appropriate methods and/or tools to use in a thermal energy investigation.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 11 Physical Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
SC.HS.5.5.C	Recognize the occurrence of a chemical reaction.	Identify that an increase or decrease in temperature affects the rate of a chemical reaction.	Participate in an investigation to determine/and or explain that a change in reactant affects the rate at which a reaction occurs.
SC.HS.5.5.D	Recognize an increase in the amount of product.	Identify which of two given models will result in the greatest amount of product.	Use a given model or data to explain that increasing the amount of reactants results in an increase in the amount of product.
SC.HS.5.5.E	Recognize a problem or identify one step to solve a given problem.	Identify a multi-step solution to solve a given problem (limited to three steps).	Participate in designing a multi-step solution to a complex real-world problem or evaluate a given solution for its validity in solving a complex real-world problem.
SC.HS.5.5.F	Recognize that all matter has weight or identify that weight does not change as a result of a chemical reaction.	Use data to identify whether or not there is a change in weight as a result of a chemical reaction.	Use a given model as evidence to determine and/or explain that weight does not change as a result of a chemical reaction.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 11 Life Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
SC.HS.6.1.B	Recognize a major human organ or an organ system.	Identify a function of a major organ system in the human body.	Use a given model to identify major organs and/or an organ system of the human body and how the organs within a system work together to support a bodily function.
SC.HS.6.1.C	Recognize that organisms respond to thirst and hunger.	Identify how an organism responds to a given change in its environment.	Use given information to explain that organisms change in response to changing conditions in their environment.
SC.HS.6.1.D	Recognize that the body is made of cells and that cells divide.	Identify a function of cell division (e.g., to grow, to replace dead or damaged cells, to produce different cell types).	Use a given model to determine and/or explain that the body is made of many different types of cells that multiply through a process of cell division.
SC.HS.7.2.C	Recognize that plants and animals rely on specific environmental conditions for survival.	Identify how an environmental change may affect the population of an organism.	Use given evidence to support a claim that living or nonliving factors in an environment affect the population of organisms.
SC.HS.7.2.D	Recognize that an individual or a group behavior of a given organism helps the organism survive and reproduce.	Use given evidence to identify how individual and/or group behaviors of an organism affect survival and reproduction.	Use given evidence to describe and/or explain that individual and group behaviors affect a species' chances to survive and reproduce.
SC.HS.8.3.A	Identify that water, sunlight, and carbon dioxide are necessary for plants to make their own food.	Use a given model to identify that plants change light energy into chemical energy to make their own food.	Develop and/or use a model to explain photosynthesis.
SC.HS.8.3.C	Recognize that all living things need food for energy to grow and survive.	Identify that energy is produced as a result of food breaking down into smaller parts and that different types of food are needed to produce energy for survival.	Use a given model to explain that different types of food are needed to produce the energy that is needed for survival.
SC.HS.8.3.D	Identify the correct order of a food chain from producer to consumer.	Use a given model to complete a food chain from producer to consumer.	Use models to describe a food chain and the cycling of matter among organisms within an ecosystem.

## NSCAS-AA Science Achievement Level Descriptors DRAFT Grade 11 Life Science

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
<b>SC.HS.9.4.A</b>	Recognize an inherited trait or recognize an acquired trait.	Identify that an organism has inherited and acquired traits.	Use a given model to explain that some traits are inherited and passed from parent to offspring and other traits are acquired.
<b>SC.HS.10.5.B</b>	Identify an environment that is the most suitable for a given animal with specific physical traits.	Identify how a population can adapt or change to survive when the environment changes.	Use a given model and/or other information to explain how a population of animals can adapt to environmental changes to increase its chance of survival.
<b>SC.HS.10.5.E</b>	Recognize a healthy population in a given environment.	Identify an environmental condition that could lead to an increase or a decrease in a population.	Use given information as evidence to support a claim that a change in the environment can cause a change in the population.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 11 Earth and Space Sciences

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	Students at this level	Students at this level	Students at this level
SC.HS.11.1.A	Recognize that the Sun provides heat and light to Earth.	Use a given model to identify that the Sun is a star that provides energy to Earth in the form of heat and light.	Use a given model to explain that the Sun's core releases energy that eventually reaches Earth in the form of light and heat.
SC.HS.11.1.D	Recognize that planets orbit the Sun.	Identify that moons orbit planets and planets orbit the Sun in predictable patterns.	Use a given model to describe the predictable orbits of objects (e.g., planets, moons, satellites) in the solar system.
SC.HS.12.2.B	Recognize that the Sun's energy at the poles and equator is different because of Earth's tilt.	Identify that Earth's tilt impacts energy differences between the poles and equator, producing different climates.	Use a given model to describe differences in energy from the Sun and climates on Earth.
SC.HS.12.2.C	Recognize a pattern in global temperatures using a simple given graph or illustration.	Use a given graph or illustration to identify patterns in global temperatures and pollution.	Use simple graphs or illustrations to identify trends in global climate over time.
SC.HS.13.3.A	Recognize that water changes the surface of Earth over time.	Identify that atmospheric changes cause changes to Earth's surface from temperature, water, and wind.	Use data or other information as evidence to support the claim that atmospheric changes cause changes to Earth's surface over time (temperature, water, and wind).
SC.HS.13.3.B	Recognize that Earth has different layers.	Identify that Earth has layers with different characteristics.	Use a given a model to describe the characteristics of the different layers of Earth.
SC.HS.13.3.C	Recognize that Earth has tectonic plates and that they move.	Identify evidence that the movement of Earth's tectonic plates causes earthquakes and volcanoes.	Use a given model to describe that the motion of Earth's tectonic plates causes events that impact Earth's features.
SC.HS.13.3.D	Recognize that water changes Earth's surface by freezing.	Identify a change to Earth's surface that is a result of water freezing or water transporting materials.	Participate in an investigation to describe that water's properties can impact Earth's surface and materials.

## NSCAS-AA Science Achievement Level Descriptors DRAFT

### Grade 11 Earth and Space Sciences

	Developing	On Track	Advanced
	Developing learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	On Track learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	Advanced learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
<b>SC.HS.15.5.A</b>	Recognize a renewable or nonrenewable natural resource or identify a natural hazard.	Identify how the availability of a given renewable/nonrenewable resource impacts humans and/or identify how a given natural hazard impacts humans.	Use given evidence to explain how the availability of natural resources and/or how the occurrence of natural hazards influences or impacts humans.
<b>SC.HS.15.5.D</b>	Recognize a way humans impact Earth.	Identify a positive and a negative way that humans impact Earth.	Use given evidence to explain how humans positively and negatively impact Earth.
<b>SC.HS.15.5.E</b>	Recognize a solution to a given environmental problem.	Identify a solution to a given environmental problem that reduces human impact on the environment.	Use given information to identify possible solutions to environmental problems that would reduce human impact on the environment.

## **F**

### Detailed Reports of Participants' Judgments

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# NSCAS Alt 2022 Standard Setting

## Unformatted Recommendations by Round and Participant for Grade 5 Science

Recommendations on the Raw Score Metric

Panelist #	Table	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1801	2	19	24	15	23	16	22
1802	1	13	23	15	23	15	22
1803	1	14	22	13	23	15	23
1804	2	18	25	15	23	16	22
1805	1	18	23	13	22	13	22
1806	2	15	22	15	23	16	22
1807	2	11	21	14	22	12	22
1808	1	16	22	13	22	14	22

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 5 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
All Partici- pants	Median	16	23	15	23	15	22
	Minimum	11	21	13	22	12	22
	25th %ile	13.75	22	13	22	13.75	22
	75th %ile	18	23.25	15	23	16	22
	Maximum	19	25	15	23	16	23
	S.D.	2.78	1.28	0.99	0.52	1.51	0.35
	N	8	8	8	8	8	8

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 5 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1	Median	15	23	13	23	15	22
1	Minimum	13	22	13	22	13	22
1	25th %ile	13.75	22	13	22	13.75	22
1	75th %ile	16.5	23	13.5	23	15	22.25
1	Maximum	18	23	15	23	15	23
1	S.D.	2.22	0.58	1	0.58	0.96	0.5
1	N	4	4	4	4	4	4
2	Median	17	23	15	23	16	22
2	Minimum	11	21	14	22	12	22
2	25th %ile	14	21.75	14.75	22.75	15	22
2	75th %ile	18.25	24.25	15	23	16	22
2	Maximum	19	25	15	23	16	22
2	S.D.	3.59	1.83	0.5	0.5	2	0
2	N	4	4	4	4	4	4

# NSCAS Alt 2022 Standard Setting

## Unformatted Recommendations by Round and Participant for Grade 8 Science

Recommendations on the Raw Score Metric

Panelist #	Table	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1701	3	11	20	12	20	13	22
1702	4	15	23	14	24	14	24
1703	2	12	21	14	23	11	23
1704	3	16	22	12	20	13	23
1705	4	14	22	14	24	14	24
1706	1	17	24	12	20	11	21
1707	1	10	18	9	17	9	19
1708	2	18	24	14	22	14	23
1709	3	15	19	12	19	13	23
1710	1	16	24	16	24	13	23
1711	2	10	19	11	22	11	21
1712	4	14	21	14	22	13	21
1713	4	16	25	14	24	14	24
1714	1	11	20	13	18	13	18
1715	2	14	22	16	20	16	23
1716	3	18	23	12	22	12	22

