

## Process to Propose Score Ranges for Assessment Achievement Levels

### *Alaska System of Academic Readiness (AK STAR)*

- The Alaska English Language Arts and Mathematics Standards define what students should know and be able to do in content areas; achievement level descriptors articulate what students should know and be able to do at each achievement level. A group of 32 Alaskan educators met in fall 2021 to draft Achievement Level Descriptors (ALDs) specific to each grade 3-9 for English Language Arts (ELA) and Mathematics.
- 50 Alaska educators gathered June 21 - June 23 to determine the proposed range of scores in each achievement level using the Achievement Level Descriptors. Educators used a process called “Standard Setting,” specifically the bookmark method. These accepted research-based procedures have been used since the 1990’s and have been used previously in Alaska for the statewide assessments. The process was led by facilitators from ACS Ventures. Staff members from the Department of Education and Early Development were present to observe and to serve as resources.
- Panelists for Standard Setting were chosen from a pool of educator applicants based on their experience with the Alaska ELA and math standards. Panelists represented 19 school districts in the state. Educators represented a diversity of schools by location and size.
- The panelists selected to participate were divided into grade-band groups with 22 panelists for ELA and 28 for math. 39 participants were current classroom teachers and others were currently serving in administrative or specialist roles. 68% of the panelists had experience with students with disabilities, and 88% had experience with English learners. Many of the panelists had previous experience in participating in setting scores, reviewing items, or drafting Achievement Level Descriptors for AK STAR, Alaska Science Assessment, or other previous Alaska assessments.
- To begin, each educator reviewed the ALDs for each grade and identified the differences in levels for each standard. After the ALD review, the educators took each test, thinking about what knowledge and skills were reflected in each question. The educators then described what knowledge and skills a ‘threshold student’ would need to barely make it into each achievement level using the ALDs as a guide. The educators were looking for borderline achievement because cut scores between achievement levels are set at those borders. The panelists would recommend the cuts between the Needs Support/Approaching Proficient, Approaching Proficient/Proficient, and Proficient/Advanced achievement levels.
- The educators received an Ordered Item Booklet (OIB) presenting the test questions in order of difficulty, from easiest to hardest, as determined by the number of students who answered each question correctly in the Spring 2022 AK STAR administration. Educators then reviewed each test question in the OIB. The educators discussed what made each question more difficult than the one before it, using their professional judgment about the standards, the ALDs, and the abilities of the Alaska students in that grade level.

- Each educator individually determined if a threshold student scoring at the ‘just proficient’ level should be able to answer the question correctly. They repeated this process for the threshold students in the Approaching Proficient and Advanced achievement levels.
- After submitting their individual recommendations, each table group received feedback on the scores in their group, including the median and the range of their recommendations. The educators discussed their decisions in small groups. Educators referred to the standards and the descriptions of achievement levels to inform their discussions. Following the discussion, each educator could change his or her individual decision. Consensus or agreement was not required.
- After two rounds of panelist recommendations and discussion, the educators were provided with impact data, which is the percent of students who would fall into each achievement level in the subject area and grade level of the 2022 administration of the AK STAR assessment, based on the median of the panelist recommendations. If requested, educators were given information about the performance of Alaskan students on the PEAKS 2019 tests. The educators discussed their decisions in the grade-band group. Similar to previous rounds, following the discussion, each educator could adjust his or her recommendation during the third round of the process.
- Following the third round, 16 educators (eight for ELA, eight for math) were selected to represent the grade-band groups on an articulation panel to review all of the proposed cut scores. The articulation panel reviewed the results to be sure that the cut scores represented a similar level of rigor across all grade levels, first within the content area and then across the two content areas. Although panelists were provided the opportunity to make changes during articulation, no changes were made.
- An internal team of department staff reviewed the recommendations from the panels of educators with Deputy Commissioner Teshner. After consideration, the department team made minor technical adjustments to the recommended cut scores that fell within 1 conditional standard error of measurement from the panelists’ recommended scores for ELA and 2 conditional standard errors of measurement from the panelists’ recommended scores for Mathematics. It was important to the department team to honor the work and professional judgment of the Alaskan educators. It was also important to reflect the reality of the performance of Alaska students on the standards and to recognize the performance of Alaska students on previous assessments.

