

Oregon Department of Education 2008-2009 Technical Report
Oregon's Statewide Assessment System
Standard Setting
Volume 3

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Oregon's Statewide Assessment System
Technical Report: Volume 3, Standard Setting
Last updated on July 18, 2008.

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This technical report is one of a series that describes the development of Oregon's Statewide Assessment System. The complete set of volumes provides comprehensive documentation of the development, procedures, technical adequacy, and results of the system:

Volume 1: 2007-2008 Annual Report
Volume 2: Test Development
Volume 3: Standard Setting
Volume 4: Reliability and Validity
Volume 5: Test Administration
Volume 6: Score Interpretation Guide
Volume 7: Alternate Assessment, Program Description
Volume 8: Alternate Assessment, 2005-06 Statistical Summary
All volumes can be found at http://www.ode.state.or.us/search/page/?id=787.

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## 1. Overview

Oregon's Statewide Assessment System provides instructionally useful information to educators about student mastery of the knowledge and skills described by the content standards. The content standards are benchmarked against national standards and were, designed with stakeholder involvement, to be rigorous, coherent, and demanding. In 1996 a panel of national experts reviewed Oregon's content and performance standards; they concluded that the standards were rigorous and powerful tools for holding students accountable for their learning. Since 1997, Education Week, has consistently awarded Oregon high marks for its standards and assessment system.

A major effort by the Oregon Department of Education resulted in the establishment of content standards that serve as the goal structure for the state assessments. The sections below provide a detailed description of the content standards development process.

The OAKS is designed to measure the grade-specific content described in the standards and is intended to serve the following goals:

- Provide instructionally useful evaluation of individual student progress toward mastery of the academic content standards;
- Guide instructional program improvement;
- Ensure that the state is progressing toward the state and federal goals for high standards for all; and
- Inform the public.

All tests are developed to be representative and valid measures of the knowledge required by Oregon's Academic Content Standards; to facilitate accessibility for all students, the tests are designed according to the principles of universal design.

Expectations for teaching and learning are organized into the following Curriculum Goals, Gradelevel Standards, and Foundations:

1. Common Curriculum Goals (CCG) that describe the knowledge and skills expected of all students as a result of their educational experience (OAR 581-022-0102)
2. Grade-level Standards that describe what students should know and be able to do at grades 3 through High School
3. K-2 Grade-level Foundations that describe one way curriculum might be organized to help students prepare to meet the third grade standards

## 2. Overview of Oregon's Assessment of Knowledge and SKills (OAKS)

Items on the Knowledge and Skills Tests and Performance Assessments are written to represent the state's content standards, and tests are composed of items such that the emphasis of the tests matches the emphasis of the content standards. Performance standards define what students must do to meet or exceed Oregon's Academic Content Standards.

### 2.1 Statewide Assessment System

The Oregon Statewide Assessment System consists of the Knowledge and Skills Assessments (KSAs), which measure student performance in Math, Reading/Literature, Science, and Social Science via multiple-choice tests aligned to grade-level content standards, and the Writing Performance Assessment which measures student performance in writing via open-ended essay questions.

The KSAs are administered via OAKS Online, a progressive, computer-based system. Students unable to take standard administrations of OAKS Online have other options-side-by-side tests in Spanish and Russian for English Language Learners, Extended Assessments for students with IEP plans, and Braille or Large Print paper-pencil Assessments for students with visual impairments. The tests are used for NCLB accountability and measure student progress. Students are provided the opportunity to demonstrate mastery of the state's content standards.

Students in grades 3-8 and 10 take the state Reading/Literature and Math KSAs, and students in grades 5, 8, and 10 take the state Science and Social Sciences KSAs. Students in grades 4, 7, and 10 are tested in Writing, using the Performance Assessment. All are state-developed, criterionreferenced tests designed to align to the content standards and measure what students should know and be able to do in each subject and at each grade level.

Table 1 summarizes the available state tests.
Table 1.
Summary of Tests and Testing Options

|  | Testing format |  | Language(s) tested | Grade levels tested |
| :---: | :---: | :---: | :---: | :---: |
| Subject Tests | TESA | Paper and pencil |  |  |
| Reading/Literature KSA | $\checkmark$ | $\checkmark$ | English | 3-8, 10 |
| Spanish Reading/Literature KSA (Aprenda) |  | $\checkmark$ | Spanish | 3 |
| Mathematics KSA | $\begin{aligned} & \checkmark \\ & \checkmark \end{aligned}$ | $\begin{aligned} & \checkmark \\ & \checkmark \\ & \checkmark \end{aligned}$ | English <br> Spanish/English <br> Russian/English | 3-8, 10 |
| Science KSA | $\stackrel{\rightharpoonup}{\checkmark}$ | $\begin{aligned} & \checkmark \\ & \checkmark \\ & \checkmark \end{aligned}$ | English <br> Spanish/English <br> Russian/English | 5, 8, 10 |
| Social Sciences KSA | $\begin{aligned} & \checkmark \checkmark \\ & \checkmark \end{aligned}$ |  | English <br> Spanish/English | 5, 8, 10 |
| Writing PA | $\checkmark$ | $\begin{aligned} & \checkmark \\ & \checkmark \end{aligned}$ | English <br> Spanish/English | 4, 7, 10 |
| English Language Proficiency | Web-based, not OAKS Online |  | English | K-12 |
| Extended Assessment, Reading |  | $\checkmark$ | English | 3-8, 10 |
| Extended Assessment, Math |  | $\checkmark$ | English | 3-8, 10 |
| Extended Assessment, Writing |  | $\checkmark$ | English | 4, 7, 10 |
| Extended Assessment, Science |  | $\checkmark$ | English | 5, 8, 10 |

KSA $=$ Knowledge and Skills Assessment, PA $=$ Performance Assessment.
All of the tests and testing options are described below. Additional information describing test development and administration can be found in Volume 2: Test Development and Volume 5: Test Administration. Information about the English Language Proficiency Exam is provided in a separate technical report. All of the technical reports can be downloaded from the Oregon Department of Education website at http://www.ode.state.or.us/search/page/?id=787.

### 2.2 Academic Content Standards

All of the state tests are designed to measure the grade-level expectations for what students should know and be able to do as described in Oregon's Academic Content Standards.

In 1996, a panel of national experts reviewed Oregon's content and performance standards. The panel reported that the standards were rigorous and highlighted the state's assessment system as a powerful tool to hold students accountable for their learning. Since 1997, Education Week, a national
education newspaper, has conducted an annual comprehensive review of public education in all 50 states and awarded Oregon high marks for its standards and assessment system each year.

Table 2 provides the dates of most recent adoption and anticipated revision by the State Board of Education for the content standards in each content area.

Table 2.
Dates of Adoption for Academic Content Standards

| Content area | Most recent adoption date | Anticipated revision date |
| :--- | :---: | :---: |
|  | K-3, June 2002 |  |
| English language arts | $4-8$ and High School, January 2003 | 2012 |
|  | 3-8, March 2007 |  |
| Mathematics | High School, April 2002 | High School, 2009 |
| Science | April 2001 | 2009 |
| Social sciences | April 2001 | 2010 |
| English language proficiency | June 2004 | 2013 |

Oregon's Academic Content Standards are available on the Web site via the state's Searchable Standards Tool that allows you to locate, view, and export standards by subject, grade level (benchmark), and/or strand (subtopic or Score Reporting Category, [SRC]) at http://www.ode.state.or.us/teachlearn/real/standards/

### 2.3 Academic Achievement Standards

Performance standards were originally set on September 19, 1996. The Oregon State Board of Education adopted the performance standards for grades 3, 5, 8, and 10 in Reading/Literature and Mathematics. Science performance standards for grades 5, 8, and 10 were adopted on October 20, 1999.

Oregon reviewed its performance levels for all grades in the content areas of Math, Reading/Literature, and Science in 2006-07. The State Board of Education reviewed the recommended achievement standards at its meeting January 18 and 19, 2007, and received regular reports on the feedback from the field review and public input prior to adopting the standards in March 2007. Following adoption by the Board, these performance levels were applied to all tests administered during the 2006-2007 school year.

The assessments use four levels of achievement - "Exceeds," "Meets," "Nearly Meets," and "Does Not Yet Meet." The grade and content specific descriptors for each level are provided in Appendix A.

## 3. Standard SETting

Standard setting was done separately for Math, Reading/Literature, and Science; the same process was followed across all subjects at grades 3, 5, 8, and high school for Reading/Literature and Mathematics; grades 5, 8, and high school for Science.

Achievement standards were reestablished in 2006-07 for all subjects following the schedule below.
Table 3.
Summary of Standard Setting Panel Meetings, December 2006

|  | Grade (spans) | Number of panelists | Dates |
| :--- | :--- | :---: | :---: |
| Reading/Literature | $3,5,8$,and 10 | 78 | December 11-13, 2006 |
| Math | $3,5,8$,and 10 | 76 | December 11-13, 2006 |
| Science | 5,8, and 10 | 56 | December 11-13, 2006 |

### 3.1 Goals

The goals of the standard-setting procedure were as follows:

- Establish what students should know and be able to do in terms of the Oregon Academic Content Standards and as measured by the state assessments at each grade, in each subject, and at the "Does Not Yet Meet," "Nearly Meets," "Meets," and "Exceeds" levels.
- Consider impact data describing the implications of proposed cut scores in making judgments about item difficulty and the placement of the bookmarks.
- Consider and assimilate public opinion regarding the appropriateness and feasibility of the standards.
- Provide recommendations to the Oregon State Board of Education on the appropriate placement of the performance levels for each test.

To meet these goals, Oregon stakeholders and educators reviewed each of the tests and recommended cut scores for each of the performance standards. The panel used student impact data, research, and stakeholder input in determining the placement of each cut score.

### 3.2 Panel Recruitment and Composition

The Department solicited involvement from all levels of the education system and from the community. Over 550 individuals expressed interest in participating. From these, the Department selected 278 to represent the needs and demographics of Oregon students, including geographic region, district size, gender, race/ethnicity, and role in education or the community.

Each panel consisted of 16-20 members organized in 3 groups (tables), including teachers, curriculum specialists, administrators, students, community members, and higher education faculty. Educators set standards in the grade/subject in which they had expertise and the most experience in identifying and determining proficiency. Parents and community/business representatives participated fully with educators on the panels. Participants received reimbursement for travel expenses, and districts received a stipend to cover substitute teacher costs for panelists.

Appendix B describes panel composition for each subject and grade span.

### 3.3 Panel Training

Panelists received training to help them understand the content standards and statewide assessment system. Content standards and the test design were explained to and reviewed by each of the panel members so that they were thoroughly familiar with the testing experience of students.

## Training

Following the presentation by the ODE, Ricardo Mercado, a member of the CTB Standard Setting Team provided an overview of the purpose of standard setting and described the implementation of the BSSP. Participants were introduced to key concepts and key materials of the BSSP, including the Ordered Item Booklet (OIB) and the item map. During this training, it was explained that table leaders would facilitate discussion at their tables and help participants complete tasks in a timely manner. Participants were given a synopsis of each day's activities. Participants engaged in a brief, mock standard setting using released Grade 4 Mathematics items from the National Assessment of Educational Progress (NAEP). During this mock standard setting, participants reviewed and used the tools of the BSSP, including a sample OIB and item map. Following the mock standard setting, participants were directed to their preassigned, breakout rooms and tables. Each grade and content area was in a separate breakout area.

## Target Student Descriptors

Prior to the standard setting, the ODE developed achievement-level descriptors for the average student within each of the following achievement levels: Does Not Yet Meet, Nearly Meets, Meets, and Exceeds. Once participants were in their preassigned, breakout rooms, the group leader within each grade and content area facilitated the target student discussion to help participants articulate the achievement levels, with one exception: the Grade 5 Mathematics group leader had participants review the OIB prior to facilitating the discussion of target student descriptors.

A target student is defined as a student whose performance minimally meets the criteria for entry into a particular achievement level, for example, the "just" Meets student. For each grade and content area there were three target student descriptors, one for each cut score (Nearly Meets, Meets, and Exceeds). Participants created descriptors of the target students using the appropriate Oregon standards, the previously developed achievement-level descriptors, and the expectations the participants have of students in the achievement levels. These definitions served as a basis for establishing a common understanding of the type of student that should be considered when setting each cut score on the test. Participants were encouraged to take notes during the target student discussion and were referred to the target student descriptors throughout the standard setting.

## Examine the Test

Participants examined an operational paper-pencil test for their grade and content area to experience the test from the student's perspective.

## Study Items in the Ordered Item Booklet

Participants at each table studied each of the 70 items in the OIB in terms of what each item measures and why it is more difficult than the items preceding it. At each table, one participant,
denoted as the scribe, recorded the group's comments about what each item measured. The locations for each item were not included on the item maps during Round 1.

## Bookmark Training

Prior to setting their Round 1 bookmarks, participants received supplemental training on bookmark placement for the minimally competent student in each achievement level. This training was presented by Christina Schneider, a member of the CTB Standard Setting Team. Participants were instructed to use four tools when placing their bookmarks: the Oregon content standards, the target student descriptors, the achievement-level descriptors, and the content as represented by the items on the test.

Participants were given training materials and three explanations of bookmark placement. The training materials titled "Bookmark Placement" and "Frequently Asked Questions about Bookmark Placement" were read aloud. The first explanation of bookmark placement demonstrated the mechanics: participants were instructed that all items preceding the bookmark define the knowledge, skills, and abilities that a "just" Meets student, for example, is expected to know. The second explanation of bookmark placement was more conceptual in that participants were instructed to examine each item in terms of its content and to make a judgment about the type of content that a student would need to know in order to be considered "just" Meets. The final explanation discussed the relationship between the bookmarks and the scale scores. The participants were tested on their understanding of bookmark placement with a short check set. A listing of the training materials provided to panelists can be found in Bookmark Standard Setting Technical Report 2006 for Reading/Literature and Mathematics Grades 3, 5, 8, and CIM and Science Grades 5, 8, and CIM.

### 3.4 Method: Bookmarking

To meet the goals listed above, the panel followed the methods of the bookmarking standard-setting procedure (Mitzel, Lewis, Patz, \& Green, 2001). The process selected for reestablishing the achievement standards on the statewide assessments in Reading/Literature, Mathematics, Science, and the ELPA consisted of three key phases.

Step 1: The Department establishes and trains a broadly representative panel for each grade and subject area to review test materials and recommend cut scores. To recommend cut scores for each of the performance standards, panels use the following: (1) ordered item booklets (OIBs), (2) impact data, and (3) predictable growth information.

Step 2: Explore impact data and seek public input
Phase 3: Field review and public input
Step 4: Research review
In each subject area, standard-setting panels met for two four-day sessions. Although standard setting was conducted for each content and grade level separately, all panels followed the same procedure. Below, we describe the standard-setting procedures for each step in detail. Outcomes are provided for each of the content areas and grades in Appendices F, G, and H for

Reading/Literature, Math and Science. ELPA results are provided in a separate ELPA Program Technical Report.

### 3.4.1 Step 1: Setting the Bookmarks

Details regarding the standard setting process can be found in The Oregon 2006 Academic Standard Setting Documentation http://www.ode.state.or.us/search/page/?id=920. The following is a brief overview:

To familiarize panelists with the assessment system and reiterate the goals of the process, the meetings began with a review of the content standards, assessments, and current performance standards. The review included the critical knowledge for all students in each subject and at each grade as determined by the content standards and examples of how that knowledge might be described and measured on tests.

These descriptions are the Performance-Level Descriptors (PLDs) provided in Appendix A.

## Round 1 Bookmark Placement

Once participants demonstrated that they understood how to place their bookmarks through the check set, they placed bookmarks in the following order: Meets, Exceeds, and Nearly Meets. Participants were instructed that bookmark placement is always an individual activity.

Prior to placement of the Round 1 bookmarks, the group leaders displayed an overhead transparency of the bookmarks that represented the existing cut scores for the Oregon Statewide Assessments. Participants were asked whether the existing cut scores reasonably represented the break in skills among the achievement levels that participants determined in their review of the items. If the existing cut scores reasonably represented the break of skills, participants were instructed that they could keep the existing bookmarks. If the current bookmarks did not reasonably represent the change in skills, participants were instructed to place their bookmarks on new pages in their OIBs.

Participants placed their Round 1 bookmarks for Nearly Meets, Meets, and Exceeds, while keeping in mind the Oregon content standards, the target student descriptors, the achievement-level descriptors, and the content as represented by the items on the test.

## Round 2 Bookmark Placement

In each grade and content area, the table leader at each table facilitated a discussion of all the bookmark placements for the table. Participants were encouraged to focus on the differences among their bookmarks by discussing the items between the lowest and highest bookmarks at their table.

Participants were then directed back to their OIBs and item maps to continue content-based discussions. At this point, table leaders were each given a copy of the item map that included the location of each item in the OIB. After discussion, participants were reminded to place their bookmarks independently.

## Round 3 Bookmark Placement

Participants received feedback based on their Round 2 bookmark placements from a member of the CTB Standard Setting Team in collaboration with an ODE representative. On an overhead
transparency, participants were shown the median bookmark placement for each achievement level for each table as well as the medians for their grade and content area. In addition, participants were shown impact data based on the median Round 2 bookmarks. Impact data was defined for participants as the percentages of students who would be classified in each achievement level based on the median bookmarks. CTB staff answered process-related questions, and the ODE staff answered all policy-related questions concerning the impact data. It was emphasized to the participants that the impact data were being presented as a "reality check."

During this portion of the standard setting, a fire alarm went off in the hotel in which the workshop was located. After a brief evacuation, the workshop resumed.

After the presentation of Round 2 results, participants discussed the rationale of their bookmark placement across tables within their grade and content area. The group leader facilitated the discussion among all participants. After the discussion, participants were instructed to place their bookmarks independently for the final time.

## Round 3 Results

Participants received feedback based on their final bookmark placements from a member of the CTB Standard Setting Team in collaboration with an ODE representative. On an overhead transparency, participants were shown the median bookmarks for each table as well as the medians for their grade and content area and the impact data based on the median Round 3 (final) bookmarks. In addition, participants were shown the impact data for all grades within their content areas as an introduction to the cross-grade discussion. If necessary, the panels would have been allowed a fourth round of voting had they expressed a pervasive dissatisfaction with their recommended cut-scores. Table 4 displays the median recommendations from the panels based on their 3rd round of votes.

Table 4.
Summary of Standard Setting Panel Meetings after Round 3, December 2006

|  | Math | Reading/Literature | Science |
| :--- | :---: | :---: | :---: |
| Grade 3 |  |  | $\mathrm{N} / \mathrm{A}$ |
| Does not yet meet | 200 and lower | 198 and lower | $\mathrm{N} / \mathrm{A}$ |
| Nearly Meets | $201-203$ | $199-202$ | $\mathrm{~N} / \mathrm{A}$ |
| Meets | $204-214$ | $203-215$ | $\mathrm{~N} / \mathrm{A}$ |
| Exceeds | 215 and higher | 216 and higher | $\mathrm{N} / \mathrm{A}$ |
| Grade 5 |  |  |  |
| Does not yet meet | 213 and lower | 208 and lower | 215 and lower |
| Nearly Meets | $214-217$ | $209-217$ | $216-224$ |
| Meets | $218-229$ | $218-229$ | $225-237$ |
| Exceeds | 230 and higher | 230 and higher | 238 and higher |
| Grade 8 | 224 and lower | 223 and lower | 228 and lower |
| Does not yet meet | $225-229$ | $224-229$ | $229-233$ |
| Nearly Meets | $230-240$ | $230-240$ | $234-245$ |
| Meets | 241 and higher | 241 and higher | 246 and higher |
| Exceeds |  |  | 234 and lower |
| Grade 10 | 230 and lower | 230 and lower | $235-239$ |
| Does not yet meet | $231-235$ | $231-235$ | $240-249$ |
| Nearly Meets | $236-245$ | $236-247$ | 249 and higher |
| Meets | 246 and higher | 248 and higher |  |
| Exceeds |  |  |  |

Once all grade panels for each content area in Mathematics and Reading/Literature completed Round 3, CTB interpolated the cut scores for the off-grades (Grades 4, 6, and 7) using the quadratic curve of best fit as the interpolation method. This policy model was specified a priori by the ODE. Historically, the percentage of students classified as Meets or above on the Oregon Statewide Assessments has followed a declining quadratic trend when tracked across grades.

Table leaders from each panel were brought together to examine the cut scores and associated impact data determined for the off-grades by interpolation. The purpose of this smoothing discussion was to establish a system of cut scores that was well articulated and, at the same time, considerate of the participants' original recommendations. A representative from the ODE was present during these discussions to answer policy-related questions.

Table leaders made various adjustments to the cut scores to promote cross-grade articulation. These changes were all small (two scale score points or less). In Grade 3 Reading, table leaders recommended increasing the Exceeds cut score by two scale score points to bring the percentage of students classified as Exceeds in that grade more consistent with the percentages in Grades 4 and 5. Table leaders in Grades 5 and 8 Reading recommended decreasing the Exceeds cut score by two scale score points in Grade 7, using similar reasoning. Table leaders in Grade 3 recommended a onepoint increase in the Meets cut score, after informal consultation with their participants, to bring the percentage of students classified as Meets in that grade more in line with the percentages of the other grades, and to increase the number of students classified as Nearly Meets in that grade. Grade

8 table leaders recommended a one-point increase in the Meets cut score at that grade for similar reasons. Table leaders in Reading did not recommend any changes to the Nearly Meets cut scores.

In Mathematics, table leaders in Grade 3 recommended a two-point increase in the Exceeds cut score in that grade, as well as a one-point increase in the Exceeds cut score for Grade 4, in order to make the percentage of students classified as Exceeds more consistent with the percentages in other grades. Table leaders in Grade 5 concurred and recommended a one point reduction in the Exceeds cut score of that grade, and they recommended, in collaboration with Grade 8, a one-point decrease in the Exceeds cut scores of Grades 6 and 7.

Grade 3 table leaders also recommended a one-point increase in the Meets cut score for that grade to promote better articulation with Grades 4 and 5. Table leaders in Grade 5 recommended a onepoint increase in the Meets cut score for Grade 6 to promote better articulation with surrounding grades. Grade 5 table leaders also recommended a one-point increase in the Nearly Meets cut score for Grade 6 for the same reason.

At the time of the cross-grade articulation discussion, Science table leaders reported that they and their participants were satisfied with their recommended cut scores, and that the impact data associated with their cut scores were reasonable. Science table leaders recommended no changes to their cut scores.

At the conclusion of the cross-grade articulation discussion, all table leaders were asked to review their recommended cut scores in their ordered item booklets and item maps. Specifically, table leaders were asked to verify that the changes that they recommended during the cross-grade articulation discussion were reasonable when compared to the content of the assessments. All table leaders reported that their recommended cut scores were reasonable when compared to the content of the assessments.

Table 5.

## Summary of Standard Setting Panel Meetings After Cross Grade Articulation, December

 2006|  | Math | Reading/Literature | Science |
| :---: | :---: | :---: | :---: |
| Grade 3 |  |  | N/A |
| Does not yet meet | 200 and lower | 198 and lower | N/A |
| Nearly Meets | 201-204 | 199-202 | N/A |
| Meets | 205-216 | 204-217 | N/A |
| Exceeds | 217 and higher | 218 and higher | N/A |
| Grade 4 |  |  | N/A |
| Does not yet meet | 207 and lower | 204 and lower | N/A |
| Nearly Meets | 208-211 | 205-210 | N/A |
| Meets | 212-224 | 211-222 | N/A |
| Exceeds | 225 and higher | 223 and higher | N/A |
| Grade 5 |  |  | N/A |
| Does not yet meet | 213 and lower | 208 and lower | 215 and lower |
| Nearly Meets | 214-217 | 209-217 | 216-224 |
| Meets | 218-228 | 218-229 | 225-237 |
| Exceeds | 229 and higher | 230 and higher | 238 and higher |
| Grade 6 |  |  |  |
| Does not yet meet | 215 and lower | 213 and lower | N/A |
| Nearly Meets | 216-220 | 214-221 | N/A |
| Meets | 221-231 | 222-233 | N/A |
| Exceeds | 232 and higher | 234 and higher | N/A |
| Grade 7 |  |  |  |
| Does not yet meet | 220 and lower | 218 and lower | N/A |
| Nearly Meets | 221-225 | 219-226 | N/A |
| Meets | 226-237 | 227-238 | N/A |
| Exceeds | 238 and higher | 239 and higher | N/A |
| Grade 8 |  |  |  |
| Does not yet meet | 224 and lower | 223 and lower | 228 and lower |
| Nearly Meets | 225-229 | 224-229 | 229-233 |
| Meets | 230-240 | 231-240 | 234-245 |
| Exceeds | 241 and higher | 241 and higher | 246 and higher |
| Grade 10 |  |  |  |
| Does not yet meet | 230 and lower | 230 and lower | 234 and lower |
| Nearly Meets | 231-235 | 231-235 | 235-239 |
| Meets | 236-245 | 236-247 | 240-249 |
| Exceeds | 246 and higher | 248 and higher | 249 and higher |

Panelists evaluated the process. Generally, feedback was positive and included the following:

- $90.9 \%$ of participants agreed or strongly agreed with the statement, "The Bookmark Procedure was well described."
- $87.6 \%$ of participants agreed or strongly agreed with the statement, "The training materials were helpful."
- $83.1 \%$ of participants agreed or strongly agreed with the statement, "Overall, I am satisfied with my group's final bookmarks."
- $94.7 \%$ of participants agreed or strongly agreed with the statement, "Overall, I valued the conference as a professional development experience."

Details regarding the participants' evaluation of the standard setting process can be found in The Oregon 2006 Academic Standard Setting Documentation.

### 3.4.2 Step 2: Impact Data and Regional Meetings with the Public

After the panels proposed the initial drafts of the performance standards, a two-stage field review was conducted. Regional meetings with educators and members of the community were held in January and February, 2007. There were two sessions held each day. The late afternoon session was targeted to educators and the early evening session was target to the members of the community. Attendees of the regional meetings provided feedback about the appropriateness and feasibility of the standards. Additionally, the Department of Education posted a video on the web that gave an overview of the process and outcome of the standard setting session. The web page contained a brief survey to collect comments that people might have after viewing the video.

Participants in the standards setting conference on cut score placement in Portland, December 1113, 2006 involved 276 participants representing 29 counties and 74 school districts. From these participants we received the following input.

Table 6:
Feedback from standards setting conference attendees.

| Content Area | \% Strongly Agree or Agree with the results of the session and the value of the <br> experience |
| :--- | :--- |
| Reading teams | $83 \%$ |
| Math teams | $88 \%$ |
| Science teams | $83 \%$ |
| Overall average | $85 \%$ |

Additionally, public hearings were held at 15 sites statewide- at Multnomah ESD, Portland Public Schools, Willamette ESD, Salem Public Library, Douglas ESD, Umatilla-Morrow ESD, Hermiston Public Schools, Redmond School District, High Desert ESD, the COSA Conference at Salishan, Southern Oregon ESD, Lane Co ESD, Wy'East Admin, the Oregon Reading Conference, and Malheur ESD. Across all hearings, 246 individuals participated. $91 \%$ were very confident or fairly confident that the process appropriately placed the cut scores. Among on-line respondents $62 \%$ were confident or better, the absence of any discussion opportunities, that the process was appropriately undertaken.

Among those expressing concerns across the state, there was a high level of confidence in the process for identifying cut scores. Elementary school representatives were concerned about how these new standards might affect schools currently in failing category on AYP and schools with high
achieving levels that may drop from their current successes. Those from secondary schools suggested that even though they supported change in cut scores at high school, there was a concern that the public would perceive that high school is lowering performance standards. In addition, there was an increasing interest at the high school level, in line with the ending of CIM, to test students in 10th-12th grades, after they have completed the requisite content.

There was a ubiquitous assertion that ODE must have a strong communication process for the public regarding change in cut scores and the impact of those changes on AYP. Similarly, many expressed the opinion that ODE should provide a comparison with past achievement levels to demonstrate that students are continuing to make academic progress.

### 3.4.3 Step 3: Research Review

With data from students who had been tested using Oregon's statewide assessments, the impact of the cut scores was reviewed. Students who were at the "meets" level in grade 8 were compared to how they had scored in grades 3 and 5 and 10. Previously, this work resulted in increasing the spread for grade 3 Reading/Literature and Mathematics standards, while all other benchmark standards remained the same for the two content areas.

Appendix G summarizes data used in the Impact and Review Step.

## 4. Formal Adoption of Challenging Academic Content STANDARDS

Finally, the State Board of Education held a formal hearing to address the reestablishment of the performance standards; during this hearing, Board members reviewed the draft performance standards and received the report of a panel of national experts.

## 5. Final Cut Scores

The final Board-approved cut scores are available on the Department's Web site at http://www.ode.state.or.us/search/results/?id=223 and are described below.