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 8 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
All Partici- pants	Median	15	22	14	22	13	23
	Minimum	10	18	9	17	9	18
	25th %ile	11.75	20	12	20	11.75	21
	75th %ile	16	23.25	14	23.25	14	23
	Maximum	18	25	16	24	16	24
	S.D.	2.69	2.09	1.81	2.24	1.65	1.75
	N	16	16	16	16	16	16

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 8 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1	Median	14	22	13	19	12	20
1	Minimum	10	18	9	17	9	18
1	25th %ile	10.75	19.5	11.25	17.75	10.5	18.75
1	75th %ile	16.25	24	13.75	21	13	21.5
1	Maximum	17	24	16	24	13	23
1	S.D.	3.51	3	2.89	3.1	1.91	2.22
1	N	4	4	4	4	4	4
2	Median	13	22	14	22	13	23
2	Minimum	10	19	11	20	11	21
2	25th %ile	11.5	20.5	13.25	21.5	11	22.5
2	75th %ile	15	22.5	14.5	22.25	14.5	23
2	Maximum	18	24	16	23	16	23
2	S.D.	3.42	2.08	2.06	1.26	2.45	1
2	N	4	4	4	4	4	4
3	Median	16	21	12	20	13	23
3	Minimum	11	19	12	19	12	22
3	25th %ile	14	19.75	12	19.75	12.75	22
3	75th %ile	16.5	22.25	12	20.5	13	23
3	Maximum	18	23	12	22	13	23
3	S.D.	2.94	1.83	0	1.26	0.5	0.58
3	N	4	4	4	4	4	4

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 8 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
4	Median	15	23	14	24	14	24
4	Minimum	14	21	14	22	13	21
4	25th %ile	14	21.75	14	23.5	13.75	23.25
4	75th %ile	15.25	23.5	14	24	14	24
4	Maximum	16	25	14	24	14	24
4	S.D.	0.96	1.71	0	1	0.5	1.5
4	N	4	4	4	4	4	4

# NSCAS Alt 2022 Standard Setting

## Unformatted Recommendations by Round and Participant for Grade 11 Science

Recommendations on the Raw Score Metric

Panelist #	Table	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1901	2	17	26	14	24	13	24
1902	2	16	27	15	24	15	23
1903	2	14	21	14	23	16	23
1904	1	11	20	10	23	12	23
1905	1	17	25	10	23	14	24
1906	1	16	23	10	22	12	22
1907	2	12	27	13	24	13	24
1908	1	22	26	12	25	17	26

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 11 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
All Partici- pants	Median	16	26	13	24	14	24
	Minimum	11	20	10	22	12	22
	25th %ile	13.5	22.5	10	23	12.75	23
	75th %ile	17	26.25	14	24	15.25	24
	Maximum	22	27	15	25	17	26
	S.D.	3.42	2.72	2.05	0.93	1.85	1.19
	N	8	8	8	8	8	8

# NSCAS Alt 2022 Standard Setting

## Summaries of Recommendations by Grade, Round and Table for Grade 11 Science

Recommendations on the Raw Score Metric

Group	Statistic	Round 1		Round 2		Round 3	
		On Track	Advanced	On Track	Advanced	On Track	Advanced
1	Median	17	24	10	23	13	24
1	Minimum	11	20	10	22	12	22
1	25th %ile	14.75	22.25	10	22.75	12	22.75
1	75th %ile	18.25	25.25	10.5	23.5	14.75	24.5
1	Maximum	22	26	12	25	17	26
1	S.D.	4.51	2.65	1	1.26	2.36	1.71
1	N	4	4	4	4	4	4
2	Median	15	27	14	24	14	24
2	Minimum	12	21	13	23	13	23
2	25th %ile	13.5	24.75	13.75	23.75	13	23
2	75th %ile	16.25	27	14.25	24	15.25	24
2	Maximum	17	27	15	24	16	24
2	S.D.	2.22	2.87	0.82	0.5	1.5	0.58
2	N	4	4	4	4	4	4

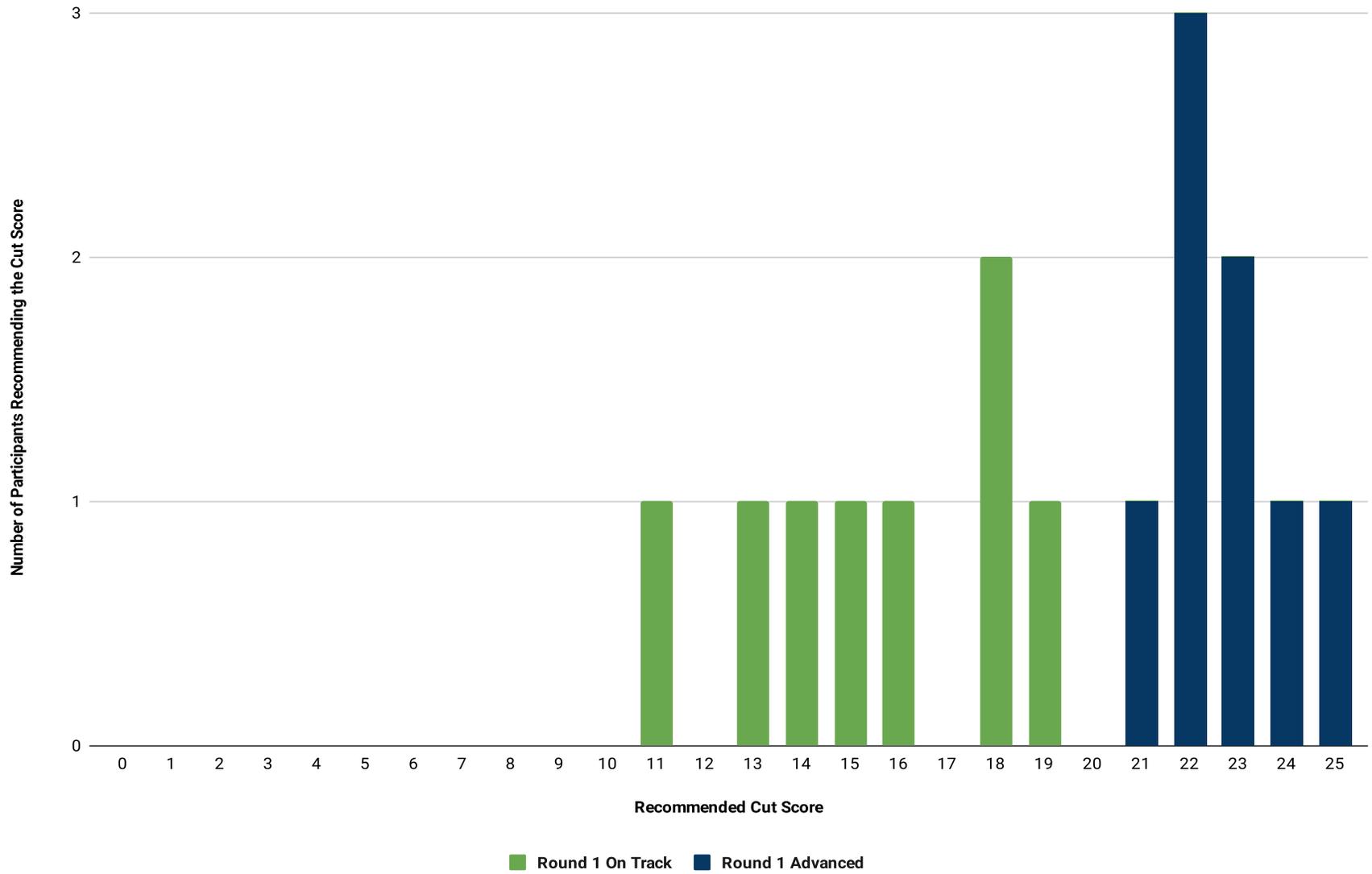
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### Graphical Summary of Panelists' Raw Cut Score Recommendations

