

ALIGNING ASSESSMENT TO GUIDE THE LEARNING OF ALL STUDENTS



SIX REPORTS

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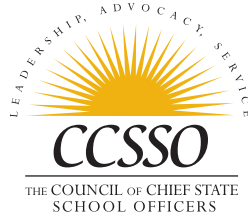
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Alignment Report 4

Vertical Alignment of Grade-Level Expectations for Student Achievement: Report of a Pilot Study

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Vertical Alignment of Grade-Level Expectations for Student Achievement: Report of a Pilot Study

Chapter 1: Introduction

Establishing Explicit Expectations for Student Performance under NCLB

A key, albeit difficult, component of the No Child Left Behind Act of 2001 (NCLB) is that each state must establish explicit standards for student performance at each grade level in reading and mathematics (and soon also science). For grades three through eight and at least once in high school, states must establish: (1) specific content objectives in English language arts and mathematics, (2) an assessment aligned to these content objectives, and (3) standards for meeting at least three levels of performance on the assessment, representing below proficient, proficient, and advanced achievement.

Prior to NCLB, many states were already engaged in standards-based reform efforts that involved public and specific content standards and assessments of performance against those standards. Few states, however, had implemented either standards or assessments for the complete range of grades and subjects required by NCLB.

The vertical alignment process described here examines the relationship of content standards and expectations from grade to grade. Through this process, panelists evaluate how the standards and expectations at one grade are related to standards and expectations at the next grade. In addition, they are asked to rate the clarity of increases in expectations from one grade to the next. A review of the consistency of expectations across grades can provide validity evidence for content standards used for accountability under NCLB.

Delaware Efforts to Meet NCLB Requirements

With the adoption of the rigorous content standards in English language arts, mathematics, science, and social studies in 1995, Delaware educators have continued the efforts to implement standards-based curriculum and assessment in order to meet the goal of improved achievement for all students. According to state regulations, the Delaware Student Testing Program (DSTP) is the official measure of student progress toward the standards in reading, writing, and mathematics by the end of each grade cluster (K–3, 4–5, 6–8, and 9–10).

NCLB requires that states report student progress toward meeting the state standards by grade for grades three through eight even though the content standards are developed by grade cluster. To meet the NCLB requirements, Delaware developed the Grade-Level-Expectations (GLE) in early 2005 based on the Delaware content standards for every grade from kindergarten through grade 10 in English language arts and from kindergarten through grade 11 in mathematics. These expectations will be used to develop curriculum and instruction at the local level and develop or identify items for inclusion on the DSTP at the state level. Although the expectations for students by the end of a grade cluster have few changes, the goals and expectations are clearly specified by the end of each grade. The GLEs have been reviewed by Delaware teachers and educators and recently finalized

It is important to be aware that at the time the vertical alignment workshop was conducted, the Grade-Level-Expectations were just available as a draft version. As described below, the vertical alignment workshop provided the panels an opportunity to read/review the newly developed GLEs and collect inputs to the process for the upcoming workshops to review/set the performance standards (cut scores) for all tested grades. Specifically, the alignment of expectations across grades was intended to help the development of the performance descriptors.

The CCSSO Alignment Project(s)

Description of the Overall Grant

The workshop design stemmed from a project conducted under a grant from the U.S. Department of Education (ED) to the Oklahoma Department of Education, in cooperation with CCSSO. The project's three primary goals were: 1) to produce an electronically-based test-to-standards alignment analysis process based on Webb's (2001) alignment method; 2) to use Webb's method to develop procedures appropriate to aligning alternate assessments for students with disabilities to content standards; and 3) to expand the method to inform vertical alignment and scaling of assessments and standards.

Concept Paper on Vertical Alignment

The CCSSO work on alignment resulted in a concept paper describing a process that states might use to check the alignment of content standards across grades (Wise & Alt, 2005). This paper described the types of judges who might review the vertical alignment of a state's content standards, the types of ratings these judges would be asked to make, and how the results of these ratings could be summarized and reported. The pilot test reported here was designed to try out the procedures described in the concept paper, and it included a number of extensions and enhancements of the procedures to better meet Delaware's goals for the workshop. These goals are described next; modifications and extensions to the vertical alignment procedures are discussed in the next chapter.

Goals for the Pilot Study

Opportunity to Try Out and Improve the Vertical Alignment Process

This report describes a workshop held to review the alignment of grade-level expectations across grades. The workshop served as a full-scale pilot study of the vertical alignment process described in the concept paper developed by CCSSO. Expenses for HumRRO and CCSSO staff to conduct this workshop were covered by funds remaining in the initial grant. Thus, in addition to meeting Delaware's goals for this workshop, this report also describes further enhancements to the vertical alignment process based on planned and unplanned results from this pilot.