Table 7.
Final Cut Scores

|  | Math | Reading/Literature | Science |
| :---: | :---: | :---: | :---: |
| Grade 3 |  |  |  |
| Very Low | below 190 | below 189 | N/A |
| Low | 190-200 | 189-198 | N/A |
| Nearly Meets | 201-204 | 199-203 | N/A |
| Meets | 205-216 | 204-217 | N/A |
| Exceeds | 217 \& above | 218 \& above | N/A |
| Grade 4 |  |  |  |
| Very Low | below 198 | below 198 | N/A |
| Low | 198-207 | 198-204 | N/A |
| Nearly Meets | 208-211 | 205-210 | N/A |
| Meets | 212-224 | 211-222 | N/A |
| Exceeds | 225 \& above | 223 \& above | N/A |
| Grade 5 |  |  |  |
| Very Low | below 203 | below 202 | below 209 |
| Low | 203-213 | 202-208 | 209-215 |
| Nearly Meets | 214-217 | 209-217 | 216-224 |
| Meets | 218-228 | 218-229 | 225-237 |
| Exceeds | 229 \& above | 230 \& above | 238 \& above |
| Grade 6 |  |  |  |
| Very Low | below 207 | below 207 | N/A |
| Low | 207-215 | 207-213 | N/A |
| Nearly Meets | 216-220 | 214-221 | N/A |
| Meets | 221-231 | 222-233 | N/A |
| Exceeds | 232 \& above | 234 \& above | N/A |
| Grade 7 |  |  |  |
| Very Low | below 211 | below 211 | N/A |
| Low | 211-220 | 211-218 | N/A |
| Nearly Meets | 221-225 | 219-226 | N/A |
| Meets | 226-237 | 227-238 | N/A |
| Exceeds | 238 \& above | 239 \& above | N/A |
| Grade 8 |  |  |  |
| Very Low | below 213 | below 213 | below 217 |
| Low | 213-224 | 213-223 | 217-228 |
| Nearly Meets | 225-229 | 224-230 | 229-233 |
| Meets | 230-240 | 231-240 | 234-245 |
| Exceeds | 241 \& above | 241 \& above | 246 \& above |
| Grade 10 |  |  |  |
| Very Low | below 214 | below 217 | below 220 |
| Low | 214-230 | 217-230 | 220-234 |
| Nearly Meets | 231-235 | 231-235 | 235-239 |
| Meets | 236-245 | 236-247 | 240-248 |
| Exceeds | 246 \& above | 248 \& above | 249 \& above |

## APPENDIX A

Performance-Level Descriptors

Table A.1. Performance-Level Descriptors for Reading/Literature

| Grade | Performance Descriptor |
| :---: | :---: |
| Grade 3 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students have a limited comprehension of the literal meaning of text and grade-level vocabulary, which prevents them from making meaningful interpretations or recognizing implied ideas. They are unable to recognize cause and effect relationships and the presence of opinions in text. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently interpret the meaning of implied or unstated ideas and concepts. They struggle to recognize cause and effect relationships and the presence of opinions. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students who score at this level demonstrate an accurate [accurate denotes "on target, right" feel word choice isn't in line with other descriptors. Possible adequate, functional or delete it.] comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They recognize directly-stated problems and solutions and interpret text to determine themes and messages. They make accurate predictions based on textual evidence, and can identify directly-stated cause and effect relationships and opinions. They can draw conclusions about character traits and actions. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have a strong comprehension of complex texts. They effectively use context clues to interpret challenging vocabulary and analyze text to determine problems, solutions, themes and messages. They make predictions based on textual evidence, identify implicit cause and effect relationships and can differentiate between facts and opinions. |
| Grade 4 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students may be able to answer literal comprehension questions based on the text, but are unable to infer or recognize implied ideas. A limited comprehension of text prevents any sort of analysis of its purpose. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently interpret the meaning of implied or unstated ideas and concepts. They can sometimes identify an author's main purpose, but lack the skills to recognize instances of persuasion in informational text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. These students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characters, and make accurate predictions based on textual evidence. They can identify the author's purpose and the presence of persuasion in informational text. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have a strong comprehension of complex text. They effectively use context clues to interpret challenging vocabulary and analyze text to determine themes and messages. They make predictions based on textual evidence, trace the development of ideas and plot in nonlinear text, and analyze characters' actions and motivations. They can identify elements of persuasion and cause and effect relationships in informational text and analyze its features to support comprehension. |


| Grade | Performance Descriptor |
| :---: | :---: |
| Grade 5 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students have a limited comprehension of the literal meaning of text and grade-level vocabulary which prevents them from making meaningful interpretations or recognizing implied ideas. A limited recognition of text elements and devices prevents them from meaningfully analyzing text. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently interpret the meaning of implied or unstated ideas and concepts. They can sometimes identify an author's main purpose, but lack the skills to recognize instances of persuasion in informational text, or how the author uses devices to enhance literary text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characterization, and make accurate predictions. They can identify the author's purpose and the effect of elements and devices commonly used in literary text. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students comprehend text at or above their grade level of enrollment. They effectively use context clues to interpret challenging vocabulary and analyze text for complex themes and messages. They make insightful predictions based on foreshadowing clues, analyze characterization, and thoughtfully evaluate the author's use of devices in literary text and elements of persuasion in informative text. |
| Grade 6 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students have a limited comprehension of the literal meaning of text and grade-level vocabulary which prevents them from making meaningful interpretations or recognizing implied ideas. A limited recognition of text elements and devices prevents them from meaningfully analyzing text. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently interpret the meaning of implied or unstated ideas and concepts. They can sometimes identify an author's main purpose, but are unable to recognize how the author uses devices to enhance literary text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text and use context to make meaning of unfamiliar vocabulary. They interpret text to determine themes and messages, analyze characterization, and make accurate predictions. They can identify the author's purpose and the effect of elements and devices commonly used in literary text. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students accurately comprehend text at or above their grade level of enrollment. They effectively use context clues to interpret challenging vocabulary and analyze text for complex themes and messages. They make insightful predictions, analyze characterization, and thoughtfully evaluate the author's use of devices and structural elements. |


| Grade | Performance Descriptor |
| :---: | :---: |
| Grade 7 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students have a limited comprehension of the literal meaning of text and grade-level vocabulary which prevents them from making meaningful interpretations or recognizing implied ideas. A limited knowledge of text structures, elements, and devices prevents them from meaningfully analyzing text. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently recognize implied or unstated ideas and concepts. They can sometimes identify an author's main purpose, but lack the skills to recognize or analyze structural elements and how the author uses devices to enhance literary text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text, including unfamiliar vocabulary, and can analyze information to form conclusions. They interpret text to determine themes and messages, make accurate predictions, and can identify the effect of an author's use of structural elements and common literary elements and devices. |
| Exceeds standards | Student scores at this level indicate a strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students comprehend text at or beyond their grade level of enrollment. They have the ability to use multiple strategies to decipher unfamiliar vocabulary and analyze text for complex themes and messages. They make insightful predictions, analyze characterization, and thoughtfully evaluate the author's use of devices and structural elements. |
| Grade 8 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level knowledge and skills outlined in the content standards for Reading/Literature. Students have a limited comprehension of the literal meaning of text and grade-level vocabulary which prevents them from making meaningful interpretations or recognizing implied ideas. A limited knowledge of text structures, elements and devices prevents them from meaningfully analyzing text. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students may comprehend the literal meaning of text and grade-level vocabulary, but inconsistently recognize implied or unstated ideas and concepts. They can sometimes identify an author's main purpose, but lack the skills to analyze how text is supported, its structural elements, and how the author uses devices to develop literary text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have an accurate comprehension of grade-level text, including unfamiliar vocabulary, and can synthesize information to form conclusions. They interpret text to determine themes and messages, make accurate predictions, and can identify an author's reasons for structural decisions and the use of common literary elements and devices. |
| Exceeds standards | Student scores at this level indicate a strong academic performance based on the grade level knowledge and skills outlined in the state content standards for Reading/Literature. Students have a strong comprehension of different types of text. They can interpret idioms and figurative expressions, and can synthesize information found in various parts of text. They analyze text for complex themes and messages, make insightful predictions, and thoughtfully evaluate the author's craft and textual support. |


| Grade | Performance Descriptor |
| :---: | :--- |
| Grade 10 | Does not meet <br> standards |
| Student scores at this level indicate a minimal and/or inaccurate grasp of the grade level <br> knowledge and skills outlined in the content standards for Reading/Literature. Students have <br> limited comprehension of the literal meaning of text and grade-level vocabulary which <br> prevents them from making meaningful interpretations or recognizing implicit ideas. Limited <br> knowledge of text structures, elements and devices prevents them from meaningfully <br> analyzing text. |  |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and <br> skills outlined in the state content standards for Reading/Literature. Students may <br> comprehend the literal meaning of text and grade-level vocabulary, but inconsistently <br> recognize implicit or subtle meanings or themes. They can sometimes identify an author's <br> main purpose but lack the skills to analyze textual support, structural elements, and the <br> author's use of devices to enrich text. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level <br> knowledge and skills outlined in the state content standards for Reading/Literature. Students <br> have an accurate comprehension of grade-level text, including unfamiliar vocabulary. They <br> interpret text to determine themes and messages; make accurate predictions; and can identify <br> the author's purpose, reasons for structural choices; and the effects of common literary <br> elements and devices. |
| Exceeds | Student scores at this level indicate a very strong academic performance based on the grade <br> level knowledge and skills outlined in the state content standards for Reading/Literature. <br> Students have a thorough comprehension of text, including complex vocabulary, beyond High <br> standards <br> School level expectations. They analyze text for subtle themes and messages, make insightful <br> predictions, and effectively evaluate the author's purpose, structural choices, and craft. |

Table A.2.

## Performance-Level Descriptors for Mathematics

| Grade/ <br> Performance Level | Performance Descriptor |
| :---: | :--- |
| Grade 3 | Does not meet <br> standards |
| Student scores at this level indicate a minimal and/or an inaccurate grasp of the grade level <br> knowledge and skills outlined in the state content standards for mathematics. Students <br> indicate basic but inconsistent performance of skills in number and operations, measurement, <br> working with data, algebra and geometry. Typically, these students are developing fluency in <br> place value and basic number operations; fitting an unknown into a pattern when given the <br> rule; reading data in a chart, table, and graph. |  |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and <br> skills outlined in the state content standards for mathematics. Students occasionally carry out <br> routine procedures, such as computing with whole numbers, identifying examples of different <br> 2 and 3-dimensional shapes, extending patterns, and reading sets of data. These students <br> solve problems for which the method or solution is straightforward. |
| Extandards | Student scores at this level indicate a solid academic performance based on the grade level <br> knowledge and skills outlined in the state content standards for mathematics. Students <br> consistently solve routine problems involving whole numbers and simple fractions, compare <br> geometric figures, and describe data. In general, these students can interpret or provide a <br> visual representation to match a problem situation. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade <br> level knowledge and skills outlined in the state content standards for mathematics. Students |
| readily identify and connect basic mathematical concepts and procedures to more complex |  |
| and novel problem situations. These students solve problems involving one operation, sets |  |
| of data, properties of geometric figures, and patterns or relationships. Students use logical |  |
| reasoning to draw conclusions. |  |


| Grade/ Performance Level | Performance Descriptor |
| :---: | :---: |
| Grade 4 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or an inaccurate grasp of the grade level knowledge and skills outlined in the state content standards for mathematics. Students indicate basic but inconsistent performance of fundamental knowledge and skills in number and operations, measurement, working with data, algebra, and geometry. Typically, they are developing fluency in place value and grade-level number operations; continuing a pattern when given the rule; reading data in a chart, table, and graph. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for mathematics. Students inconsistently carry out routine procedures, such as rounding numbers, computing with whole numbers, identifying examples of different classes of quadrilaterals, extending patterns, and finding mode, median and range of a set of data. These students solve problems for which the method or solution is easily recognized and straightforward. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve routine problems involving whole numbers, decimals and simple fractions; describe perimeter and area; compare geometric figures; translate a situation using numbers and symbols; and describe data. Generally, these students can interpret or provide a visual or symbolic representation to match a problem situation and purpose. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students readily identify and connect fundamental mathematical concepts, properties and procedures to more complex and novel problem situations. These students solve multi-step problems involving more than one operation, multiple sets of data, properties of geometric figures, and patterns or relationships. Students use informal and some formal reasoning to evaluate and justify solutions. |
| Grade 5 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or an inaccurate grasp of the grade level knowledge and skills outlined in the state content standards for mathematics. Students indicate basic but inconsistent performance of fundamental knowledge and skills in number and operations, measurement, working with data, algebra, and geometry. Typically, they are developing fluency in place value and fraction and decimal operations; continuing a pattern when given the rule; reading data in a chart, table, and graph. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and skills outlined in the state content standards for mathematics. Students inconsistently carry out routine procedures, such as computing with rational numbers; finding perimeter and area of triangles and quadrilaterals; determining patterns; finding mode, median and range of a set of data; and identifying points on a coordinate graph. These students solve problems for which the method or solution is easily recognized and straightforward. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students consistently solve with fluency and accuracy routine problems involving whole numbers, decimals and percents; have efficient strategies to determine perimeter and area; compare geometric figures; and can represent and interpret data. In general, these students can interpret or provide a visual or symbolic representation to match a problem situation. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade level knowledge and skills outlined in the state content standards for mathematics. Students readily identify and connect basic mathematical concepts and procedures, applying these to more complex problem situations. These students solve multi-step problems involving more than one operation, multiple sets of data, properties of geometric figures, and patterns or relationships. Students use informal and some formal reasoning to evaluate and justify solutions. |


| Grade/ <br> Performance Level | Performance Descriptor |
| :---: | :--- | | Grade $\mathbf{6}$ | Does not meet <br> standards |
| :---: | :--- |
| Student scores at this level indicate a minimal and/or an inaccurate grasp of the grade level <br> knowledge and skills outlined in the state content standards for mathematics. Students <br> indicate basic but inconsistent performance of fundamental knowledge and skills in number <br> and operations, measurement, working with data, algebra and geometry. Typically, they are <br> developing fluency in place value and grade-level number operations; continuing a pattern <br> when given the rule; and reading data in a chart, table, and graph. |  |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and <br> skills outlined in the state content standards for mathematics. Students inconsistently carry <br> out routine procedures, such as computing with fractionss finding perimeter and area of <br> polygons, extending patterns and predicting probabilities. These students solve problems for <br> which the method or solution is easily recognized and straightforward. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level <br> knowledge and skills outlined in the state content standards for mathematics. Students <br> consistently solve routine problems involving whole numbers, decimals, and simple fractions <br> with fluency and accuracy. They find perimeter and area of polygons, write an equation to <br> describe a situation, compare geometric figures, and describe and use data. In general, these <br> students can interpret or provide a visual or symbolic representation to match a problem <br> situation. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the grade <br> level knowledge and skills outlined in the state content standards for mathematics. Students <br> readily identify and connect fundamental mathematical concepts, properties and procedures <br> to more complex and novel problem situations. These students use rational numbers to |
| solve multi-step problems, predict theoretical probabilities, define algebraic relationships, and |  |
| apply side and angle properties of geometric figures. Students use informal and some formal |  |
| reasoning to evaluate and justify solutions. |  |


| Grade/ <br> Performance Level | $\quad$ Performance Descriptor |
| :---: | :--- | | Grade 8 | Student scores at this level indicate a minimal and/or an inaccurate grasp of the grade level <br> standards meet <br> knowledge and skills outlined in the state content standards for mathematics. Students <br> indicate basic but inconsistent performance of fundamental knowledge and skills in number <br> and operations, measurement, working with data, algebra and geometry. Typically, these <br> students are developing fluency in application of powers, coordinate geometry, calculating <br> missing geometric measurements, and predicting and reporting outcomes of probabilities. |
| :---: | :--- |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the grade level knowledge and <br> skills outlined in the state content standards for mathematics. Students recall and recognize <br> mathematical concepts, terms and properties, yet are inconsistent in application. They <br> inconsistently carry out routine procedures, such as writing numbers in scientific notation, <br> solving equations, reading graphs, and using formulas to find areas and volumes. Students <br> solve problems for which the method or solution is easily recognized and straightforward. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the grade level <br> knowledge and skills outlined in the state content standards for mathematics. Students at this <br> knowe |
| level consistently apply mathematical concepts, terms and properties to problem situations. |  |
| Students readily solve problems involving rational numbers, proportions and percents, similar |  |
| figures, algebraic representations, and interpreting probability and data. In general these |  |
| students can interpret or provide a visual or symbolic representation to match a problem |  |
| situation and purpose. |  |

Table A. 3.
Performance-Level Descriptors for Science

| Grade | Performance Descriptor |
| :---: | :---: |
| Grade 5 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the benchmark level knowledge and skills outlined in the state content standards for Science. These students inconsistently explain and/or minimally describe the fundamental properties of matter, force and energy and the basic structures, functions and interactions of living organisms in the environment. They can minimally identify Earth's properties and Earth's relationship in space. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the benchmark level knowledge and skills outlined in the state content standards for Science. These students can partially explain and describe the fundamental properties of matter, force and energy and the basic structures, functions and interactions of living organisms in the environment. They can partially identify Earth's properties and can recognize some of Earth's relationship in space. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can explain and describe most fundamental properties of matter, force and energy and the basic structures, functions and interactions of living organisms in the environment. They can describe most of Earth's properties and can explain Earth's relationship in space. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can consistently explain and describe the fundamental properties of matter, force and energy and the basic structures, functions and interactions of living organisms in the environment. They can consistently describe Earth's properties and correctly explain Earth's relationship in space. |
| Grade 8 |  |
| Does not meet standards | Student scores at this level indicate a minimal and/or inaccurate grasp of the benchmark level knowledge and skills outlined in the state content standards for Science. These students can inconsistently explain and/or minimally describe the properties of matter, force and energy and have limited knowledge about the structures, functions and interactions of living organisms in the environment. They have a minimal and/or inaccurate understanding of Earth's properties, Earth's motion and its relationship in space. |
| Nearly Meets | Student scores at this level indicate an incomplete grasp of the benchmark level knowledge and skills outlined in the state content standards for Science. These students can partially explain and describe the properties of matter, force and energy and the structures, functions and interactions of living organisms in the environment. They can partially identify Earth's properties and how these properties change over time. Students can explain some of Earth's motion and its relationship in space. |
| Meets standards | Student scores at this level indicate a solid academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can explain and describe properties of matter, force and energy and the structures, functions and interactions of living organisms in the environment. They can describe Earth's properties and how some of these properties change over time. Students can explain Earth's motion and its relationship in space. |
| Exceeds standards | Student scores at this level indicate a very strong academic performance based on the benchmark level knowledge and skills outlined in the state content standards for Science. These students can consistently explain and describe the properties of matter, force and energy and structures, functions and interactions of living organisms in the environment. They can consistently explain and describe Earth's properties and how these properties change over time. Students can effectively explain Earth's motion and its relationship in space. |


| Grade | Performance Descriptor |
| :---: | :--- |
| Grade 10 | Does not meet <br> standards |
| Student scores at this level indicate a minimal and/or inaccurate grasp of the benchmark <br> level knowledge and skills outlined in the state content standards for Science. These <br> students inconsistently explain, describe and analyze the properties of matter, force and <br> energy and the complex structures, functions and interactions of living organisms in the <br> environment. They have a minimum and/or inaccurate understanding of Earth's properties <br> and explain only the simplistic principles of Earth's relationship in space and interaction <br> with other objects in space. |  |
| Meets standards | Student scores at this level indicate an incomplete grasp of the benchmark level knowledge <br> and skills outlined in the state content standards for Science. These students can <br> incompletely explain, describe and analyze the properties of matter, force and energy and <br> the complex structures, functions and interactions of living organisms in the environment. <br> They can partially describe and analyze Earth's properties and can explain some of Earth's <br> relationship in space and interaction with other objects in space. |
| Student scores at this level indicate a solid academic performance based on the benchmark <br> level knowledge and skills outlined in the state content standards for Science. These <br> students can mostly explain, describe and analyze the properties of matter, force and energy <br> and the complex structures, functions and interactions of living organisms in the |  |
| Exvironment. They can describe and analyze Earth's properties and can accurately explain |  |
| Earth's relationship in space and interaction with other objects in space. |  |

## Appendix B

Standard-SEtting Panel Composition by Subject Area and Grade
Table B.1.
Reading/Literature Standard-Setting Panel Composition, Grade 3

| Panelist <br> ID | Panelist name |  |  |
| ---: | :--- | :--- | :--- |
| 1 | Bonnie Harper | READING | City |
| 2 | Cheri Shea | READING | Helix |
| 3 | Connie Owens | READING/MATHEMATICS | Portland |
| 4 | Cynthia Hodgdon | ELEMENTARY MATHEMATICS/READING | Gladstone |
| 5 | Diann Gillaspie | READING - 3RD GRADE | Coquille |
| 6 | Jeremiah Patterson | READING | Gladstone |
| 7 | John O'Neill Jr. | ADMINISTRATION | Forest Grove |
| 8 | Kathy Saterdahl | READING-ELEMENTARY | Bend |
| 9 | Kayla Reents | READING - 3RD GRADE | Coquille |
| 10 | Kristie Buckley | READING/MATHEMATICS | Glide |
| 11 | Lisa Becker | READING | Fairview |
| 12 | Michelle Zundel | ANY | Ashland |
| 13 | Mike Campbell | GRADE 1 | Molalla |
| 14 | Norma Barber | READING | Ukiah |
| 15 | Patty Ball | READING | Corvallis |
| 16 | Peg Cowens | READING/LITERATURE | Grants Pass |
| 17 | Tammy Doty | ELEMENTARY | Lapine |
| 18 | Tanya Grape-Frisendahl | READING | Salem |
| 19 | Teresa Furukawa | 3RD GRADE | Salem |

Table B.2.
Reading/Literature Standard-Setting Panel Composition, Grade 5

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 20 | Charlotte Fisher | ELEMENTARY (READING/LANGUAGE <br> ARTS/MATHEMATICS | Dallas |
| 21 | Cheryl Lemke | READING | Medford |
| 22 | Cindi Schmitz | READING | Silverton |
| 23 | Dave VanLoo | READING-ELEMENTARY | Bend |
| 24 | Dawn Kennison-Kerrigan | LANGUAGE ARTS | Hermiston |
| 25 | Dayle Spitzer Eder | MATHEMATICS/SCIENCE/LANGUAGE ARTS | Hillsboro |
| 26 | Dean Richards | MATHEMATICS/LITERATURE | Clackamas |
| 27 | Derek Edens | ASSESSMENT | Portland |
| 28 | Fran MacKenzie |  | Roseburg |
| 29 | Gary Thompson | READING | Portland |
| 30 | Jannie Heller | READING/LITERATURE | Cave Junction |
| 31 | Jerry Archer | READING/MATHEMATICS | Pendleton |
| 32 | John Blanck | LANGUAGE ARTS | Portland |
| 33 | Kevin Milner | READING | Newberg |
| 34 | Laurie Glazener | ASSESSMENT, READING | Springfield |


| Panelist <br> ID | Panelist name | Expertise | City |
| :---: | :--- | :--- | :--- |
| 35 | Louise Johnston | READING | Portland |
| 36 | Marietta Donohue |  | Welches |
| 37 | Michelle Coleman | READING-ELEMENTARY | Bend |
| 38 | Pam Edens | LITERACY | Beaverton |
| 39 | Patricia Bieze | MATHEMATICS | Portland |
| 40 | Shelley Liscom | ADMINISTRATION | Pendleton |
| 41 | Wade Smith | CURRICULUM/INSTRUCTION | Lexington |

Table B.3.
Reading/Literature Standard-Setting Panel Composition, Grade 8

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 42 | Alex Bick | SPECIAL ED | Bend |
| 43 | Annette Jacobsen | READING/LITERATURE, ASSESSMENT | Mcminnville |
| 44 | Cari Price | LANGUAGE ARTS/READING | Salem |
| 45 | Doug Geygan | LANGUAGE ARTS/SOCIAL STUDIES | Bend |
| 46 | Heather Johnstone | PARENT | Newberg |
| 47 | Jana Avison | READING/LITERATURE | Salem |
| 48 | Jennifer Clair | READING OSAT | Roseburg |
| 49 | Josh Marks | SPED MATHEMATICS | Bend |
| 50 | Julie Barnes | READING | Cave Junction |
| 51 | Kristin Sacks | SECONDARY LITERACY | Tigard |
| 52 | Molly Matthews |  | Grand Ronde |
| 53 | Monica Schalock |  | SPED |
| 54 | Patti Virden | READING/LITERATURE | Salem |
| 55 | Renee Stickles | READING | Palem |
| 56 | Shelley Wilcoxen | ENGLISH | Albany |
| 57 | Susan Equinoa |  | Lagrande |
| 58 | Teri Rowell | LANGUAGE ARTS/SOCIAL STUDIES | Newberg |
| 59 | Terry McElligott |  |  |

Table B.4.
Reading/Literature Standard-Setting Panel Composition, Grade 10

| Panelist <br> ID | Panelist name | Expertise | City |
| :---: | :--- | :--- | :--- |
| 60 | Arthur L. Dingle | READING/LANGUAGE ARTS | Brookings |
| 61 | Carlos Montgomery |  |  |
| 62 | Christine Richardson | WRITING | Newberg |
| 63 | Dave Mues | LANGUAGE ARTS | Hines |
| 64 | Gabriel Shannon |  | Portland |
| 65 | Georgiana Yee | READING GRADES 8 OR 10 | Sherwood |
| 66 | Jim Raible | READING/LITERATURE | Ione |


| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 67 | Joe LaFountaine | PARENT/PRINCIPAL | Salem |
| 68 | Kathy Haynie | ELA | Oregon City |
| 69 | Katie Gisler | ENGLISH | Albany |
| 70 | Marilyn LaHue | READING | Newberg |
| 71 | Mark Recker | LANGUAGE ARTS | Silverton |
| 72 | Mary Holmes | ENGLISH 9-12 | Gladstone |
| 73 | Michelle Shigemasa | 9-12 LANGUAGE ARTS | Hillsboro |
| 74 | Rick Dills | READING | Hood River |
| 75 | Steve Harloff | READING | Forest Grove |
| 76 | Teri Houghton | ELA | Grants Pass |
| 77 | Tim Drilling | MATHEMATICS/SCIENCE | Gresham |

Table B.5.
Mathematics Standard-Setting Panel Composition, Grade 3

| Panelist <br> ID | Panelist name |  | City |
| ---: | :--- | :--- | :--- |
| 1 | Alicia Glasscock | SPED READING | Beaverton |
| 2 | Andrea Lane | MATHEMATICS | John Day |
| 3 | Craig Martin | MATHEMATICS | Ashland |
| 4 | Diane Delvers | SPED | Gladstone |
| 5 | Dick Bertelsen | MATHEMATICS | Gresham |
| 6 | Gary Hendricks | ALL - GRADE 4 | Milton-Freewater |
| 7 | Ginger Colwell | MATHEMATICS/READING | Albany |
| 8 | Jackie Cooke | MATHEMATICS | Vancouver |
| 9 | Jan Kittelson | SITE COUNCIL | Tigard |
| 10 | Jane Osborne | MATHEMATICS | Hood River |
| 11 | Janelle Rebick | TEACHER | Bend |
| 12 | Jill Conant | READING | Nyssa |
| 13 | Kathy Bowers | MATHEMATICS, ELEMENTARY | Salem |
| 14 | Larry Bentz | MATHEMATICS | Gresham |
| 15 | Lesley Johnson | SCIENCE | Salem |
| 16 | Robert Bonner | GRADE 3 | Newberg |
| 17 | Stephen Buckley | MATHEMATICS AND SCIENCE | Glide |
| 18 | Tami Hansey | ELEMENTARY | Myrtle Creek |
| 19 | Theresa Kalstad | MATHEMATICS, LANGUAGE ARTS | Portland |
| 20 | Tiffanie Hansey | ELEMENTARY | Myrtle Creek |

Table B.6.
Mathematics Standard-Setting Panel Composition, Grade 5

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 21 | Cheryl Ogburn | MATHEMATICS | Portland |
| 22 | Craig Koontz | MATHEMATICS | Albany |
| 23 | Deb Gaffney | READING/LITERATURE/WRITING <br> (ELEMENTARY/MIDDLE SCHOOL) | Newport |
| 24 | Don Grossarth | MATHEMATICS, S STUDIES | Salem |
| 25 | Francie Bostwick | MATHEMATICS | Medford |
| 26 | Gary Montgomery | ELEMENTARY READING \& MATHEMATICS | Medford |
| 27 | Julie Fox | MATHEMATICS - 5TH | Gladstone |
| 28 | Karen Lokting |  | Beaverton |
| 29 | Katie Legace | PRINCIPAL, MS | Bend |
| 30 | Kayda Mitchell | MATHEMATICS | Newberg |
| 31 | Laura Lethe | MATHEMATICS | Keizer |
| 32 | Linda Errick | ANY | Sutherlin |
| 33 | Lyn Philiben | MATHEMATICS | Bend |
| 34 | Marla Baber | MATHEMATICS | Portland |
| 35 | Nancy Fowler | MATHEMATICS | Beaverton |
| 36 | Olivia Variel | ALL | Bend |
| 37 | Ross Eells | MATHEMATICS GRADES 3-8 | Mcminnville |
| 38 | Scot Anderson | MATHEMATICS | Albany |
| 39 | Stephanie Legard | MATHEMATICS | Mcminnville |

Table B.7.
Mathematics Standard-Setting Panel Composition, Grade 8

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 40 | Anna Som | MATHEMATICS | Albany |
| 41 | Betsy Shane | JUNIOR HIGH MATHEMATICS | Boardman |
| 42 | Brent Freeman | MATHEMATICS | Ashland |
| 43 | Cathy Windsheimer | MATHEMATICS | Portland |
| 44 | Drew Braun |  | Eugene |
| 45 | Evelyn Mears | MATHEMATICS | Albany |
| 46 | Jeff Lee | MATHEMATICS | Salem |
| 47 | Jill Hayden | MATHEMATICS | The Dalles |
| 48 | Jill Plattner | MATHEMATICS/TITLE I MATHEMATICS | Bend |
| 49 | Jill Sumerlin | MATHEMATICS - MIDDLE SCHOOL | Tillamook |
| 50 | Jon R. Bennett | MATHEMATICS | Myrtle Creek |
| 51 | Julia Murphy | MATHEMATICS - 8TH GRADE | Sutherlin |
| 52 | Karen Stiner | MATHEMATICS | Bend |
| 53 | Ken Gilbert | MATHEMATICS | Albany |
| 54 | La Dona May | MATHEMATICS | Terrebonne |
| 55 | MaryAnn Heglie-King | Eugene |  |


| 56 | Nicholas Gilbertson | MATHEMATICS | Molalla |
| :---: | :--- | :--- | :--- |
| 57 | Sally Wood | MATHEMATICS | Estacada |
| 58 | Sandra Harris | MATHEMATICS | Hillsboro |

Table B.8.
Mathematics Standard-Setting Panel Composition, Grade 10

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 59 | Brenda Paustian | MATHEMATICS | Ashland |
| 60 | Brian Goldman | MATHEMATICS | Portland |
| 61 | Cheryl Klampe-VanHess | MATHEMATICS | Stayton |
| 62 | David Dopperman | MATHEMATICS | Aloha |
| 63 | Eda Davis-Butts | UMSAAT | Corvallis |
| 64 | Ellen Irish | MATHEMATICS 9-12 |  |
| 65 | Jennifer Jones | MATHEMATICS, SITE COUNCIL | Phoenix |
| 66 | Jerry Renfro | MATHEMATICS 9-12 | Gladstone |
| 67 | LaDona Barton-Copeland | MATHEMATICS | Hines |
| 68 | Larry Susuki |  | Ontario |
| 69 | Les Willett | MATHEMATICS | North Bend |
| 70 | Marie Cramer | MATHEMATICS | Keizer |
| 71 | Nancy Sanders | MATHEMATICS | Scio |
| 72 | Patty Sandoz | MATHEMATICS | La Grande |
| 73 | Randy Shockey | MATHEMATICS | Forest Grove |
| 74 | Shawna Blanchette | MATHEMATICS | Phoenix |
| 75 | Sheila Otto | MATHEMATICS | Eugene |
| 76 | Tom Owen | MATHEMATICS AND SCIENCE | Portland |
|  |  |  |  |

Table B. 9
Science Standard-Setting Panel Composition, Grade 5

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 1 | Angela Pak | GRADES 4/5 | Mulino |
| 2 | Annie Morton | TEACHER/PRINCIPAL | Salem |
| 3 | Beckianne Kilkenny | SCIENCE | Beaverton |
| 4 | Brian Skaar | READING/LIT | Philomath |
| 5 | Cheryl Eggers | SCIENCE | Milwaukie |
| 6 | Debbie Freeman | SCIENCE | Hermiston |
| 7 | Della Emerick |  | Beaverton |
| 8 | Don Brown | LA K-5 | Hillsboro |
| 9 | Kimberly Harrington | GRADE 4 | Portland |
| 10 | Kris Alman | MATHEMATICS | Newport |
| 11 | Kristin Takano | MATHEMATICS/SCIENCE ESL | Gearhart |
| 12 | Laurie Dougherty | READING | Lagrande |
| 13 | Leslie Graham | MATHEMATICS OR SCIENCE | Salem |
| 14 | Linda Dougherty | K-5, READING, MATHEMATICS AND |  |


|  |  | SCIENCE |  |
| :--- | :--- | :--- | :--- |
| 15 | Linda Wallmark | MATHEMATICS/SCIENCE GRADE 5 | Salem |
| 16 | Patricia George | ELEMENTARY EDUCATION | Milwaukie |
| 17 | Susan Talbot | MATHEMATICS | Pendleton |
| 18 | Teena Staller | SCIENCE | Medford |
| 19 | Tracy McLafferty | SPED | Estacada |
| 20 | Virginia Christensen | 6TH GRADE | Oakland |

Table B. 10
Science Standard-Setting Panel Composition, Grade 8

| Panelist <br> ID | Panelist name | Expertise | City |
| :---: | :--- | :--- | :--- |
| 21 | Andrea Sande | 6TH GRADE LITERACY/MATHEMATICS |  |
| 22 | Catherine Perkins | SCIENCE | Portland |
| 23 | Celeste Kimbrough | SCIENCE - 8TH | Gladstone |
| 24 | Clayton Gillette | SCIENCE | Medford |
| 25 | Dawn Bonder | SITE COUNCIL | Portland |
| 26 | Dee Carlson | MATHEMATICS | Beaverton |
| 27 | Doralee Hayden | ANY | Sutherlin |
| 28 | Erin Roby | SCIENCE | Hillsboro |
| 29 | Jennifer Cox | ELEMENTARY MATHEMATICS | Boardman |
| 30 | Kristina Healy | SCIENCE | Ashland |
| 31 | Lynda Sanders | SCIENCE | Coos Bay |
| 32 | Michael Rockow | SCIENCE | Salem |
| 33 | Nancy Bailey | SCIENCE - 8TH | Gladstone |
| 34 | Nancy Earl | SPED | Salem |
| 35 | Polly Beam | PRINCIPAL | Klamath Falls |
| 36 | Ragna TenEyck | TAG/LD | Forest Grove |
| 37 | Riff Canaday | SCIENCE | Newberg |
| 38 | Robert Dunton |  | Corbett |
| 39 | Roxanne Bailey | SCIENCE | Hines |
| 40 | Ruth McDonald | SCIENCE (MIDDLE) | Newport |
| 41 | Sue Durgan | HEALTH | Baker City |
|  |  |  |  |
|  |  |  |  |

Table B. 11
Science Standard-Setting Panel Composition, Grade 10

| Panelist <br> ID | Panelist name | Expertise | City |
| ---: | :--- | :--- | :--- |
| 42 | Becky Vanderwoude | SCIENCE | Grants Pass |
| 43 | Buzz Brazeau | SCIENCE | Hermiston |
| 44 | Chris Clouse | 9-12 MATHEMATICS \& SCIENCE | Grants Pass |
| 45 | D. Allan Bruner | SCIENCE | Colton |
| 46 | David Novak | SCIENCE | Eugene |
| 47 | James Long | MATHEMATICS AND SCIENCE | Corvallis |


| 48 | Jill Merolla | SCIENCE 9-12 | Gladstone |
| :---: | :--- | :--- | :--- |
| 49 | Karen Peterson | SCIENCE | Mcminnville |
| 50 | Laura Oldenkamp |  | Canby |
| 51 | Malvina Holloway | SCIENCE |  |
| 52 | Maxine Thompson | COMMUNICATING DATA TO PUBLIC | Portland |
| 53 | Rachel Marble | SCIENCE | Tigard |
| 54 | Rick Foster | SCIENCE | Phoenix |
| 55 | Robert Espenel | EDUCATIONAL ADMINISTRATION | Molalla |
| 56 | Sean McElhaney | SCIENCE | Molalla |
| 57 | Todd Thomas | GRADUATION REQUIREMENTS | Newberg |
| 58 | Trish Beckius | SCIENCE | Newberg |

## APPENDIX C

Standard-Setting Panel Training Materials
from Bookmark Standard Setting Technical Report 2006 for Reading/Literature and Mathematics Grades 3, 5, 8, and CIM and Science Grades 5, 8, and CIM by CTB/McGraw-Hill LLC, 20 Ryan Ranch Road, Monterey, California 93940-5703


## Bookmark Placement

These directions are written for placing the Meets bookmark and apply analogously to the Nearly Meets and Exceeds bookmarks.