## *Alaska Science Assessments*

- K-12 Science Standards for Alaska define what students should know and be able to do in the content area of science; achievement level descriptors articulate what students should know and be able to do at each achievement level. A group of 23 Alaskan educators met in January 2020 to draft Achievement Level Descriptors (ALDs) specific to science.
- 27 Alaska educators gathered June 14 - June 15 to determine the proposed range of scores in each achievement level using the ALDs. Educators used a process called “Standard Setting,” specifically the bookmark method. These accepted research-based procedures have been used since the 1990’s and have been used previously in Alaska for the statewide assessments. The process was led by facilitators from Data Recognition Corporation (DRC). Staff members from DEED were present to observe and to serve as resources.
- Panelists for Standard Setting were chosen from the pool of applicants based on their experience with the science standards. Panelists represented 13 school districts in the state. Educators represented a diversity of schools by location and size.
- 20 participants were current classroom teachers and others were currently serving in administrative or specialist roles. 81% of the panelists had experience with students with disabilities, and 88% had experience with English learners. Many of the panelists had previous experience in participating in setting scores, reviewing items, or drafting ALDs for the Alaska Science Assessment or other previous Alaska assessments.
- To begin, each educator reviewed the ALDs for each grade and identified the differences in levels for each standard. After the ALD review, the educators took each test, thinking about what knowledge and skills were reflected in each question. The educators then described what knowledge and skills a ‘threshold student’ would need to barely make it into each achievement level using the ALDs as a guide. The educators were looking for borderline achievement because cut scores between achievement levels are set at those borders. The panelists would recommend the cuts between the Needs Support/Approaching Proficient, Approaching Proficient/Proficient, and Proficient/Advanced achievement levels.
- The educators received an Ordered Item Booklet (OIB) presenting the test questions in order of difficulty, from easiest to hardest, as determined by the number of students who answered each question correctly. Educators then reviewed each test question in the OIB. The educators discussed what made each question more difficult than the one before it, using their professional judgment about the standards, the ALDs, and the abilities of the Alaska students in that grade level.
- Each educator individually determined if a threshold student scoring at the ‘just proficient’ level should be able to answer the question correctly. They repeated this process for the threshold students in the Approaching Proficient and Advanced achievement levels.
- After submitting their individual recommendations, each table group received feedback on the scores in their group, including the median and the range of their recommendations. The

educators discussed their decisions in small groups. Educators referred to the standards and the descriptions of achievement levels to inform their discussions. Following the discussion, each educator could change his or her individual decision. Consensus or agreement was not required.

- After two rounds of panelist recommendations and discussion, the educators were provided with impact data, which is the percent of students who would fall into each achievement level in the subject area and grade level of the 2022 administration of the Alaska Science Assessment, based on the median of the panelist recommendations. If requested, educators were given information about the performance of Alaskan students on the 2019 tests. The educators discussed their decisions in a large group. Similar to previous rounds, following the discussion, each educator could adjust his or her recommendation during the third round of the process.
- Following the third round, six educators (two from each grade level group) from within the larger group of panelists served on articulation panels to review all of the proposed cut scores. The articulation panel reviewed the results to be sure that the cut scores represented a similar level of performance across all grade levels. This group reviewed the items for all three grade levels and proposed several changes.
- An internal team of department staff reviewed the recommendations from the panels of educators with Deputy Commissioner Teshner. After consideration, the department team made minor technical adjustments to the recommended cut scores that fell within 1 conditional standard error of measurement from the panelists' recommended scores for science. It was important to the department team to honor the work and professional judgment of the Alaskan educators. It was also important to reflect the reality of the performance of Alaska students on the standards and to recognize the performance of Alaska students on previous assessments.