Implications for NCLB Requirements

The workshop supported Delaware's efforts to meet NCLB requirements. This workshop created an opportunity for Delaware teachers and educators to review the newly developed Grade-Level-Expectations (GLEs) in English language arts and mathematics. Feedback, comments, and suggestions provided by the panelists were helpful to the Department of Education in revising and finalizing the GLEs. The workshop also provided input to the process for developing the performance level descriptors—what students are expected to know and be able to do at each performance level.

Organization of the Report

The methods used with the pilot vertical alignment workshop are described in Chapter 2, including a brief description of the panelists who participated in the workshop, the rating tasks the panelists were asked to perform, and the methods used to analyze the ratings and summarize the feedback provided by the panelists.

The results from the workshop are presented in Chapter 3, which includes the nature of alignment across grades, an examination of agreement of ratings across tables (groups of panelists), a summary of the ratings of Importance and Clarity, and a description of detailed results for the Delaware Department of Education.

Recommendations based on results from the workshop are presented in Chapter 4. These recommendations focus on continued enhancement of the process and criteria for vertical alignment and the further improvement of the Delaware Grade-Level-Expectations

Chapter 2: Methods

The vertical alignment process is a way of making explicit the assumptions about grade-to-grade growth in knowledge and skills that are implicit in the content standards, objectives, and expectations for each separate grade. The process involves assembling content experts to identify objectives that are new at each grade and to link other objectives to related objectives from earlier grades. Where objectives are linked across grades, the panelists are asked to rate how knowledge and skill requirements increase across the grades.

Different states use different terminology for their content standards. In this report, we have adopted the terminology used in Delaware. The Delaware content standards are structured with four broad statements in English language arts and eight in mathematics across grades. Objectives that specify the knowledge and skills are under the general statements by the end of each grade cluster. The newly developed Grade-Level-Expectations further specify what students are expected to know and be able to do by the end of each grade.

As noted in Chapter 1, the methods used in the Delaware vertical alignment workshop included modifications, enhancements, and extensions to the procedures proposed in the vertical alignment concept paper developed for CCSSO. In this chapter, we describe (a) the recruitment of panelists for the workshop, (b) the rating tasks used in this workshop, and (c) the methods used to analyze the results. The results themselves are presented in Chapter 3.

Workshop Participants

Identifying and Recruiting Appropriate Panelists

The Delaware content experts served on the two panels, one for English language arts and one for mathematics. A total of 56 classroom teachers and curriculum specialists throughout the state participated in the vertical alignment workshop at the elementary, middle, and high school levels. Table 1 shows the demographic characteristics of panelists. Over 80 percent of the panelists were experienced teachers and content experts (over six years), and 14–15 percent of the panelists were new teachers. Many had very extensive teaching careers with over 10 years of service.

Table 1. Characteristics of the Workshop Participants

Demographic Category	Number (Percent) of Panelists	
	ELA	Mathematics
Gender		
Female	25 (93%)	23 (79%)
Male	2 (07%)	6 (21%)
Race Ethnicity		
Caucasian	23 (85%)	24 (83%)
African American	3 (11%)	3 (10%)
Other/Unknown	1 (04%)	2 (07%)
Grade Taught		
Primary School	9 (33%)	10 (34%)
Middle School	9 (33%)	8 (28%)
High School	9 (33%)	9 (31%)
Years of Experience		
2–5	4 (15%)	4 (14%)
6–9	9 (33%)	3 (10%)
10+	14 (52%)	21 (72%)

Selection and Training of Table Facilitators

Table facilitators were selected from panelists according to their experience and expertise, three for English language arts and four for mathematics. The table facilitator served to facilitate discussion and direct activities. A training session was held prior to the workshop. The training included an overview of the workshop activities and the role and responsibilities of the process.

Rating Tables and Review Assignment

The panelists were split into seven groups, three for English language arts and four for mathematics. Each group included 6–9 panelists, 2–3 each for elementary (grades 2–5), middle (grades 5–8), and high school level (grades 8–10 or 11), respectively. Each group was seated at a separate table and led by a table facilitator. The review and rating started with subgroup discussion within each grade level. This was followed by the groupwide discussion across grades. The overlapping arrangement of panelists for the subgroups created the opportunity for communication between elementary, middle, and high school levels and examined the consistency of ratings for grades 5 and 8.