## For whom am I placing this bookmark? The Target Student

When you place your Meets bookmark, you are separating the highest ability Nearly Meets students from the lowest ability Meets students. In other words, you are keeping in mind the Target Student who will just make it into the Meets level.

## How do I place my bookmark? The Mechanics

The bookmark is exactly that: a bookmark. It separates the content students are expected to master from the content they are not expected to master. In the example below, a participant has placed the Meets bookmark on page 7. With this bookmark placement, the participant says that a student must master the content represented by items 1 through 6 to be Meets.

To place your bookmark, start at page 1 in the Ordered Item Booklet (OIB). Page through the OIB looking at the content covered until you find the first page where you think a student has demonstrated a sufficient body of evidence to indicate that the student is Meets relative to the content standards. This is the content you are saying a Meets Target Student needs to master to just make it into the Meets level.

Hold the pages that contain the content you expect the student to master in your left hand. Place your bookmark on the page AFTER the last item you expect the student to master. This page number is your bookmark. Write it on your Rating Form.
Hint: It may be helpful to first identify the interval of items in which you are reasonably certain the bookmark should be placed; then you can place the bookmark within that interval. If you are uncertain about where to place your bookmark, make your best decision; you will have two more rounds of voting to reconsider your bookmark.

What does my Meets Bookmark mean? Some Answers


- You expect Meets students to master the knowledge, skills, and abilities contained in the items before your bookmark.
- Meets students should know and be able to do the items before the bookmark. For multiple-choice items, Meets students should know the correct response.

Is my bookmark the same as a raw score? NO
It is very important to remember that your bookmark placement is not equal to a raw score. In the example above, the Meets bookmark was placed on page 7. The participant was not saying that a student must get six items correct to be classified as Meets. This participant is saying that a barely Meets student must master the content measured by the items on pages 1 through 6 . The numbers in the OIB correspond to the rank order of difficulty of each item. The order of difficulty numbers do not correspond to raw scores.

## Frequently Asked Questions about Bookmark Placement

These questions are written in reference to the Meets bookmark and apply analogously to the Nearly Meets and Exceeds bookmarks.

## How do I know if I placed my bookmark in the "right" place?

The "right" place is a matter of judgment, your judgment. You are placing your bookmark based on the content you expect students to know and be able to do.

I set my bookmark based on the content I expect students to know and be able to do, that is, the content I expect students to master. What is the definition of mastery?

We look at mastery by considering the likelihood with which students will respond correctly to the items. This question is answered in more depth in the handout "Mastery."

If a student misses some items before the Meets bookmark and gets some correct after the bookmark, is that student still Meets?

A student does not have to get every item before the bookmark correct to be Meets. Meets students can miss some items before the bookmark and correctly respond to some items after the bookmark.

Does the page number on which I place my bookmark correspond to the raw score a student must get on the test?

No. Remember, you are placing your bookmark based on the content you expect students to know and be able to do. You are not making your decision based on the number of items students must answer correctly. The bookmark is placed on a page in the Ordered Item Booklet. This page number corresponds to the difficulty ordering of the item, not to the raw score.

Should I place my bookmark in the first place in the Ordered Item Booklet where all the content standards have occurred?

Not necessarily. The test only samples the content domain. In some cases, some content standards will only be represented by difficult items that would be hard for most students to master.

How many bookmarks do I set?

You set one less bookmark than the number of achievement levels. In Oregon, you will set 3 bookmarks to separate students into 4 achievement levels.


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MASTERY
You are participating in this standard setting because of your experience with students and your knowledge of the state content standards, curriculum, and current instructional practices. You will be making judgments that will operationalize your expectations for the level of achievement students must demonstrate in order to place in each achievement level. To understand how your judgments relate to expected student achievement within each achievement level, consider the following examples.
Consider how students at various scale locations might perform on an imaginary assessment that consists of a total of 50 score points. In particular, we will consider the performance of groups of students who are at three specific points on the test scale. Group A consists of 100 low-achieving students, Group B consists of 100 average-achieving students, and Group C consists of 100 high-achieving students. Assume that the students have all taken the assessment and that the 100 students within each group have all obtained the exact same scale score. Note the location of the obtained scale score for each of the three groups on the test scale below.

## J dno.19

Test Scale
The following three figures show how students in each of the three groups might perform on the assessment.
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Figure A shows how many students in Group A responded correctly to each item in the ordered item booklet. Observe that the students in Group A performed well on the items that appear early in the ordered item booklet but performed poorly on the items that appear later in the ordered item booklet. This makes sense, because the items appear in order of difficulty, with the easiest item first and the hardest item last. For example, 99 of the 100 Group A students responded correctly to item 1, 67 of the Group A students responded correctly to item 10, but only 1 of the Group A students responded correctly to item 50 .
We say that a group of like students have demonstrated mastery of the content represented by an item if at least $2 / 3$ of the students (about 67 out of 100) in the group can be expected to respond successfully to the item. According to Figure A, Group A students have demonstrated mastery of items 1 through 10 , but have not demonstrated mastery of items 11 through 50 .
Figure A. The number (or percent) of Group A students who responded correctly to each item in the ordered item booklet.

| item | item | item | item | item | item | item | item | item | item |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| $\underline{99}$ | $\underline{95}$ | $\underline{93}$ | $\underline{87}$ | $\underline{83}$ | $\underline{82}$ | $\underline{78}$ | $\underline{74}$ | $\underline{69}$ | $\underline{67}$ |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |


| $\begin{array}{\|c} \hline \text { item } \\ 11 \end{array}$ | $\begin{gathered} \hline \text { item } \\ 12 \end{gathered}$ | $\begin{gathered} \hline \text { item } \\ 13 \end{gathered}$ | $\begin{gathered} \text { item } \\ 14 \end{gathered}$ | $\begin{gathered} \text { item } \\ 15 \end{gathered}$ | $\begin{gathered} \text { item } \\ 16 \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { item } \\ 17 \end{array}$ | $\begin{gathered} \hline \text { item } \\ 18 \end{gathered}$ | $\begin{gathered} \hline \text { item } \\ 19 \end{gathered}$ | $\begin{array}{\|c} \hline \text { item } \\ 20 \end{array}$ | $\begin{array}{\|c} \hline \text { item } \\ 21 \end{array}$ | $\begin{gathered} \text { item } \\ 22 \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { item } \\ 23 \end{array}$ | $\begin{gathered} \text { item } \\ 24 \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { item } \\ 25 \end{array}$ | $\begin{array}{\|c} \hline \text { item } \\ 26 \end{array}$ | $\begin{array}{\|c} \hline \text { item } \\ 27 \end{array}$ | $\begin{gathered} \text { item } \\ 28 \end{gathered}$ | $\begin{gathered} \text { item } \\ 29 \end{gathered}$ | $\begin{gathered} \text { item } \\ 30 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 | 60 | 59 | 58 | 57 | 53 | 52 | 50 | 50 | 49 | 49 | 48 | 47 | 43 | 41 | 39 | 37 | 35 | 34 | 31 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |


| item | item | item | item | $\begin{array}{\|c} \hline \text { item } \\ 35 \end{array}$ | item | $\begin{gathered} \text { item } \\ 37 \end{gathered}$ | $\begin{gathered} \text { item } \\ 38 \end{gathered}$ | $\begin{gathered} \text { item } \\ 39 \end{gathered}$ | $\begin{array}{\|c} \hline \text { item } \\ 40 \end{array}$ | $\begin{gathered} \text { item } \\ 41 \end{gathered}$ | $\begin{gathered} \text { item } \\ 42 \end{gathered}$ | $\begin{gathered} \text { item } \\ 43 \end{gathered}$ | item <br> 44 | item <br> 45 | $\begin{array}{\|c} \text { item } \\ 46 \end{array}$ | $\begin{gathered} \text { item } \\ 47 \end{gathered}$ | $\begin{gathered} \text { item } \\ 48 \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { item } \\ 49 \end{array}$ | $\begin{gathered} \text { Item } \\ 50 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30 | 29 | $\underline{25}$ | 22 | $\underline{20}$ | 18 | 17 | 14 | 11 | 10 | $\underline{9}$ | 7 | $\underline{5}$ | 5 | 4 | 3 | $\underline{2}$ | $\underline{2}$ | 1 | 1 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

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Figure B shows how many students in Group B responded correctly to each item in the ordered item booklet. Observe that the students in Group B performed much better than students in Group A. That makes sense because Group B students are average-achieving students while Group A students are low-achieving students.
Before you read further, use Figure B and the definition of mastery stated in the box above to determine which items Group B has mastered.
Group B students have demonstrated mastery of the content reflected in items 1 through 30 of the ordered item booklet, but have not demonstrated mastery of the content reflected by items 31 through 50 . This is true according to the definition, because at least 67 of the 100 Group B students responded successfully to each of items 1 through 30 , but fewer than 67 of them responded correctly to items 31 through 50 .
Figure B. The number (or percent) of Group B students who responded correctly to each item in the ordered item booklet. item item item item item item item item item item

| item | item | item | item | item | item | item | item |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1tem | item |  |  |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 |  |  |  |  |  |  |

${ }^{97}{ }^{97}$
100

| item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| $\underline{96}$ | 96 | 95 | 93 | 89 | 85 | 84 | 83 | 83 | 81 | 79 | 79 | 78 | $\underline{73}$ | 72 | 72 | 71 | 70 | 69 | 67 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |


| $\begin{gathered} \text { item } \\ 31 \end{gathered}$ | item 32 | item 33 | item 34 | item 35 | item 36 | item 37 | item 38 | item 39 | item 40 | item 41 | item 42 | item 43 | item 44 | item <br> 45 | item 46 | item 47 | $\begin{gathered} \text { item } \\ 48 \end{gathered}$ | item 49 | item 50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65 | 63 | 63 | 61 | 58 | 57 | 57 | 55 | 55 | 54 | 53 | 53 | 52 | 51 | 44 | 41 | 39 | 37 | 35 | 33 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

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| Definition of Mastery |
| :--- | :--- |
| We say that a group of like students have demonstrated mastery of the content represented by an item |
| if at least $2 / 3(67 / 100)$ of the students in the group can be expected to respond successfully to the item. |

Figure C shows how many students in Group C responded correctly to each item in the ordered item booklet. Observe that Group C performed much better than Groups A or B . That makes sense because Group C consists of high-achieving students while Groups A and B consist of low-and average-achieving students, respectively.
Before you read further, use Figure C and the definition of mastery stated in the box above to determine which items Group C has mastered. Group C students have demonstrated mastery of the content reflected in items 1 through 45 of the ordered item booklet, but have not demonstrated mastery of the content reflected by items 46 through 50. This is true according to the definition, because at least 67 of the 100 Group C students responded successfully to each of items 1 through 45 , but fewer than 67 of them responded correctly to items 46 through 50 .
Figure C. The number (or percent) of Group $C$ students who responded correctly to each item in the ordered item booklet.

$$
\begin{array}{|c|c|c|c|c|c|c|c|c|c|}
\hline \text { item } & \text { item } & \text { item } & \text { item } & \text { item } & \text { item } & \text { item } & \text { item } & \text { item } & \text { item } \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\
\hline \frac{99}{100} & \underline{99} & \underline{99} & \underline{99} & \underline{99} & \underline{99} & \underline{99} & \frac{99}{100} & \frac{97}{100} & \underline{97} \\
\hline 100 & 100 & 100 & 100 & 100 & 100 & 100 & 100 \\
\hline
\end{array}
$$

| item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item | item |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| $\underline{97}$ | $\frac{97}{100}$ | $\underline{95}$ | $\underline{95}$ | $\underline{94}$ | $\underline{93}$ | $\underline{92}$ | $\underline{92}$ | $\underline{91}$ | $\underline{89}$ | $\frac{89}{100}$ | $\frac{89}{100}$ | $\frac{88}{100}$ | $\underline{88}$ | $\frac{88}{100}$ | $\frac{87}{100}$ | $\frac{87}{100}$ | $\frac{86}{100}$ | $\frac{85}{100}$ |
| 104 | $\frac{84}{100}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| item 31 | item 32 | item 33 | item 34 | item 35 | item 36 | item 37 | item 38 | item 39 | item 40 | item 41 | item 42 | item 43 | item 44 | item 45 | item 46 | item 47 | item 48 | item 49 | item 50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 83 | 81 | 81 | 81 | 80 | 80 | 79 | 78 | 77 | 75 | 74 | 72 | 70 | 68 | 67 | 64 | 58 | 53 | 49 | 46 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

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You have seen from the above examples that by using a specific definition of mastery, we can identify the content in the ordered item booklet that students at any location of the test scale have mastered.
Also, if you identify a set of items in the ordered item booklet, the specific point on the test scale at which
students have demonstrated mastery of the content you have specified can be determined. This is how the various cut scores are ascertained.
As experts, you will first specify the content in the ordered item booklet that you expect students to master in order to be classified as Meets. This means that you will identify the items that reflect the knowledge, skills, and abilities you expect all Meets students to master. When you have made that judgment, the point on the scale at which students achieve that level of mastery can be identified.


Suppose the bookmarks were placed in this sample ordered item booklet as follows:

|  | Nearly Meets <br> Bookmark on Page \# | Meets <br> Bookmark on Page \# | Exceeds <br> Bookmark on Page \# |
| :--- | :---: | :---: | :---: |
| Round 1 | 7 | 11 | 14 |

1. Which items does a student need to master to just make it into the Meets achievement level?
2. If a student mastered only items 1 through 5 , in which achievement level would this student be?
3. Suppose a student mastered items 1 through 13. Which achievement level is this student in?
4. For students who are classified as Meets, with at least what likelihood will they be able to answer item 10?
5. Will the items BEFORE the Meets bookmark be more or less difficult to answer than the items AFTER the bookmark or about the same?


| 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: |
| Does Not | Nearly | Meets | Exceeds |
| Yet Meet | Meets |  |  |


| 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: |
| Does Not | Nearly | Meets | Exceeds |
| Yet Meet | Meets |  |  |


| O | 0 | 0 |
| :---: | :---: | :---: |
| $1 / 3$ | $1 / 2$ | $2 / 3$ |
|  |  |  |
| O | O | O |
| More <br> difficult to <br> answer | About the <br> same | Less <br> difficult to <br> answer |

0
3/4

49


## Grade 4

## Mathematics

## Ordered Item Booklet

Publicly released items from the National Assessment of Educational Progress 1996 State Assessment Program in Mathematics.

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[^0]
3. $N$ stands for the number of stamps John had. He gave 12 stamps to his sister.

Which expression tells how many stamps John has now?
(4) $\mathrm{N}+12$
(8) $\mathrm{N}-12$
(c) $12-\mathrm{N}$
() $12 \times \mathrm{N}$
$\square$
$\square$