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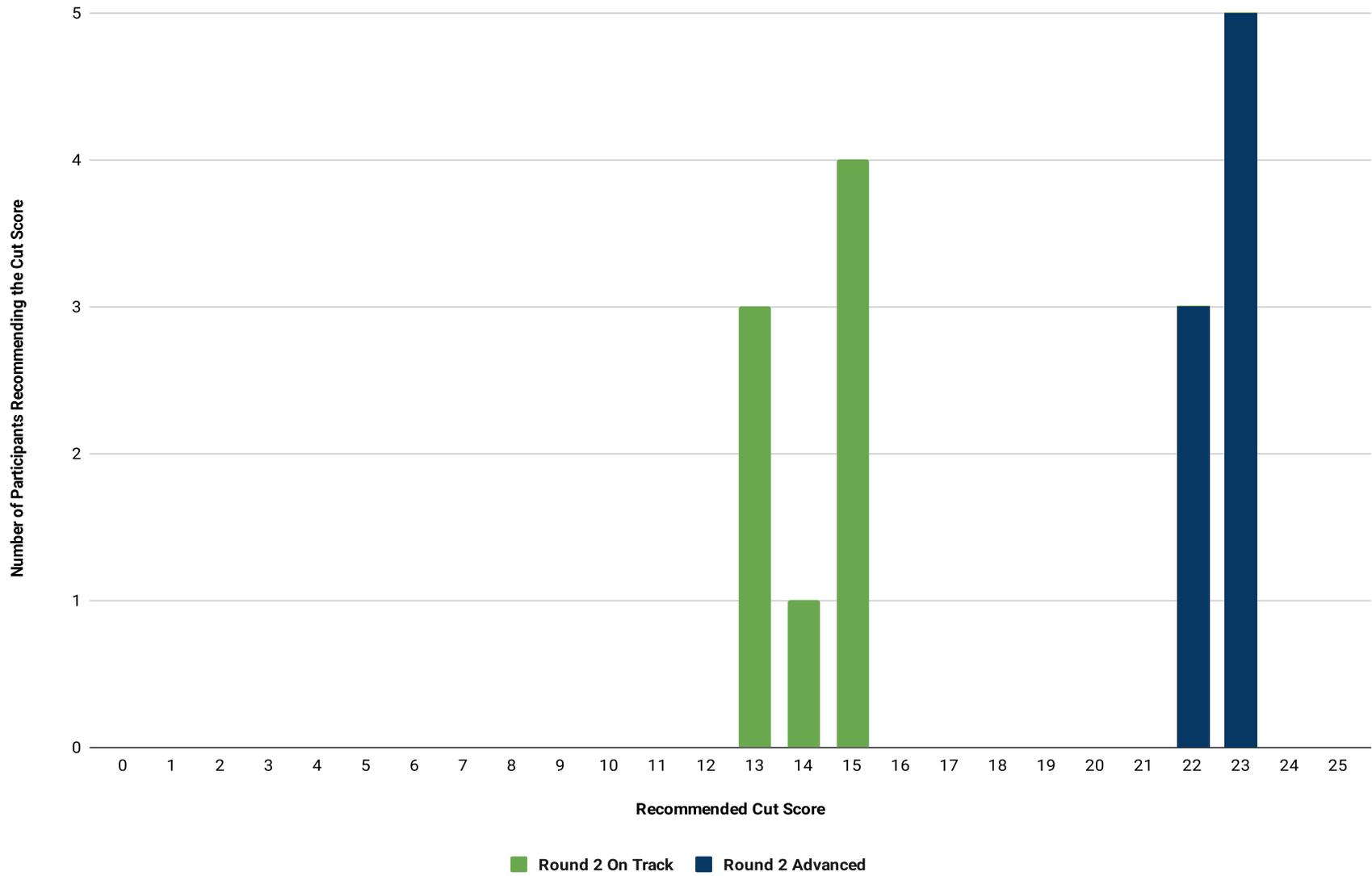
# Histogram of Recommended Cut Scores for Round 1

Nebraska Alt Grade 5 Science



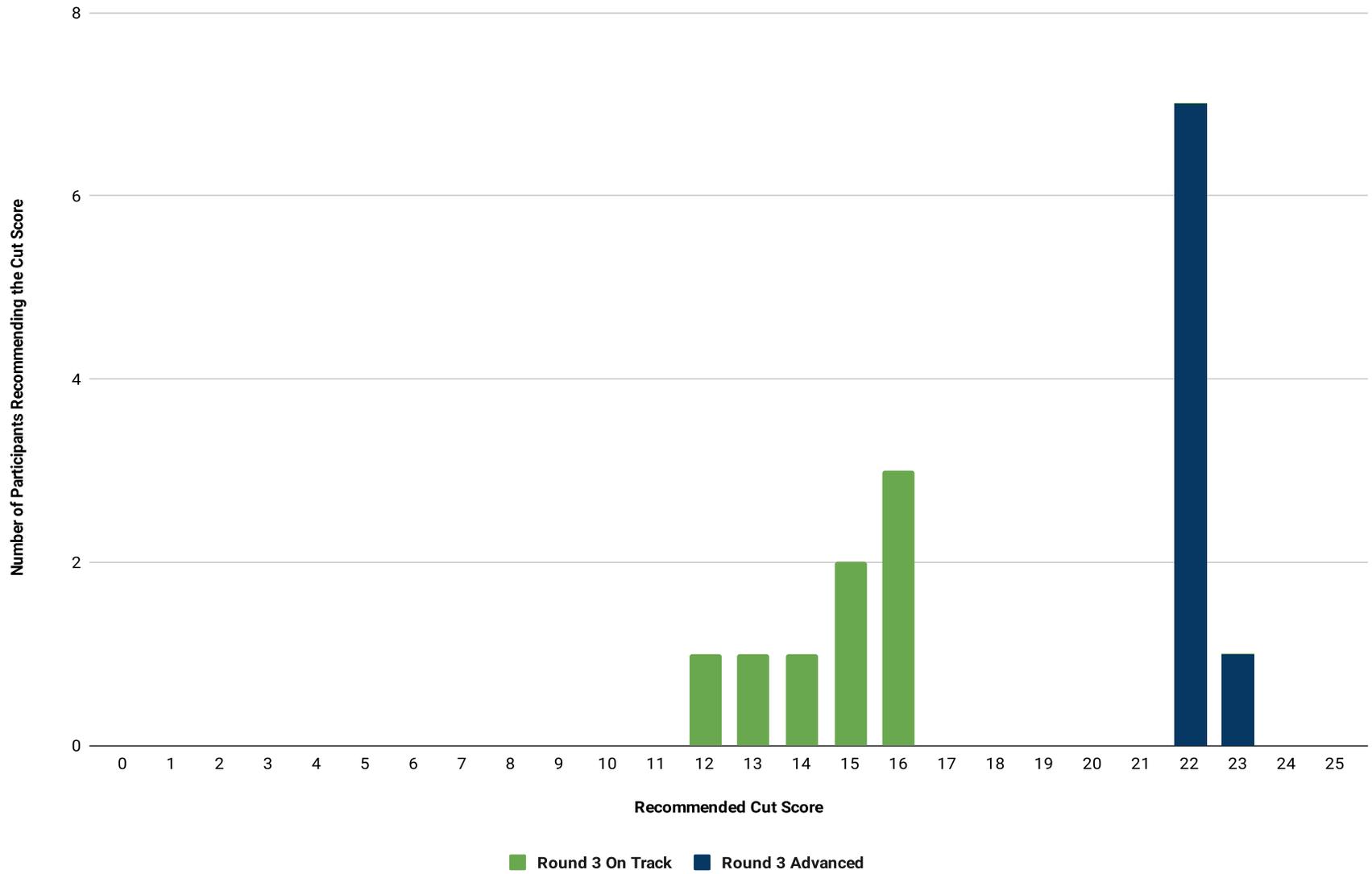
## Histogram of Recommended Cut Scores for Round 2

Nebraska Alt Grade 5 Science



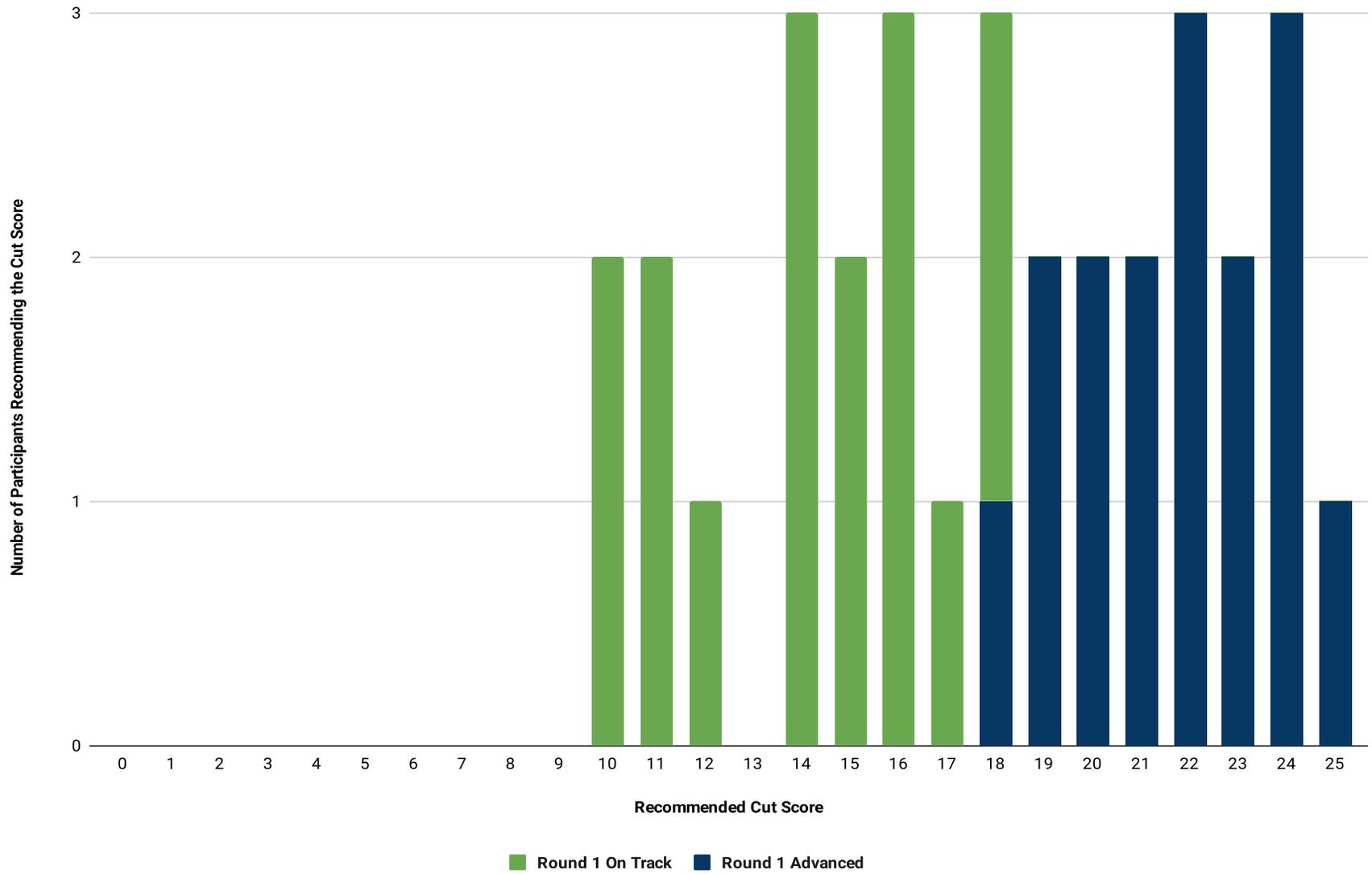
# Histogram of Recommended Cut Scores for Round 3