Each group was assigned a standard for the primary review. (See appendix A for a list of the standards reviewed.) Each standard also received a secondary review by another group to provide additional results and allow for examining the consistency of groupwide results. The four mathematics groups were each assigned one of the four content standards for the first round and another standard for the second round. The English language arts groups started with either Reading Standard 2 or Writing Standard 4. Because of relatively small number of objectives/expectations of Reading Standard 4, connections, this standard was not reviewed until the second round. Table 2 shows the standards reviewed by each group in each round of ratings.

Table 2. Standards Rated by Each Table

Group (Table Number)	Standards Rated in Each Round		
	Round 1	Round 2	Round 3
Mathematics			
1	1. Numbers and Operations	2. Algebra	
2	2. Algebra	3. Geometry	
3	3. Geometry	4. Data and Probability	
4	4. Data and Probability	1. Numbers and Operations	
Language Arts			
1	1. Writing	2. Comprehension	
2	2. Comprehension	4. Connections	1. Writing
3	1. Writing	4. Connections	2. Comprehension

Vertical Alignment Ratings

The alignment ratings were collected in two phases. First, panelists in each grade range subgroup reviewed the GLEs for a subset of grades as shown in Table 3. The middle and high school panelists were asked to rate one or two grades below their normal grade levels to provide overlap in the ratings at key transition points, which were thus labeled as consensus grades. Next the three subgroups at each table came together and made consensus ratings for the transition grade pairs (4 to 5 and 7 to 8).

Table 3. Grade Ranges Rated by Each Teacher

Subgroup	Grade Linkages Rated							
	3 to 2	4 to 3	5 to 4	6 to 5	7 to 6	8 to 7	9 to 8	10 to 9
Elementary	X	X	X	X				
Middle			X	X	X	X		
High School					X	X	X	X

Note: Columns shown in bold are consensus grades.

Rating Forms

Because of the nature of each content area, different forms were developed for English language arts and mathematics. For mathematics, the rating forms generally followed the design described in the CCSSO vertical alignment concept paper. For each grade, panelists were asked to identify one or possibly two expectations at the previous grade that were most related to each expectation for the target grade. Reference sheets were provided that listed all the expectations by grade and standard as shown in the examples provided in appendices D and E. If no related expectations were found, the panelist recorded “new”. Where a matching expectation was found, panelists were asked to rate

- the **Nature** of the increase in expectation from one grade to the next (Broadened, Deepened, Same, or New)
- the **Importance** of the increase in expectation
- the **Clarity** of the increase in expectation

Appendix C contains an example of the ratings sheets used for mathematics. Additional information about the scales used for these ratings is provided in the training materials included in appendix F.

For English language arts, the expectations across grades are similar. Most of the significant differences from grade to grade are the complexity of text. Because many of the expectations for adjacent grades are otherwise identically worded, it was not necessary to ask the panelists to locate matching expectations. Instead, panelists were shown matching standards for the adjacent grades where a particular expectation was worded differently from the corresponding expectation at the previous grade. The rating forms for English language arts showed the matching expectations at the two adjacent grades and ask for ratings of the nature, importance, and clarity of the differences. See appendix B for an example of an ELA Rating Sheet.

Discussions of Additional Dimensions for Grade-Level Expectations

While grade-level expectations had been developed for purposes of assessment and accountability, there were aspects of the standards for each content area where variation by grade was not specific. For language arts, the expectations consistently referred to grade-level texts, but did not include descriptions of the specific ways in which texts might vary across grades. For mathematics, there are four process standards in addition to the four content standards. For process standards such as problem solving or mathematical reasoning, expectations are the same for all grades, but the complexity with which these standards are assessed, as evidenced by specific test questions, increase from one grade to the next.

After the vertical alignment ratings were completed, panelists in each subject area met as a group to discuss ways of characterizing increased complexity demands in their subject area. The language arts panelists reviewed reading passages used in assessments at different grade levels. The mathematics panelists reviewed mathematical reasoning problems from different grade levels. A brief description of these discussions is provided here although it was not a formal part of the vertical alignment process.

Reading. To capture the complexity of grade-level reading materials and provide information of increased complexity from grade to grade, a session called Rating the Narrative Complexity of Materials was developed by a consultant, Dr. Charles W. Peters, with the content staff of the Delaware Department of Education. The purpose of the narrative complexity scale was to capture such changes in complexity as themes, setting, characters, plot, and author’s craft (e.g., figurative language, rhetorical and literary devices) that occurs across grade levels. The English language arts panelists were grouped with grade level to compare selected reading passages between grades 2 and 4, 4 and 6, 6 and 8, and 8 and 10. The participants were engaged in a three-hour activity to determine where and how the change in narrative complexity occurred and rate the complexity of narrative structures across various grade-level passages that appeared on the Delaware Student Testing Program reading test. They also compared the changes that occurred from one grade level to another to determine the changes in the narrative structure that occurred from level to level and how the narrative structure becomes more complex from lower grades to higher grades.

