Parent Guide to Student Reports
Spring 2019 Alaska Science Assessment

The Purpose of the Alaska Science Assessment
The Alaska Science Assessment is administered annually statewide to students in grades 4, 8, and 10. It provides students the opportunity to show their understanding of Alaska’s Science Standards. The assessment provides information to parents, educators, policy makers, communities, and businesses about how Alaska’s schools and districts are performing. The assessment also provides information to help schools improve and to help Alaska’s educational mission: “An excellent education for every student every day.”

Types of Items
There are two main item types on the Alaska Science Assessment: multiple-choice and constructed-response. For multiple-choice items, students are asked to select one correct response from a number of possible answer choices.

All multiple-choice items are worth one point each. Constructed-response items require students to respond to a given prompt. Short constructed-response items receive between zero to two points each, and extended constructed-response items receive zero to four points each.

Performance by Standard
The Alaska Content and Performance Standards define what students should know and be able to do in science. The standards are broken down into categories. The Alaska Science Assessment items assess student skills within these categories.

For more information visit the Alaska Standards webpage.
About the Alaska Science Assessment
This report provides a record of test results on the Alaska Science Assessment. The student’s scale score is represented by the symbol. The chart displays where this score is on the possible scale score range (100–600). If the student were to test again, the student’s score would likely fall within the lines on either side of the circle.

Performance by Standard — Proficiency Levels and Probable Scale Score Ranges

<table>
<thead>
<tr>
<th>Subject/Standard</th>
<th>Points Possible</th>
<th>Scale Score</th>
<th>FBP</th>
<th>BP</th>
<th>P</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>50</td>
<td>310</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inquiry, Technology, and Nature of Science</td>
<td>22</td>
<td>278</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concepts of Physical Science</td>
<td>8</td>
<td>320</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concepts of Life Science</td>
<td>10</td>
<td>360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concepts of Earth Science</td>
<td>10</td>
<td>268</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Scores in the shaded area indicate Below Proficient or Far Below Proficient, whereas scores in the non-shaded area indicate Proficient or Advanced.

Science Proficiency Level Descriptors — 4th Grade

A = Advanced: 357 and above
The student displays a highly developed conceptual understanding by applying simple investigations and incorporating the processes of science; explaining technological, local, and historical connections to science; modeling and explaining the characteristics of Earth; linking light and dark changes caused by heating and cooling, providing detailed explanations of plant and animal systems; comparing the child’s to the Alaska environment; explaining and modeling the rock cycle; and using cause and effect to explain how different objects and organisms work together in the Alaska environment; explaining causes of rock changes in Earth; and explaining and modeling that objects in the universe can be observed and described by their properties, locations, and movements.

P = Proficient: 232–356
The student demonstrates a basic conceptual understanding by applying the processes of science during simple investigations; demonstrating connections between science and technological, local, and historical perspectives; identifying and connecting technological processes; explaining and modeling the rock cycle; recognizing cause and effect in Earth; and explaining and modeling that objects in the universe can be observed and described by their properties, locations, and movements.

BP = Below Proficient: 233–299
The student meets the standards; demonstrates knowledge and skills of current grade-level content.

FBBP = Far Below Proficient: 232 and below
There is a significant need for additional instructional opportunities to achieve the proficient level.

For more information on the Alaska Science Assessments, please see the Educator and Parent Guides to Reports on the website: https://education.alaska.gov/tls/assessments/peaks.html

Reading the Science Student Report

A This section presents student, school, and district information.

The number in the box indicates the student’s scale score in science. Please note: If the student did not attempt the test or if the student did not receive a valid test score, there will not be a scale score or other information reported. Contact your school for more information about the specific circumstances.

B The horizontal bar graphically illustrates the student’s scale score and the location of that score in the achievement level attained by the student. The dark circle in the symbol (–) represents the student’s actual scale score. The bars on the sides of the circle represent the range of where the student’s score would likely fall if the student were to test again. This represents the standard error of measurement (SEM).

C This section describes the student’s proficiency level determined by the scale score reported in B. Proficiency levels are reported as Advanced (A), Proficient (P), Below Proficient (BP), or Far Below Proficient (FBP).

D This section shows how the student performed in the standards for science. For each standard, the points possible, scale score, and proficiency level is shown.

E This section provides general descriptions of what a student in this grade level can do at each proficiency level in each science.
Terms and Types of Scores

**Scale Score:** A number that provides a common metric for expressing student performance. The student's overall performance on the Alaska Science Assessment is reported as a scale score. Points earned by answering an item correctly are converted into a scale score that takes into consideration the difficulty of the item.

**Proficiency Levels:** Student performance on the Alaska Science Assessment is reported in one of four proficiency levels. These levels describe the performance of the student on the standards tested at the grade level. The four proficiency levels are:

- **Advanced** (A)—Student meets the standards at an advanced level, demonstrating knowledge and skills of complex grade-level content.
- **Proficient** (P)—Student meets the standards at a proficient level, demonstrating knowledge and skills of current grade-level content.
- **Below Proficient** (BP)—Student partially meets the standards, and may have gaps in knowledge and skills but is capable of most grade-level content.
- **Far Below Proficient** (FBP)—Student may partially meet the standards, but has significant gaps in knowledge and skills of current grade-level content.

**Standard Error of Measurement (SEM):** The SEM provides information about the level of confidence that a student would achieve the same score if that student tested again on an equivalent form of the test without changing knowledge or skills. The SEM is specific for the particular grade and content area.