Nebraska Alt Grade 5 Science



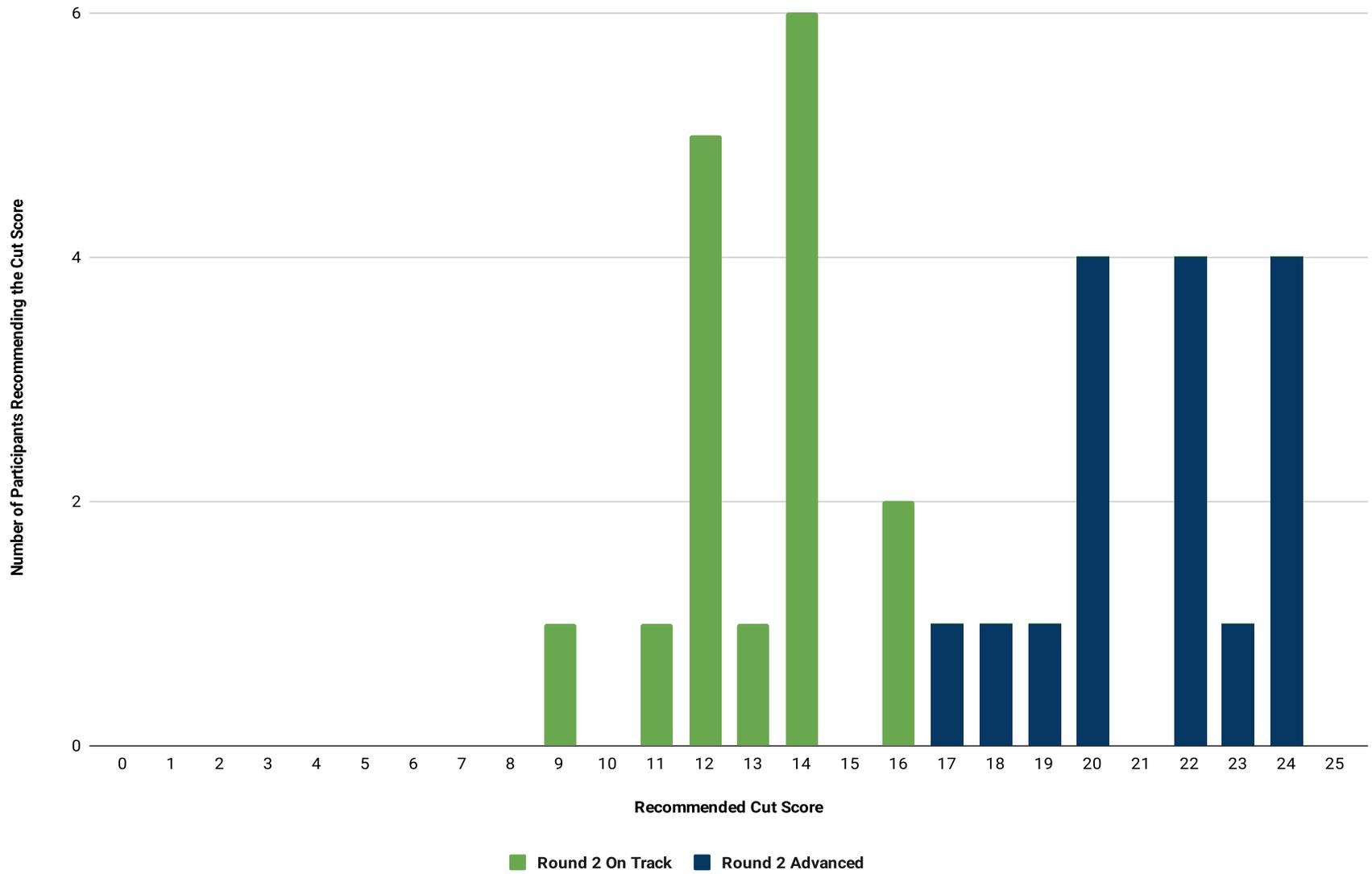
# Histogram of Recommended Cut Scores for Round 1

Nebraska Alt Grade 8 Science



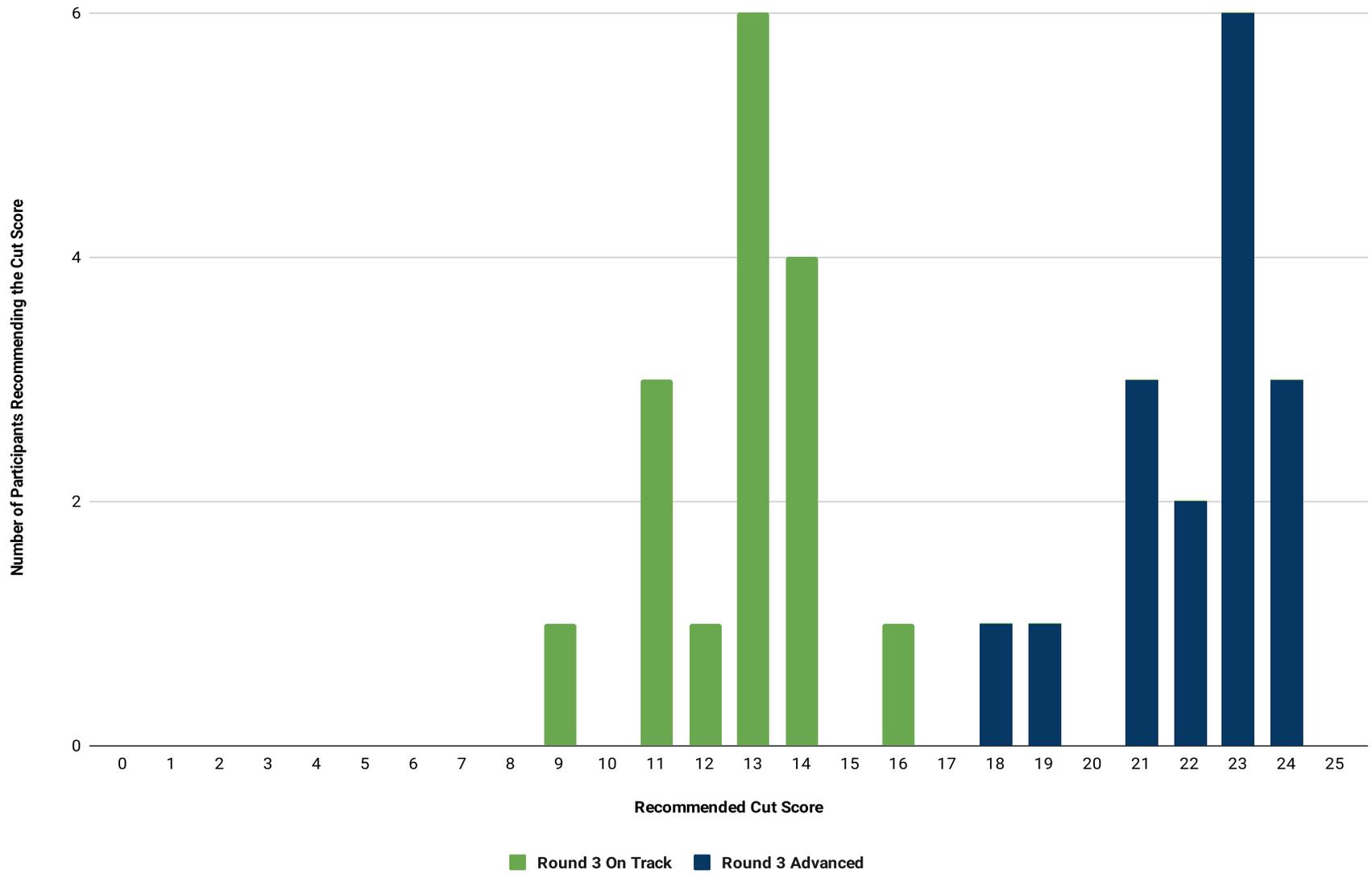
# Histogram of Recommended Cut Scores for Round 2