Mathematics. Unlike the content standards, the four process standards in mathematics use general language across grades rather than being described progressively from one grade to the next. Nevertheless, the process standards form the backbone of the mathematics grade-level expectations and should therefore not be ignored in discussions of vertical alignment. Therefore, an additional session was allotted to explorations of how the process standards evolve across the grades, which was led by a consultant, Dr. Linda Wilson, with the content staff of the Delaware Department of Education. Participants were grouped according to their teaching grade level (elementary, middle, or high) and the standard of mathematical reasoning chosen for consideration. Using

a very simple task of two sets of five pennies arranged in different configurations on two sides of a mat, the participants explored how this question would be addressed by children at very early grades, then how middle-grades students might approach it, and finally how a mathematician might write a proof. The example was used to show how reasoning develops in students from very informal precounting to formal proof. And then the participants discussed how the given task might be adapted for a grade level higher or lower than the grade for which it is presently intended.

The panel agreed that some of the aspects of reasoning that evolve over the grades should include

- 1) types of explanations required
- 2) number of clues provided to the student in the problem
- 3) number of steps required to solve the problem
- 4) level of difficulty of patterns
- 5) level of complexity of the problem
- 6) level of sophistication of the vocabulary used
- 7) abstraction
- 8) use of symbols and technical mathematical representations

A recommendation was made that more specificity be included in the GLE documents to include descriptions of the evolution of the process standards across the grade bands.

Debriefing and Evaluation

At the conclusion of the workshop, a debriefing session was held for each content area. The content leaders led the discussion and collected comments and reactions to the processes and outcomes of the workshop. Specific debriefing questions are shown in appendix H. In addition, panelists completed an evaluation form that provided more quantitative feedback on various aspects of the workshop. See appendix I.

Analysis of Results

Nature, importance, and clarity ratings were recorded for each standard reviewed by each of group of panelists. Groupwide ratings, generally just for the consensus grades, were entered by the table facilitators during the workshop. Ratings for additional grades were entered from the paper rating sheets completed by the grade-range subgroups. Results for grades 3 and 4 were taken from the elementary subgroup ratings, results for grades 6 and 7 were taken from the middle school subgroup ratings, and results from grades 9 and 10 were taken from the high school subgroup ratings. Analyses of these ratings are reported in the next chapter.

In addition to the results reported here, panelist comments and feedback were provided to the department in two ways. All of the rating booklets were returned to the department so that they could see the comments in their original form. Second, for mathematics, alignment charts showing how expectations were matched across grades were recorded in an Excel spreadsheet. This spreadsheet provided additional feedback to the department for use in organizing and summarizing information for the development of performance level descriptions.

Chapter 3: Results

Results from analyses of the workshop data are presented in this chapter, beginning with analyses of the consistency of the main ratings as measured by the consistency in results across independent groups. This is followed by a discussion of specific findings from the nature, importance, and clarity ratings for each content area. Then it continues with a discussion of more detailed workshop results and concludes with a summary of the debriefing session comments.

Agreement across Independent Groups

The vertical alignment ratings collected reflected consensus judgments at either the subgroup or whole table level. In this context, it was neither possible nor meaningful to examine agreement at the level of individual panelists. Instead, the design of the workshop review of each standard by two independent groups of raters, seated at different tables. Analyses of the consistency of rating results from the independent groups is presented here before turning to the substantive findings from the workshop.

Mathematics

Table 4 shows the relationship of judgments on the nature of linkage ratings across independent groups of panelists. Group 1 indicates the table of panelists who rated the standard on the first round and Group 2 indicates the group that rated that same standard on the second round of ratings. Across all standards and grades, the agreement was found for 164 of the 344 links (48 percent). Even though broadened and deepened are highly related in some cases, the panelists could only code the expectation with one category, broadened or deepened. If these two categories are combined into a single category of “extended” an additional 86 links would be added to the agreement count, yielding an agreement rate of 73 percent (250 of 344 links).