$\square$

## Appendix D

## Ordered Item Booklets Supplied to Panelists

Table D.1.
Standard-Setting Ordered Item Bookmap for Reading/Literature

| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 1 | 30111350 | 193 | 3.7 | 1.2.3 |
| 3 | 2 | 30111410 | 194 | 4.4 | 3.2.3 |
| 3 | 3 | 30113090 | 198 | 7.5 | 4.2.3 |
| 3 | 4 | 30206590 | 198 | 7.5 | 3.1.3 |
| 3 | 5 | 30111370 | 199 | 8.5 | 3.1.3 |
| 3 | 6 | 30206170 | 199 | 8.5 | 1.2.3 |
| 3 | 7 | 30113030 | 200 | 9.4 | 1.2.3 |
| 3 | 8 | 30113100 | 200 | 9.4 | 3.1.3 |
| 3 | 9 | 30204930 | 200 | 9.4 | 4.3.3 |
| 3 | 10 | 30236350 | 201 | 10.4 | 2.1.3 |
| 3 | 11 | 30237650 | 201 | 10.4 | 1.2.3 |
| 3 | 12 | 30109970 | 202 | 12.9 | 4.2.3 |
| 3 | 13 | 30113050 | 202 | 12.9 | 3.2.3 |
| 3 | 14 | 30111380 | 203 | 15.6 | 3.1.3 |
| 3 | 15 | 30237280 | 203 | 15.6 | 2.3.3 |
| 3 | 16 | 30237310 | 204 | 18.3 | 3.6.3 |
| 3 | 17 | 30403390 | 204 | 18.3 | 4.5.3 |
| 3 | 18 | 30206560 | 205 | 21.3 | 4.2.3 |
| 3 | 19 | 30113070 | 206 | 24.3 | 4.2.3 |
| 3 | 20 | 30111400 | 207 | 27.3 | 4.2.3 |
| 3 | 21 | 30224710 | 207 | 27.3 | 3.1.3 |
| 3 | 22 | 30229230 | 207 | 27.3 | 4.2.3 |
| 3 | 23 | 30237300 | 207 | 27.3 | 1.2.3 |
| 3 | 24 | 30204900 | 208 | 30.6 | 1.2.3 |
| 3 | 25 | 30401110 | 208 | 30.6 | 4.4.3 |
| 3 | 26 | 30403380 | 208 | 30.6 | 4.4.3 |
| 3 | 27 | 30109880 | 209 | 34 | 1.2.3 |
| 3 | 28 | 30204910 | 210 | 37.5 | 4.4.3 |
| 3 | 29 | 30229240 | 210 | 37.5 | 4.1.3 |
| 3 | 30 | 30236330 | 210 | 37.5 | 2.1.3 |
| 3 | 31 | 30237690 | 210 | 37.5 | 4.6.3 |
| 3 | 32 | 30401100 | 211 | 41 | 3.6.3 |
| 3 | 33 | 30403340 | 211 | 41 | 3.5.3 |
| 3 | 34 | 30109900 | 212 | 44.4 | 1.2.3 |
| 3 | 35 | 30224720 | 212 | 44.4 | 2.3.3 |
| 3 | 36 | 30229210 | 212 | 44.4 | 3.1.3 |
| 3 | 37 | 30401120 | 212 | 44.4 | 3.6.3 |
| 3 | 38 | 30402250 | 212 | 44.4 | 1.2.3 |
| 3 | 39 | 30401150 | 213 | 48.1 | 3.6.3 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 40 | 30109950 | 214 | 51.6 | 4.1.3 |
| 3 | 41 | 30109960 | 214 | 51.6 | 4.2.3 |
| 3 | 42 | 30402180 | 214 | 51.6 | 1.2.3 |
| 3 | 43 | 30206610 | 215 | 54.7 | 2.2.3 |
| 3 | 44 | 30401060 | 215 | 54.7 | 1.2.3 |
| 3 | 45 | 30402020 | 215 | 54.7 | 2.3.3 |
| 3 | 46 | 30208480 | 216 | 58 | 4.2.3 |
| 3 | 47 | 30235320 | 216 | 58 | 1.2.3 |
| 3 | 48 | 30238910 | 216 | 58 | 3.1.3 |
| 3 | 49 | 30402270 | 216 | 58 | 3.6.3 |
| 3 | 50 | 30208430 | 217 | 62.2 | 1.2.3 |
| 3 | 51 | 30229220 | 217 | 62.2 | 3.3.3 |
| 3 | 52 | 30403310 | 218 | 65.8 | 1.1.3 |
| 3 | 53 | 30208500 | 219 | 68.1 | 1.2.3 |
| 3 | 54 | 30259700 | 219 | 68.1 | 3.2.3 |
| 3 | 55 | 30402220 | 219 | 68.1 | 4.3.3 |
| 3 | 56 | 30259730 | 220 | 71.6 | 4.2.3 |
| 3 | 57 | 30270290 | 220 | 71.6 | 4.6.3 |
| 3 | 58 | 30206530 | 221 | 74.6 | 3.1.3 |
| 3 | 59 | 30206550 | 221 | 74.6 | 2.2.3 |
| 3 | 60 | 30208450 | 221 | 74.6 | 3.3.3 |
| 3 | 61 | 30224400 | 221 | 74.6 | 1.2.3 |
| 3 | 62 | 30235950 | 221 | 74.6 | 1.2.3 |
| 3 | 63 | 30259660 | 221 | 74.6 | 1.2.3 |
| 3 | 64 | 30270270 | 221 | 74.6 | 4.3.3 |
| 3 | 65 | 30235000 | 224 | 81 | 1.2.3 |
| 3 | 66 | 30235380 | 224 | 81 | 4.2.3 |
| 3 | 67 | 30235120 | 225 | 83.6 | 1.2.3 |
| 3 | 68 | 30208440 | 226 | 85 | 3.2.3 |
| 3 | 69 | 30259710 | 226 | 85 | 4.1.3 |
| 3 | 70 | 30236020 | 227 | 87.1 | 4.3.3 |
| 4 | 1 | 40235720 | 199 | 3.1 | 4.7.4 |
| 4 | 2 | 40464950 | 199 | 3.1 | 3.1.4 |
| 4 | 3 | 40415370 | 201 | 4.4 | 3.1.4 |
| 4 | 4 | 40465190 | 203 | 5.9 | 2.1.4 |
| 4 | 5 | 40464930 | 204 | 6.7 | 3.1.4 |
| 4 | 6 | 40472810 | 204 | 6.7 | 1.1.4 |
| 4 | 7 | 40464940 | 205 | 7.7 | 3.1 .4 |
| 4 | 8 | 40473440 | 205 | 7.7 | 4.7.4 |
| 4 | 9 | 40438420 | 206 | 8.7 | 1.2.4 |
| 4 | 10 | 40473240 | 206 | 8.7 | 4.4.4 |
| 4 | 11 | 40401380 | 208 | 11.4 | 5.1.4 |
| 4 | 12 | 40401330 | 209 | 14.1 | 3.1 .4 |
| 4 | 13 | 40235690 | 210 | 17.2 | 4.7.4 |
| 4 | 14 | 40415390 | 210 | 17.2 | 4.2.4 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 15 | 40464910 | 211 | 20.4 | 1.1.4 |
| 4 | 16 | 40473210 | 211 | 20.4 | 1.1.4 |
| 4 | 17 | 40464900 | 212 | 24.1 | 1.1.4 |
| 4 | 18 | 40465170 | 212 | 24.1 | 2.1.4 |
| 4 | 19 | 40401290 | 213 | 27.9 | 2.3.4 |
| 4 | 20 | 40415410 | 214 | 31.7 | 4.2.4 |
| 4 | 21 | 40457330 | 214 | 31.7 | 5.3.4 |
| 4 | 22 | 40235780 | 215 | 35.8 | 4.7.4 |
| 4 | 23 | 40418120 | 215 | 35.8 | 3.2.4 |
| 4 | 24 | 40207530 | 216 | 39.9 | 1.1.4 |
| 4 | 25 | 40207550 | 216 | 39.9 | 4.7.4 |
| 4 | 26 | 40235730 | 216 | 39.9 | 3.3.4 |
| 4 | 27 | 40268780 | 217 | 44.1 | 4.7.4 |
| 4 | 28 | 40305840 | 217 | 44.1 | 2.2.4 |
| 4 | 29 | 40439340 | 217 | 44.1 | 1.2.4 |
| 4 | 30 | 40268820 | 218 | 47.9 | 4.7.4 |
| 4 | 31 | 40418090 | 218 | 47.9 | 1.1.4 |
| 4 | 32 | 40207540 | 219 | 51.6 | 1.1.4 |
| 4 | 33 | 40439810 | 219 | 51.6 | 4.3.4 |
| 4 | 34 | 40401540 | 220 | 55.6 | 1.1.4 |
| 4 | 35 | 40411800 | 220 | 55.6 | 2.1.4 |
| 4 | 36 | 40415380 | 220 | 55.6 | 3.1.4 |
| 4 | 37 | 40439380 | 220 | 55.6 | 4.3.4 |
| 4 | 38 | 40401470 | 221 | 59.2 | 3.2.4 |
| 4 | 39 | 40418110 | 221 | 59.2 | 4.7.4 |
| 4 | 40 | 40439400 | 221 | 59.2 | 1.1.4 |
| 4 | 41 | 40201000 | 222 | 62.5 | 4.5.4 |
| 4 | 42 | 40401590 | 222 | 62.5 | 4.1.4 |
| 4 | 43 | 40418170 | 222 | 62.5 | 4.4.4 |
| 4 | 44 | 40418270 | 222 | 62.5 | 5.1.4 |
| 4 | 45 | 40401410 | 223 | 66 | 1.3.4 |
| 4 | 46 | 40405560 | 223 | 66 | 5.3.4 |
| 4 | 47 | 40418140 | 223 | 66 | 3.3.4 |
| 4 | 48 | 40305820 | 224 | 69.8 | 1.3.4 |
| 4 | 49 | 40418300 | 224 | 69.8 | 4.2.4 |
| 4 | 50 | 40268770 | 225 | 72.9 | 3.2.4 |
| 4 | 51 | 40305830 | 225 | 72.9 | 2.2.4 |
| 4 | 52 | 40401340 | 225 | 72.9 | 3.1.4 |
| 4 | 53 | 40418240 | 225 | 72.9 | 1.1.4 |
| 4 | 54 | 40401570 | 226 | 75.7 | 1.3.4 |
| 4 | 55 | 40439330 | 226 | 75.7 | 1.1.4 |
| 4 | 56 | 40405540 | 227 | 78.7 | 5.1.4 |
| 4 | 57 | 40418080 | 227 | 78.7 | 1.1.4 |
| 4 | 58 | 40200950 | 228 | 81.1 | 4.7.4 |
| 4 | 59 | 40256700 | 228 | 81.1 | 1.3.4 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 60 | 40401550 | 228 | 81.1 | 3.1.4 |
| 4 | 61 | 40411760 | 228 | 81.1 | 2.1.4 |
| 4 | 62 | 40200970 | 229 | 83.5 | 4.5.4 |
| 4 | 63 | 40411770 | 231 | 87.2 | 2.1.4 |
| 4 | 64 | 40401520 | 232 | 89.1 | 1.1.4 |
| 4 | 65 | 40418340 | 232 | 89.1 | 3.1.4 |
| 4 | 66 | 40401460 | 233 | 90.7 | 4.7.4 |
| 4 | 67 | 40457340 | 233 | 90.7 | 5.2.4 |
| 4 | 68 | 40268740 | 236 | 94.2 | 1.1.4 |
| 4 | 69 | 40401490 | 236 | 94.2 | 4.6.4 |
| 4 | 70 | 40401440 | 240 | 97.1 | 4.7.4 |
| 5 | 1 | 50273310 | 202 | 2.8 | 4.7.5 |
| 5 | 2 | 50269650 | 204 | 3.8 | 1.1.5 |
| 5 | 3 | 50269700 | 204 | 3.8 | 4.1.5 |
| 5 | 4 | 50254390 | 205 | 4.4 | 5.1.5 |
| 5 | 5 | 50271270 | 205 | 4.4 | 4.4.5 |
| 5 | 6 | 50273350 | 205 | 4.4 | 3.2.5 |
| 5 | 7 | 50306220 | 205 | 4.4 | 2.2.5 |
| 5 | 8 | 50479440 | 205 | 4.4 | 3.3.5 |
| 5 | 9 | 50273360 | 206 | 5.1 | 3.2.5 |
| 5 | 10 | 50479450 | 207 | 5.8 | 3.2.5 |
| 5 | 11 | 50232180 | 208 | 6.7 | 1.1.5 |
| 5 | 12 | 50269740 | 208 | 6.7 | 5.1.5 |
| 5 | 13 | 50254410 | 209 | 7.7 | 4.3.5 |
| 5 | 14 | 50477950 | 209 | 7.7 | 6.1.5 |
| 5 | 15 | 50479460 | 209 | 7.7 | 1.1.5 |
| 5 | 16 | 50271470 | 210 | 8.8 | 5.1.5 |
| 5 | 17 | 50254380 | 211 | 10 | 4.1.5 |
| 5 | 18 | 50272350 | 211 | 10 | 5.1.5 |
| 5 | 19 | 50273330 | 211 | 10 | 6.3.5 |
| 5 | 20 | 50306210 | 211 | 10 | 2.2.5 |
| 5 | 21 | 50271360 | 212 | 11.2 | 1.1.5 |
| 5 | 22 | 50306200 | 212 | 11.2 | 2.2.5 |
| 5 | 23 | 50210860 | 213 | 12.7 | 1.1.5 |
| 5 | 24 | 50210870 | 214 | 14.3 | 3.2.5 |
| 5 | 25 | 50271390 | 214 | 14.3 | 5.2.5 |
| 5 | 26 | 50269680 | 215 | 16.2 | 3.1.5 |
| 5 | 27 | 50210850 | 216 | 20.1 | 1.1.5 |
| 5 | 28 | 50210880 | 216 | 20.1 | 3.2.5 |
| 5 | 29 | 50269640 | 216 | 20.1 | 1.1.5 |
| 5 | 30 | 50271440 | 217 | 24.3 | 3.1 .5 |
| 5 | 31 | 50416570 | 217 | 24.3 | 6.3.5 |
| 5 | 32 | 50271430 | 218 | 28.6 | 4.3.5 |
| 5 | 33 | 50210930 | 220 | 37.6 | 6.2.5 |
| 5 | 34 | 50272360 | 220 | 37.6 | 3.1.5 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 35 | 50414210 | 222 | 46.1 | 2.2.5 |
| 5 | 36 | 50418600 | 222 | 46.1 | 3.1.5 |
| 5 | 37 | 50418760 | 222 | 46.1 | 5.2.5 |
| 5 | 38 | 50111870 | 223 | 49.9 | 2.1.5 |
| 5 | 39 | 50245400 | 223 | 49.9 | 3.2.5 |
| 5 | 40 | 50417480 | 223 | 49.9 | 1.3.5 |
| 5 | 41 | 50418740 | 223 | 49.9 | 3.1 .5 |
| 5 | 42 | 50229690 | 224 | 53.9 | 1.1.5 |
| 5 | 43 | 50417520 | 224 | 53.9 | 3.1.5 |
| 5 | 44 | 50418580 | 224 | 53.9 | 1.3.5 |
| 5 | 45 | 50417590 | 225 | 57.9 | 2.2.5 |
| 5 | 46 | 50242880 | 226 | 61.6 | 6.3.5 |
| 5 | 47 | 50417570 | 226 | 61.6 | 2.2.5 |
| 5 | 48 | 50111860 | 227 | 64.8 | 2.1.5 |
| 5 | 49 | 50212300 | 227 | 64.8 | 4.7.5 |
| 5 | 50 | 50213730 | 227 | 64.8 | 4.4.5 |
| 5 | 51 | 50212290 | 228 | 68.1 | 3.2.5 |
| 5 | 52 | 50418730 | 228 | 68.1 | 5.1.5 |
| 5 | 53 | 50210920 | 229 | 71.4 | 6.3.5 |
| 5 | 54 | 50244040 | 229 | 71.4 | 1.1.5 |
| 5 | 55 | 50417460 | 229 | 71.4 | 5.1.5 |
| 5 | 56 | 50212320 | 231 | 76.8 | 6.2.5 |
| 5 | 57 | 50244090 | 231 | 76.8 | 3.1.5 |
| 5 | 58 | 50245390 | 231 | 76.8 | 4.7.5 |
| 5 | 59 | 50245410 | 231 | 76.8 | 4.5.5 |
| 5 | 60 | 50417500 | 231 | 76.8 | 1.1.5 |
| 5 | 61 | 50245420 | 232 | 80 | 4.5.5 |
| 5 | 62 | 50212310 | 234 | 84.8 | 4.7 .5 |
| 5 | 63 | 50242900 | 234 | 84.8 | 6.1.5 |
| 5 | 64 | 50236080 | 235 | 87 | 1.1.5 |
| 5 | 65 | 50244110 | 235 | 87 | 4.2.5 |
| 5 | 66 | 50245440 | 237 | 90.4 | 1.1.5 |
| 5 | 67 | 50245460 | 237 | 90.4 | 6.2.5 |
| 5 | 68 | 50244070 | 239 | 93.3 | 1.2.5 |
| 5 | 69 | 50111940 | 240 | 94.5 | 2.1.5 |
| 5 | 70 | 50417470 | 241 | 95.4 | 5.3.5 |
| 6 | 1 | 60468270 | 210 | 5.5 | 1.1.6 |
| 6 | 2 | 60468290 | 211 | 6.5 | 3.2.6 |
| 6 | 3 | 60225460 | 212 | 7.8 | 3.1 .6 |
| 6 | 4 | 60458160 | 212 | 7.8 | 3.1 .6 |
| 6 | 5 | 60459120 | 212 | 7.8 | 6.2.6 |
| 6 | 6 | 60468130 | 213 | 9 | 1.1.6 |
| 6 | 7 | 60458110 | 214 | 10.4 | 1.1 .6 |
| 6 | 8 | 60468190 | 214 | 10.4 | 4.9.6 |
| 6 | 9 | 60225480 | 215 | 11.8 | 2.1.6 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 10 | 60458130 | 215 | 11.8 | 3.1 .6 |
| 6 | 11 | 60225450 | 216 | 13.4 | 2.1 .6 |
| 6 | 12 | 60269120 | 216 | 13.4 | 4.9.6 |
| 6 | 13 | 60468360 | 216 | 13.4 | 6.1 .6 |
| 6 | 14 | 60450570 | 217 | 15.1 | 1.1.6 |
| 6 | 15 | 60468300 | 217 | 15.1 | 3.2.6 |
| 6 | 16 | 60468240 | 218 | 17 | 6.1.6 |
| 6 | 17 | 60450620 | 219 | 19.1 | 5.1.6 |
| 6 | 18 | 60450630 | 219 | 19.1 | 4.3.6 |
| 6 | 19 | 60458140 | 219 | 19.1 | 5.3.6 |
| 6 | 20 | 60458190 | 219 | 19.1 | 1.2.6 |
| 6 | 21 | 60269090 | 220 | 22.2 | 3.2.6 |
| 6 | 22 | 60442420 | 220 | 22.2 | 2.1.6 |
| 6 | 23 | 60468170 | 220 | 22.2 | 3.3.6 |
| 6 | 24 | 60468260 | 220 | 22.2 | 1.1.6 |
| 6 | 25 | 60269070 | 221 | 25.7 | 1.1.6 |
| 6 | 26 | 60450610 | 221 | 25.7 | 5.1 .6 |
| 6 | 27 | 60269150 | 222 | 29.6 | 6.1.6 |
| 6 | 28 | 60468280 | 222 | 29.6 | 1.1.6 |
| 6 | 29 | 60450560 | 223 | 33.5 | 1.1.6 |
| 6 | 30 | 60458250 | 223 | 33.5 | 5.1.6 |
| 6 | 31 | 60225430 | 224 | 37.5 | 2.1.6 |
| 6 | 32 | 60438850 | 224 | 37.5 | 5.3.6 |
| 6 | 33 | 60459060 | 224 | 37.5 | 4.9.6 |
| 6 | 34 | 60500870 | 224 | 37.5 | 1.1.6 |
| 6 | 35 | 60269170 | 226 | 45.7 | 6.1.6 |
| 6 | 36 | 60458150 | 227 | 49.7 | 3.1 .6 |
| 6 | 37 | 60468150 | 227 | 49.7 | 3.2.6 |
| 6 | 38 | 60458950 | 228 | 53.5 | 2.1.6 |
| 6 | 39 | 60459020 | 228 | 53.5 | 6.1.6 |
| 6 | 40 | 60450640 | 229 | 57.4 | 1.1.6 |
| 6 | 41 | 60459000 | 229 | 57.4 | 2.1 .6 |
| 6 | 42 | 60501450 | 229 | 57.4 | 6.1.6 |
| 6 | 43 | 60458960 | 230 | 60.9 | 2.1.6 |
| 6 | 44 | 60501380 | 230 | 60.9 | 1.2.6 |
| 6 | 45 | 60438920 | 231 | 64.2 | 5.2.6 |
| 6 | 46 | 60450670 | 231 | 64.2 | 4.2.6 |
| 6 | 47 | 60501740 | 231 | 64.2 | 1.1.6 |
| 6 | 48 | 60269160 | 232 | 67.8 | 6.1.6 |
| 6 | 49 | 60500950 | 232 | 67.8 | 4.3.6 |
| 6 | 50 | 60455490 | 233 | 71.4 | 4.6.6 |
| 6 | 51 | 60501390 | 233 | 71.4 | 3.2.6 |
| 6 | 52 | 60501400 | 233 | 71.4 | 3.2.6 |
| 6 | 53 | 60458430 | 234 | 74.7 | 2.2.6 |
| 6 | 54 | 60500880 | 234 | 74.7 | 1.1.6 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 55 | 60455450 | 235 | 77.5 | 6.1.6 |
| 6 | 56 | 60455470 | 235 | 77.5 | 6.1.6 |
| 6 | 57 | 60501830 | 235 | 77.5 | 5.1.6 |
| 6 | 58 | 60501820 | 236 | 80.4 | 4.3.6 |
| 6 | 59 | 60501360 | 237 | 83.1 | 1.2.6 |
| 6 | 60 | 60501770 | 237 | 83.1 | 3.1 .6 |
| 6 | 61 | 60501420 | 238 | 85.2 | 4.9.6 |
| 6 | 62 | 60500940 | 239 | 87.3 | 4.2.6 |
| 6 | 63 | 60500960 | 239 | 87.3 | 5.3.6 |
| 6 | 64 | 60500980 | 239 | 87.3 | 5.2.6 |
| 6 | 65 | 60455510 | 240 | 88.9 | 6.1.6 |
| 6 | 66 | 60458990 | 240 | 88.9 | 2.1 .6 |
| 6 | 67 | 60501460 | 240 | 88.9 | 6.1.6 |
| 6 | 68 | 60458980 | 242 | 92.3 | 2.2.6 |
| 6 | 69 | 60501780 | 245 | 95.9 | 3.1 .6 |
| 6 | 70 | 60501810 | 245 | 95.9 | 4.3.6 |
| 7 | 1 | 70502600 | 213 | 4.5 | 3.1.7 |
| 7 | 2 | 70502450 | 214 | 5.3 | 1.1.7 |
| 7 | 3 | 70447940 | 216 | 7.3 | 2.2.7 |
| 7 | 4 | 70502690 | 216 | 7.3 | 5.3.7 |
| 7 | 5 | 70503260 | 216 | 7.3 | 3.2.7 |
| 7 | 6 | 70466410 | 217 | 8.4 | 2.1.7 |
| 7 | 7 | 70502550 | 218 | 9.9 | 5.2.7 |
| 7 | 8 | 70503150 | 218 | 9.9 | 4.1.7 |
| 7 | 9 | 70502680 | 220 | 13 | 5.2.7 |
| 7 | 10 | 70223410 | 221 | 14.9 | 1.3.7 |
| 7 | 11 | 70446450 | 221 | 14.9 | 3.2.7 |
| 7 | 12 | 70513610 | 221 | 14.9 | 4.2.7 |
| 7 | 13 | 70446480 | 222 | 17 | 3.2.7 |
| 7 | 14 | 70502520 | 222 | 17 | 4.2.7 |
| 7 | 15 | 70513580 | 222 | 17 | 3.1 .7 |
| 7 | 16 | 70215620 | 223 | 19.4 | 3.1 .7 |
| 7 | 17 | 70446520 | 223 | 19.4 | 6.2.7 |
| 7 | 18 | 70513600 | 223 | 19.4 | 4.1.7 |
| 7 | 19 | 70446490 | 224 | 21.7 | 4.10 .7 |
| 7 | 20 | 70503240 | 224 | 21.7 | 1.3.7 |
| 7 | 21 | 70215630 | 225 | 24.4 | 4.4.7 |
| 7 | 22 | 70447930 | 225 | 24.4 | 2.2.7 |
| 7 | 23 | 70503200 | 226 | 27 | 5.2.7 |
| 7 | 24 | 70503270 | 227 | 30.7 | 3.2.7 |
| 7 | 25 | 70447530 | 228 | 34.5 | 3.1 .7 |
| 7 | 26 | 70247770 | 229 | 38.3 | 3.1.7 |
| 7 | 27 | 70449320 | 229 | 38.3 | 4.10 .7 |
| 7 | 28 | 70513560 | 229 | 38.3 | 1.1.7 |
| 7 | 29 | 70215660 | 230 | 42 | 1.1.7 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 30 | 70446500 | 230 | 42 | 6.1.7 |
| 7 | 31 | 70513620 | 230 | 42 | 5.2.7 |
| 7 | 32 | 70215650 | 231 | 45.8 | 4.2.7 |
| 7 | 33 | 70223930 | 231 | 45.8 | 2.1.7 |
| 7 | 34 | 70248120 | 231 | 45.8 | 1.1.7 |
| 7 | 35 | 70449350 | 231 | 45.8 | 3.2.7 |
| 7 | 36 | 70457400 | 231 | 45.8 | 3.2.7 |
| 7 | 37 | 70503230 | 231 | 45.8 | 1.2.7 |
| 7 | 38 | 70501890 | 232 | 49.9 | 3.2.7 |
| 7 | 39 | 70501960 | 232 | 49.9 | 6.1.7 |
| 7 | 40 | 70502640 | 232 | 49.9 | 4.2.7 |
| 7 | 41 | 70501950 | 233 | 53.4 | 6.3.7 |
| 7 | 42 | 70447470 | 234 | 57 | 4.3.7 |
| 7 | 43 | 70509690 | 234 | 57 | 5.1 .7 |
| 7 | 44 | 70449340 | 235 | 61.1 | 3.2.7 |
| 7 | 45 | 70502000 | 235 | 61.1 | 1.1.7 |
| 7 | 46 | 70223940 | 236 | 64.7 | 2.1.7 |
| 7 | 47 | 70247440 | 236 | 64.7 | 6.1 .7 |
| 7 | 48 | 70447510 | 236 | 64.7 | 3.1.7 |
| 7 | 49 | 70457390 | 236 | 64.7 | 4.5.7 |
| 7 | 50 | 70509590 | 236 | 64.7 | 1.1.7 |
| 7 | 51 | 70221340 | 238 | 71.4 | 1.1.7 |
| 7 | 52 | 70258080 | 238 | 71.4 | 2.1.7 |
| 7 | 53 | 70449370 | 238 | 71.4 | 3.2.7 |
| 7 | 54 | 70449400 | 238 | 71.4 | 6.2.7 |
| 7 | 55 | 70221370 | 239 | 74.8 | 2.1.7 |
| 7 | 56 | 70502080 | 239 | 74.8 | 5.2.7 |
| 7 | 57 | 70447490 | 240 | 77.9 | 4.1.7 |
| 7 | 58 | 70447560 | 240 | 77.9 | 1.1.7 |
| 7 | 59 | 70502050 | 240 | 77.9 | 4.2.7 |
| 7 | 60 | 70220160 | 241 | 80.4 | 4.5.7 |
| 7 | 61 | 70247390 | 241 | 80.4 | 4.9.7 |
| 7 | 62 | 70449330 | 241 | 80.4 | 6.2.7 |
| 7 | 63 | 70502020 | 241 | 80.4 | 3.1.7 |
| 7 | 64 | 70509650 | 241 | 80.4 | 4.1.7 |
| 7 | 65 | 70447450 | 242 | 83.2 | 5.3.7 |
| 7 | 66 | 70509640 | 242 | 83.2 | 3.1.7 |
| 7 | 67 | 70501970 | 243 | 85.2 | 6.1.7 |
| 7 | 68 | 70509700 | 245 | 89 | 5.1 .7 |
| 7 | 69 | 70457380 | 247 | 92.1 | 4.7.7 |
| 7 | 70 | 70447460 | 249 | 94.5 | 5.1.7 |
| 8 | 1 | 80101100 | 212 | 2.8 | 1.1 .8 |
| 8 | 2 | 80248090 | 213 | 3.4 | 4.3.8 |
| 8 | 3 | 80101090 | 215 | 4.8 | 1.1.8 |
| 8 | 4 | 80213580 | 216 | 5.6 | 3.2.8 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 5 | 80213840 | 217 | 6.4 | 4.4.8 |
| 8 | 6 | 80247360 | 217 | 6.4 | 3.1.8 |
| 8 | 7 | 80242090 | 218 | 7.4 | 3.2.8 |
| 8 | 8 | 80247250 | 218 | 7.4 | 4.3.8 |
| 8 | 9 | 80101150 | 220 | 9.7 | 5.1 .8 |
| 8 | 10 | 80247220 | 220 | 9.7 | 1.1.8 |
| 8 | 11 | 80220570 | 221 | 11.1 | 1.1.8 |
| 8 | 12 | 80213010 | 222 | 12.5 | 1.2.8 |
| 8 | 13 | 80265240 | 222 | 12.5 | 1.2.8 |
| 8 | 14 | 80248000 | 223 | 14.1 | 1.1.8 |
| 8 | 15 | 80213030 | 224 | 15.9 | 4.7.8 |
| 8 | 16 | 80248060 | 224 | 15.9 | 4.3.8 |
| 8 | 17 | 80242120 | 225 | 17.9 | 4.8.8 |
| 8 | 18 | 80303980 | 225 | 17.9 | 5.1.8 |
| 8 | 19 | 80214540 | 226 | 20.1 | 2.1.8 |
| 8 | 20 | 80247210 | 226 | 20.1 | 1.1.8 |
| 8 | 21 | 80261160 | 226 | 20.1 | 4.7.8 |
| 8 | 22 | 80265250 | 227 | 22.6 | 3.2 .8 |
| 8 | 23 | 80265280 | 227 | 22.6 | 4.7.8 |
| 8 | 24 | 80133720 | 228 | 25.3 | 5.2.8 |
| 8 | 25 | 80265320 | 228 | 25.3 | 6.1.8 |
| 8 | 26 | 80101130 | 229 | 28.1 | 4.1.8 |
| 8 | 27 | 80213600 | 230 | 31.1 | 6.2.8 |
| 8 | 28 | 80451460 | 230 | 31.1 | 5.1.8 |
| 8 | 29 | 80100770 | 231 | 34.5 | 4.7.8 |
| 8 | 30 | 80240180 | 231 | 34.5 | 3.1.8 |
| 8 | 31 | 80224130 | 232 | 39.7 | 6.2.8 |
| 8 | 32 | 80303940 | 232 | 39.7 | 3.1.8 |
| 8 | 33 | 80448250 | 233 | 44.8 | 1.1.8 |
| 8 | 34 | 80451440 | 233 | 44.8 | 3.1 .8 |
| 8 | 35 | 80214460 | 234 | 49.8 | 2.1.8 |
| 8 | 36 | 80234800 | 234 | 49.8 | 4.8.8 |
| 8 | 37 | 80100760 | 235 | 54.6 | 3.2.8 |
| 8 | 38 | 80214520 | 235 | 54.6 | 2.1.8 |
| 8 | 39 | 80100820 | 236 | 59.2 | 6.1.8 |
| 8 | 40 | 80203000 | 236 | 59.2 | 3.2.8 |
| 8 | 41 | 80234780 | 237 | 63.6 | 3.2.8 |
| 8 | 42 | 80240210 | 237 | 63.6 | 4.3.8 |
| 8 | 43 | 80304000 | 237 | 63.6 | 5.1.8 |
| 8 | 44 | 80100730 | 238 | 67.4 | 1.1.8 |
| 8 | 45 | 80451510 | 238 | 67.4 | 1.1 .8 |
| 8 | 46 | 80100790 | 239 | 71.1 | 3.2.8 |
| 8 | 47 | 80100840 | 239 | 71.1 | 4.7.8 |
| 8 | 48 | 80448360 | 239 | 71.1 | 4.6.8 |
| 8 | 49 | 80451410 | 240 | 74.9 | 4.2.8 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 50 | 80203040 | 241 | 78.4 | 4.8.8 |
| 8 | 51 | 80214430 | 241 | 78.4 | 2.1.8 |
| 8 | 52 | 80240150 | 241 | 78.4 | 5.1.8 |
| 8 | 53 | 80240220 | 241 | 78.4 | 1.3.8 |
| 8 | 54 | 80240240 | 241 | 78.4 | 3.1 .8 |
| 8 | 55 | 80303930 | 242 | 81.2 | 3.1.8 |
| 8 | 56 | 80448260 | 242 | 81.2 | 1.2.8 |
| 8 | 57 | 80451490 | 242 | 81.2 | 1.1.8 |
| 8 | 58 | 80221500 | 243 | 84.1 | 6.2.8 |
| 8 | 59 | 80240170 | 243 | 84.1 | 4.2.8 |
| 8 | 60 | 80303900 | 243 | 84.1 | 5.1 .8 |
| 8 | 61 | 80265720 | 244 | 86.4 | 2.1 .8 |
| 8 | 62 | 80303910 | 244 | 86.4 | 1.1.8 |
| 8 | 63 | 80204280 | 245 | 88.5 | 6.1 .8 |
| 8 | 64 | 80221480 | 246 | 90.3 | 6.1 .8 |
| 8 | 65 | 80234810 | 246 | 90.3 | 4.4.8 |
| 8 | 66 | 80303960 | 246 | 90.3 | 4.2.8 |
| 8 | 67 | 80203030 | 247 | 91.9 | 4.7 .8 |
| 8 | 68 | 80265710 | 248 | 93.4 | 2.1.8 |
| 8 | 69 | 80265740 | 250 | 95.6 | 2.1.8 |
| 8 | 70 | 80448280 | 252 | 97.3 | 1.2.8 |
| 10 | 1 | 10248900 | 221 | 6.3 | 1.1.C |
| 10 | 2 | 10253890 | 222 | 7.3 | 6.2.C |
| 10 | 3 | 10006960 | 223 | 8.4 | 2.1.C |
| 10 | 4 | 10249320 | 223 | 8.4 | 5.1.C |
| 10 | 5 | 10469970 | 224 | 9.5 | 5.1.C |
| 10 | 6 | 10470170 | 224 | 9.5 | 4.4.C |
| 10 | 7 | 10469700 | 225 | 10.8 | 1.1.C |
| 10 | 8 | 10249230 | 226 | 12.2 | 3.1.C |
| 10 | 9 | 10249310 | 226 | 12.2 | 5.1.C |
| 10 | 10 | 10253860 | 227 | 13.8 | 4.10.C |
| 10 | 11 | 10253870 | 227 | 13.8 | 6.1.C |
| 10 | 12 | 10421620 | 227 | 13.8 | 1.3.C |
| 10 | 13 | 10006990 | 229 | 17.2 | 2.1.C |
| 10 | 14 | 10469740 | 229 | 17.2 | 5.1.C |
| 10 | 15 | 10458550 | 230 | 19.3 | 4.9.C |
| 10 | 16 | 10458530 | 231 | 21.3 | 3.2.C |
| 10 | 17 | 10006950 | 232 | 23.7 | 2.1.C |
| 10 | 18 | 10458500 | 232 | 23.7 | 4.6.C |
| 10 | 19 | 10469730 | 233 | 26.4 | 1.1.C |
| 10 | 20 | 10253850 | 234 | 29.1 | 4.9.C |
| 10 | 21 | 10307200 | 235 | 32.1 | 2.1.C |
| 10 | 22 | 10422220 | 235 | 32.1 | 5.1.C |
| 10 | 23 | 10458560 | 236 | 35.4 | 3.2.C |
| 10 | 24 | 10470180 | 236 | 35.4 | 1.1.C |


| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 25 | 10470190 | 236 | 35.4 | 4.2.C |
| 10 | 26 | 10253910 | 237 | 38.8 | 3.2.C |
| 10 | 27 | 10438240 | 237 | 38.8 | 6.1.C |
| 10 | 28 | 10278900 | 239 | 45.3 | 6.3.C |
| 10 | 29 | 10421630 | 239 | 45.3 | 1.1.C |
| 10 | 30 | 10421660 | 239 | 45.3 | 3.1.C |
| 10 | 31 | 10307220 | 240 | 50.3 | 2.1.C |
| 10 | 32 | 10422230 | 240 | 50.3 | 5.4.C |
| 10 | 33 | 10437610 | 240 | 50.3 | 1.1.C |
| 10 | 34 | 10458480 | 240 | 50.3 | 1.2.C |
| 10 | 35 | 10135410 | 241 | 55.4 | 5.1.C |
| 10 | 36 | 10415840 | 241 | 55.4 | 5.4.C |
| 10 | 37 | 10438220 | 241 | 55.4 | 3.2.C |
| 10 | 38 | 10307510 | 242 | 60 | 3.1.C |
| 10 | 39 | 10424230 | 242 | 60 | 6.2.C |
| 10 | 40 | 10307170 | 243 | 64.3 | 2.1.C |
| 10 | 41 | 10424220 | 243 | 64.3 | 6.1.C |
| 10 | 42 | 10307530 | 244 | 68.9 | 4.4.C |
| 10 | 43 | 10438230 | 244 | 68.9 | 4.8.C |
| 10 | 44 | 10217280 | 245 | 72.9 | 1.1.C |
| 10 | 45 | 10307550 | 245 | 72.9 | 4.3.C |
| 10 | 46 | 10437820 | 245 | 72.9 | 3.2.C |
| 10 | 47 | 10135390 | 246 | 76.6 | 5.3.C |
| 10 | 48 | 10218880 | 246 | 76.6 | 3.1.C |
| 10 | 49 | 10278800 | 246 | 76.6 | 1.3.C |
| 10 | 50 | 10307500 | 247 | 80 | 3.1.C |
| 10 | 51 | 10424240 | 247 | 80 | 3.2.C |
| 10 | 52 | 10218850 | 248 | 83.1 | 2.1.C |
| 10 | 53 | 10424160 | 248 | 83.1 | 4.10.C |
| 10 | 54 | 10424190 | 248 | 83.1 | 4.6.C |
| 10 | 55 | 10278820 | 249 | 85.6 | 3.2.C |
| 10 | 56 | 10307480 | 249 | 85.6 | 1.1.C |
| 10 | 57 | 10307560 | 249 | 85.6 | 5.3.C |
| 10 | 58 | 10135370 | 250 | 88 | 3.1.C |
| 10 | 59 | 10424200 | 250 | 88 | 6.1.C |
| 10 | 60 | 10424210 | 250 | 88 | 6.5.C |
| 10 | 61 | 10135440 | 251 | 90.1 | 4.3.C |
| 10 | 62 | 10218860 | 252 | 92 | 1.1.C |
| 10 | 63 | 10278920 | 252 | 92 | 6.1.C |
| 10 | 64 | 10218830 | 254 | 94.8 | 2.1.C |
| 10 | 65 | 10135330 | 255 | 95.7 | 1.1.C |
| 10 | 66 | 10217310 | 255 | 95.7 | 3.1.C |
| 10 | 67 | 10278810 | 255 | 95.7 | 3.2.C |
| 10 | 68 | 10278860 | 255 | 95.7 | 4.9.C |
| 10 | 69 | 10135360 | 258 | 97.9 | 4.2.C |


| Grade | Order of <br> Difficulty | Item ID | Item <br> Difficulty | Impact Data* $^{*}$ | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 70 | 10217350 | 262 | 99.2 | 5.2.C |

* Impact data indicates the percentage of students answering this item incorrectly on the 2005-2006 administration.
$\dagger$ Subskill information denotes the "eligible content" included in the item. This describes the specific area within the discipline tested by the item and can be resolved online at http://www.ode.state.or.us/search/results/?id=53.

Table D.2.