Nebraska Alt Grade 8 Science



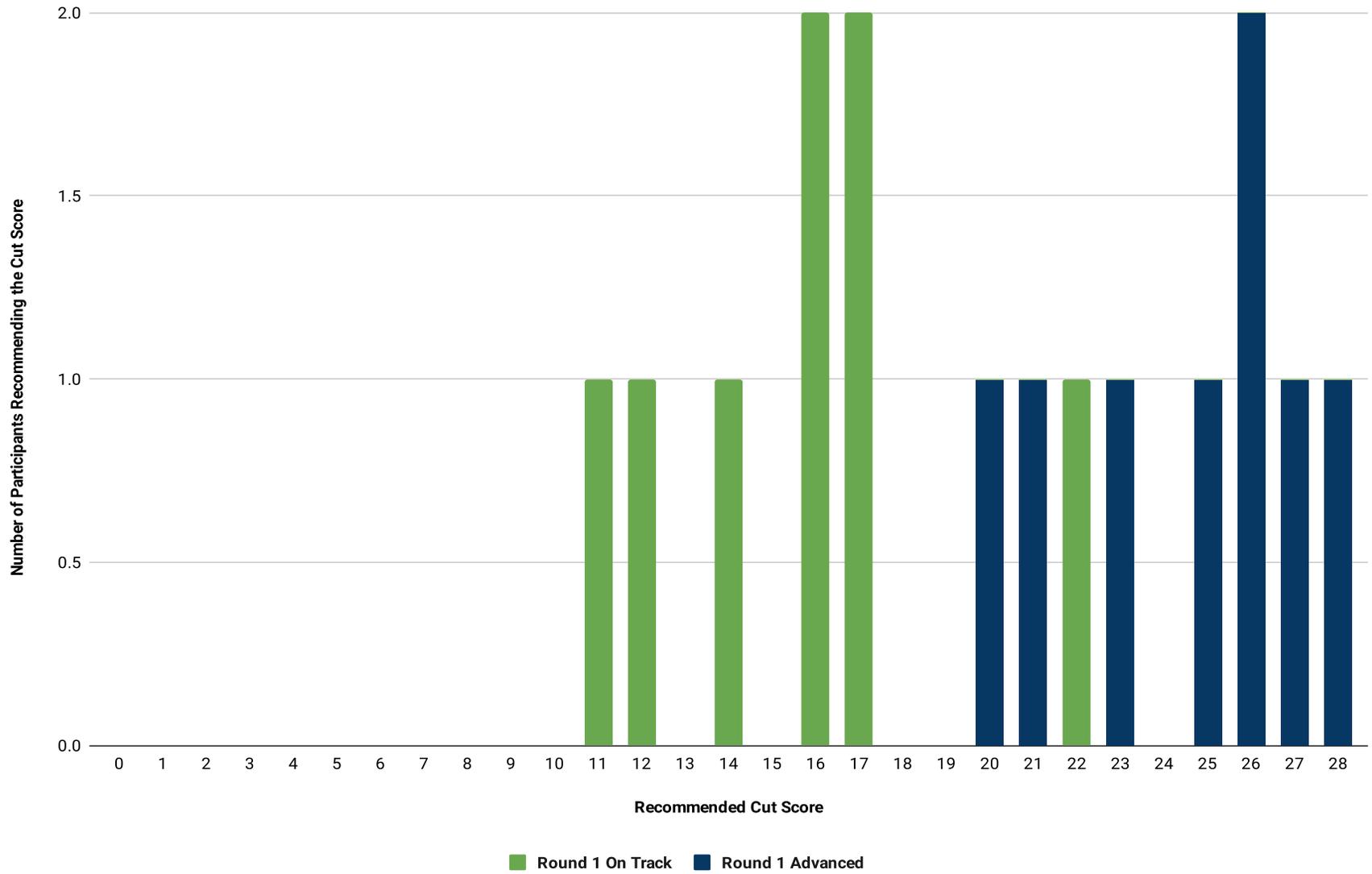
# Histogram of Recommended Cut Scores for Round 3

Nebraska Alt Grade 8 Science



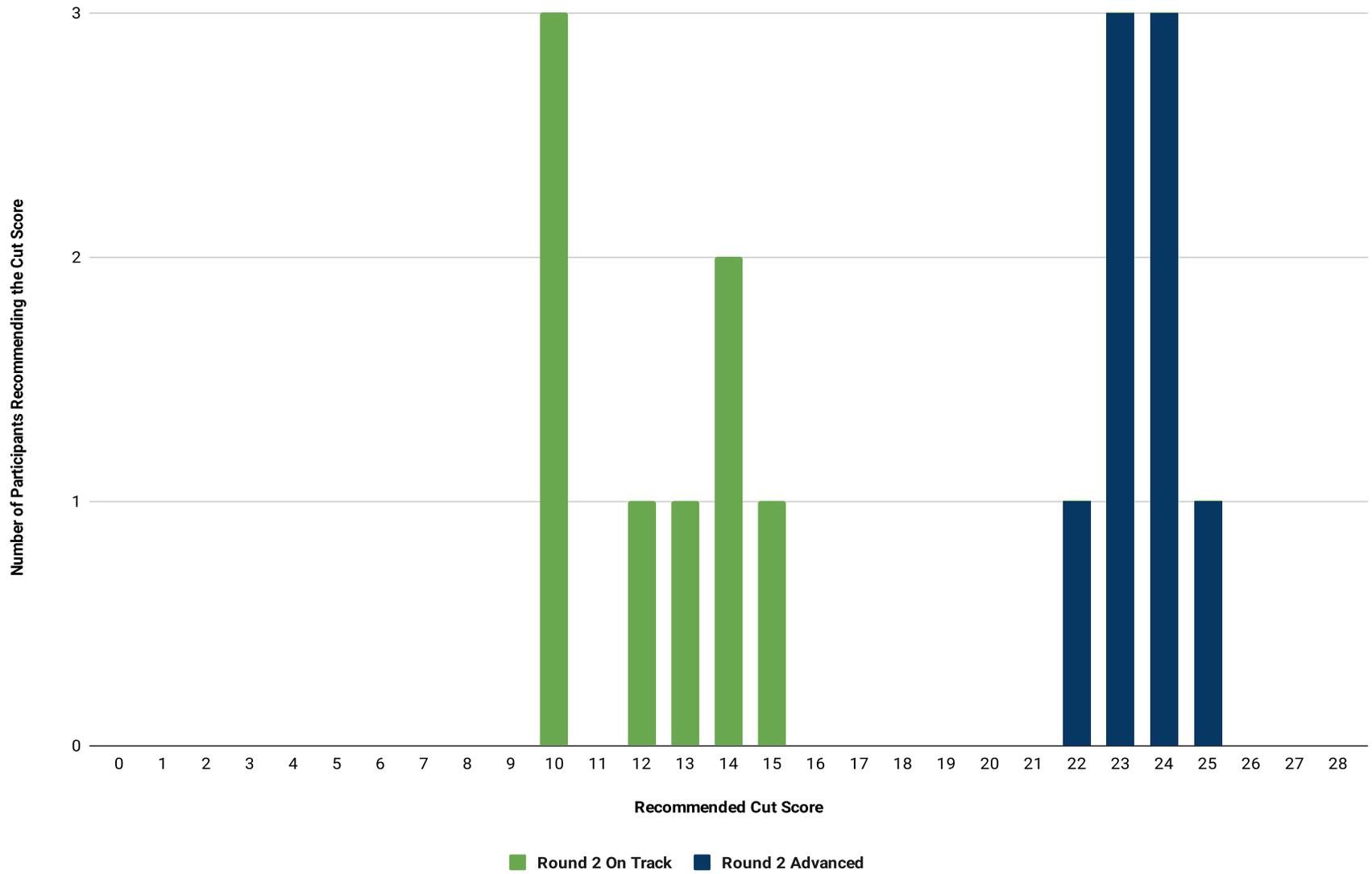
# Histogram of Recommended Cut Scores for Round 1

Nebraska Alt Grade 11 Science



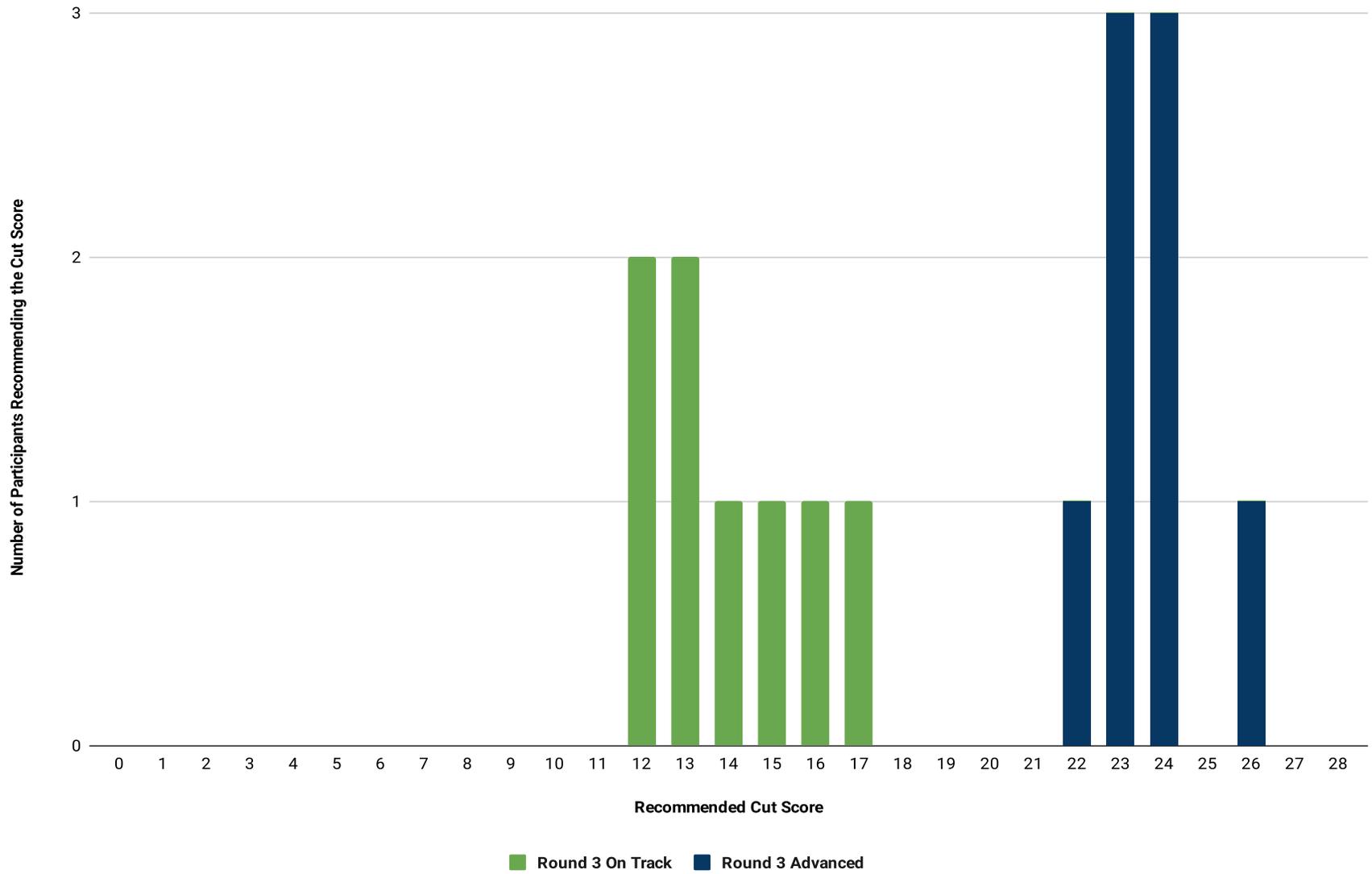
# Histogram of Recommended Cut Scores for Round 2