Table 4. Agreement of Nature of Link Ratings from Independent Groups—Mathematics

Group 1 Judgment	Group 2 Judgment				Total
	Broadened	Deepened	New	Same	
Broadened	61	45	13	4	123
Deepened	41	54	16	6	117
New	9	20	33	2	64
Same	16	8	0	16	40
Total	127	127	62	28	344

Note: 48 percent agreement (73 percent if broadened and deepened are combined)

Table 5 shows the relationship of judgments between round 1 and round 2 about the clarity increases in expectations from one grade to the next. Note that clarity was not rated for the target expectation if the panelists considered the expectation was new and not related to any expectations from the previous grade. The independent groups agreed on 189 out of 264 links (72 percent) largely because most expectations were rated as clear. For the most part, the independent groups identified clarity issues with different links. Since all links identified by any of the groups were forwarded for further review, exact agreement across groups was unnecessary. Because the links in expectations were reviewed by multiple groups, it was more likely that any significant problem would be flagged by at least one of these groups.

Table 5. Agreement of Clarity of Link Ratings from Independent Groups—Mathematics

Group1 Judgment	Group 2 Judgment			Total
	1. Not Clear	2. Minor	3. Clear	
1. Not Clear	1	1	18	20
2. Minor Issues	0	3	35	38
3. Clear	7	14	185	206
Total	8	18	238	264

Note: 72% overall agreement

Table 6 shows the relationship across independent groups of judgments about the Importance of increases in expectations from one grade to the next. Again, importance was not rated where an expectation was considered to be new and not related to any of the expectations at the previous grade. Agreement was found for only 173 of the 257 links (44 percent agreement). As with the clarity ratings, the primary use of this information was to flag instances where increases in expectations were judged to be of low importance

Table 6. Agreement of Importance Ratings from Independent Groups—Mathematics

Group 1 Judgment	Group 2 Judgment			
	1. Low	2. Medium	3. High	Total
1. Low	14	16	21	51
2. Medium	23	37	35	95
3. High	13	36	62	111
Total	50	89	118	257

Note: 44 percent overall agreement

Table 7 shows the percentage of agreement across independent groups on the lower-grade expectations matched to each expectation at the target grade. Overall the independent groups found the same matching expectation 62 percent of the time and found different matching expectations 21 percent of the time. For the remaining 17 percent of the target expectations, no matching lower-grade expectation was found by one or both of the independent groups. Across the four mathematics standards, the highest agreement found for Data and Probability (77 percent). The agreement was considerably lower for the Algebra expectations (48 percent) than the other standards.

Table 7. Agreement on Expectation Matched across Independent Groups—Mathematics

Standard	Number of Expectations	Agreement across Groups		
		% Same	% Different	% No Match
1. Number and Operations	120	61%	23%	21%
2. Algebra	81	48%	25%	27%
3. Geometry	108	67%	18%	16%
4. Data and Probability	47	77%	17%	6%
Total	356	62%	21%	17%

"No Match" means one group did not find a match while the other did.

English Language Arts

Table 8 shows the relationship of judgments on the nature of linkage ratings across independent groups of panelists. It also shows the relationship between type of linkage judgments from the table that rated a given standard in the first round and a second table rating expectations from that same standard in round 2. For English language arts, only matched expectations were presented, so there was not a "new" category. A few panelists, however, insisted that some expectations were both broadened and deepened at the next grade and created a new response category ("both") to cover this situation.

Across all standards and grades, there was a clear relationship between the nature of link ratings from independent tables, with agreement for 284 of the 421 linkages (67 percent). Unlike mathematics, judges were better able to distinguish between broadening and deepening for the English language arts expectations.

As with mathematics, about 10 percent of the time, panelists did not see a clear difference in an expectation from one grade to the next and rated the type of linkage as the "same." Each of these instances was flagged for further review by the Department to see where further clarification of intended differences might be needed.

Table 8. Agreement of Nature of Link Ratings from Independent Groups—English Language Arts

Group 1 Judgments	Group 2 Judgments				
	Broaden	Deepen	Both	Same	Total
Broaden	84	30	4	15	133
Deepen	12	189	3	11	215
Both	8	27	0	6	41
Same	18	3	0	11	32
Total	122	249	7	43	421

Note: 67% agreement (77% if Broaden and Deepen are combined)

Table 9 shows the relationship across independent groups in ratings of the clarity of increases in expectations from one grade to the next. As with mathematics, different rating tables were likely to raise different issues about their understanding of increases in expectation from one grade to the next. The primary concern is not so much with agreement as with the likelihood that at least one panelist spotted an issue that might trouble other teachers. With more than one group of panelists reviewing each standard, the chances of finding potential problems were increased.

Table 9. Agreement of Clarity of Link Ratings across Independent Groups—English Language Arts

Round 1 Judgments	Round 2 Judgments			
	1. Not Clear	2. Minor	3. Clear	Total
1. Not Clear	6	13	32	51
2. Minor Issues	9	35	86	130
3. Clear	15	67	168	250
Total	30	115	286	431

Note: 48 percent overall agreement

Table 10 shows the relationship across independent groups of panelists about the importance of increases in expectation from one grade to the next. Across all standards and grades, there was agreement for only 193 of the 419 linkages (46 percent) for which importance ratings were provided. As with the clarity ratings, expectations where increases from one grade to the next were given low importance ratings were flagged for further review.