## Standard-Setting Ordered Item Bookmap for Mathematics

| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. ${ }^{\text {t }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 1 | 30401010 | 190 | 2.2 | 1.1.31 |
| 3 | 2 | 30438230 | 190 | 2.2 | 4.1.33 |
| 3 | 3 | 30438590 | 190 | 2.2 | 3.3.35 |
| 3 | 4 | 30112110 | 191 | 2.6 | 2.1.31 |
| 3 | 5 | 30400190 | 191 | 2.6 | 5.1.32 |
| 3 | 6 | 30418560 | 191 | 2.6 | 1.1.39 |
| 3 | 7 | 30212440 | 192 | 3 | 4.1.34 |
| 3 | 8 | 30293010 | 192 | 3 | 3.4.31 |
| 3 | 9 | 30411380 | 192 | 3 | 1.2.34 |
| 3 | 10 | 30216700 | 193 | 3.5 | 2.2.31 |
| 3 | 11 | 30403250 | 196 | 5.8 | 1.1.39 |
| 3 | 12 | 30520060 | 196 | 5.8 | 5.1.34 |
| 3 | 13 | 39700160 | 197 | 6.7 | 2.1.31 |
| 3 | 14 | 30221230 | 198 | 7.7 | 4.1.33 |
| 3 | 15 | 30406530 | 198 | 7.7 | 1.1.33 |
| 3 | 16 | 30415010 | 199 | 8.9 | 3.3.35 |
| 3 | 17 | 30293610 | 200 | 10.2 | 4.1.31 |
| 3 | 18 | 30406420 | 200 | 10.2 | 1.1.33 |
| 3 | 19 | 30432830 | 200 | 10.2 | 2.1.31 |
| 3 | 20 | 30416990 | 201 | 11.4 | 3.4.31 |
| 3 | 21 | 30401450 | 202 | 12.9 | 5.1.34 |
| 3 | 22 | 30404010 | 202 | 12.9 | 4.2.32 |
| 3 | 23 | 30418860 | 202 | 12.9 | 1.3.33 |
| 3 | 24 | 30415070 | 203 | 16.1 | 5.1.31 |
| 3 | 25 | 30438530 | 203 | 16.1 | 2.2.31 |
| 3 | 26 | 30408840 | 204 | 19.6 | 4.1.31 |
| 3 | 27 | 30416600 | 204 | 19.6 | 1.1.31 |
| 3 | 28 | 30237420 | 205 | 23.3 | 3.3.35 |
| 3 | 29 | 30400070 | 205 | 23.3 | 1.1.33 |
| 3 | 30 | 30400050 | 206 | 27.4 | 3.4.31 |
| 3 | 31 | 30500160 | 206 | 27.4 | 5.1.31 |
| 3 | 32 | 30419370 | 207 | 31.5 | 4.1.31 |
| 3 | 33 | 30424970 | 207 | 31.5 | 2.2.311 |
| 3 | 34 | 30418540 | 208 | 35.7 | 1.1.31 |
| 3 | 35 | 30433160 | 209 | 39.8 | 5.1.34 |
| 3 | 36 | 30417250 | 210 | 44.3 | 1.2.37 |
| 3 | 37 | 30401430 | 211 | 48.4 | 1.2.34 |
| 3 | 38 | 30415180 | 211 | 48.4 | 2.2.38 |
| 3 | 39 | 30417080 | 211 | 48.4 | 3.4.31 |
| 3 | 40 | 30418900 | 211 | 48.4 | 4.1.33 |
| 3 | 41 | 30520560 | 211 | 48.4 | 5.1.31 |
| 3 | 42 | 30400040 | 212 | 52.5 | 3.4.31 |
| 3 | 43 | 30235470 | 213 | 56.6 | 1.2.316 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 44 | 30237710 | 213 | 56.6 | 5.1.32 |
| 3 | 45 | 30411720 | 213 | 56.6 | 4.1.31 |
| 3 | 46 | 30414980 | 213 | 56.6 | 2.2.31 |
| 3 | 47 | 30236170 | 214 | 60.8 | 3.3.35 |
| 3 | 48 | 30237540 | 214 | 60.8 | 5.4.33 |
| 3 | 49 | 30404430 | 215 | 64.8 | 1.1.35 |
| 3 | 50 | 30447540 | 215 | 64.8 | 4.1.33 |
| 3 | 51 | 30408400 | 216 | 69.1 | 2.2.31 |
| 3 | 52 | 30400420 | 217 | 72.9 | 1.1.33 |
| 3 | 53 | 30401240 | 218 | 76.4 | 2.2.38 |
| 3 | 54 | 30411780 | 218 | 76.4 | 4.2.31 |
| 3 | 55 | 30430440 | 218 | 76.4 | 5.1.34 |
| 3 | 56 | 30404410 | 219 | 80 | 1.1.33 |
| 3 | 57 | 30430780 | 219 | 80 | 3.4.31 |
| 3 | 58 | 30433150 | 221 | 85.8 | 5.1.31 |
| 3 | 59 | 30234360 | 222 | 87.7 | 1.2.34 |
| 3 | 60 | 30237291 | 222 | 87.7 | 1.2.315 |
| 3 | 61 | 30419350 | 223 | 89.8 | 5.1.32 |
| 3 | 62 | 30240270 | 225 | 92.7 | 1.2.34 |
| 3 | 63 | 30400410 | 225 | 92.7 | 4.2.32 |
| 3 | 64 | 30401270 | 225 | 92.7 | 2.1.31 |
| 3 | 65 | 30409010 | 226 | 94.1 | 2.2.34 |
| 3 | 66 | 30448730 | 226 | 94.1 | 5.1.34 |
| 3 | 67 | 30435280 | 228 | 95.9 | 5.1.31 |
| 3 | 68 | 30419680 | 229 | 96.9 | 4.1.34 |
| 3 | 69 | 30419270 | 230 | 97.3 | 4.2.32 |
| 3 | 70 | 30103270 | 231 | 98 | 1.2.316 |
| 3 | 71 | 30420500 | 233 | 98.5 | 3.3.35 |
| 4 | 1 | 40428140 | 194 | 0.9 | 2.1.41 |
| 4 | 2 | 40438260 | 197 | 1.8 | 3.4.41 |
| 4 | 3 | 40448710 | 197 | 1.8 | 4.2.41 |
| 4 | 4 | 40274200 | 198 | 2.2 | 5.1.42 |
| 4 | 5 | 40438430 | 198 | 2.2 | 2.2.44 |
| 4 | 6 | 40239410 | 200 | 3.2 | 1.2.416 |
| 4 | 7 | 40442070 | 200 | 3.2 | 3.4.42 |
| 4 | 8 | 40404050 | 201 | 3.8 | 4.1.41 |
| 4 | 9 | 40404420 | 202 | 4.5 | 1.1.43 |
| 4 | 10 | 40432110 | 203 | 5.2 | 4.2 .42 |
| 4 | 11 | 40290520 | 204 | 6 | 2.2.41 |
| 4 | 12 | 40292610 | 204 | 6 | 1.1.41 |
| 4 | 13 | 40415200 | 204 | 6 | 5.3.42 |
| 4 | 14 | 40440820 | 205 | 7 | 2.2.41 |
| 4 | 15 | 40273850 | 206 | 8.1 | 5.1.42 |
| 4 | 16 | 40422030 | 206 | 8.1 | 1.1.43 |
| 4 | 17 | 40002450 | 209 | 13.7 | 4.1.43 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 18 | 40403450 | 209 | 13.7 | 5.1.42 |
| 4 | 19 | 40409160 | 209 | 13.7 | 1.2.411 |
| 4 | 20 | 40417380 | 209 | 13.7 | 3.1.41 |
| 4 | 21 | 40432250 | 209 | 13.7 | 1.1.41 |
| 4 | 22 | 40444010 | 209 | 13.7 | 2.2.41 |
| 4 | 23 | 40443250 | 210 | 16.9 | 2.2.413 |
| 4 | 24 | 40423680 | 211 | 20.4 | 5.1.42 |
| 4 | 25 | 40440940 | 211 | 20.4 | 4.1.41 |
| 4 | 26 | 40444200 | 211 | 20.4 | 3.3.45 |
| 4 | 27 | 40412380 | 212 | 23.9 | 1.2.46 |
| 4 | 28 | 40414970 | 212 | 23.9 | 3.4.42 |
| 4 | 29 | 40403420 | 213 | 27.5 | 4.1.41 |
| 4 | 30 | 40404160 | 214 | 31.2 | 1.1.43 |
| 4 | 31 | 40404180 | 214 | 31.2 | 5.1.44 |
| 4 | 32 | 40409240 | 214 | 31.2 | 2.1.42 |
| 4 | 33 | 40217800 | 215 | 35 | 1.2.410 |
| 4 | 34 | 40408390 | 215 | 35 | 2.2.41 |
| 4 | 35 | 40428130 | 216 | 39.3 | 2.1.42 |
| 4 | 36 | 40403640 | 218 | 47.3 | 1.2.416 |
| 4 | 37 | 40404300 | 218 | 47.3 | 5.3.41 |
| 4 | 38 | 40408890 | 218 | 47.3 | 3.4.41 |
| 4 | 39 | 40423240 | 218 | 47.3 | 4.2.42 |
| 4 | 40 | 40423460 | 218 | 47.3 | 1.1.49 |
| 4 | 41 | 40435640 | 218 | 47.3 | 4.1.41 |
| 4 | 42 | 40234400 | 219 | 50.9 | 2.2.41 |
| 4 | 43 | 40443500 | 219 | 50.9 | 5.1.42 |
| 4 | 44 | 40411760 | 220 | 54.4 | 1.2.48 |
| 4 | 45 | 40428240 | 220 | 54.4 | 2.2.46 |
| 4 | 46 | 40428260 | 220 | 54.4 | 4.2.41 |
| 4 | 47 | 40409130 | 221 | 58 | 3.1.41 |
| 4 | 48 | 40443510 | 221 | 58 | 5.1.42 |
| 4 | 49 | 40216241 | 222 | 61.5 | 4.1.41 |
| 4 | 50 | 40431800 | 222 | 61.5 | 4.1.41 |
| 4 | 51 | 40404210 | 223 | 64.9 | 5.1.41 |
| 4 | 52 | 40444380 | 223 | 64.9 | 3.1.41 |
| 4 | 53 | 40428310 | 224 | 68.7 | 5.4.43 |
| 4 | 54 | 40408910 | 225 | 72 | 4.1.41 |
| 4 | 55 | 40423390 | 225 | 72 | 2.1.42 |
| 4 | 56 | 40454910 | 226 | 75.4 | 3.1.41 |
| 4 | 57 | 40407560 | 228 | 82 | 1.2.415 |
| 4 | 58 | 40403670 | 229 | 84.4 | 5.3.41 |
| 4 | 59 | 40404190 | 230 | 86.6 | 3.1.41 |
| 4 | 60 | 40403600 | 231 | 88.7 | 1.1.41 |
| 4 | 61 | 40248480 | 234 | 93.3 | 2.2.43 |
| 4 | 62 | 40408950 | 234 | 93.3 | 3.4.41 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 63 | 40448590 | 234 | 93.3 | 3.1.41 |
| 4 | 64 | 40274380 | 235 | 94.4 | 4.1.41 |
| 4 | 65 | 40276630 | 235 | 94.4 | 3.3.45 |
| 4 | 66 | 40407480 | 235 | 94.4 | 2.2.41 |
| 4 | 67 | 40432480 | 235 | 94.4 | 5.1.45 |
| 4 | 68 | 40444120 | 237 | 96.1 | 5.1.45 |
| 4 | 69 | 40404070 | 240 | 97.9 | 3.1.41 |
| 5 | 1 | 50407580 | 202 | 2 | 3.3.55 |
| 5 | 2 | 50426610 | 204 | 2.8 | 1.2.511 |
| 5 | 3 | 50436020 | 205 | 3.3 | 2.2.510 |
| 5 | 4 | 50437750 | 205 | 3.3 | 4.1.51 |
| 5 | 5 | 50276770 | 206 | 3.9 | 1.1.513 |
| 5 | 6 | 50440340 | 207 | 4.6 | 4.2.57 |
| 5 | 7 | 50244670 | 208 | 5.4 | 2.1.52 |
| 5 | 8 | 50220360 | 209 | 6.4 | 1.2.511 |
| 5 | 9 | 50437640 | 209 | 6.4 | 3.1.51 |
| 5 | 10 | 50241760 | 210 | 7.3 | 5.4.51 |
| 5 | 11 | 50429610 | 210 | 7.3 | 5.1.54 |
| 5 | 12 | 50438900 | 210 | 7.3 | 4.2.51 |
| 5 | 13 | 50438000 | 211 | 8.6 | 1.1.513 |
| 5 | 14 | 50438860 | 211 | 8.6 | 2.2.510 |
| 5 | 15 | 50210610 | 212 | 9.8 | 4.1.53 |
| 5 | 16 | 50436080 | 212 | 9.8 | 5.1.54 |
| 5 | 17 | 50211771 | 214 | 13.1 | 1.2.516 |
| 5 | 18 | 50212690 | 214 | 13.1 | 3.1.51 |
| 5 | 19 | 50244560 | 215 | 14.9 | 4.2.56 |
| 5 | 20 | 50245850 | 215 | 14.9 | 2.2.511 |
| 5 | 21 | 50435260 | 216 | 18.9 | 5.1.54 |
| 5 | 22 | 50440440 | 216 | 18.9 | 5.3.52 |
| 5 | 23 | 50408090 | 217 | 22.9 | 5.2.53 |
| 5 | 24 | 50429850 | 217 | 22.9 | 1.1.510 |
| 5 | 25 | 50406170 | 218 | 27.4 | 3.1 .51 |
| 5 | 26 | 50429910 | 218 | 27.4 | 5.1.51 |
| 5 | 27 | 50435230 | 218 | 27.4 | 2.2.511 |
| 5 | 28 | 50446610 | 218 | 27.4 | 4.2.52 |
| 5 | 29 | 50426800 | 219 | 32.1 | 1.1.514 |
| 5 | 30 | 50520980 | 220 | 36.4 | 3.1.51 |
| 5 | 31 | 50211910 | 221 | 41 | 3.3.55 |
| 5 | 32 | 50438690 | 222 | 45.7 | 4.2.56 |
| 5 | 33 | 50426600 | 223 | 50.1 | 1.1.513 |
| 5 | 34 | 50440320 | 223 | 50.1 | 5.4.54 |
| 5 | 35 | 50446700 | 223 | 50.1 | 4.2.57 |
| 5 | 36 | 50407290 | 224 | 54.6 | 3.4.51 |
| 5 | 37 | 50407300 | 224 | 54.6 | 4.1.53 |
| 5 | 38 | 50436190 | 224 | 54.6 | 1.2.515 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 39 | 59700680 | 224 | 54.6 | 2.2.520 |
| 5 | 40 | 50210900 | 225 | 58.8 | 2.2.511 |
| 5 | 41 | 50245870 | 225 | 58.8 | 5.4.54 |
| 5 | 42 | 50441060 | 225 | 58.8 | 5.4.51 |
| 5 | 43 | 50429660 | 226 | 63.1 | 5.1.51 |
| 5 | 44 | 50429810 | 227 | 66.8 | 1.1.51 |
| 5 | 45 | 50431410 | 227 | 66.8 | 5.3.51 |
| 5 | 46 | 50437710 | 227 | 66.8 | 4.1.51 |
| 5 | 47 | 50405160 | 228 | 70.3 | 5.1.55 |
| 5 | 48 | 50412670 | 228 | 70.3 | 3.4.51 |
| 5 | 49 | 50426550 | 228 | 70.3 | 2.1.52 |
| 5 | 50 | 50407220 | 229 | 73.6 | 1.1.51 |
| 5 | 51 | 50426490 | 229 | 73.6 | 2.1.52 |
| 5 | 52 | 50437680 | 230 | 76.3 | 3.1.51 |
| 5 | 53 | 50440160 | 230 | 76.3 | 4.1.53 |
| 5 | 54 | 50441290 | 230 | 76.3 | 2.2.54 |
| 5 | 55 | 50431460 | 231 | 79 | 3.4.51 |
| 5 | 56 | 50446910 | 231 | 79 | 4.3.53 |
| 5 | 57 | 50429760 | 232 | 81.8 | 2.1.52 |
| 5 | 58 | 50436220 | 232 | 81.8 | 5.1.55 |
| 5 | 59 | 50431450 | 234 | 86.8 | 3.4.51 |
| 5 | 60 | 50104140 | 235 | 88.7 | 1.1.51 |
| 5 | 61 | 50274160 | 235 | 88.7 | 2.2.511 |
| 5 | 62 | 50437610 | 235 | 88.7 | 3.1.51 |
| 5 | 63 | 50447080 | 235 | 88.7 | 4.2.52 |
| 5 | 64 | 50277210 | 237 | 91.8 | 3.3.55 |
| 5 | 65 | 50426660 | 237 | 91.8 | 2.2.511 |
| 5 | 66 | 50211830 | 239 | 94 | 1.2.516 |
| 5 | 67 | 50419860 | 239 | 94 | 4.2 .56 |
| 5 | 68 | 50403170 | 240 | 94.9 | 3.3.55 |
| 5 | 69 | 50435410 | 240 | 94.9 | 2.2.54 |
| 5 | 70 | 50209110 | 243 | 97 | 1.2.510 |
| 6 | 1 | 60502840 | 209 | 4.8 | 4.2.67 |
| 6 | 2 | 60414000 | 212 | 8.4 | 1.1.65 |
| 6 | 3 | 60439610 | 212 | 8.4 | 4.2.67 |
| 6 | 4 | 60274500 | 213 | 9.8 | 3.4.62 |
| 6 | 5 | 60241440 | 214 | 11.3 | 5.1.62 |
| 6 | 6 | 60406930 | 214 | 11.3 | 2.2.621 |
| 6 | 7 | 60502130 | 215 | 13.2 | 4.2.67 |
| 6 | 8 | 60220170 | 217 | 17.3 | 3.4.62 |
| 6 | 9 | 60502090 | 217 | 17.3 | 4.2.66 |
| 6 | 10 | 60293350 | 218 | 19.7 | 1.3.63 |
| 6 | 11 | 60403000 | 219 | 22.3 | 5.1.62 |
| 6 | 12 | 60411240 | 219 | 22.3 | 2.2.621 |
| 6 | 13 | 60444900 | 219 | 22.3 | 3.1.61 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 14 | 60407150 | 221 | 29.7 | 1.1.611 |
| 6 | 15 | 60502790 | 221 | 29.7 | 4.2.66 |
| 6 | 16 | 60417300 | 222 | 33.7 | 2.2.618 |
| 6 | 17 | 60416700 | 223 | 37.9 | 5.1.61 |
| 6 | 18 | 60424050 | 223 | 37.9 | 3.1.61 |
| 6 | 19 | 60404840 | 224 | 42.2 | 1.3.62 |
| 6 | 20 | 60420750 | 224 | 42.2 | 5.1.65 |
| 6 | 21 | 60400870 | 225 | 46.1 | 5.1.64 |
| 6 | 22 | 60420560 | 225 | 46.1 | 4.2.66 |
| 6 | 23 | 60420790 | 225 | 46.1 | 2.2.621 |
| 6 | 24 | 60444890 | 226 | 50.3 | 3.1.61 |
| 6 | 25 | 60406910 | 227 | 54.3 | 1.1.61 |
| 6 | 26 | 60502120 | 227 | 54.3 | 4.1.61 |
| 6 | 27 | 60503870 | 227 | 54.3 | 3.4.61 |
| 6 | 28 | 60503890 | 227 | 54.3 | 3.3.65 |
| 6 | 29 | 60422870 | 228 | 58.2 | 5.1.64 |
| 6 | 30 | 60414260 | 229 | 61.8 | 4.2.66 |
| 6 | 31 | 60106871 | 230 | 65.3 | 5.1.61 |
| 6 | 32 | 60400750 | 230 | 65.3 | 5.1.62 |
| 6 | 33 | 60404820 | 230 | 65.3 | 1.1.65 |
| 6 | 34 | 60501880 | 230 | 65.3 | 3.4.62 |
| 6 | 35 | 60225870 | 231 | 68.7 | 2.2.64 |
| 6 | 36 | 60404910 | 231 | 68.7 | 4.2.66 |
| 6 | 37 | 60409140 | 231 | 68.7 | 3.4.62 |
| 6 | 38 | 60292660 | 232 | 71.9 | 2.2.611 |
| 6 | 39 | 60415810 | 232 | 71.9 | 1.2.610 |
| 6 | 40 | 60416690 | 232 | 71.9 | 1.3.63 |
| 6 | 41 | 60420570 | 233 | 74.9 | 4.2.66 |
| 6 | 42 | 60423890 | 233 | 74.9 | 5.1.64 |
| 6 | 43 | 60426220 | 233 | 74.9 | 3.4.61 |
| 6 | 44 | 60400730 | 234 | 77.9 | 5.1.61 |
| 6 | 45 | 60427630 | 234 | 77.9 | 3.1.61 |
| 6 | 46 | 60403760 | 236 | 82.8 | 2.2.615 |
| 6 | 47 | 60416930 | 236 | 82.8 | 2.2.611 |
| 6 | 48 | 60502770 | 236 | 82.8 | 4.2.66 |
| 6 | 49 | 60207530 | 237 | 85 | 1.1.69 |
| 6 | 50 | 60407120 | 237 | 85 | 2.2.620 |
| 6 | 51 | 60419800 | 237 | 85 | 5.1.65 |
| 6 | 52 | 60420800 | 237 | 85 | 4.2.66 |
| 6 | 53 | 60503980 | 237 | 85 | 3.4.61 |
| 6 | 54 | 60406140 | 238 | 87 | 4.2.67 |
| 6 | 55 | 60411920 | 239 | 88.8 | 1.2.613 |
| 6 | 56 | 60422220 | 239 | 88.8 | 5.1.65 |
| 6 | 57 | 60423710 | 240 | 90.2 | 3.4.61 |
| 6 | 58 | 60428770 | 240 | 90.2 | 3.4.62 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 59 | 60245530 | 241 | 91.4 | 1.1.610 |
| 6 | 60 | 60400990 | 241 | 91.4 | 4.2.67 |
| 6 | 61 | 60400820 | 244 | 94.5 | 5.1.63 |
| 6 | 62 | 60400930 | 244 | 94.5 | 4.1.61 |
| 6 | 63 | 60407960 | 244 | 94.5 | 2.2.615 |
| 6 | 64 | 60404920 | 245 | 95.6 | 2.2.615 |
| 6 | 65 | 60419720 | 245 | 95.6 | 4.2.67 |
| 6 | 66 | 60422830 | 246 | 96.3 | 2.2.610 |
| 6 | 67 | 60423860 | 246 | 96.3 | 5.1.64 |
| 6 | 68 | 60424600 | 246 | 96.3 | 4.2.66 |
| 6 | 69 | 60407070 | 247 | 96.8 | 2.2.615 |
| 6 | 70 | 60422810 | 247 | 96.8 | 2.1.61 |
| 7 | 1 | 70435810 | 216 | 8.2 | 2.1.71 |
| 7 | 2 | 70404560 | 218 | 11.3 | 1.3.72 |
| 7 | 3 | 70251690 | 220 | 14.9 | 4.2.72 |
| 7 | 4 | 70292540 | 220 | 14.9 | 1.1.71 |
| 7 | 5 | 70442820 | 221 | 17 | 1.2.71 |
| 7 | 6 | 70403110 | 222 | 19.2 | 2.2.715 |
| 7 | 7 | 70413480 | 223 | 21.6 | 5.3.71 |
| 7 | 8 | 70500850 | 223 | 21.6 | 4.2.76 |
| 7 | 9 | 70408790 | 224 | 24.2 | 1.3.72 |
| 7 | 10 | 70415950 | 225 | 26.7 | 4.3.71 |
| 7 | 11 | 70408630 | 226 | 29.2 | 1.1.79 |
| 7 | 12 | 70446630 | 227 | 32.9 | 4.2.77 |
| 7 | 13 | 70292270 | 228 | 36.6 | 3.2.74 |
| 7 | 14 | 70413440 | 228 | 36.6 | 1.1.79 |
| 7 | 15 | 70501060 | 228 | 36.6 | 4.2.72 |
| 7 | 16 | 70207360 | 229 | 40.3 | 1.1.714 |
| 7 | 17 | 70404780 | 229 | 40.3 | 3.3.73 |
| 7 | 18 | 70003380 | 230 | 44.1 | 3.2.74 |
| 7 | 19 | 70275330 | 230 | 44.1 | 4.2.72 |
| 7 | 20 | 70430330 | 230 | 44.1 | 5.3.71 |
| 7 | 21 | 70291760 | 231 | 47.8 | 5.1.71 |
| 7 | 22 | 70209370 | 232 | 51.3 | 1.2.711 |
| 7 | 23 | 70407910 | 232 | 51.3 | 5.3.71 |
| 7 | 24 | 70415800 | 232 | 51.3 | 5.4.74 |
| 7 | 25 | 70208650 | 233 | 54.8 | 5.2.73 |
| 7 | 26 | 70246920 | 233 | 54.8 | 2.2.711 |
| 7 | 27 | 70430240 | 233 | 54.8 | 3.3.73 |
| 7 | 28 | 70406160 | 234 | 58.3 | 2.2.720 |
| 7 | 29 | 70411900 | 234 | 58.3 | 1.2.71 |
| 7 | 30 | 70415790 | 234 | 58.3 | 3.2.74 |
| 7 | 31 | 70504400 | 234 | 58.3 | 4.2.76 |
| 7 | 32 | 70402100 | 235 | 61.6 | 1.2.716 |
| 7 | 33 | 70249180 | 236 | 65 | 3.2.72 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 34 | 70275160 | 236 | 65 | 2.2.711 |
| 7 | 35 | 70427130 | 236 | 65 | 3.3.72 |
| 7 | 36 | 70430370 | 236 | 65 | 4.1.71 |
| 7 | 37 | 70502640 | 236 | 65 | 4.3.73 |
| 7 | 38 | 70504700 | 236 | 65 | 4.4.71 |
| 7 | 39 | 70250410 | 237 | 68.4 | 5.3.71 |
| 7 | 40 | 70404790 | 237 | 68.4 | 3.3.72 |
| 7 | 41 | 70430320 | 237 | 68.4 | 3.3.76 |
| 7 | 42 | 70434500 | 237 | 68.4 | 4.3.71 |
| 7 | 43 | 70414960 | 238 | 71.7 | 3.4.72 |
| 7 | 44 | 70454760 | 238 | 71.7 | 4.1.71 |
| 7 | 45 | 70501430 | 238 | 71.7 | 5.3.71 |
| 7 | 46 | 70505540 | 238 | 71.7 | 4.3.71 |
| 7 | 47 | 70277810 | 239 | 74.7 | 3.3.75 |
| 7 | 48 | 70402370 | 239 | 74.7 | 5.3.71 |
| 7 | 49 | 70408720 | 239 | 74.7 | 4.2.77 |
| 7 | 50 | 70413460 | 239 | 74.7 | 1.1.711 |
| 7 | 51 | 70407770 | 242 | 81.8 | 4.2.76 |
| 7 | 52 | 70219970 | 243 | 83.7 | 3.2.71 |
| 7 | 53 | 70504770 | 243 | 83.7 | 4.2.72 |
| 7 | 54 | 70404750 | 244 | 85.3 | 5.1.77 |
| 7 | 55 | 70402860 | 245 | 86.8 | 5.1 .73 |
| 7 | 56 | 70501030 | 245 | 86.8 | 2.2.711 |
| 7 | 57 | 70503340 | 245 | 86.8 | 4.2.72 |
| 7 | 58 | 70278700 | 246 | 88.3 | 3.4.72 |
| 7 | 59 | 70501070 | 246 | 88.3 | 4.4.71 |
| 7 | 60 | 70430920 | 247 | 89.7 | 4.3.71 |
| 7 | 61 | 70431040 | 247 | 89.7 | 2.2.715 |
| 7 | 62 | 70431310 | 247 | 89.7 | 4.1.71 |
| 7 | 63 | 70432610 | 248 | 91 | 2.1.74 |
| 7 | 64 | 70433430 | 248 | 91 | 2.1.71 |
| 7 | 65 | 70530390 | 249 | 92.1 | 4.4.71 |
| 7 | 66 | 70416770 | 250 | 93.4 | 5.4.74 |
| 7 | 67 | 70501600 | 250 | 93.4 | 5.3.71 |
| 7 | 68 | 70435710 | 253 | 96 | 2.2.711 |
| 7 | 69 | 70504100 | 253 | 96 | 2.2.720 |
| 7 | 70 | 70402230 | 254 | 96.6 | 3.2.72 |
| 8 | 1 | 80442440 | 217 | 6.4 | 3.1.82 |
| 8 | 2 | 80402360 | 219 | 8.9 | 5.3.81 |
| 8 | 3 | 80407920 | 221 | 11.5 | 5.1.89 |
| 8 | 4 | 80440530 | 221 | 11.5 | 3.1 .82 |
| 8 | 5 | 80443060 | 221 | 11.5 | 2.2.821 |
| 8 | 6 | 80411190 | 222 | 13.3 | 5.4.87 |
| 8 | 7 | 80249820 | 223 | 15 | 1.2.81 |
| 8 | 8 | 80444920 | 223 | 15 | 4.2.812 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 9 | 80111320 | 224 | 16.9 | 5.1.87 |
| 8 | 10 | 80400980 | 224 | 16.9 | 4.2.82 |
| 8 | 11 | 80441590 | 224 | 16.9 | 4.3.81 |
| 8 | 12 | 80249810 | 225 | 19.2 | 4.1.81 |
| 8 | 13 | 80424000 | 225 | 19.2 | 1.1.810 |
| 8 | 14 | 80410240 | 226 | 21.7 | 3.2.81 |
| 8 | 15 | 80443040 | 226 | 21.7 | 2.2.822 |
| 8 | 16 | 80443120 | 226 | 21.7 | 1.2.816 |
| 8 | 17 | 80444560 | 227 | 24.4 | 3.3.86 |
| 8 | 18 | 80252410 | 228 | 27.1 | 4.2 .86 |
| 8 | 19 | 80414280 | 228 | 27.1 | 4.2.82 |
| 8 | 20 | 80443990 | 228 | 27.1 | 4.2.812 |
| 8 | 21 | 80270410 | 229 | 29.9 | 5.1.89 |
| 8 | 22 | 80441340 | 230 | 32.3 | 3.1 .82 |
| 8 | 23 | 80442420 | 232 | 38.9 | 2.1.81 |
| 8 | 24 | 80507160 | 233 | 43 | 3.4.81 |
| 8 | 25 | 80411160 | 234 | 47.3 | 5.2.83 |
| 8 | 26 | 80414230 | 234 | 47.3 | 4.2.87 |
| 8 | 27 | 80416720 | 234 | 47.3 | 2.2.822 |
| 8 | 28 | 80440760 | 234 | 47.3 | 4.1.85 |
| 8 | 29 | 80250680 | 235 | 51.5 | 5.4.84 |
| 8 | 30 | 80413790 | 235 | 51.5 | 3.4.81 |
| 8 | 31 | 80414070 | 235 | 51.5 | 1.1.81 |
| 8 | 32 | 80414380 | 235 | 51.5 | 4.3.82 |
| 8 | 33 | 80441400 | 235 | 51.5 | 3.1.81 |
| 8 | 34 | 80441540 | 235 | 51.5 | 1.3.83 |
| 8 | 35 | 80221580 | 236 | 55.4 | 1.1 .87 |
| 8 | 36 | 80400920 | 237 | 59.6 | 4.1.83 |
| 8 | 37 | 80404000 | 237 | 59.6 | 5.2.83 |
| 8 | 38 | 80411140 | 237 | 59.6 | 1.1.810 |
| 8 | 39 | 80413320 | 237 | 59.6 | 4.3 .81 |
| 8 | 40 | 80502350 | 237 | 59.6 | 3.4.81 |
| 8 | 41 | 80402320 | 238 | 63.2 | 3.3.85 |
| 8 | 42 | 80412550 | 238 | 63.2 | 2.1.82 |
| 8 | 43 | 80269850 | 239 | 66.4 | 3.1.81 |
| 8 | 44 | 80441530 | 240 | 69.6 | 4.2.82 |
| 8 | 45 | 80432660 | 241 | 72.6 | 1.1.89 |
| 8 | 46 | 80440750 | 241 | 72.6 | 4.2.88 |
| 8 | 47 | 80442480 | 241 | 72.6 | 3.3.86 |
| 8 | 48 | 80500300 | 241 | 72.6 | 3.3.85 |
| 8 | 49 | 80220320 | 242 | 75.3 | 1.2.815 |
| 8 | 50 | 80443820 | 242 | 75.3 | 2.1.81 |
| 8 | 51 | 80444660 | 242 | 75.3 | 4.1 .83 |
| 8 | 52 | 80403940 | 243 | 77.6 | 4.3.83 |
| 8 | 53 | 80251300 | 246 | 83.4 | 5.1.81 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 54 | 80401000 | 246 | 83.4 | 4.2.87 |
| 8 | 55 | 80411110 | 246 | 83.4 | 5.3.82 |
| 8 | 56 | 80444970 | 246 | 83.4 | 2.1.82 |
| 8 | 57 | 80224160 | 247 | 85.2 | 2.2.821 |
| 8 | 58 | 80251770 | 247 | 85.2 | 4.2.82 |
| 8 | 59 | 80252210 | 247 | 85.2 | 5.1.89 |
| 8 | 60 | 80411050 | 247 | 85.2 | 2.1.82 |
| 8 | 61 | 80412760 | 247 | 85.2 | 3.3.86 |
| 8 | 62 | 80444550 | 248 | 86.9 | 2.2.811 |
| 8 | 63 | 80275150 | 249 | 88.7 | 5.1.87 |
| 8 | 64 | 80275750 | 249 | 88.7 | 5.4.87 |
| 8 | 65 | 80403710 | 249 | 88.7 | 1.1.81 |
| 8 | 66 | 80411020 | 249 | 88.7 | 4.3.83 |
| 8 | 67 | 80253910 | 251 | 91.4 | 4.2.86 |
| 8 | 68 | 80205700 | 252 | 92.7 | 4.2.87 |
| 8 | 69 | 80442630 | 255 | 95.4 | 2.2.818 |
| 8 | 70 | 80441390 | 256 | 96 | 1.3.85 |
| 10 | 1 | 10225300 | 227 | 19.9 | 5.2.C4 |
| 10 | 2 | 10215340 | 229 | 24.6 | 5.4.C4 |
| 10 | 3 | 10418200 | 229 | 24.6 | 3.4.C2 |
| 10 | 4 | 10214490 | 230 | 27.1 | 2.1.C2 |
| 10 | 5 | 10229440 | 230 | 27.1 | 5.1.C8 |
| 10 | 6 | 10416430 | 230 | 27.1 | 1.2.C17 |
| 10 | 7 | 10225800 | 231 | 29.8 | 5.1.C12 |
| 10 | 8 | 10421560 | 231 | 29.8 | 4.1.C5 |
| 10 | 9 | 10213800 | 232 | 32.5 | 4.2.C4 |
| 10 | 10 | 19601330 | 232 | 32.5 | 2.2.C12 |
| 10 | 11 | 10438340 | 233 | 35.5 | 4.2.C4 |
| 10 | 12 | 10401790 | 234 | 38.9 | 3.2.C2 |
| 10 | 13 | 10206420 | 235 | 42.2 | 4.2.C8 |
| 10 | 14 | 10227340 | 235 | 42.2 | 5.1.C5 |
| 10 | 15 | 10213570 | 236 | 45.6 | 1.1.C9 |
| 10 | 16 | 10214160 | 236 | 45.6 | 2.2.C12 |
| 10 | 17 | 10438930 | 236 | 45.6 | 4.2.C7 |
| 10 | 18 | 10441910 | 236 | 45.6 | 4.3.C1 |
| 10 | 19 | 10214440 | 237 | 49.2 | 5.1.C7 |
| 10 | 20 | 10429140 | 237 | 49.2 | 5.4.C7 |
| 10 | 21 | 10445270 | 237 | 49.2 | 4.2.C7 |
| 10 | 22 | 10445500 | 237 | 49.2 | 4.1.C1 |
| 10 | 23 | 10427320 | 239 | 55.8 | 1.3.C2 |
| 10 | 24 | 10434810 | 239 | 55.8 | 3.4.C2 |
| 10 | 25 | 10436810 | 239 | 55.8 | 4.2.C7 |
| 10 | 26 | 10427760 | 240 | 61.5 | 2.2.C10 |
| 10 | 27 | 10427860 | 240 | 61.5 | 1.1.C3 |
| 10 | 28 | 10437340 | 240 | 61.5 | 4.1.C3 |


| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 29 | 10445250 | 240 | 61.5 | 4.2.C5 |
| 10 | 30 | 10227270 | 241 | 66.4 | 5.3.C2 |
| 10 | 31 | 10439030 | 241 | 66.4 | 4.3.C3 |
| 10 | 32 | 10224740 | 242 | 70.8 | 3.4.C1 |
| 10 | 33 | 10402620 | 242 | 70.8 | 4.2.C2 |
| 10 | 34 | 10412970 | 242 | 70.8 | 3.3.C5 |
| 10 | 35 | 10429030 | 242 | 70.8 | 5.2.C4 |
| 10 | 36 | 10427400 | 243 | 74.8 | 2.2.C12 |
| 10 | 37 | 10439810 | 243 | 74.8 | 4.2.C7 |
| 10 | 38 | 10117180 | 244 | 78 | 5.1.C3 |
| 10 | 39 | 10229690 | 244 | 78 | 3.1.C1 |
| 10 | 40 | 10410120 | 244 | 78 | 1.2.C11 |
| 10 | 41 | 10424310 | 244 | 78 | 1.3.C3 |
| 10 | 42 | 10438920 | 244 | 78 | 5.3.C1 |
| 10 | 43 | 10433790 | 245 | 80.7 | 3.4.C2 |
| 10 | 44 | 10225000 | 246 | 83.3 | 3.3.C7 |
| 10 | 45 | 10225020 | 247 | 85.4 | 4.4.C2 |
| 10 | 46 | 10425750 | 247 | 85.4 | 2.2.C13 |
| 10 | 47 | 10426930 | 247 | 85.4 | 4.2.C5 |
| 10 | 48 | 10412960 | 248 | 87.3 | 3.2.C2 |
| 10 | 49 | 10421280 | 248 | 87.3 | 1.1.C1 |
| 10 | 50 | 10425920 | 249 | 88.8 | 5.1.C9 |
| 10 | 51 | 10433710 | 249 | 88.8 | 5.4.C5 |
| 10 | 52 | 10215440 | 250 | 90.2 | 3.2.C1 |
| 10 | 53 | 10434210 | 250 | 90.2 | 5.1.C5 |
| 10 | 54 | 10439110 | 250 | 90.2 | 4.2.C6 |
| 10 | 55 | 10442970 | 250 | 90.2 | 4.2.C3 |
| 10 | 56 | 10442810 | 251 | 91.6 | 4.2.C12 |
| 10 | 57 | 10225160 | 252 | 92.8 | 5.1.C7 |
| 10 | 58 | 10401510 | 252 | 92.8 | 4.3.C1 |
| 10 | 59 | 10422490 | 252 | 92.8 | 2.2.C15 |
| 10 | 60 | 10427920 | 252 | 92.8 | 5.3.C1 |
| 10 | 61 | 10434140 | 252 | 92.8 | 3.3.C1 |
| 10 | 62 | 10438350 | 253 | 93.9 | 4.2.C4 |
| 10 | 63 | 10219240 | 254 | 94.7 | 3.2.C3 |
| 10 | 64 | 10214660 | 255 | 95.4 | 1.1.C9 |
| 10 | 65 | 10229850 | 257 | 96.7 | 4.4.C3 |
| 10 | 66 | 10402490 | 258 | 97.2 | 3.2.C1 |
| 10 | 67 | 10427520 | 258 | 97.2 | 5.1.C5 |
| 10 | 68 | 10442910 | 258 | 97.2 | 4.2.C7 |
| 10 | 69 | 10414470 | 259 | 97.7 | 3.2.C4 |
| 10 | 70 | 10439370 | 259 | 97.7 | 4.1.C5 |

* Impact data indicates the percentage of students answering this item incorrectly on the 2005-2006
administration.
$\dagger$ Subskill information denotes the "eligible content" included in the item. This describes the specific area within the discipline tested by the item and can be resolved online at http://www.ode.state.or.us/search/results/?id=53.