Nebraska Alt Grade 11 Science



# Histogram of Recommended Cut Scores for Round 3

Nebraska Alt Grade 11 Science



# H

## Standard Setting Evaluations

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## Pre-Workshop Survey

Thank you for participating in the Nebraska NSCAS Alternate Science standard setting! NDE and DRC thank you for your time and expertise during this important step in the assessment process.

This survey is designed to document the experience and diversity of standard setting participants. While we need your information to describe the committee in the aggregate, your individual responses will be kept confidential.

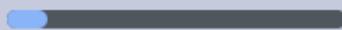
What is your full name? \*

Your answer

To which group have you been assigned at the standard setting? \*

- Science Grades 5/8
- Science Grades 8/11

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## Pre-Workshop Survey

### Security Agreements

During the registration process, you agreed to the Security Agreement from NDE. In this section, you will be shown the Security Agreement once again, as well as a Security Agreement from DRC. Please review the Security Agreements below and signify your acceptance by writing your name below.

#### NDE SECURITY AGREEMENT

As a participant in the NSCAS Alternate Science Standard Setting, you may have access to data and information which needs to be kept confidential and may not be shared or used for any purpose.

No materials distributed or used during the NSCAS Alternate Science Standard Setting workshop may be removed from the room.

Your signature below is your agreement to maintain the confidentiality of all information that is made available to you as a participant of the NSCAS Alternate Science Standard Setting workshop on

July 26 – 28, 2022.

## DRC SECURITY AGREEMENT

AS A PARTICIPANT AT THIS WORKSHOP, you will have access to materials that must be regarded as confidential. You are required to treat all test materials used in this meeting as confidential. Test security and student confidentiality are of the utmost importance to Data Recognition Corporation (DRC), and DRC must protect information about tests and students in the assessment process. Such information includes performance tasks, multiple-choice items, stimuli, and student responses used in each exam. The nature and quality of an individual student's performance must not be released. In addition, the training materials, standard setting materials (including ordered item booklets and item maps), workshop feedback, and workshop recommendations must not be released.

DO NOT REPRODUCE ANY MATERIALS, directly or indirectly, disclose the contents of these materials, use the tasks as future instructional activities, or reveal any personally identifiable information from student responses to any person for any purpose. We are certain that you share our concern that all items and students' responses be handled in a professional and confidential manner and ask that you acknowledge your adherence to these guidelines by agreeing to these terms and conditions.

DRC technology, processes, records and information related to DRC and its customers are confidential and must be treated accordingly. DRC-related information, including without limitation, documents, notes, files, records, oral information, computer files, or similar materials may not be saved, duplicated or removed from DRC premises or systems (including this website) without permission from DRC.

Additionally, the contents of DRC's records or information otherwise obtained regarding business may not be disclosed to anyone, except where required for a business purpose.

Meeting attendees must not disclose any confidential information, purposefully or inadvertently, through casual conversation, with any unauthorized person inside or outside DRC.

BY SIGNING ON AS A MEMBER OF THIS WORKSHOP COMMITTEE, I AGREE:

- a) that all training materials, items (test questions) and student responses are the property of DRC and/or its clients;
- b) that commenting on the content of test questions or responses with non-project related personnel is prohibited;

c) that reproducing, in part or in whole, through means including but not limited to printing, taking pictures, downloading, or capturing screen shots of student responses, test questions, training materials, standard setting materials, workshop feedback, or workshop recommendations is expressly prohibited;

d) that the privacy of the students whose work is presented is to be respected, and all related data is to be protected from disclosure;

e) that I will work in a private environment, separate from others and free from distractions;

f) that I will be the only one to read items and student responses that have been assigned to me;

g) that I will adhere to the criteria defined by the training that I receive;

h) that I will not discuss test questions, student responses, training materials, standard setting materials, workshop feedback, and workshop recommendations with anyone except the workshop facilitators and committee members; and

i) that I will not share test questions, student responses, training materials, standard setting materials, workshop feedback, or workshop recommendations on any media, including social media.

I acknowledge that I have received and am responsible for reading and complying with the aforementioned test security terms, as shown on this site and in linked documents. By virtue of the foregoing, I am on notice that any actions by me that are contrary to the foregoing affirmations and acknowledgements will subject me to possible legal action by Data Recognition Corporation to protect its interest in its intellectual property rights and the integrity and security of the assessments.

By printing my full name here, I acknowledge that I have read and agree to the terms of the Security Agreements presented here. \*

Please type your full name here.

Your answer

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## Pre-Workshop Survey

### About You and Your Experience

This section asks about your background. This information will be used to describe the diversity and experience of the standard setting committee.

What is your current position? \*

Please choose one answer that best describes where a majority of your time is spent.

- General education teacher
- Special education teacher
- ELL teacher
- Curriculum staff
- District assessment staff
- Higher education
- School-level administrator
- District-level administrator

If you are a special education teacher, in what environment do you typically teach? \*

If more than one applies, please choose the environment in which you spend the most time.

- I teach in a self-contained classroom (i.e., all or nearly all students receive special education services)
- I teach in a mixed classroom (i.e., some students receive special education services)
- I am not a special education teacher
- Other: \_\_\_\_\_

What is your educational setting? \*

Please choose one answer that best describes where a majority of your time is spent.

- Elementary school
- Middle school or junior high school
- High school
- Higher education
- K-8 school
- 6-12 school
- Other: \_\_\_\_\_

How many years have you worked in education? \*

- Less than 5 years
- 5-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- More than 25 years

What percent of students in your district/LEA qualify for free or reduced-price meals? \*

Estimates are OK. If you don't know, choose Unknown.

- 0-25%
- 26-50%
- 51-75%
- 76-100%
- Unknown or not applicable

In which community type is your district/LEA? \*

- Rural
- Urban
- Suburban

What is the name of your school district/LEA? If not working in a school or district, enter place of employment. \*

Your answer \_\_\_\_\_

What is your highest level of education? \*

- High school diploma
- Bachelor's degree
- Bachelor's degree + additional hours
- Master's degree
- Master's degree + additional hours
- Doctoral degree

What is your gender? \*

- Female
- Male
- Prefer not to answer
- Other: \_\_\_\_\_

Are you of Hispanic, Latino/a, or Spanish origin? \*

- No
- Yes
- Prefer not to answer

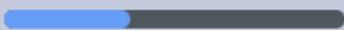
What is your race? \*

Please choose as many as apply.

- White
- Black or African-American
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
- Asian
- Prefer not to answer
- Other: \_\_\_\_\_

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## Pre-Workshop Survey

### About Your Experience Before the Workshop

Have you ever attended a standard setting meeting before? \*

- No, I have not.
- Yes, I have attended one other standard setting.
- Yes, I have attended more than one standard setting.

How long has it been since your most recent standard setting experience? \*

- I have not attended a standard setting before.
- Less than 2 years
- 2 to 5 years
- Over five years

Have you worked with the state's alternate content standards (the "Nebraska Alternate Science Extended Indicators") before? \*

Yes

No

Have you worked with achievement level descriptors (ALDs) before? \*

Yes, I have.

No, I've heard of them but haven't worked with them.

No, I haven't heard of these before.

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## Pre-Workshop Survey

Thank you!