Table 10. Agreement of Importance Ratings across Independent Groups—English Language Arts

Round 1 Judgments	Round 2 Judgments			
	1. Low	2. Medium	3. High	Total
1. Low	3	2	14	19
2. Medium	6	46	67	119
3. High	39	98	144	281
Total	48	146	225	419

Note: 46% overall agreement.

Summary of Agreement Rates

Overall agreement rates were modest. The concept paper called for using judges who were thoroughly familiar with the expectations being aligned. It was envisioned that panelists would either be teachers responsible for teaching to the targeted expectations or content experts who had participated in development of the content frameworks. While Delaware's overall content standards were well-established, the grade-level expectations were brand new. It was thus not possible to find people outside of the department who had established familiarity with these expectations. This may have suppressed the agreement rates considerably.

Given only modest agreement, some caution is advised in interpreting the summary information presented next. The greater value of the workshop was very likely in the detailed feedback indicating where procedures might be improved and indicating areas where the grade-level expectations might be explained more fully.

Nature of Alignment from One Grade to the Next

Mathematics

Table 11 shows the distribution of the type of match ratings for each of the four mathematics content standards. Overall, about 20 percent of the expectations were judged to be new for the target grade. The frequencies of broaden versus deepen ratings were nearly equal at about 35 percent each, although recall that distinctions between these two categories were not highly reliable (as evidenced by the cross-table agreement analyses shown in table 4.). In roughly 10 percent of the cases, panelists could not see an increase in expectations from one grade to the next and rated the related expectations as the same. Almost by definition “grade-level” expectations should require more of students in each successive grade, so the panelists’ difficulty in seeing the intended increase is a potential problem. While relatively infrequent, this type of problem was slightly more prevalent for algebra expectations and less so for geometry expectations.

Table 11. Nature of Increases in Mathematics Expectations for Each Standard

Standard	Type of Match			
	% Broadened	% Deepened	% Same	% New
1. Number and Operations	40%	34%	9%	17%
2. Algebra	26%	33%	16%	24%
3. Geometry	36%	36%	5%	23%
4. Data and Probability	44%	41%	10%	5%
Total	36%	35%	10%	19%

Table 12 shows the distribution of the type of match ratings across grades. Most striking is the result that the percent of expectations judged to be “new” was much higher for the 9th grade expectations (40 percent) compared to other grades, suggesting a possible disconnect between middle and high school expectations. The biggest proportion of “same” judgments was found for the 8th grade expectations. Significant differences in the proportion of “same” judgments or “new” judgments from one grade to the next could lead to discontinuities in describing target performance levels. Where many expectations were perceived to be similar from one grade to the next, performance level descriptions could also end up being relatively similar. When a number of expectations are new, performance level descriptions are more likely to suggest large increases in competencies.

Finally, the expectations were thought to broaden more frequently at the 5th and 7th grade and deepen more frequently at the 6th and 10th grades.

Table 12. Nature of Increases in Mathematics Expectations by Grade

Grades	Number of Ratings	Type of Match			
		% Broadened	% Deepened	% Same	% New
2 to 3	34	41%	44%	12%	3%
3 to 4	45	38%	24%	16%	22%
4 to 5	54	56%	33%	7%	4%
5 to 6	47	21%	47%	13%	19%
6 to 7	58	47%	24%	7%	22%
7 to 8	55	29%	33%	18%	20%
8 to 9	47	21%	28%	9%	40%
9 to 10	16	13%	56%	6%	25%
Total	356	36%	35%	10%	19%

English Language Arts

For language arts, panelists only rated matched pairs of expectations. Table 13 shows the distribution of type of match ratings for the pairs rated under each language arts standard. In a few cases, panelists disagreed with the match and reported that the target-grade expectation represented a new skill rather than an increase in the prior grade expectation. Nonetheless, relatively few expectations were rated as new (2 percent overall) compared to mathematics, where 19 percent of the expectations are rated as new. The most striking result is that the majority of the expectations for writing (Standard 1) were rated as “broadening” from one grade to the next. Students are expected to perform the same writing tasks but with an extended range of prompts. For the two reading standards, expectations were mostly judged to deepen from one grade to the next (66 percent for comprehension and 72 percent for connections). This suggests that cognitive requirements go from simple recognition to descriptions, understanding, analysis, and even evaluation as students move to higher grades.