Table D.3.

## Standard-Setting Ordered Item Bookmap for Science

| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 1 | 50516240 | 208 | 1.5 | 2.3.51.1 |
| 5 | 2 | 50205420 | 211 | 3.2 | 4.2.51.2 |
| 5 | 3 | 50613170 | 211 | 3.2 | 2.4.52.3 |
| 5 | 4 | 50401620 | 212 | 4 | 4.3.51.2 |
| 5 | 5 | 50414590 | 212 | 4 | 3.1.53.1 |
| 5 | 6 | 50511400 | 212 | 4 | 2.3.52.1 |
| 5 | 7 | 50412290 | 213 | 4.9 | 2.4.52.1 |
| 5 | 8 | 50401230 | 214 | 5.8 | 3.2.51.2 |
| 5 | 9 | 50000590 | 215 | 6.9 | 2.2.51.1 |
| 5 | 10 | 50400450 | 215 | 6.9 | 4.2.52.2 |
| 5 | 11 | 50219710 | 216 | 8 | 2.1.51.2 |
| 5 | 12 | 50000960 | 217 | 9.3 | 3.4.51.2 |
| 5 | 13 | 50404380 | 217 | 9.3 | 4.1.51.3 |
| 5 | 14 | 50510510 | 218 | 10.8 | 3.3.51.4 |
| 5 | 15 | 50103700 | 221 | 16.1 | 4.2.51.1 |
| 5 | 16 | 50413830 | 221 | 16.1 | 2.2.51.1 |
| 5 | 17 | 50207020 | 222 | 18.2 | 4.3.51.1 |
| 5 | 18 | 50404220 | 222 | 18.2 | 4.1.51.3 |
| 5 | 19 | 50510780 | 222 | 18.2 | 3.3.51.1 |
| 5 | 20 | 50205560 | 224 | 23.8 | 4.2.52.1 |
| 5 | 21 | 50505780 | 224 | 23.8 | 2.3.52.2 |
| 5 | 22 | 50507280 | 224 | 23.8 | 4.3.51.1 |
| 5 | 23 | 50505940 | 225 | 27.1 | 3.2.51.1 |
| 5 | 24 | 50210280 | 226 | 31 | 2.1.51.2 |
| 5 | 25 | 50219780 | 227 | 34.9 | 3.4.51.2 |
| 5 | 26 | 50000160 | 228 | 39.1 | 2.2.51.1 |
| 5 | 27 | 50505730 | 228 | 39.1 | 4.1.51.1 |
| 5 | 28 | 50503450 | 229 | 43.3 | 3.4.51.1 |
| 5 | 29 | 50505770 | 229 | 43.3 | 3.3.51.5 |
| 5 | 30 | 50507500 | 230 | 47.8 | 4.1.51.4 |
| 5 | 31 | 50110840 | 231 | 52 | 4.2.52.1 |
| 5 | 32 | 50403210 | 231 | 52 | 2.3.52.1 |
| 5 | 33 | 50505860 | 232 | 56.5 | 3.3.51.4 |
| 5 | 34 | 50508120 | 232 | 56.5 | 3.1.52.1 |
| 5 | 35 | 50413230 | 233 | 60.5 | 2.2.51.1 |
| 5 | 36 | 50504820 | 233 | 60.5 | 4.1.51.1 |
| 5 | 37 | 50516610 | 234 | 64.4 | 3.3.51.3 |
| 5 | 38 | 50100480 | 235 | 68.1 | 2.4.51.1 |
| 5 | 39 | 50400010 | 235 | 68.1 | 3.1.51.1 |
| 5 | 40 | 50413960 | 237 | 74.5 | 4.1.51.1 |
| 5 | 41 | 50404930 | 238 | 77.6 | 3.1.51.1 |
| 5 | 42 | 50204360 | 239 | 80.5 | 2.2.51.1 |
| 5 | 43 | 50414690 | 239 | 80.5 | 4.3.51.2 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 44 | 50512350 | 239 | 80.5 | 3.3.51.2 |
| 5 | 45 | 50108050 | 240 | 83.3 | 4.2.51.1 |
| 5 | 46 | 50505840 | 241 | 85 | 3.4.51.2 |
| 5 | 47 | 50510470 | 241 | 85 | 2.1.51.2 |
| 5 | 48 | 50105080 | 242 | 87.4 | 2.3.51.1 |
| 5 | 49 | 50507560 | 243 | 89.4 | 4.2.52.2 |
| 5 | 50 | 50107650 | 244 | 90.9 | 2.1.51.1 |
| 5 | 51 | 50506670 | 244 | 90.9 | 2.1.51.2 |
| 5 | 52 | 50507340 | 244 | 90.9 | 3.3.51.5 |
| 5 | 53 | 50508870 | 244 | 90.9 | 3.4.51.2 |
| 5 | 54 | 50510680 | 244 | 90.9 | 2.3.52.1 |
| 5 | 55 | 50413270 | 245 | 92.8 | 2.2.51.2 |
| 5 | 56 | 50413660 | 245 | 92.8 | 4.2.52.1 |
| 5 | 57 | 50506740 | 245 | 92.8 | 2.1.51.2 |
| 5 | 58 | 50510670 | 245 | 92.8 | 2.3.52.1 |
| 5 | 59 | 50511590 | 245 | 92.8 | 4.1.51.3 |
| 5 | 60 | 50510640 | 246 | 93.5 | 4.1.51.4 |
| 5 | 61 | 50507250 | 247 | 94.8 | 3.3.51.4 |
| 5 | 62 | 50401800 | 248 | 95.8 | 3.1.53.1 |
| 5 | 63 | 50505620 | 248 | 95.8 | 3.4.51.1 |
| 5 | 64 | 50612010 | 249 | 96.4 | 4.1.51.1 |
| 5 | 65 | 50400380 | 251 | 97.7 | 3.3.51.4 |
| 5 | 66 | 50400430 | 251 | 97.7 | 4.2.52.2 |
| 5 | 67 | 50506770 | 252 | 98.1 | 4.2.52.2 |
| 5 | 68 | 50506410 | 253 | 98.4 | 4.2.51.1 |
| 5 | 69 | 50507520 | 254 | 98.7 | 3.3.51.5 |
| 5 | 70 | 50413320 | 256 | 99.2 | 2.2.51.2 |
| 8 | 1 | 80418690 | 214 | 0.7 | 3.1.82.1 |
| 8 | 2 | 80216490 | 218 | 2.9 | 3.2.81.1 |
| 8 | 3 | 80414750 | 220 | 5 | 3.2.81.2 |
| 8 | 4 | 80416880 | 220 | 5 | 2.1.81.3 |
| 8 | 5 | 80222280 | 221 | 6.4 | 3.3.81.3 |
| 8 | 6 | 80503080 | 221 | 6.4 | 2.4.82.3 |
| 8 | 7 | 80505420 | 221 | 6.4 | 2.3.81.3 |
| 8 | 8 | 80606020 | 221 | 6.4 | 4.1.81.1 |
| 8 | 9 | 80505480 | 222 | 7.9 | 2.3.82.1 |
| 8 | 10 | 80421980 | 223 | 9.7 | 3.3.81.2 |
| 8 | 11 | 80423390 | 223 | 9.7 | 4.3.81.1 |
| 8 | 12 | 80503130 | 223 | 9.7 | 3.4.81.1 |
| 8 | 13 | 80515540 | 223 | 9.7 | 4.2.81.3 |
| 8 | 14 | 80505320 | 224 | 11.4 | 2.3.81.1 |
| 8 | 15 | 80204480 | 225 | 13.2 | 4.2.81.1 |
| 8 | 16 | 80507920 | 225 | 13.2 | 3.1.82.1 |
| 8 | 17 | 80220230 | 226 | 15 | 4.2.81.5 |
| 8 | 18 | 80210990 | 227 | 16.9 | 2.1.81.1 |

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| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 19 | 80416240 | 227 | 16.9 | 4.2.82.1 |
| 8 | 20 | 80506240 | 227 | 16.9 | 4.1.81.1 |
| 8 | 21 | 80417060 | 228 | 19.1 | 3.3.81.2 |
| 8 | 22 | 80105521 | 229 | 21.3 | 3.4.81.2 |
| 8 | 23 | 80424260 | 230 | 23.6 | 2.3.82.1 |
| 8 | 24 | 80217880 | 231 | 26.1 | 4.2.82.5 |
| 8 | 25 | 80502940 | 232 | 28.9 | 4.1.81.1 |
| 8 | 26 | 80503940 | 232 | 28.9 | 2.3.81.3 |
| 8 | 27 | 80216510 | 233 | 31.8 | 3.1.82.1 |
| 8 | 28 | 80503160 | 233 | 31.8 | 3.1.83.4 |
| 8 | 29 | 80419250 | 235 | 39.2 | 2.1.81.1 |
| 8 | 30 | 80506990 | 235 | 39.2 | 4.2.82.5 |
| 8 | 31 | 80501220 | 236 | 43.2 | 3.1.83.2 |
| 8 | 32 | 80425630 | 237 | 47.3 | 3.3.81.2 |
| 8 | 33 | 80507750 | 237 | 47.3 | 4.3.81.1 |
| 8 | 34 | 80003690 | 238 | 51.4 | 2.2.81.3 |
| 8 | 35 | 80205830 | 238 | 51.4 | 4.2.81.1 |
| 8 | 36 | 80606910 | 238 | 51.4 | 3.2.81.4 |
| 8 | 37 | 80212670 | 239 | 55.4 | 4.2.81.1 |
| 8 | 38 | 80222730 | 239 | 55.4 | 3.3.81.4 |
| 8 | 39 | 80100011 | 240 | 59.4 | 4.2.81.4 |
| 8 | 40 | 80415610 | 240 | 59.4 | 2.3.82.1 |
| 8 | 41 | 80416250 | 241 | 63 | 4.2.82.1 |
| 8 | 42 | 80420880 | 242 | 66.9 | 3.1.83.1 |
| 8 | 43 | 80100910 | 243 | 70.4 | 2.2.81.3 |
| 8 | 44 | 80211410 | 243 | 70.4 | 4.2.81.3 |
| 8 | 45 | 80200630 | 244 | 73.8 | 3.3.81.1 |
| 8 | 46 | 80415360 | 244 | 73.8 | 2.3.82.1 |
| 8 | 47 | 80222160 | 245 | 77 | 4.2.81.4 |
| 8 | 48 | 80424300 | 245 | 77 | 2.4.82.3 |
| 8 | 49 | 80415720 | 246 | 79.8 | 2.4.82.1 |
| 8 | 50 | 80500410 | 246 | 79.8 | 4.2.82.5 |
| 8 | 51 | 80606800 | 246 | 79.8 | 3.2.81.4 |
| 8 | 52 | 80213560 | 247 | 82.3 | 2.1.81.1 |
| 8 | 53 | 80506920 | 247 | 82.3 | 4.2.82.2 |
| 8 | 54 | 80424840 | 248 | 84.8 | 3.2.81.3 |
| 8 | 55 | 80416090 | 249 | 86.7 | 2.1.81.1 |
| 8 | 56 | 80606390 | 250 | 88.6 | 4.2.82.4 |
| 8 | 57 | 80416260 | 251 | 90.4 | 4.2.82.1 |
| 8 | 58 | 80418900 | 251 | 90.4 | 3.1.82.1 |
| 8 | 59 | 80503920 | 251 | 90.4 | 2.4.81.1 |
| 8 | 60 | 80607940 | 251 | 90.4 | 3.2.81.1 |
| 8 | 61 | 80415570 | 252 | 91.8 | 2.3.81.3 |
| 8 | 62 | 80204440 | 253 | 93 | 2.1.81.2 |
| 8 | 63 | 80224310 | 253 | 93 | 4.2.81.5 |


| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 64 | 80412760 | 254 | 94 | 3.1.83.3 |
| 8 | 65 | 80424930 | 254 | 94 | 2.4.82.2 |
| 8 | 66 | 80220580 | 255 | 94.9 | 4.2.82.6 |
| 8 | 67 | 80415740 | 255 | 94.9 | 2.2.81.1 |
| 8 | 68 | 80210720 | 257 | 96.4 | 2.2.81.1 |
| 8 | 69 | 80417070 | 258 | 97 | 3.3.81.4 |
| 8 | 70 | 80507120 | 258 | 97 | 4.2.82.1 |
| 10 | 1 | 10206890 | 221 | 3 | 3.3.C1.2 |
| 10 | 2 | 10435440 | 222 | 3.4 | 4.2.C1.3 |
| 10 | 3 | 10500240 | 222 | 3.4 | 2.1.C1.3 |
| 10 | 4 | 10210130 | 223 | 4.6 | 4.1.C1.1 |
| 10 | 5 | 10218060 | 224 | 5.9 | 3.1.C3.7 |
| 10 | 6 | 10206510 | 225 | 6.7 | 3.3.C1.1 |
| 10 | 7 | 10217930 | 225 | 6.7 | 2.2.C1.1 |
| 10 | 8 | 10511740 | 225 | 6.7 | 4.3.C1.2 |
| 10 | 9 | 10440460 | 227 | 9.3 | 3.4.C1.1 |
| 10 | 10 | 10510840 | 227 | 9.3 | 4.2.C1.3 |
| 10 | 11 | 10213350 | 228 | 11.5 | 2.4.C1.2 |
| 10 | 12 | 10218260 | 228 | 11.5 | 4.2.C2.2 |
| 10 | 13 | 10511010 | 228 | 11.5 | 3.1.C3.5 |
| 10 | 14 | 10511700 | 228 | 11.5 | 4.3.C1.1 |
| 10 | 15 | 10510070 | 229 | 13.6 | 2.1.C1.1 |
| 10 | 16 | 10214690 | 231 | 17.1 | 4.2.C1.1 |
| 10 | 17 | 10218070 | 231 | 17.1 | 2.4.C2.2 |
| 10 | 18 | 10221040 | 231 | 17.1 | 3.4.C1.2 |
| 10 | 19 | 10510870 | 232 | 19.6 | 3.1.C3.4 |
| 10 | 20 | 10221470 | 233 | 22.3 | 2.1.C1.2 |
| 10 | 21 | 10434100 | 233 | 22.3 | 4.2.C1.3 |
| 10 | 22 | 10221310 | 234 | 23.7 | 3.2.C1.5 |
| 10 | 23 | 10200581 | 235 | 26.6 | 2.4.C2.3 |
| 10 | 24 | 10434280 | 235 | 26.6 | 4.2.C2.4 |
| 10 | 25 | 10218250 | 236 | 29.8 | 3.1.C3.1 |
| 10 | 26 | 10508450 | 237 | 33.3 | 3.4.C1.5 |
| 10 | 27 | 10220660 | 238 | 36.6 | 2.1.C1.1 |
| 10 | 28 | 10211910 | 240 | 44 | 2.2.C1.1 |
| 10 | 29 | 10005800 | 241 | 49.1 | 3.2.C1.2 |
| 10 | 30 | 10221201 | 241 | 49.1 | 3.4.C1.4 |
| 10 | 31 | 10211950 | 242 | 52 | 4.1.C1.1 |
| 10 | 32 | 10436760 | 242 | 52 | 2.4.C2.4 |
| 10 | 33 | 10006220 | 243 | 56.6 | 2.1.C1.2 |
| 10 | 34 | 10200320 | 243 | 56.6 | 4.2.C1.3 |
| 10 | 35 | 10439270 | 243 | 56.6 | 3.2.C1.4 |
| 10 | 36 | 10436830 | 244 | 61.4 | 3.1.C3.6 |
| 10 | 37 | 10511750 | 244 | 61.4 | 4.2.C2.5 |
| 10 | 38 | 10200561 | 245 | 64.4 | 2.4.C2.3 |


| Grade | Order of Difficulty | Item ID | Item Difficulty | Impact Data* | Subskill No. $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 39 | 10500850 | 245 | 64.4 | 4.2.C2.3 |
| 10 | 40 | 10442410 | 246 | 68.9 | 4.3.C1.2 |
| 10 | 41 | 10511820 | 246 | 68.9 | 2.4.C1.1 |
| 10 | 42 | 10005890 | 247 | 73.2 | 3.1.C3.2 |
| 10 | 43 | 10108700 | 247 | 73.2 | 2.4.C2.2 |
| 10 | 44 | 10440350 | 247 | 73.2 | 4.2.C1.1 |
| 10 | 45 | 10509520 | 248 | 75.5 | 2.3.C1.1 |
| 10 | 46 | 10213000 | 249 | 79.3 | 4.3.C1.1 |
| 10 | 47 | 10435260 | 250 | 81.2 | 3.1.C3.6 |
| 10 | 48 | 10437320 | 250 | 81.2 | 2.4.C2.1 |
| 10 | 49 | 10210480 | 251 | 84.6 | 2.1.C1.1 |
| 10 | 50 | 10500860 | 251 | 84.6 | 3.1.C3.5 |
| 10 | 51 | 10200541 | 252 | 87.5 | 2.4.C2.3 |
| 10 | 52 | 10433690 | 252 | 87.5 | 4.2.C2.5 |
| 10 | 53 | 10006660 | 253 | 88.8 | 4.2.C1.1 |
| 10 | 54 | 10434210 | 253 | 88.8 | 3.3.C1.2 |
| 10 | 55 | 10101850 | 254 | 91.4 | 4.2.C1.2 |
| 10 | 56 | 10509270 | 254 | 91.4 | 2.4.C1.2 |
| 10 | 57 | 10510810 | 254 | 91.4 | 4.2.C1.3 |
| 10 | 58 | 10220860 | 255 | 92.4 | 2.1.C1.1 |
| 10 | 59 | 10436000 | 255 | 92.4 | 3.1.C3.2 |
| 10 | 60 | 10212210 | 256 | 93 | 3.2.C1.2 |
| 10 | 61 | 10440750 | 256 | 93 | 2.2.C1.1 |
| 10 | 62 | 10227100 | 257 | 94.9 | 4.1.C1.1 |
| 10 | 63 | 10440530 | 257 | 94.9 | 4.2.C2.3 |
| 10 | 64 | 10212140 | 258 | 95.6 | 4.3.C1.2 |
| 10 | 65 | 10434310 | 258 | 95.6 | 3.1.C3.7 |
| 10 | 66 | 10509400 | 259 | 96 | 2.4.C2.4 |
| 10 | 67 | 10201190 | 260 | 97.3 | 3.1.C3.3 |
| 10 | 68 | 10221540 | 261 | 97.5 | 3.1.C3.1 |
| 10 | 69 | 10440580 | 262 | 97.8 | 2.2.C1.2 |
| 10 | 70 | 10218390 | 263 | 98.5 | 4.3.C1.1 |

* Impact data indicates the percentage of students answering this item incorrectly on the 2005-2006 administration.
$\dagger \quad$ Subskill information denotes the "eligible content" included in the item. This describes the specific area within the discipline tested by the item and can be resolved online at http://www.ode.state.or.us/search/results/?id=53.


## APPENDIX E

## Initial Bookmarks Set By Individual Panelists

Table E.1.
Median Initial Individual Bookmarks Set for Reading/Literature

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 3 | 199 | 203 | 215 |
| 5 | 210 | 217 | 228 |
| 8 | 224 | 230 | 239 |
| 10 | 231 | 237 | 248 |

Table E.2.
Median Initial Individual Bookmarks Set for Math

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 3 | 200 | 205 | 215 |
| 5 | 214 | 217 | 228 |
| 8 | 225 | 230 | 241 |
| 10 | 232 | 239 | 247 |

Table E.1.
Median Initial Individual Bookmarks Set for Science

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 5 | 216 | 225 | 238 |
| 8 | 227 | 234 | 246 |
| 10 | 234 | 240 | 248 |

## APPENDIX F

Consensus Bookmarks Set Across Grade Spans
Table F.1.
Consensus Bookmarks Set for Reading/Literature

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 3 | 199 | 203 | 216 |
| 5 | 209 | 218 | 230 |
| 8 | 224 | 230 | 241 |
| 10 | 231 | 236 | 248 |

Table F.2.
Consensus Bookmarks Set for Math

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 3 | 201 | 204 | 215 |
| 5 | 214 | 218 | 230 |
| 8 | 225 | 230 | 241 |
| 10 | 231 | 236 | 246 |

Table F.3.
Consensus Bookmarks Set for Science

| Grade | Nearly Meets | Meets standards | Exceeds standards |
| :---: | :---: | :---: | :---: |
| 5 | 216 | 225 | 238 |
| 8 | 229 | 234 | 246 |
| 10 | 235 | 240 | 249 |

## Appendix G

## Research and Impact Data

Table G.1.
Cut Scores for Reading/Literature, Meets and Exceeds Standards

|  | Meets standards |  | Exceeds standards |  | Meets and <br> Exceeds |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | RIT <br> score | Estimated overall percent <br> of students at or above <br> cut (excludes exceeds) | RIT <br> score | Estimated overall <br> percent of students <br> at or above cut | Estimated <br> percent of <br> students rated <br> as proficient |
| 3 | 204 | $47.5 \%$ | 218 | $34.2^{2} \%$ | $81.7 \%$ |
| $4^{*}$ | 211 | $45.6 \%$ | 223 | $34.0 \%$ | $79.6 \%$ |
| 5 | 218 | $45.8 \%$ | 230 | $25.6 \%$ | $71.4 \%$ |
| $6^{*}$ | 222 | $45.1 \%$ | 234 | $25.3 \%$ | $70.4 \%$ |
| $7^{*}$ | 227 | $44.1 \%$ | 239 | $25.2 \%$ | $69.3 \%$ |
| 8 | 231 | $43.9 \%$ | 241 | $21.6 \%$ | $65.5 \%$ |
| 10 | 236 | $47.6 \%$ | 248 | $16.9 \%$ | $64.6 \%$ |

* interpolated score based on scores set by participants

Table G.2.
Cut Scores for Math, Meets and Exceeds Standards

|  | Meets standards |  | Exceeds standards |  | Meets and <br> Exceeds |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | RIT <br> score | Estimated overall percent <br> of students at or above <br> cut (excludes exceeds) | RIT <br> score | Estimated overall <br> percent of students <br> at or above cut | Estimated <br> percent of <br> students rated <br> as proficient |
| 3 | 205 | $49.7 \%$ | 217 | $27.1 \%$ | $76.7 \%$ |
| $4^{*}$ | 212 | $48.1 \%$ | 225 | $28.0 \%$ | $76.1 \%$ |
| 5 | 218 | $46.1 \%$ | 229 | $26.4 \%$ | $72.6 \%$ |
| $6^{*}$ | 221 | $42.2 \%$ | 232 | $28.1 \%$ | $70.3 \%$ |
| $7^{*}$ | 226 | $42.5 \%$ | 238 | $28.3 \%$ | $70.8 \%$ |
| 8 | 230 | $40.3 \%$ | 241 | $27.4 \%$ | $67.7 \%$ |
| 10 | 236 | $37.7 \%$ | 246 | $16.7 \%$ | $54.4 \%$ |

* interpolated score based on scores set by participants

Table G.3.
Cut Scores for Science, Meets and Exceeds Standards

|  | Meets standards |  | Exceeds standards |  | Meets and <br> Exceeds |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | RIT <br> score | Estimated overall percent <br> of students at or above <br> cut (excludes exceeds) | RIT <br> score | Estimated overall <br> percent of students <br> at or above cut | Estimated <br> percent of <br> students rated <br> as proficient |
| 5 | 225 | $50.5 \%$ | 238 | $22.4 \%$ | $72.9 \%$ |
| 8 | 234 | $44.2 \%$ | 246 | $20.2 \%$ | $64.4 \%$ |
| 10 | 240 | $35.3 \%$ | 249 | $20.7 \%$ | $56.0 \%$ |

Table G.4.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Reading, Grade 3

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 200 | 203 | 215 |
| $\mathbf{3}$ | 199 | 203 | 215 |
| $\mathbf{4}$ | 198 | 201 | 212 |
| $\mathbf{5}$ | 194 | 201 | 216 |
| $\mathbf{6}$ | 200 | 201 | 216 |
| $\mathbf{7}$ | 199 | 203 | 214 |
| $\mathbf{8}$ | 198 | 201 | 216 |
| $\mathbf{9}$ | 199 | 204 | 219 |
| $\mathbf{1 0}$ | 198 | 203 | 215 |
| $\mathbf{1 1}$ | 198 | 202 | 215 |
| $\mathbf{1 2}$ | 199 | 203 | 216 |
| $\mathbf{1 3}$ | 198 | 204 | 212 |
| $\mathbf{1 4}$ | 199 | 204 | 213 |
| $\mathbf{1 5}$ | 199 | 203 | 213 |
| $\mathbf{1 6}$ | 193 | 199 | 215 |
| $\mathbf{1 7}$ | 200 | 208 | 215 |
| $\mathbf{1 8}$ | 198 | 203 | 212 |
| $\mathbf{1 9}$ | 201 | 214 | 224 |
| $\mathbf{2 0}$ | 199 | 203 | 215 |
| Median | 199 | 203 | 215 |
| Maximum | 201 | 214 | 224 |
| Minimum | 193 | 199 | 212 |
| $\mathbf{S D}$ | 1.92 | 3.16 | 2.75 |

Table G.5.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Reading, Grade 5

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 208 | 216 | 228 |
| $\mathbf{3}$ | 211 | 218 | 231 |
| $\mathbf{4}$ | 218 | 221 | 234 |
| $\mathbf{5}$ | 213 | 221 | 228 |
| $\mathbf{6}$ | 211 | 221 | 229 |
| $\mathbf{7}$ | 211 | 220 | 229 |
| $\mathbf{8}$ | 209 | 216 | 228 |
| $\mathbf{9}$ | 211 | 216 | 226 |
| $\mathbf{1 0}$ | 209 | 216 | 226 |
| $\mathbf{1 1}$ | 209 | 216 | 228 |
| $\mathbf{1 2}$ | 211 | 217 | 227 |
| $\mathbf{1 3}$ | 211 | 217 | 228 |
| $\mathbf{1 4}$ | 209 | 211 | 228 |
| $\mathbf{1 5}$ | 209 | 214 | 226 |
| $\mathbf{1 6}$ | 211 | 220 | 229 |
| $\mathbf{1 7}$ | 209 | 217 | 229 |
| $\mathbf{1 8}$ | 208 | 214 | 227 |
| $\mathbf{1 9}$ | 211 | 219 | 235 |
| $\mathbf{2 0}$ | 210 | 220 | 231 |
| $\mathbf{2 2}$ | 209 | 218 | 230 |
| $\mathbf{2 3}$ | 211 | 216 | 222 |
| $\mathbf{2 4}$ | 209 | 219 | 234 |
| Median | 210 | 217 | 228 |
| Maximum | 218 | 221 | 235 |
| Minimum | 208 | 211 | 222 |
| SD | 2.13 | 2.59 | 2.96 |

Table G.6.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Reading, Grade 8

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 220 | 228 | 237 |
| $\mathbf{3}$ | 223 | 234 | 241 |
| $\mathbf{4}$ | 224 | 230 | 239 |
| $\mathbf{5}$ | 220 | 230 | 236 |
| $\mathbf{6}$ | 222 | 230 | 238 |
| $\mathbf{7}$ | 221 | 230 | 239 |
| $\mathbf{8}$ | 224 | 232 | 239 |
| $\mathbf{9}$ | 224 | 230 | 241 |
| $\mathbf{1 0}$ | 223 | 232 | 239 |
| $\mathbf{1 1}$ | 225 | 234 | 242 |
| $\mathbf{1 2}$ | 226 | 234 | 242 |
| $\mathbf{1 3}$ | 226 | 233 | 240 |
| $\mathbf{1 4}$ | 224 | 233 | 239 |
| $\mathbf{1 5}$ | 223 | 229 | 238 |
| $\mathbf{1 6}$ | 224 | 231 | 237 |
| $\mathbf{1 7}$ | 224 | 231 | 239 |
| $\mathbf{1 8}$ | 225 | 230 | 239 |
| $\mathbf{1 9}$ | 220 | 228 | 237 |
| $\mathbf{2 0}$ | 224 | 230 | 238 |
| $\mathbf{2 2}$ | 225 | 230 | 237 |
| Median | 224 | 230 | 239 |
| Maximum | 226 | 234 | 242 |
| Minimum | 220 | 228 | 236 |
| SD | 1.87 | 1.88 | 1.69 |