Thank you for completing this pre-workshop evaluation! NDE and DRC thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

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Submit

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# NSCAS Alternate Science Pre-Workshop Survey

## To which group have you been assigned at the standard setting?

Response	Frequency	Percent	Mean: 1.50
Science Grades 8 5/8		50.00	<div style="width: 50%;"><div style="width: 50%;"></div></div>
Science Grades 8 8/11		50.00	<div style="width: 50%;"><div style="width: 50%;"></div></div>

## What is your current position?

Response	Frequency	Percent	Mean: 2.06
General education teacher	2	12.50	<div style="width: 12.5%;"><div style="width: 12.5%;"></div></div>
Special education teacher	13	81.25	<div style="width: 81.25%;"><div style="width: 81.25%;"></div></div>
ELL teacher	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
Curriculum staff	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
District assessment staff	1	6.25	<div style="width: 6.25%;"><div style="width: 6.25%;"></div></div>
Higher education	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
School-level administrator	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
District-level administrator	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>

## If you are a special education teacher, in what environment do you typically teach?

Response	Frequency	Percent	Mean: 2.13
I teach in a self-contained classroom i.e. all or nearly all students receive special education services	5	31.25	<div style="width: 31.25%;"><div style="width: 31.25%;"></div></div>
I teach in a mixed classroom i.e. some students receive special education services	6	37.50	<div style="width: 37.5%;"><div style="width: 37.5%;"></div></div>
I am not a special education teacher	3	18.75	<div style="width: 18.75%;"><div style="width: 18.75%;"></div></div>
Other:	2	12.50	<div style="width: 12.5%;"><div style="width: 12.5%;"></div></div>

## What is your educational setting?

Response	Frequency	Percent	Mean: 3.88
Elementary school	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
Middle school or 6 junior high school		37.50	<div style="width: 37.5%;"><div style="width: 37.5%;"></div></div>
High school	4	25.00	<div style="width: 25%;"><div style="width: 25%;"></div></div>
Higher education	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
K-8 school	0	0.00	<div style="width: 0%;"><div style="width: 0%;"></div></div>
6-12 school	4	25.00	<div style="width: 25%;"><div style="width: 25%;"></div></div>
Other:	2	12.50	<div style="width: 12.5%;"><div style="width: 12.5%;"></div></div>

**How many years have you worked in education?**

Response	Frequency	Percent	Mean: 3.06
Less than 5 years	3	18.75	
5-10 years	5	31.25	
11-15 years	2	12.50	
16-20 years	2	12.50	
21-25 years	2	12.50	
More than 25 years	2	12.50	

**What percent of students in your district/LEA qualify for free or reduced-price meals?**

Response	Frequency	Percent	Mean: 2.88
0-25%	4	25.00	
26-50%	4	25.00	
51-75%	2	12.50	
76-100%	2	12.50	
Unknown or not applicable	4	25.00	

**In which community type is your district/LEA?**

Response	Frequency	Percent	Mean: 1.75
Rural	8	50.00	
Urban	4	25.00	
Suburban	4	25.00	

**What is your highest level of education?**

Response	Frequency	Percent	Mean: 3.81
High school diploma	0	0.00	
Bachelor's degree	1	6.25	
Bachelor's degree + additional hours	5	31.25	
Master's degree	6	37.50	
Master's degree + additional hours	4	25.00	
Doctoral degree	0	0.00	

**What is your gender?**

Response	Frequency	Percent	Mean: 1.13
Female	14	87.50	
Male	2	12.50	
Prefer not to answer	0	0.00	
Other:	0	0.00	

**Are you of Hispanic, Latino/a, or Spanish origin?**

Response	Frequency	Percent	Mean: 1.13
No	15	93.75	
Yes	0	0.00	
Prefer not to answer	1	6.25	

**What is your race?**

Response	Frequency	Percent	Mean: -
White	15	93.75	
Black or African-American	1	6.25	
American Indian or Alaska Native	0	0.00	
Native Hawaiian or Other Pacific Islander	0	0.00	
Asian	0	0.00	
Prefer not to answer	1	6.25	
Other:	0	0.00	

**How long has it been since your most recent standard setting experience?**

Response	Frequency	Percent	Mean: 1.69
I have not attended a standard setting before.	9	56.25	
Less than 2 years	4	25.00	
2 to 5 years	2	12.50	
Over five years	1	6.25	

**Have you worked with achievement level descriptors (ALDs) before?**

Response	Frequency	Percent	Mean: 1.69
Yes I have.	8	50.00	
No I've heard of them but haven't worked with them.	5	31.25	
No I haven't heard of these before.	3	18.75	

**Have you ever attended a standard setting meeting before?**

Response	Frequency	Percent	Mean: 1.75
No I have not.	9	56.25	
Yes I have attended one other standard setting.	2	12.50	
Yes I have attended more than one standard setting.	5	31.25	

**Have you worked with the state's alternate content standards (the "Nebraska Alternate Science Extended Indicators") before?**

Response	Frequency	Percent	Mean: 1.31
Yes	11	68.75	
No	5	31.25	



## Post-Workshop Evaluation

Thank you again for participating in the Nebraska NSCAS Alternate Science Assessments standard setting! The Nebraska Department of Education (NDE) and Data Recognition Corporation (DRC) appreciate your hard work.

This evaluation is designed to record your level of satisfaction with the standard setting process and recommendations. Your opinions and comments are important, as they will provide a basis for judging the quality of this process. At the end of the evaluation, there is an opportunity for you to ask questions should you have any.

In which group did you work at the standard setting? \*

- Science Grades 5/8
- Science Grades 8/11

What was your last participant number? \*

Your answer \_\_\_\_\_

Please consider the statements below and mark the level of agreement or disagreement you have with each.

\*

	Strongly Disagree	Disagree	Agree	Strongly Agree
I had enough time to review the group's recommendations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had enough time to discuss the group's recommendations with my fellow panelists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The achievement standards represent a reasonable profile of achievement at each level.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The achievement level descriptors (ALDs) were useful during the process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The descriptions of the threshold students were useful during the process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studying the test items was useful during the process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The item maps (where I took notes on each item) were useful during the process.

Please consider the statements below and mark the level of agreement or disagreement you have with each. \*

Strongly Disagree

Disagree

Agree

Strongly Agree

During the workshop, my opinions were considered.

My opinions were valued by my group.

My group's work was reflected in the presentation of recommendations.

The facilitator provided clear instructions.

I believe this process will yield defensible cut scores.

Overall, I valued the workshop as a professional development experience.

Please consider the statements below and mark the level of agreement or disagreement you have with each. \*

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was satisfied with the facilitator who led the main training sessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was satisfied with the facilitator who worked with my breakout room.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was satisfied with the DRC content expert who worked with my group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was satisfied with other DRC staff members I worked with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The food and service at the facility met my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The breakout rooms had appropriate accommodations to facilitate our work.



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## Post-Workshop Evaluation

### About the Recommendations

This section asks about your level of confidence and satisfaction with the recommendations made for each grade.

#### Grade 5

If you worked on this grade, consider these statements and indicate your level of agreement. If you did NOT work on this grade, move on to the next grade.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was confident in my recommendations for the On Track cut score.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was confident in my recommendations for the Advanced cut score.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The group's recommended cut score for On Track is about right.

The group's recommended cut score for Advanced is about right.

### Grade 8 \*

Consider these statements and indicate your level of agreement.

Strongly Disagree

Disagree

Agree

Strongly Agree

I was confident in my recommendations for the On Track cut score.

I was confident in my recommendations for the Advanced cut score.

The group's recommended cut score for On Track is about right.

The group's recommended cut score for Advanced is about right.

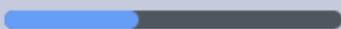
## Grade 11

If you worked on this grade, consider these statements and indicate your level of agreement. If you did NOT work on this grade, move on to the next grade.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was confident in my recommendations for the On Track cut score.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was confident in my recommendations for the Advanced cut score.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The group's recommended cut score for On Track is about right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The group's recommended cut score for Advanced is about right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## Post-Workshop Evaluation

### Interacting With Workshop Tools

How comfortable did you feel using the following technologies during the workshop? \*

	Very uncomfortable	Somewhat uncomfortable	Somewhat comfortable	Very comfortable
The DRC workshop "Hub"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Sheets/Forms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did you use the following paper-based materials during the workshop? \*

	Frequently	Occasionally	Rarely	Never
Paper agenda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paper content standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paper ALDs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paper practice items and map	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## Post-Workshop Evaluation

Thank you!

Thank you for completing this post-workshop evaluation! We thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

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# NSCAS Alternate Science Post-Workshop Evaluation

**In which group did you work at the standard setting?**

Response	Frequency	Percent	Mean: 1.50
Science Grades 8 5/8		50.00	
Science Grades 8 8/11		50.00	

**I had enough time to discuss the group's recommendations with my fellow panelists.**

Response	Frequency	Percent	Mean: 3.81
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	3	18.75	
Strongly Agree	13	81.25	

**The achievement level descriptors (ALDs) were useful during the process.**

Response	Frequency	Percent	Mean: 3.81
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	3	18.75	
Strongly Agree	13	81.25	

**Studying the test items was useful during the process.**

Response	Frequency	Percent	Mean: 3.88
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	2	12.50	
Strongly Agree	14	87.50	

**During the workshop, my opinions were considered.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	6	37.50	
Strongly Agree	10	62.50	

**I had enough time to review the group's recommendations.**

Response	Frequency	Percent	Mean: 3.75
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	4	25.00	
Strongly Agree	12	75.00	

**The achievement standards represent a reasonable profile of achievement at each level.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	50.00	
Strongly Agree	8	50.00	

**The descriptions of the threshold students were useful during the process.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	5	31.25	
Strongly Agree	11	68.75	

**The item maps (where I took notes on each item) were useful during the process.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	6	37.50	
Strongly Agree	10	62.50	

**My opinions were valued by my group.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	5	31.25	
Strongly Agree	11	68.75	

**My group's work was reflected in the presentation of recommendations.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	5	31.25	<input type="text"/>
Strongly Agree	11	68.75	<input type="text"/>

**I believe this process will yield defensible cut scores.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	5	31.25	<input type="text"/>
Strongly Agree	11	68.75	<input type="text"/>