Table 13. Nature of Matches for Each Language Arts Standard

Standard	Type of Match				
	% Broadened	% Deepened	% Both	% Same	% New
1. Writing	54%	28%	4%	12%	1%
2. Comprehension	18%	66%	5%	9%	2%
4. Connections	20%	72%	0%	5%	4%
Total	31%	53%	4%	9%	2%

Table 14 shows the distribution of the language arts nature of match ratings by grade. These results show a much higher proportion of “same” ratings for the 9th (28 percent) and 10th (36 percent) expectations. These ratings suggest that the panelists could not see differences in expectations that may have been intended, and so indicate the potential need for further explanation of the expectations at these grade levels.

Table 14. Nature of Increases in Language Arts Expectations by Grade

Grades	Number of Ratings	Type of Match				
		% Broadened	% Deepened	% Both	% Same	% New
2 to 3	90	32%	50%	7%	3%	8%
3 to 4	72	50%	22%	14%	14%	0%
4 to 5	106	42%	38%	9%	10%	0%
5 to 6	73	52%	45%	3%	0%	0%
6 to 7	68	38%	47%	15%	13%	0%
7 to 8	92	24%	52%	11%	13%	0%
8 to 9	79	8%	57%	5%	28%	3%
9 to 10	56	38%	27%	0%	36%	0%
Total	356	35%	43%	8%	12%	1%

Ratings of the Importance of Increases in Expectation

Mathematics

Table 15 shows the distribution of the ratings of importance assigned to increases in expectation from one grade to the next for each mathematics content standard. A greater proportion of the grade-to-grade increases in expectation for geometry (58 percent) and number and operations (47 percent) were judged important compared to algebra (38 percent) and data analysis and probability (28 percent). As noted above, there was not a high level of agreement across independent tables with respect to the importance ratings, so some caution is needed in interpreting these results.

Table 15. Importance of Expectation Increases for Each Mathematics Standard

Standard	Number of Ratings	Importance		
		% Low	% Medium	% High
1. Number and Operations	199	19%	34%	47%
2. Algebra	120	21%	40%	39%
3. Geometry	178	15%	27%	58%
4. Data and Probability	89	22%	49%	28%
Total	586	19%	35%	46%

Table 16 shows the distribution of the ratings of importance assigned to increases in expectation from one grade to the next for each for each grade. Increased expectations were rated somewhat more important for the 6th grade (57 percent high importance) and notably lower at the 10th grade (only 27 percent high importance). This result suggests the need for further clarification of the 10th grade expectations in mathematics relative to the 9th grade expectations.

Table 16. Importance of Increases in Mathematics Expectations by Grade

Grades	Number of Ratings	Importance		
		% Low	% Medium	% High
2 to 3	34	21%	38%	41%
3 to 4	41	29%	29%	41%
4 to 5	53	17%	36%	47%
5 to 6	46	15%	28%	57%
6 to 7	54	17%	35%	48%
7 to 8	50	14%	52%	44%
8 to 9	36	8%	44%	47%
9 to 10	15	33%	40%	27%
Total	356	36%	35%	10%

English Language Arts

Table 17 shows the distribution of importance ratings for each of the language arts standards. As with mathematics, the majority (57 percent) of the increases in expectation from one grade to the next were rated as high importance. Overall, expectations for the writing standard had higher ratings of increased importance than was the case for two reading standards.

Table 17. Importance of Expectation Increases for Each Language Arts Standard

Standard	Number of Ratings	Importance		
		% Low	% Medium	% High
1. Writing	272	4%	32%	64%
2. Comprehension	399	12%	33%	55%
4. Connections	84	11%	40%	49%
Total	755	9%	34%	57%

Table 18 shows the distribution of importance ratings for grade-to-grade increases in expectation, separately for each grade. Expectation increases at the lower grades were slightly less likely to be rated as high importance (47 percent for grades 3 and 4 compared to 63 percent overall).

Table 18. Importance of Increases in Language Arts Expectations by Grade

Grades	Number of Ratings	Importance		
		% Low	% Medium	% High
2 to 3	85	5%	48%	47%
3 to 4	72	0%	53%	47%
4 to 5	106	0%	32%	68%
5 to 6	73	8%	34%	58%
6 to 7	68	12%	13%	75%
7 to 8	92	4%	22%	74%
8 to 9	78	7%	24%	69%
9 to 10	47	4%	28%	68%
Total	621	5%	32%	63%

Clarity of Alignment of Expectations

Mathematics

The final summary of results concerns the ratings of the clarity of increases in related expectations from one grade to the next. Table 19 shows the clarity ratings for each mathematics standards. Overall, the panelists rated the increases as having high clarity (84 percent). Low clarity ratings were generally accompanied by specific comments or suggestions. Low ratings were slightly more frequent for geometry expectations (10 percent compared to 4–5 percent for other mathematics standards).