Table G.7.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Reading, Grade 10

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 234 | 240 | 249 |
| $\mathbf{3}$ | 229 | 237 | 249 |
| $\mathbf{4}$ | 234 | 237 | 243 |
| $\mathbf{5}$ | 232 | 235 | 248 |
| $\mathbf{6}$ | 229 | 237 | 248 |
| $\mathbf{7}$ | 227 | 237 | 248 |
| $\mathbf{8}$ | 233 | 240 | 249 |
| $\mathbf{9}$ | 230 | 239 | 249 |
| $\mathbf{1 0}$ | 232 | 239 | 248 |
| $\mathbf{1 1}$ | 229 | 240 | 245 |
| $\mathbf{1 2}$ | 232 | 240 | 250 |
| $\mathbf{1 3}$ | 227 | 237 | 250 |
| $\mathbf{1 4}$ | 230 | 237 | 249 |
| $\mathbf{1 5}$ | 232 | 239 | 245 |
| $\mathbf{1 6}$ | 231 | 237 | 248 |
| $\mathbf{1 7}$ | 227 | 237 | 248 |
| $\mathbf{1 8}$ | 231 | 237 | 249 |
| Median | 231 | 237 | 248 |
| Maximum | 234 | 240 | 250 |
| Minimum | 227 | 235 | 243 |
| SD | 2.29 | 1.52 | 1.89 |

Table G.8.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Math, Grade 3

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 200 | 203 | 211 |
| $\mathbf{3}$ | 202 | 209 | 224 |
| $\mathbf{4}$ | 200 | 203 | 215 |
| $\mathbf{5}$ | 200 | 203 | 218 |
| $\mathbf{6}$ | 193 | 205 | 213 |
| $\mathbf{7}$ | 200 | 205 | 214 |
| $\mathbf{8}$ | 202 | 207 | 213 |
| $\mathbf{9}$ | 198 | 203 | 215 |
| $\mathbf{1 0}$ | 201 | 204 | 215 |
| $\mathbf{1 1}$ | 200 | 205 | 218 |
| $\mathbf{1 2}$ | 202 | 206 | 218 |
| $\mathbf{1 3}$ | 203 | 206 | 217 |
| $\mathbf{1 4}$ | 200 | 204 | 215 |
| $\mathbf{1 5}$ | 202 | 205 | 218 |
| $\mathbf{1 6}$ | 201 | 204 | 215 |
| $\mathbf{1 7}$ | 200 | 205 | 218 |
| $\mathbf{1 8}$ | 201 | 205 | 215 |
| $\mathbf{1 9}$ | 202 | 205 | 214 |
| $\mathbf{2 0}$ | 196 | 202 | 214 |
| Median | 200 | 205 | 215 |
| Maximum | 203 | 209 | 224 |
| Minimum | 193 | 202 | 211 |
| SD | 2.36 | 1.63 | 2.84 |

Table G.9.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Math, Grade 5

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 210 | 215 | 225 |
| $\mathbf{2}$ | 215 | 219 | 230 |
| $\mathbf{3}$ | 209 | 216 | 230 |
| $\mathbf{4}$ | 214 | 217 | 227 |
| $\mathbf{5}$ | 214 | 217 | 223 |
| $\mathbf{8}$ | 214 | 216 | 227 |
| $\mathbf{9}$ | 214 | 217 | 227 |
| $\mathbf{1 0}$ | 212 | 218 | 239 |
| $\mathbf{1 1}$ | 211 | 218 | 227 |
| $\mathbf{1 2}$ | 214 | 218 | 235 |
| $\mathbf{1 3}$ | 215 | 218 | 225 |
| $\mathbf{1 4}$ | 214 | 217 | 229 |
| $\mathbf{1 5}$ | 214 | 216 | 229 |
| $\mathbf{1 6}$ | 214 | 216 | 229 |
| $\mathbf{1 7}$ | 212 | 219 | 231 |
| $\mathbf{1 8}$ | 214 | 216 | 229 |
| $\mathbf{1 9}$ | 210 | 218 | 227 |
| $\mathbf{2 0}$ | 214 | 216 | 227 |
| Median | 214 | 217 | 228 |
| Maximum | 215 | 219 | 239 |
| Minimum | 209 | 215 | 223 |
| SD | 1.85 | 1.16 | 3.69 |

Table G.10.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Math, Grade 8

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| 2 | 225 | 228 | 237 |
| 3 | 226 | 232 | 238 |
| 4 | 226 | 230 | 241 |
| 5 | 224 | 228 | 239 |
| 6 | 225 | 228 | 239 |
| 7 | 224 | 228 | 237 |
| 8 | 228 | 230 | 241 |
| 9 | 223 | 233 | 241 |
| 10 | 224 | 228 | 241 |
| 11 | 224 | 228 | 237 |
| 12 | 225 | 233 | 241 |
| 13 | 224 | 228 | 241 |
| 14 | 224 | 234 | 239 |
| 15 | 225 | 230 | 241 |
| 16 | 225 | 234 | 241 |
| 17 | 226 | 234 | 241 |
| 18 | 225 | 233 | 241 |
| 19 | 228 | 234 | 241 |
| 20 | 226 | 233 | 246 |
| 22 | 225 | 233 | 241 |
| Median | 225 | 230 | 241 |
| Maximum | 228 | 234 | 246 |
| Minimum | 223 | 228 | 237 |
| SD | 1.29 | 2.54 | 2.07 |

Table G.11.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Math, Grade 10

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 231 | 236 | 245 |
| $\mathbf{3}$ | 236 | 238 | 247 |
| $\mathbf{4}$ | 236 | 239 | 247 |
| $\mathbf{5}$ | 234 | 239 | 248 |
| $\mathbf{6}$ | 237 | 242 | 250 |
| $\mathbf{7}$ | 231 | 239 | 249 |
| $\mathbf{8}$ | 235 | 237 | 247 |
| $\mathbf{9}$ | 232 | 239 | 244 |
| $\mathbf{1 0}$ | 229 | 244 | 252 |
| $\mathbf{1 1}$ | 231 | 240 | 250 |
| $\mathbf{1 2}$ | 230 | 237 | 247 |
| $\mathbf{1 3}$ | 230 | 236 | 242 |
| $\mathbf{1 4}$ | 230 | 240 | 250 |
| $\mathbf{1 5}$ | 230 | 239 | 247 |
| $\mathbf{1 6}$ | 232 | 238 | 247 |
| $\mathbf{1 7}$ | 230 | 237 | 244 |
| $\mathbf{1 8}$ | 234 | 239 | 249 |
| $\mathbf{1 9}$ | 232 | 237 | 244 |
| $\mathbf{2 0}$ | 237 | 242 | 247 |
| Median | 232 | 239 | 247 |
| Maximum | 237 | 244 | 252 |
| Minimum | 229 | 236 | 242 |
| SD | 2.65 | 2.12 | 2.54 |

Table G.12.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Science, Grade 5

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| 1 | 218 | 224 | 236 |
| 2 | 212 | 225 | 241 |
| 3 | 211 | 224 | 229 |
| 4 | 216 | 228 | 242 |
| 5 | 215 | 224 | 235 |
| 6 | 216 | 225 | 240 |
| 7 | 216 | 227 | 238 |
| 8 | 216 | 228 | 239 |
| 9 | 213 | 228 | 243 |
| 10 | 216 | 226 | 237 |
| 11 | 219 | 225 | 237 |
| 12 | 217 | 228 | 236 |
| 13 | 216 | 225 | 233 |
| 14 | 215 | 228 | 236 |
| 15 | 212 | 225 | 238 |
| 16 | 216 | 225 | 238 |
| 17 | 226 | 230 | 238 |
| 18 | 218 | 225 | 238 |
| 19 | 208 | 225 | 238 |
| 20 | 213 | 225 | 238 |
| Median | 216 | 225 | 238 |
| Maximum | 226 | 230 | 243 |
| Minimum | 208 | 224 | 229 |
| SD | 3.65 | 1.75 | 3.07 |

Table G.13.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Science, Grade 8

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 227 | 234 | 246 |
| $\mathbf{2}$ | 227 | 236 | 245 |
| $\mathbf{3}$ | 231 | 236 | 246 |
| $\mathbf{4}$ | 230 | 237 | 246 |
| $\mathbf{5}$ | 227 | 231 | 242 |
| $\mathbf{6}$ | 233 | 237 | 248 |
| $\mathbf{7}$ | 225 | 233 | 246 |
| $\mathbf{8}$ | 228 | 234 | 246 |
| $\mathbf{9}$ | 230 | 233 | 245 |
| $\mathbf{1 0}$ | 231 | 234 | 249 |
| $\mathbf{1 1}$ | 229 | 233 | 245 |
| $\mathbf{1 2}$ | 223 | 234 | 246 |
| $\mathbf{1 3}$ | 226 | 231 | 246 |
| $\mathbf{1 4}$ | 225 | 234 | 244 |
| $\mathbf{1 5}$ | 230 | 232 | 245 |
| $\mathbf{1 6}$ | 225 | 234 | 247 |
| $\mathbf{1 7}$ | 227 | 231 | 247 |
| $\mathbf{1 8}$ | 231 | 236 | 245 |
| $\mathbf{1 9}$ | 226 | 231 | 245 |
| $\mathbf{2 2}$ | 229 | 235 | 246 |
| Median | 227 | 234 | 246 |
| Maximum | 233 | 237 | 249 |
| Minimum | 223 | 231 | 242 |
| SD | 2.62 | 1.96 | 1.45 |
|  |  |  |  |

Table G.14.
Standard Setting, Step 1RIT Score of Recommended Bookmark Question by Each Participant for Science, Grade 10

| Participant | Nearly Meets | Meets | Exceeds |
| :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 233 | 240 | 251 |
| $\mathbf{3}$ | 233 | 240 | 249 |
| $\mathbf{4}$ | 237 | 241 | 247 |
| $\mathbf{5}$ | 234 | 240 | 249 |
| $\mathbf{6}$ | 237 | 241 | 247 |
| $\mathbf{7}$ | 238 | 244 | 247 |
| $\mathbf{8}$ | 235 | 241 | 248 |
| $\mathbf{9}$ | 234 | 241 | 249 |
| $\mathbf{1 0}$ | 233 | 236 | 248 |
| $\mathbf{1 1}$ | 233 | 240 | 252 |
| $\mathbf{1 2}$ | 235 | 241 | 249 |
| $\mathbf{1 3}$ | 232 | 241 | 250 |
| $\mathbf{1 4}$ | 233 | 238 | 245 |
| $\mathbf{1 5}$ | 232 | 240 | 252 |
| $\mathbf{1 6}$ | 234 | 237 | 243 |
| $\mathbf{1 7}$ | 234 | 238 | 243 |
| Median | 234 | 240 | 248 |
| Maximum | 238 | 244 | 252 |
| Minimum | 232 | 236 | 243 |
| SD | 1.8 | 1.91 | 2.72 |

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## Appendix H

## Panelist Evaluations

Question \#1. The Bookmark Procedure was well described.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $0.0 \%$ | $1.9 \%$ | $7.2 \%$ | $61.7 \%$ | $29.2 \%$ | $90.9 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $10.5 \%$ | $57.9 \%$ | $31.6 \%$ | $89.5 \%$ |
|  | 5 | 18 | $0.0 \%$ | $11.1 \%$ | $16.7 \%$ | $44.4 \%$ | $27.8 \%$ | $72.2 \%$ |
|  | 8 | 20 | $0.0 \%$ | $5.0 \%$ | $0.0 \%$ | $65.0 \%$ | $30.0 \%$ | $95.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $68.4 \%$ | $31.6 \%$ | $100.0 \%$ |
| Reading $/$ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $57.9 \%$ | $42.1 \%$ | $100.0 \%$ |
|  | 5 | 22 | $0.0 \%$ | $0.0 \%$ | $4.5 \%$ | $68.2 \%$ | $27.3 \%$ | $95.5 \%$ |
|  | 8 | 20 | $0.0 \%$ | $5.0 \%$ | $15.0 \%$ | $55.0 \%$ | $25.0 \%$ | $80.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $0.0 \%$ | $18.8 \%$ | $50.0 \%$ | $31.3 \%$ | $81.3 \%$ |

Question \#2. The training on bookmark placement made the task clear to me.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + Strongly Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 0.0\% | 3.3\% | 9.6\% | 61.7\% | 25.4\% | 87.1\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 10.5\% | 63.2\% | 26.3\% | 89.5\% |
|  | 5 | 18 | 0.0\% | 11.1\% | 16.7\% | 55.6\% | 16.7\% | 72.3\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 5.0\% | 75.0\% | 20.0\% | 95.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 10.5\% | 57.9\% | 31.6\% | 89.5\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 5.3\% | 52.6\% | 42.1\% | 94.7\% |
|  | 5 | 22 | 0.0\% | 4.5\% | 9.1\% | 50.0\% | 36.4\% | 86.4\% |
|  | 8 | 20 | 0.0\% | 10.0\% | 15.0\% | 50.0\% | 25.0\% | 75.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 6.3\% | 68.8\% | 25.0\% | 93.8\% |
| Science | 5 | 20 | 0.0\% | 10.0\% | 5.0\% | 50.0\% | 35.0\% | 85.0\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 15.0\% | 80.0\% | 5.0\% | 85.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 6.3\% | 81.3\% | 12.5\% | 93.8\% |

Question \#3. The training materials were helpful.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + Strongly Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 0.0\% | 1.0\% | 11.5\% | 66.5\% | 21.1\% | 87.6\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 5.3\% | 68.4\% | 26.3\% | 94.7\% |
|  | 5 | 18 | 0.0\% | 0.0\% | 16.7\% | 72.2\% | 11.1\% | 83.3\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 10.0\% | 70.0\% | 20.0\% | 90.0\% |
|  | 10 | 19 | 0.0\% | 5.3\% | 5.3\% | 57.9\% | 31.6\% | 89.5\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 5.3\% | 78.9\% | 15.8\% | 94.7\% |
|  | 5 | 22 | 0.0\% | 0.0\% | 9.1\% | 63.6\% | 27.3\% | 90.9\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 25.0\% | 60.0\% | 10.0\% | 70.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 18.8\% | 56.3\% | 25.0\% | 81.3\% |
| Science | 5 | 20 | 0.0\% | 0.0\% | 5.0\% | 60.0\% | 35.0\% | 95.0\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 20.0\% | 75.0\% | 5.0\% | 80.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 6.3\% | 68.8\% | 25.0\% | 93.8\% |

Question \#4. The goals for the Bookmark Procedure were clear.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 208 | 0.0\% | 7.2\% | 9.1\% | 57.7\% | 26.0\% | 83.7\% |
| Mathematics | 3 | 19 | 0.0\% | 5.3\% | 10.5\% | 63.2\% | 21.1\% | 84.3\% |
|  | 5 | 18 | 0.0\% | 11.1\% | 16.7\% | 55.6\% | 16.7\% | $72.3 \%$ |
|  | 8 | 20 | 0.0\% | 0.0\% | 10.0\% | 60.0\% | 30.0\% | 90.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 15.8\% | 63.2\% | 21.1\% | 84.3\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 5.3\% | 0.0\% | 52.6\% | 42.1\% | 94.7\% |
|  | 5 | 21 | 0.0\% | 4.8\% | 0.0\% | 61.9\% | 33.3\% | 95.2\% |
|  | 8 | 20 | 0.0\% | 20.0\% | 5.0\% | 65.0\% | 10.0\% | 75.0\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 6.3\% | 43.8\% | 37.5\% | 81.3\% |
| Science | 5 | 20 | 0.0\% | 5.0\% | 0.0\% | 55.0\% | 40.0\% | 95.0\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 25.0\% | 40.0\% | 20.0\% | 60.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 12.5\% | 75.0\% | 12.5\% | 87.5\% |

Question \#5. Reviewing the test items helped me place my bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + Strongly Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 208 | 1.9\% | 2.4\% | 4.8\% | 38.0\% | 52.9\% | 90.9\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 5.3\% | 36.8\% | 57.9\% | 94.7\% |
|  | 5 | 18 | 11.1\% | 0.0\% | 5.6\% | 27.8\% | 55.6\% | 83.4\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 5.0\% | 40.0\% | 55.0\% | 95.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 10.5\% | 26.3\% | 63.2\% | 89.5\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 21.1\% | 78.9\% | 100.0\% |
|  | 5 | 21 | 0.0\% | 0.0\% | 4.8\% | 52.4\% | 42.9\% | 95.3\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 0.0\% | 65.0\% | 30.0\% | 95.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 6.3\% | 50.0\% | 43.8\% | 93.8\% |
| Science | 5 | 20 | 5.0\% | 0.0\% | 0.0\% | 30.0\% | 65.0\% | 95.0\% |
|  | 8 | 20 | 5.0\% | 20.0\% | 15.0\% | 40.0\% | 20.0\% | 60.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 0.0\% | 25.0\% | 75.0\% | 100.0\% |

Question \#6. The ordering of the items in the ordered item booklet agreed with my perception of the relative difficulty of the items.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 6.2\% | 28.2\% | 19.1\% | 42.6\% | 3.8\% | 46.4\% |
| Mathematics | 3 | 19 | 5.3\% | 36.8\% | 15.8\% | 42.1\% | 0.0\% | 42.1\% |
|  | 5 | 18 | 0.0\% | 22.2\% | 33.3\% | 44.4\% | 0.0\% | 44.4\% |
|  | 8 | 20 | 0.0\% | 25.0\% | 35.0\% | 35.0\% | 5.0\% | 40.0\% |
|  | 10 | 19 | 15.8\% | 52.6\% | 10.5\% | 21.1\% | 0.0\% | 21.1\% |
| Reading/ Literature | 3 | 19 | 0.0\% | 21.1\% | 15.8\% | 63.2\% | 0.0\% | 63.2\% |
|  | 5 | 22 | 0.0\% | 0.0\% | 13.6\% | 68.2\% | 18.2\% | 86.4\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 20.0\% | 65.0\% | 0.0\% | 65.0\% |
|  | 10 | 16 | 6.3\% | 12.5\% | 25.0\% | 50.0\% | 6.3\% | 56.3\% |
| Science | 5 | 20 | 5.0\% | 25.0\% | 25.0\% | 40.0\% | 5.0\% | 45.0\% |
|  | 8 | 20 | $25.0 \%$ | 45.0\% | 10.0\% | 20.0\% | 0.0\% | 20.0\% |
|  | 10 | 16 | 12.5\% | 62.5\% | 6.3\% | 12.5\% | 6.3\% | 18.8\% |

Question \#7. Reviewing the Target Student helped me place my bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $1.0 \%$ | $11.0 \%$ | $22.0 \%$ | $52.6 \%$ | $13.4 \%$ | $66.0 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $36.8 \%$ | $63.2 \%$ | $0.0 \%$ | $63.2 \%$ |
|  | 5 | 18 | $0.0 \%$ | $11.1 \%$ | $33.3 \%$ | $38.9 \%$ | $16.7 \%$ | $55.6 \%$ |
|  | 8 | 20 | $0.0 \%$ | $15.0 \%$ | $30.0 \%$ | $50.0 \%$ | $5.0 \%$ | $55.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $15.8 \%$ | $31.6 \%$ | $52.6 \%$ | $0.0 \%$ | $52.6 \%$ |
| Reading/ | Literature | 3 | 19 | $0.0 \%$ | $5.3 \%$ | $10.5 \%$ | $73.7 \%$ | $10.5 \%$ |
|  | 5 | 22 | $0.0 \%$ | $9.1 \%$ | $9.1 \%$ | $54.5 \%$ | $27.3 \%$ | $81.8 \%$ |
|  | 8 | 20 | $5.0 \%$ | $30.0 \%$ | $10.0 \%$ | $40.0 \%$ | $15.0 \%$ | $55.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $12.5 \%$ | $18.8 \%$ | $37.5 \%$ | $31.3 \%$ | $68.8 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $15.0 \%$ | $5.0 \%$ | $55.0 \%$ | $25.0 \%$ | $80.0 \%$ |

Question \#8. I considered the content standards when I placed my bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 207 | $0.0 \%$ | $2.4 \%$ | $3.9 \%$ | $40.6 \%$ | $53.1 \%$ | $93.7 \%$ |
|  | 3 | 18 | $0.0 \%$ | $0.0 \%$ | $5.6 \%$ | $16.7 \%$ | $77.8 \%$ | $94.5 \%$ |
|  | 5 | 18 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $55.6 \%$ | $44.4 \%$ | $100.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $5.0 \%$ | $55.0 \%$ | $40.0 \%$ | $95.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $10.5 \%$ | $31.6 \%$ | $57.9 \%$ | $89.5 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $26.3 \%$ | $73.7 \%$ | $100.0 \%$ |
|  | 5 | 22 | $0.0 \%$ | $4.5 \%$ | $0.0 \%$ | $40.9 \%$ | $54.5 \%$ | $95.4 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $5.0 \%$ | $45.0 \%$ | $50.0 \%$ | $95.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $6.3 \%$ | $6.3 \%$ | $43.8 \%$ | $43.8 \%$ | $87.6 \%$ |
| Science | 5 | 19 | $0.0 \%$ | $10.5 \%$ | $0.0 \%$ | $31.6 \%$ | $57.9 \%$ | $89.5 \%$ |
|  | 8 | 20 | $0.0 \%$ | $5.0 \%$ | $5.0 \%$ | $60.0 \%$ | $30.0 \%$ | $90.0 \%$ |

Question \#9. During Round 1, I placed my bookmarks without consulting other participants.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 1.4\% | 2.4\% | 2.9\% | 31.1\% | 62.2\% | 93.3\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 26.3\% | 73.7\% | 100.0\% |
|  | 5 | 18 | 0.0\% | 5.6\% | 16.7\% | 38.9\% | 38.9\% | 77.8\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 0.0\% | 35.0\% | 60.0\% | 95.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 0.0\% | 42.1\% | 57.9\% | 100.0\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 5.3\% | 94.7\% | 100.0\% |
|  | 5 | 22 | 4.5\% | 13.6\% | 4.5\% | 45.5\% | 31.8\% | 77.3\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 0.0\% | 30.0\% | 70.0\% | 100.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 0.0\% | 25.0\% | 75.0\% | 100.0\% |
| Science | 5 | 20 | 5.0\% | 0.0\% | 0.0\% | 5.0\% | 90.0\% | 95.0\% |
|  | 8 | 20 | 5.0\% | 0.0\% | 0.0\% | 55.0\% | 40.0\% | 95.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 12.5\% | 31.3\% | 56.3\% | 87.6\% |

Question \#10. I had enough time to consider my Round 1 bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 1.4\% | 6.7\% | 5.3\% | 33.5\% | 53.1\% | 86.6\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 5.3\% | 21.1\% | 73.7\% | 94.8\% |
|  | 5 | 18 | 0.0\% | 0.0\% | 5.6\% | 44.4\% | 50.0\% | 94.4\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 0.0\% | 45.0\% | 50.0\% | 95.0\% |
|  | 10 | 19 | 0.0\% | 10.5\% | 10.5\% | 36.8\% | 42.1\% | 78.9\% |
| Reading/ Literature | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 26.3\% | 73.7\% | 100.0\% |
|  | 5 | 22 | 0.0\% | 18.2\% | 13.6\% | 40.9\% | 27.3\% | 68.2\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 0.0\% | $35.0 \%$ | 60.0\% | 95.0\% |
|  | 10 | 16 | 18.8\% | 0.0\% | 12.5\% | 43.8\% | 25.0\% | 68.8\% |
| Science | 5 | 20 | 0.0\% | 10.0\% | 0.0\% | 0.0\% | 90.0\% | 90.0\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 10.0\% | 40.0\% | 35.0\% | 75.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 0.0\% | 37.5\% | 56.3\% | 93.8\% |

Question \#11. Overall, my table's discussions were open and honest.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | 209 | $0.0 \%$ | $0.0 \%$ | $0.5 \%$ | $16.7 \%$ | $82.8 \%$ | $99.5 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $10.5 \%$ | $89.5 \%$ | $100.0 \%$ |
|  | 5 | 18 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $22.2 \%$ | $77.8 \%$ | $100.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $15.0 \%$ | $85.0 \%$ | $100.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $21.1 \%$ | $78.9 \%$ | $100.0 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $5.3 \%$ | $94.7 \%$ | $100.0 \%$ |
|  | 5 | 22 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $9.1 \%$ | $90.9 \%$ | $100.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $20.0 \%$ | $80.0 \%$ | $100.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $12.5 \%$ | $87.5 \%$ | $100.0 \%$ |

Question \#12. Overall, I believe that my opinions were considered and valued by my group.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $0.5 \%$ | $1.9 \%$ | $4.3 \%$ | $27.8 \%$ | $65.6 \%$ | $93.4 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $36.8 \%$ | $63.2 \%$ | $100.0 \%$ |
|  | 5 | 18 | $0.0 \%$ | $5.6 \%$ | $11.1 \%$ | $27.8 \%$ | $55.6 \%$ | $83.4 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $40.0 \%$ | $60.0 \%$ | $100.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $5.3 \%$ | $15.8 \%$ | $78.9 \%$ | $94.7 \%$ |
| Reading/ | Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $10.5 \%$ | $89.5 \%$ |

Question \#13. The presentation of different types of impact data was helpful to me.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $2.4 \%$ | $9.1 \%$ | $13.4 \%$ | $47.8 \%$ | $27.3 \%$ | $75.1 \%$ |
|  | 3 | 19 | $0.0 \%$ | $15.8 \%$ | $5.3 \%$ | $42.1 \%$ | $36.8 \%$ | $78.9 \%$ |
|  | 5 | 18 | $0.0 \%$ | $0.0 \%$ | $11.1 \%$ | $66.7 \%$ | $22.2 \%$ | $88.9 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $5.0 \%$ | $40.0 \%$ | $55.0 \%$ | $95.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $10.5 \%$ | $10.5 \%$ | $42.1 \%$ | $36.8 \%$ | $78.9 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $10.5 \%$ | $5.3 \%$ | $63.2 \%$ | $21.1 \%$ | $84.3 \%$ |
|  | 5 | 22 | $0.0 \%$ | $0.0 \%$ | $4.5 \%$ | $50.0 \%$ | $45.5 \%$ | $95.5 \%$ |
|  | 8 | 20 | $5.0 \%$ | $35.0 \%$ | $25.0 \%$ | $30.0 \%$ | $5.0 \%$ | $35.0 \%$ |
|  | 10 | 16 | $12.5 \%$ | $18.8 \%$ | $31.3 \%$ | $31.3 \%$ | $6.3 \%$ | $37.6 \%$ |

Question \#14. I learned how to do the bookmark placement as I went along, so my later ones may not be comparable to my earlier ones.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $21.1 \%$ | $42.1 \%$ | $12.0 \%$ | $19.6 \%$ | $5.3 \%$ | $24.9 \%$ |
|  | 3 | 19 | $21.1 \%$ | $57.9 \%$ | $15.8 \%$ | $5.3 \%$ | $0.0 \%$ | $5.3 \%$ |
|  | 5 | 18 | $0.0 \%$ | $50.0 \%$ | $16.7 \%$ | $22.2 \%$ | $11.1 \%$ | $33.3 \%$ |
|  | 8 | 20 | $20.0 \%$ | $55.0 \%$ | $0.0 \%$ | $25.0 \%$ | $0.0 \%$ | $25.0 \%$ |
|  | 10 | 19 | $21.1 \%$ | $26.3 \%$ | $15.8 \%$ | $31.6 \%$ | $5.3 \%$ | $36.9 \%$ |
| Reading/ <br> Literature | 3 | 19 | $26.3 \%$ | $21.1 \%$ | $26.3 \%$ | $15.8 \%$ | $10.5 \%$ | $26.3 \%$ |
|  | 5 | 22 | $31.8 \%$ | $31.8 \%$ | $4.5 \%$ | $31.8 \%$ | $0.0 \%$ | $31.8 \%$ |
|  | 8 | 20 | $30.0 \%$ | $45.0 \%$ | $10.0 \%$ | $15.0 \%$ | $0.0 \%$ | $15.0 \%$ |
|  | 10 | 16 | $12.5 \%$ | $50.0 \%$ | $12.5 \%$ | $18.8 \%$ | $6.3 \%$ | $25.1 \%$ |

Question \#15. I understood how to place my bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 0.0\% | 1.9\% | 1.4\% | 52.2\% | 44.5\% | 96.7\% |
| Mathematics | 3 | 19 | 0.0\% | 5.3\% | 0.0\% | 57.9\% | 36.8\% | 94.7\% |
|  | 5 | 18 | 0.0\% | 0.0\% | 0.0\% | 72.2\% | 27.8\% | 100.0\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 0.0\% | 50.0\% | 50.0\% | 100.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 0.0\% | 57.9\% | 42.1\% | 100.0\% |
| Reading/ Literature | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 42.1\% | 57.9\% | 100.0\% |
|  | 5 | 22 | 0.0\% | 4.5\% | 4.5\% | 45.5\% | 45.5\% | 91.0\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 0.0\% | 40.0\% | 55.0\% | 95.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 6.3\% | 56.3\% | 37.5\% | 93.8\% |
| Science | 5 | 20 | 0.0\% | 0.0\% | 0.0\% | 35.0\% | 65.0\% | 100.0\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 5.0\% | 65.0\% | 30.0\% | 95.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 0.0\% | 56.3\% | 37.5\% | 93.8\% |

Question \#16. Overall, I am satisfied with my group's final bookmarks.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 1.4\% | 8.7\% | 6.8\% | 57.5\% | 25.6\% | 83.1\% |
| Mathematics | 3 | 19 | 0.0\% | 10.5\% | 10.5\% | 73.7\% | 5.3\% | 79.0\% |
|  | 5 | 18 | 0.0\% | 11.1\% | 0.0\% | 66.7\% | 22.2\% | 88.9\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 5.0\% | 55.0\% | 40.0\% | 95.0\% |
|  | 10 | 18 | 0.0\% | 5.6\% | 0.0\% | 61.1\% | 33.3\% | 94.4\% |
| Reading/ Literature | 3 | 19 | 0.0\% | 0.0\% | 10.5\% | 52.6\% | 36.8\% | 89.4\% |
|  | 5 | 21 | 4.8\% | 4.8\% | 19.0\% | 52.4\% | 19.0\% | 71.4\% |
|  | 8 | 20 | 0.0\% | 20.0\% | 10.0\% | 55.0\% | 15.0\% | 70.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 0.0\% | 68.8\% | 25.0\% | 93.8\% |
| Science | 5 | 20 | 0.0\% | 0.0\% | 10.0\% | 35.0\% | 55.0\% | 90.0\% |
|  | 8 | 20 | 10.0\% | 25.0\% | 5.0\% | 50.0\% | 10.0\% | 60.0\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 0.0\% | 68.8\% | 18.8\% | 87.6\% |