**I was satisfied with the facilitator who led the main training sessions.**

Response	Frequency	Percent	Mean: 3.88
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	2	12.50	<input type="text"/>
Strongly Agree	14	87.50	<input type="text"/>

**I was satisfied with the DRC content expert who worked with my group.**

Response	Frequency	Percent	Mean: 3.88
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	2	12.50	<input type="text"/>
Strongly Agree	14	87.50	<input type="text"/>

**The food and service at the facility met my expectations.**

Response	Frequency	Percent	Mean: 3.94
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	1	6.25	<input type="text"/>
Strongly Agree	15	93.75	<input type="text"/>

**The facilitator provided clear instructions.**

Response	Frequency	Percent	Mean: 3.81
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	13	81.25	<input type="text"/>

**Overall, I valued the workshop as a professional development experience.**

Response	Frequency	Percent	Mean: 3.81
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	13	81.25	<input type="text"/>

**I was satisfied with the facilitator who worked with my breakout room.**

Response	Frequency	Percent	Mean: 3.69
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	5	31.25	<input type="text"/>
Strongly Agree	11	68.75	<input type="text"/>

**I was satisfied with other DRC staff members I worked with.**

Response	Frequency	Percent	Mean: 3.88
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	2	12.50	<input type="text"/>
Strongly Agree	14	87.50	<input type="text"/>

**The breakout rooms had appropriate accommodations to facilitate our work.**

Response	Frequency	Percent	Mean: 3.94
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	1	6.25	<input type="text"/>
Strongly Agree	15	93.75	<input type="text"/>

**Grade 5: I was confident in my recommendations for the On Track cut score.**

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	5	31.25	<input type="text"/>
Strongly Agree	3	18.75	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 5: The group's recommended cut score for On Track is about right.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	4	25.00	<input type="text"/>
Strongly Agree	4	25.00	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 8: I was confident in my recommendations for the On Track cut score.**

Response	Frequency	Percent	Mean: 3.44
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	9	56.25	<input type="text"/>
Strongly Agree	7	43.75	<input type="text"/>

**Grade 8: The group's recommended cut score for On Track is about right.**

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	7	43.75	<input type="text"/>
Strongly Agree	9	56.25	<input type="text"/>

**Grade 11: I was confident in my recommendations for the On Track cut score.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	5	31.25	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 5: I was confident in my recommendations for the Advanced cut score.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	4	25.00	<input type="text"/>
Strongly Agree	4	25.00	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 5: The group's recommended cut score for Advanced is about right.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	5	31.25	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 8: I was confident in my recommendations for the Advanced cut score.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	8	50.00	<input type="text"/>
Strongly Agree	8	50.00	<input type="text"/>

**Grade 8: The group's recommended cut score for Advanced is about right.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	1	6.25	<input type="text"/>
Agree	6	37.50	<input type="text"/>
Strongly Agree	9	56.25	<input type="text"/>

**Grade 11: I was confident in my recommendations for the Advanced cut score.**

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	5	31.25	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Grade 11: The group's recommended cut score for On Track is about right.**

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	4	25.00	<input type="text"/>
Strongly Agree	4	25.00	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**The DRC workshop "Hub"**

Response	Frequency	Percent	Mean: 3.75
Very uncomfortable	1	6.25	<input type="text"/>
Somewhat uncomfortable	0	0.00	<input type="text"/>
Somewhat comfortable	1	6.25	<input type="text"/>
Very comfortable	14	87.50	<input type="text"/>

**Paper agenda**

Response	Frequency	Percent	Mean: 2.75
Frequently	2	12.50	<input type="text"/>
Occasionally	5	31.25	<input type="text"/>
Rarely	4	25.00	<input type="text"/>
Never	5	31.25	<input type="text"/>

**Paper ALDs**

Response	Frequency	Percent	Mean: 1.00
Frequently	16	100.00	<input type="text"/>
Occasionally	0	0.00	<input type="text"/>
Rarely	0	0.00	<input type="text"/>
Never	0	0.00	<input type="text"/>

**Grade 11: The group's recommended cut score for Advanced is about right.**

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	1	6.25	<input type="text"/>
Agree	3	18.75	<input type="text"/>
Strongly Agree	4	25.00	<input type="text"/>
No Response	8	50.00	<input type="text"/>

**Google Sheets/Forms**

Response	Frequency	Percent	Mean: 3.81
Very uncomfortable	1	6.25	<input type="text"/>
Somewhat uncomfortable	0	0.00	<input type="text"/>
Somewhat comfortable	0	0.00	<input type="text"/>
Very comfortable	15	93.75	<input type="text"/>

**Paper content standards**

Response	Frequency	Percent	Mean: 1.13
Frequently	14	87.50	<input type="text"/>
Occasionally	2	12.50	<input type="text"/>
Rarely	0	0.00	<input type="text"/>
Never	0	0.00	<input type="text"/>

**Paper practice items and map**

Response	Frequency	Percent	Mean: 2.13
Frequently	7	43.75	<input type="text"/>
Occasionally	2	12.50	<input type="text"/>
Rarely	5	31.25	<input type="text"/>
Never	2	12.50	<input type="text"/>



## Across-Grade Discussion Evaluation

This evaluation is designed to document the process used to review the cut scores across grades during the standard setting. Your opinions and comments are important, as they will provide a basis for judging the quality of this process. At the end of the evaluation, there is an opportunity for you to ask questions should you have any.

In what group did you work during the standard setting? \*

- Science Grades 5/8
- Science Grades 8/11

Please consider the statements below and mark the level of agreement or disagreement you have with each. \*

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understood the purpose of the across-grade discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The facilitator made the across-grade discussion process clear to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I considered the recommendations from my original grade/group during the discussion.

I considered the content-based expectations for students during the discussion.

I considered the impact data during the discussion.

I understood how the impact data were calculated.

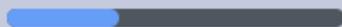
I had enough time to hear about the recommendations made by other groups.

I had enough time to share the recommendations made by my group.

Please consider the statements below and mark the level of agreement or disagreement you have with each. \*

	Strongly Disagree	Disagree	Agree	Strongly Agree
Overall, the impact data form an explainable pattern across grades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, the recommendations reflect appropriately rigorous expectations for students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I believe my opinions were considered and valued by my group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My group's work was reflected in the presentation of recommendations across grades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This process will lead to defensible performance standards for the test.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## Across-Grade Discussion Evaluation

### About the Recommendations

Please indicate your opinion regarding whether you feel the final, recommended \* cut scores were too low, about right, or too high for each cut score.

	Too Low	About Right	Too High
Grade 5: On Track cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grade 5: Advanced cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grade 8: On Track cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grade 8: Advanced cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grade 11: On Track cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grade 11: Advanced cut score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(Optional.) Use this space to explain any of your responses from above.

Your answer

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## Across-Grade Discussion Evaluation

Thank you!

Thank you for completing this evaluation! We thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

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# NSCAS Alternate Science Across-Grade Discussion Evaluation

**In what group did you work during the standard setting?**

Response	Frequency	Percent	Mean: 1.50
Science Grades 3 5/8		50.00	
Science Grades 3 8/11		50.00	

**The facilitator made the across-grade discussion process clear to me.**

Response	Frequency	Percent	Mean: 3.83
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	1	16.67	
Strongly Agree	5	83.33	

**I considered the content-based expectations for students during the discussion.**

Response	Frequency	Percent	Mean: 3.83
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	1	16.67	
Strongly Agree	5	83.33	

**I understood how the impact data were calculated.**

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	0	0.00	
Strongly Agree	6	100.00	

**I had enough time to share the recommendations made by my group.**

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	0	0.00	
Strongly Agree	6	100.00	

**I understood the purpose of the across-grade discussion.**

Response	Frequency	Percent	Mean: 3.83
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	1	16.67	
Strongly Agree	5	83.33	

**I considered the recommendations from my original grade/group during the discussion.**

Response	Frequency	Percent	Mean: 3.83
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	1	16.67	
Strongly Agree	5	83.33	

**I considered the impact data during the discussion.**

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	2	33.33	
Strongly Agree	4	66.67	

**I had enough time to hear about the recommendations made by other groups.**

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	0	0.00	
Strongly Agree	6	100.00	

**Overall, the impact data form an explainable pattern across grades.**

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	2	33.33	
Strongly Agree	4	66.67	

Overall, the recommendations reflect appropriately rigorous expectations for students.

Response	Frequency	Percent	Mean: 3.83
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	1	16.67	<input type="text"/>
Strongly Agree	5	83.33	<input type="text"/>

My group's work was reflected in the presentation of recommendations across grades.

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	0	0.00	<input type="text"/>
Strongly Agree	6	100.00	<input type="text"/>

Grade 5: On Track cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>

Grade 8: On Track cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>

Grade 11: On Track cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>

Overall, I believe my opinions were considered and valued by my group.

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	0	0.00	<input type="text"/>
Strongly Agree	6	100.00	<input type="text"/>

This process will lead to defensible performance standards for the test.

Response	Frequency	Percent	Mean: 4.00
Strongly Disagree	0	0.00	<input type="text"/>
Disagree	0	0.00	<input type="text"/>
Agree	0	0.00	<input type="text"/>
Strongly Agree	6	100.00	<input type="text"/>

Grade 5: Advanced cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>

Grade 8: Advanced cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>

Grade 11: Advanced cut score

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	<input type="text"/>
About Right	6	100.00	<input type="text"/>
Too High	0	0.00	<input type="text"/>