Question \#17. I feel this procedure was fair.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + Strongly Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 208 | 2.4\% | 5.3\% | 15.4\% | 50.0\% | 26.9\% | 76.9\% |
| Mathematics | 3 | 19 | 0.0\% | 10.5\% | 10.5\% | 52.6\% | 26.3\% | 78.9\% |
|  | 5 | 18 | 0.0\% | 16.7\% | 22.2\% | 44.4\% | 16.7\% | 61.1\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 10.0\% | 55.0\% | 35.0\% | 90.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 15.8\% | 63.2\% | 21.1\% | 84.3\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 5.3\% | 0.0\% | 52.6\% | 42.1\% | 94.7\% |
|  | 5 | 22 | 0.0\% | 0.0\% | 22.7\% | 50.0\% | 27.3\% | 77.3\% |
|  | 8 | 19 | 0.0\% | 5.3\% | 26.3\% | 57.9\% | 10.5\% | 68.4\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 18.8\% | 56.3\% | 18.8\% | 75.1\% |
| Science | 5 | 20 | 0.0\% | 0.0\% | 10.0\% | 25.0\% | 65.0\% | 90.0\% |
|  | 8 | 20 | 25.0\% | 5.0\% | 25.0\% | 35.0\% | 10.0\% | 45.0\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 6.3\% | 62.5\% | 18.8\% | 81.3\% |

Question \#18. I am confident that the Bookmark Procedure produced valid standards.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 2.4\% | 11.6\% | 22.2\% | 49.3\% | 14.5\% | 63.8\% |
| Mathematics | 3 | 18 | 0.0\% | 0.0\% | 22.2\% | 61.1\% | 16.7\% | 77.8\% |
|  | 5 | 18 | 0.0\% | 11.1\% | 33.3\% | 50.0\% | 5.6\% | 55.6\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 0.0\% | 85.0\% | 15.0\% | 100.0\% |
|  | 10 | 19 | 0.0\% | 26.3\% | 5.3\% | 52.6\% | 15.8\% | 68.4\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 5.3\% | 5.3\% | 68.4\% | 21.1\% | 89.5\% |
|  | 5 | 21 | 0.0\% | 14.3\% | 38.1\% | 42.9\% | 4.8\% | 47.7\% |
|  | 8 | 20 | 0.0\% | 25.0\% | 40.0\% | 30.0\% | 5.0\% | 35.0\% |
|  | 10 | 16 | 6.3\% | 6.3\% | 12.5\% | 50.0\% | 25.0\% | 75.0\% |
| Science | 5 | 20 | 5.0\% | 0.0\% | 20.0\% | 35.0\% | 40.0\% | 75.0\% |
|  | 8 | 20 | 15.0\% | 30.0\% | 30.0\% | 20.0\% | 5.0\% | 25.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 37.5\% | 50.0\% | 6.3\% | 56.3\% |

Question \#19. I would defend the Nearly Meets cut score against criticism that it is too high.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + Strongly Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 4.3\% | 8.7\% | 15.0\% | 47.3\% | 24.6\% | 71.9\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 15.8\% | 57.9\% | 26.3\% | 84.2\% |
|  | 5 | 18 | 5.6\% | 0.0\% | 11.1\% | 66.7\% | 16.7\% | 83.4\% |
|  | 8 | 20 | 0.0\% | 30.0\% | 10.0\% | 45.0\% | 15.0\% | 60.0\% |
|  | 10 | 19 | 0.0\% | 5.3\% | 15.8\% | 47.4\% | 31.6\% | 79.0\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 10.5\% | 47.4\% | 42.1\% | 89.5\% |
|  | 5 | 22 | 13.6\% | 0.0\% | 22.7\% | 36.4\% | 27.3\% | 63.7\% |
|  | 8 | 20 | 0.0\% | 20.0\% | 10.0\% | 40.0\% | 30.0\% | 70.0\% |
|  | 10 | 16 | 6.3\% | 12.5\% | 12.5\% | 50.0\% | 18.8\% | 68.8\% |
| Science | 5 | 20 | 10.0\% | 10.0\% | 0.0\% | 55.0\% | 25.0\% | 80.0\% |
|  | 8 | 18 | 11.1\% | 5.6\% | 50.0\% | 33.3\% | 0.0\% | 33.3\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 6.3\% | 43.8\% | 37.5\% | 81.3\% |

Question \#20. I would defend the Nearly Meets cut score against criticism that it is too low.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 206 | 3.4\% | 6.8\% | 17.5\% | 53.9\% | 18.4\% | 72.3\% |
| Mathematics | 3 | 19 | 0.0\% | 10.5\% | 15.8\% | 52.6\% | 21.1\% | 73.7\% |
|  | 5 | 18 | 5.6\% | 0.0\% | 5.6\% | 72.2\% | 16.7\% | 88.9\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 10.0\% | 70.0\% | 15.0\% | 85.0\% |
|  | 10 | 18 | 5.6\% | 0.0\% | 22.2\% | 55.6\% | 16.7\% | 72.3\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 15.8\% | 47.4\% | 36.8\% | 84.2\% |
|  | 5 | 22 | 0.0\% | 13.6\% | 18.2\% | 36.4\% | 31.8\% | 68.2\% |
|  | 8 | 20 | 10.0\% | 15.0\% | 10.0\% | 50.0\% | 15.0\% | 65.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 18.8\% | 56.3\% | 18.8\% | 75.1\% |
| Science | 5 | 20 | 10.0\% | 10.0\% | 5.0\% | 65.0\% | 10.0\% | 75.0\% |
|  | 8 | 18 | 5.6\% | 0.0\% | 55.6\% | 38.9\% | 0.0\% | 38.9\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 18.8\% | 50.0\% | 18.8\% | 68.8\% |

Question \#21. I would defend the Meets cut score against criticism that it is too high.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 4.3\% | 12.6\% | 11.6\% | 46.9\% | 24.6\% | 71.5\% |
| Mathematics | 3 | 19 | 0.0\% | 10.5\% | 5.3\% | 52.6\% | 31.6\% | 84.2\% |
|  | 5 | 18 | 0.0\% | 5.6\% | 11.1\% | 77.8\% | 5.6\% | 83.4\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 10.0\% | 65.0\% | 10.0\% | 75.0\% |
|  | 10 | 19 | 0.0\% | 10.5\% | 10.5\% | 36.8\% | 42.1\% | 78.9\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 5.3\% | 15.8\% | 47.4\% | 31.6\% | 79.0\% |
|  | 5 | 22 | 13.6\% | 31.8\% | 9.1\% | 22.7\% | 22.7\% | 45.4\% |
|  | 8 | 20 | 5.0\% | 25.0\% | 5.0\% | 40.0\% | 25.0\% | 65.0\% |
|  | 10 | 16 | 0.0\% | 12.5\% | 18.8\% | 43.8\% | 25.0\% | 68.8\% |
| Science | 5 | 20 | 5.0\% | 10.0\% | 0.0\% | 45.0\% | 40.0\% | 85.0\% |
|  | 8 | 18 | 16.7\% | 5.6\% | 38.9\% | 38.9\% | 0.0\% | 38.9\% |
|  | 10 | 16 | 6.3\% | 0.0\% | 6.3\% | 50.0\% | 37.5\% | 87.5\% |

Question \#22. I would defend the Meets cut score against criticism that it is too low.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 4.3\% | 10.1\% | 11.6\% | 51.7\% | 22.2\% | 73.9\% |
| Mathematics | 3 | 19 | 0.0\% | 5.3\% | 10.5\% | 57.9\% | 26.3\% | 84.2\% |
|  | 5 | 18 | 0.0\% | 0.0\% | 0.0\% | 77.8\% | 22.2\% | 100.0\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 10.0\% | 65.0\% | 10.0\% | 75.0\% |
|  | 10 | 19 | 10.5\% | 26.3\% | 10.5\% | 26.3\% | 26.3\% | 52.6\% |
| Reading/ Literature | 3 | 19 | 0.0\% | 0.0\% | 10.5\% | 52.6\% | 36.8\% | 89.4\% |
|  | 5 | 22 | 0.0\% | 0.0\% | 4.5\% | 54.5\% | 40.9\% | 95.4\% |
|  | 8 | 20 | 15.0\% | 30.0\% | 15.0\% | 30.0\% | 10.0\% | 40.0\% |
|  | 10 | 16 | 0.0\% | 25.0\% | 6.3\% | 43.8\% | 25.0\% | 68.8\% |
| Science | 5 | 20 | 5.0\% | 5.0\% | 15.0\% | 50.0\% | 25.0\% | 75.0\% |
|  | 8 | 18 | 11.1\% | 0.0\% | 33.3\% | 55.6\% | 0.0\% | 55.6\% |
|  | 10 | 16 | 6.3\% | 6.3\% | 12.5\% | 56.3\% | 18.8\% | 75.1\% |

Question \#23. I would defend the Exceeds cut score against criticism that it is too high.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 207 | $3.4 \%$ | $6.3 \%$ | $18.8 \%$ | $50.2 \%$ | $21.3 \%$ | $71.5 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $15.8 \%$ | $63.2 \%$ | $21.1 \%$ | $84.3 \%$ |
|  | 5 | 18 | $0.0 \%$ | $11.1 \%$ | $5.6 \%$ | $66.7 \%$ | $16.7 \%$ | $83.4 \%$ |
|  | 8 | 20 | $0.0 \%$ | $15.0 \%$ | $15.0 \%$ | $55.0 \%$ | $15.0 \%$ | $70.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $5.3 \%$ | $21.1 \%$ | $52.6 \%$ | $21.1 \%$ | $73.7 \%$ |
| Reading/ <br> Literature | 3 | 19 | $5.3 \%$ | $5.3 \%$ | $10.5 \%$ | $52.6 \%$ | $26.3 \%$ | $78.9 \%$ |
|  | 5 | 22 | $13.6 \%$ | $13.6 \%$ | $13.6 \%$ | $36.4 \%$ | $22.7 \%$ | $59.1 \%$ |
|  | 8 | 20 | $0.0 \%$ | $10.0 \%$ | $15.0 \%$ | $50.0 \%$ | $25.0 \%$ | $75.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $0.0 \%$ | $43.8 \%$ | $31.3 \%$ | $25.0 \%$ | $56.3 \%$ |

Question \#24. I would defend the Exceeds cut score against criticism that it is too low.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 207 | 4.8\% | 5.8\% | 17.9\% | 53.1\% | 18.4\% | 71.5\% |
| Mathematics | 3 | 19 | 0.0\% | 0.0\% | 15.8\% | 78.9\% | 5.3\% | 84.2\% |
|  | 5 | 18 | 11.1\% | 5.6\% | 5.6\% | 72.2\% | 5.6\% | 77.8\% |
|  | 8 | 20 | 0.0\% | 15.0\% | 20.0\% | 50.0\% | 15.0\% | 65.0\% |
|  | 10 | 19 | 10.5\% | 5.3\% | 10.5\% | 52.6\% | 21.1\% | 73.7\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 21.1\% | 52.6\% | 26.3\% | 78.9\% |
|  | 5 | 22 | 4.5\% | 9.1\% | 13.6\% | 45.5\% | 27.3\% | 72.8\% |
|  | 8 | 20 | 5.0\% | 15.0\% | 25.0\% | 40.0\% | 15.0\% | 55.0\% |
|  | 10 | 16 | 6.3\% | 0.0\% | 31.3\% | 31.3\% | 31.3\% | 62.6\% |
| Science | 5 | 20 | 10.0\% | 5.0\% | 5.0\% | 40.0\% | 40.0\% | 80.0\% |
|  | 8 | 18 | 5.6\% | 0.0\% | 38.9\% | 55.6\% | 0.0\% | 55.6\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 12.5\% | 68.8\% | 12.5\% | 81.3\% |

Question \#25. Participating in the Bookmark Procedure increased my understanding of the test.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 209 | $0.0 \%$ | $1.4 \%$ | $7.7 \%$ | $42.1 \%$ | $48.8 \%$ | $90.9 \%$ |
|  | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $73.7 \%$ | $26.3 \%$ | $100.0 \%$ |
|  | 5 | 18 | $0.0 \%$ | $11.1 \%$ | $16.7 \%$ | $33.3 \%$ | $38.9 \%$ | $72.2 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $5.0 \%$ | $35.0 \%$ | $60.0 \%$ | $95.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $15.8 \%$ | $36.8 \%$ | $47.4 \%$ | $84.2 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $5.3 \%$ | $36.8 \%$ | $57.9 \%$ | $94.7 \%$ |
|  | 5 | 22 | $0.0 \%$ | $4.5 \%$ | $9.1 \%$ | $27.3 \%$ | $59.1 \%$ | $86.4 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $65.0 \%$ | $35.0 \%$ | $100.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $0.0 \%$ | $12.5 \%$ | $37.5 \%$ | $50.0 \%$ | $87.5 \%$ |

Question \#26. This experience will help me target instruction for the students in my classroom.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 202 | $1.0 \%$ | $2.5 \%$ | $19.3 \%$ | $40.1 \%$ | $37.1 \%$ | $77.2 \%$ |
|  | 3 | 18 | $0.0 \%$ | $0.0 \%$ | $33.3 \%$ | $38.9 \%$ | $27.8 \%$ | $66.7 \%$ |
|  | 5 | 18 | $0.0 \%$ | $5.6 \%$ | $27.8 \%$ | $33.3 \%$ | $33.3 \%$ | $66.6 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $5.0 \%$ | $40.0 \%$ | $55.0 \%$ | $95.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $5.3 \%$ | $5.3 \%$ | $63.2 \%$ | $26.3 \%$ | $89.5 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $5.3 \%$ | $21.1 \%$ | $42.1 \%$ | $31.6 \%$ | $73.7 \%$ |
|  | 5 | 22 | $0.0 \%$ | $4.5 \%$ | $22.7 \%$ | $31.8 \%$ | $40.9 \%$ | $72.7 \%$ |
|  | 8 | 19 | $5.3 \%$ | $0.0 \%$ | $5.3 \%$ | $57.9 \%$ | $31.6 \%$ | $89.5 \%$ |
|  | 10 | 12 | $0.0 \%$ | $0.0 \%$ | $25.0 \%$ | $58.3 \%$ | $16.7 \%$ | $75.0 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $5.0 \%$ | $15.0 \%$ | $15.0 \%$ | $65.0 \%$ | $80.0 \%$ |
|  | 8 | 19 | $5.3 \%$ | $0.0 \%$ | $36.8 \%$ | $26.3 \%$ | $31.6 \%$ | $57.9 \%$ |

Question \#27. This experience will help me target instruction for the students in my classroom.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 208 | 0.5\% | 1.4\% | 3.4\% | 40.9\% | 53.8\% | 94.7\% |
| Mathematics | 3 | 19 | 0.0\% | 5.3\% | 10.5\% | 36.8\% | 47.4\% | 84.2\% |
|  | 5 | 18 | 0.0\% | 5.6\% | 5.6\% | 44.4\% | 44.4\% | 88.8\% |
|  | 8 | 20 | 0.0\% | 0.0\% | 0.0\% | 30.0\% | 70.0\% | 100.0\% |
|  | 10 | 19 | 0.0\% | 0.0\% | 0.0\% | 47.4\% | 52.6\% | 100.0\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 0.0\% | 0.0\% | 31.6\% | 68.4\% | 100.0\% |
|  | 5 | 22 | 0.0\% | 0.0\% | 0.0\% | 40.9\% | 59.1\% | 100.0\% |
|  | 8 | 20 | 0.0\% | 5.0\% | 5.0\% | 45.0\% | 45.0\% | 90.0\% |
|  | 10 | 15 | 0.0\% | 0.0\% | 0.0\% | 66.7\% | 33.3\% | 100.0\% |
| Science | 5 | 20 | 0.0\% | 0.0\% | 5.0\% | 10.0\% | 85.0\% | 95.0\% |
|  | 8 | 20 | 5.0\% | 0.0\% | 10.0\% | 55.0\% | 30.0\% | 85.0\% |
|  | 10 | 16 | 0.0\% | 0.0\% | 0.0\% | 50.0\% | 50.0\% | 100.0\% |

Question \#28. The standard setting was well organized.

| Content Area | Grade | N | Strongly <br> Disagree | Disagree | Neutral | Agree | Strongly <br> Agree | Agree + <br> Strongly <br> Agree |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 208 | $1.4 \%$ | $7.7 \%$ | $12.0 \%$ | $44.2 \%$ | $34.6 \%$ | $78.8 \%$ |
|  | 3 | 19 | $0.0 \%$ | $10.5 \%$ | $21.1 \%$ | $47.4 \%$ | $21.1 \%$ | $68.5 \%$ |
|  | 5 | 18 | $0.0 \%$ | $16.7 \%$ | $22.2 \%$ | $38.9 \%$ | $22.2 \%$ | $61.1 \%$ |
|  | 8 | 20 | $0.0 \%$ | $5.0 \%$ | $15.0 \%$ | $45.0 \%$ | $35.0 \%$ | $80.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $15.8 \%$ | $31.6 \%$ | $52.6 \%$ | $84.2 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $63.2 \%$ | $36.8 \%$ | $100.0 \%$ |
|  | 5 | 21 | $4.8 \%$ | $4.8 \%$ | $9.5 \%$ | $52.4 \%$ | $28.6 \%$ | $81.0 \%$ |
|  | 8 | 20 | $5.0 \%$ | $10.0 \%$ | $25.0 \%$ | $45.0 \%$ | $15.0 \%$ | $60.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $6.3 \%$ | $12.5 \%$ | $68.8 \%$ | $12.5 \%$ | $81.3 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $20.0 \%$ | $80.0 \%$ | $100.0 \%$ |
|  | 8 | 20 | $5.0 \%$ | $25.0 \%$ | $10.0 \%$ | $30.0 \%$ | $30.0 \%$ | $60.0 \%$ |

Question \#29. What is your occupation?

| Content Area | Grade | N | Teacher | Administrator | Other |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Overall |  | 207 | $74.4 \%$ | $14.0 \%$ | $11.6 \%$ |
| Mathematics | 3 | 18 | $94.4 \%$ | $5.6 \%$ | $0.0 \%$ |
|  | 5 | 18 | $83.3 \%$ | $0.0 \%$ | $16.7 \%$ |
|  | 8 | 20 | $90.0 \%$ | $5.0 \%$ | $5.0 \%$ |
|  | 10 | 19 | $78.9 \%$ | $10.5 \%$ | $10.5 \%$ |
| Reading/ <br> Literature | 3 | 19 | $68.4 \%$ | $21.1 \%$ | $10.5 \%$ |
|  | 5 | 22 | $45.5 \%$ | $36.4 \%$ | $18.2 \%$ |
|  | 8 | 20 | $75.0 \%$ | $20.0 \%$ | $5.0 \%$ |
|  | 10 | 16 | $56.3 \%$ | $18.8 \%$ | $25.0 \%$ |
| Science | 5 | 20 | $80.0 \%$ | $10.0 \%$ | $10.0 \%$ |
|  | 8 | 19 | $73.7 \%$ | $10.5 \%$ | $15.8 \%$ |
|  | 10 | 16 | $75.0 \%$ | $12.5 \%$ | $12.5 \%$ |

Question \#30. How many years in your current profession?

| Content Area | Grade | N | 1-5 | 6-10 | 11-15 | 16-20 | $21+$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall |  | 209 | 8.1\% | 19.1\% | 15.8\% | 21.5\% | 35.4\% |
| Mathematics | 3 | 19 | 5.3\% | 26.3\% | 5.3\% | 21.1\% | 42.1\% |
|  | 5 | 18 | 5.6\% | 16.7\% | 16.7\% | 22.2\% | 38.9\% |
|  | 8 | 20 | 10.0\% | 25.0\% | 10.0\% | 35.0\% | 20.0\% |
|  | 10 | 19 | 5.3\% | 21.1\% | 5.3\% | 15.8\% | 52.6\% |
| Reading/ <br> Literature | 3 | 19 | 0.0\% | 15.8\% | 21.1\% | 21.1\% | 42.1\% |
|  | 5 | 22 | 4.5\% | 22.7\% | 13.6\% | 22.7\% | 36.4\% |
|  | 8 | 20 | 20.0\% | 20.0\% | 30.0\% | 5.0\% | 25.0\% |
|  | 10 | 16 | 18.8\% | 0.0\% | 12.5\% | 31.3\% | 37.5\% |
| Science | 5 | 20 | 5.0\% | 20.0\% | 20.0\% | 25.0\% | 30.0\% |
|  | 8 | 20 | 15.0\% | 30.0\% | 5.0\% | 10.0\% | 40.0\% |
|  | 10 | 16 | 0.0\% | 6.3\% | 37.5\% | 31.3\% | 25.0\% |

Question \#31. What is your primary role at this standard setting?

| Content Area | Grade | N | Educator | Parent | Community <br> Member | Business <br> Member |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: |
| Overall |  | 209 | $93.8 \%$ | $3.3 \%$ | $2.4 \%$ | $0.5 \%$ |
| Mathematics | 3 | 19 | $94.7 \%$ | $0.0 \%$ | $5.3 \%$ | $0.0 \%$ |
|  | 5 | 18 | $94.4 \%$ | $5.6 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 10 | 19 | $94.7 \%$ | $0.0 \%$ | $5.3 \%$ | $0.0 \%$ |
| Reading/ <br> Literature | 3 | 19 | $94.7 \%$ | $0.0 \%$ | $5.3 \%$ | $0.0 \%$ |
|  | 5 | 22 | $95.5 \%$ | $0.0 \%$ | $0.0 \%$ | $4.5 \%$ |
|  | 8 | 20 | $95.0 \%$ | $5.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 10 | 16 | $87.5 \%$ | $0.0 \%$ | $12.5 \%$ | $0.0 \%$ |
| Science | 5 | 20 | $95.0 \%$ | $5.0 \%$ | $0.0 \%$ | $0.0 \%$ |

Question \#32. What is your education level?

| Content Area | Grade | N | HSD or <br> GED | Bachelor's | Master's | Doctorate |
| :--- | ---: | ---: | :--- | :--- | :--- | :--- |
| Overall |  | 209 | $1.0 \%$ | $23.4 \%$ | $69.4 \%$ | $6.2 \%$ |
| Mathematics | 3 | 19 | $0.0 \%$ | $47.4 \%$ | $47.4 \%$ | $5.3 \%$ |
|  | 5 | 18 | $0.0 \%$ | $33.3 \%$ | $66.7 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $25.0 \%$ | $75.0 \%$ | $0.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $21.1 \%$ | $73.7 \%$ | $5.3 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $26.3 \%$ | $68.4 \%$ | $5.3 \%$ |
|  | 5 | 22 | $0.0 \%$ | $13.6 \%$ | $72.7 \%$ | $13.6 \%$ |
|  | 8 | 20 | $5.0 \%$ | $20.0 \%$ | $75.0 \%$ | $0.0 \%$ |
|  | 10 | 16 | $6.3 \%$ | $25.0 \%$ | $62.5 \%$ | $6.3 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $20.0 \%$ | $70.0 \%$ | $10.0 \%$ |

Question \#33. What is your gender?

| Content Area | Grade | N | Male | Female |
| :--- | ---: | :--- | :--- | :--- |
| Overall |  | 208 | $28.8 \%$ | $71.2 \%$ |
| Mathematics | 3 | 19 | $26.3 \%$ | $73.7 \%$ |
|  | 5 | 18 | $27.8 \%$ | $72.2 \%$ |
|  | 8 | 20 | $25.0 \%$ | $75.0 \%$ |
|  | 10 | 19 | $42.1 \%$ | $57.9 \%$ |
| Reading/ <br> Literature | 3 | 19 | $10.5 \%$ | $89.5 \%$ |
|  | 5 | 21 | $38.1 \%$ | $61.9 \%$ |
|  | 8 | 20 | $15.0 \%$ | $85.0 \%$ |
|  | 10 | 16 | $56.3 \%$ | $43.8 \%$ |

Question \#34. What is your race?

| Content Area | Grade | N | Asian/ <br> Pacific <br> Islander | Black/ <br> African- <br> American | American <br> Indian | White | Other |
| :--- | ---: | ---: | :--- | :---: | :---: | :---: | :---: |
|  |  | 205 | $1.5 \%$ | $1.5 \%$ | $0.5 \%$ | $94.1 \%$ | $2.4 \%$ |
|  | 3 | 17 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
|  | 5 | 18 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $94.4 \%$ | $5.6 \%$ |
|  | 8 | 19 | $5.3 \%$ | $0.0 \%$ | $0.0 \%$ | $94.7 \%$ | $0.0 \%$ |
|  | 10 | 19 | $5.3 \%$ | $5.3 \%$ | $0.0 \%$ | $89.5 \%$ | $0.0 \%$ |
| Reading/ <br> Literature | 3 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $94.7 \%$ | $5.3 \%$ |
|  | 5 | 21 | $0.0 \%$ | $0.0 \%$ | $4.8 \%$ | $95.2 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $95.0 \%$ | $5.0 \%$ |
|  | 10 | 16 | $6.3 \%$ | $0.0 \%$ | $0.0 \%$ | $93.8 \%$ | $0.0 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $5.0 \%$ | $0.0 \%$ | $85.0 \%$ | $10.0 \%$ |

Question \#35. Are you of Hispanic origin?

| Content Area | Grade | N | Yes | No |
| :--- | ---: | :--- | ---: | ---: |
| Overall |  | 208 | $1.4 \%$ | $98.6 \%$ |
| Mathematics | 3 | 18 | $5.6 \%$ | $94.4 \%$ |
|  | 5 | 18 | $0.0 \%$ | $100.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $100.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $100.0 \%$ |
| Reading/ | 3 | 19 | $0.0 \%$ | $100.0 \%$ |
|  | 5 | 22 | $0.0 \%$ | $100.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $100.0 \%$ |
|  | 10 | 16 | $6.3 \%$ | $93.8 \%$ |
| Science | 5 | 20 | $5.0 \%$ | $95.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $100.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $100.0 \%$ |

Question \#36. Have you taught Special Education?

| Content Area | Grade | N | Yes | No |
| :--- | ---: | ---: | ---: | ---: |
| Overall |  | 208 | $17.8 \%$ | $82.2 \%$ |
| Mathematics | 3 | 19 | $21.1 \%$ | $78.9 \%$ |
|  | 5 | 17 | $5.9 \%$ | $94.1 \%$ |
|  | 8 | 20 | $10.0 \%$ | $90.0 \%$ |
|  | 10 | 19 | $10.5 \%$ | $89.5 \%$ |
| Reading/ <br> Literature | 3 | 19 | $21.1 \%$ | $78.9 \%$ |
|  | 5 | 22 | $22.7 \%$ | $77.3 \%$ |
|  | 8 | 20 | $20.0 \%$ | $80.0 \%$ |
|  | 10 | 16 | $12.5 \%$ | $87.5 \%$ |

Question \#37. Have you taught ESL/ELD?

| Content Area | Grade | N | Yes | No |
| :--- | ---: | ---: | ---: | ---: |
| Overall |  | 208 | $16.8 \%$ | $83.2 \%$ |
| Mathematics | 3 | 19 | $26.3 \%$ | $73.7 \%$ |
|  | 5 | 18 | $11.1 \%$ | $88.9 \%$ |
|  | 8 | 20 | $20.0 \%$ | $80.0 \%$ |
|  | 10 | 19 | $5.3 \%$ | $94.7 \%$ |
| Literature | 3 | 19 | $10.5 \%$ | $89.5 \%$ |
|  | 5 | 22 | $27.3 \%$ | $72.7 \%$ |
|  | 8 | 20 | $25.0 \%$ | $75.0 \%$ |
|  | 10 | 16 | $12.5 \%$ | $87.5 \%$ |

Question \#38. Have you taught Vocational Education?

| Content Area | Grade | N | Yes | N No |
| :--- | ---: | ---: | ---: | ---: |
| Overall |  | 209 | $3.8 \%$ | $96.2 \%$ |
|  | 3 | 19 | $0.0 \%$ | $100.0 \%$ |
| Mathematics | 5 | 18 | $5.6 \%$ | $94.4 \%$ |
|  | 8 | 20 | $0.0 \%$ | $100.0 \%$ |
|  | 10 | 19 | $15.8 \%$ | $84.2 \%$ |
| Reading/ | 3 | 19 | $0.0 \%$ | $100.0 \%$ |
|  | 5 | 22 | $4.5 \%$ | $95.5 \%$ |
|  | 8 | 20 | $10.0 \%$ | $90.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $100.0 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $100.0 \%$ |
|  | 8 | 20 | $5.0 \%$ | $95.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $100.0 \%$ |

Question \#39. Have you taught Alternative Education?

| Content Area | Grade | N | Yes | No |
| :--- | ---: | ---: | ---: | ---: |
| Overall |  | 209 | $15.3 \%$ | $84.7 \%$ |
| Mathematics | 3 | 19 | $5.3 \%$ | $94.7 \%$ |
|  | 5 | 18 | $11.1 \%$ | $88.9 \%$ |
|  | 8 | 20 | $20.0 \%$ | $80.0 \%$ |
|  | 10 | 19 | $26.3 \%$ | $73.7 \%$ |
| Reading/ | 3 | 19 | $5.3 \%$ | $94.7 \%$ |
|  | 5 | 22 | $18.2 \%$ | $81.8 \%$ |
|  | 8 | 20 | $25.0 \%$ | $75.0 \%$ |
|  | 10 | 16 | $25.0 \%$ | $75.0 \%$ |
|  | 5 | 20 | $0.0 \%$ | $100.0 \%$ |

Question \#40. Have you taught Adult Education?

| Content Area | Grade | N | Yes | No |
| :--- | ---: | :--- | :--- | :--- |
| Overall |  | 209 | $27.3 \%$ | $72.7 \%$ |
| Mathematics | 3 | 19 | $10.5 \%$ | $89.5 \%$ |
|  | 5 | 18 | $38.9 \%$ | $61.1 \%$ |
|  | 8 | 20 | $20.0 \%$ | $80.0 \%$ |
|  | 10 | 19 | $42.1 \%$ | $57.9 \%$ |
| Reading/ | 3 | 19 | $21.1 \%$ | $78.9 \%$ |
|  | 5 | 22 | $31.8 \%$ | $68.2 \%$ |
|  | 8 | 20 | $30.0 \%$ | $70.0 \%$ |
|  | 10 | 16 | $18.8 \%$ | $81.3 \%$ |
| Science | 5 | 20 | $30.0 \%$ | $70.0 \%$ |
|  | 8 | 20 | $35.0 \%$ | $65.0 \%$ |
|  | 10 | 16 | $18.8 \%$ | $81.3 \%$ |

Question \#41. Which content area did you work on during this standard setting?

| Content Area | Grade | N | Mathematics | Reading/ <br> Literature | Science |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Overall |  | 209 | $36.4 \%$ | $36.8 \%$ | $26.8 \%$ |
| Mathematics | 3 | 19 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 5 | 18 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 10 | 19 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 3 | 19 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
| Science | 5 | 22 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |

Question \#42. Which grade did you work on during this standard setting?

| Content Area | Grade | N | Grade 3 | Grade 5 | Grade 8 | Grade 10 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Overall |  | 209 | $18.2 \%$ | $28.7 \%$ | $28.7 \%$ | $24.4 \%$ |
| Mathematics | 3 | 19 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 5 | 18 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
|  | 10 | 19 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ |
| Reading/ <br> Literature | 3 | 19 | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 5 | 22 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |
|  | 10 | 16 | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ |
| Science | 5 | 20 | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ | $0.0 \%$ |
|  | 8 | 20 | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ | $0.0 \%$ |


[^0]:    | (1. Kitty is taking a trip on which she plans to drive 300 miles each day. Her |
    | :--- |
    | trip is 1723 miles long She has already driven 849 miles. How much | trip is 1,723 miles long. She has already driven 849 miles. How much farther must she drive?

    (4) 574 miles
    (8) 874 miles
    © 1,423 miles
    © 2,872 miles