Table 19. Clarity of Expectation Increases for Each Mathematics Standard

Standard	Number of Ratings	Clarity		
		% Low	% Medium	% High
1. Number and Operations	196	4%	9%	87%
2. Algebra	133	5%	12%	83%
3. Geometry	183	10%	7%	83%
4. Data and Probability	87	5%	16%	79%
Total	599	6%	10%	84%

Table 20 shows the distribution of the clarity ratings for the mathematics expectations at each grade level. There was a higher proportion of “low clarity” ratings for grades 4, 8, and 9 (14 percent, 16 percent, and 14 percent respectively).

Table 20. Clarity of Mathematics Expectation Increases by Grade

Grades	Number of Ratings	Clarity		
		% Low	% Medium	% High
2 to 3	34	3%	24%	73%
3 to 4	42	14%	10%	76%
4 to 5	53	6%	15%	79%
5 to 6	46	2%	13%	85%
6 to 7	54	7%	6%	87%
7 to 8	49	16%	10%	73%
8 to 9	42	14%	14%	71%
9 to 10	15	7%	13%	80%
Total	335	9%	13%	79%

Note: In this table, each expectation is only counted once (335 expectations). In the previous table, multiple ratings of the same expectations were included (599 ratings).

English Language Arts

Table 21 shows the distribution of clarity ratings for each language arts standard. There were significantly more low clarity ratings for the writing standard (18 percent compared to 8 percent and 5 percent for the two reading standards).

Table 21. Clarity of Expectation Increases for Each Language Arts Standard

Standard	Number of Ratings	Clarity		
		% Low	% Medium	% High
1. Writing	276	18%	26%	56%
2. Comprehension	409	8%	29%	63%
4. Connections	84	5%	19%	76%
Total	769	11%	27%	62%

Table 22 shows the distribution of clarity ratings for the language arts expectations at each grade. There was a much higher proportion of low clarity ratings at grades 9 and 10 (30 percent and 38 percent). This is very consistent with the result above that more of the 9th and 10th grade expectations were judged to be the “same” as the corresponding lower grade expectation.

Table 22. Clarity of Language Arts Expectation Increases by Grade

Grades	Number of Ratings	Clarity		
		% Low	% Medium	% High
2 to 3	89	25%	28%	47%
3 to 4	75	11%	15%	75%
4 to 5	106	7%	36%	58%
5 to 6	73	11%	37%	52%
6 to 7	69	3%	41%	57%
7 to 8	92	20%	23%	57%
8 to 9	80	30%	12%	58%
9 to 10	47	38%	30%	32%
Total	631	17%	28%	55%

Detailed Workshop Results

In addition to the summary information described above, the workshop yielded two types of important results about individual expectations. First, we captured panelists’ comments about each specific expectation. Some of these comments applied to the expectation itself and others applied to the relationship of the expectation to the corresponding expectation at the prior grade. These comments were transmitted to the DOE for use in revising or explaining the current grade-level expectations.

The second detailed result was content maps for each of the mathematics standards. These maps show linkages of the expectations across grades. Spreadsheets including these maps have also been sent separately to the department. The maps might be used to reorder the expectations within a standard to increase the correspondence across grades.

The alignment linkages shown in the content maps raised some issues with the way in which mathematics expectations were grouped into “big idea” categories within each standard. Panelists sometimes linked an expectation in one category to a prior grade expectation in a different category. Sometimes the distinction within

a grade level was also not clear. For example, one of the 8th grade number and operations expectations in the first big idea category, number sense is

8.105 Use proportional reasoning to solve problems.

Another very similar expectation listed under the second big idea category, operations, is:

8.117 Apply proportional reasoning strategies to solve real-world problems.

Panelists did not appear to see a clear distinction between these two expectations and linked them to prior grade expectations in a different “big idea” category.

Debriefing Session

The evaluation survey results show that 62 percent of the panelists in English language arts and 100 percent in Mathematics reported that the orientation and training had prepared them for the alignment workshop adequately or very well. Over 90 percent of the English language arts panelists and nearly 80 percent of the mathematics panelists felt comfortable or very comfortable to match expectations across grades and identify the type of match. More than 90 percent of the mathematics panelists were comfortable or very comfortable rating the importance of increased expectations; however, only 67 percent of the English language arts panelists reported in the same level. Similarly, about 80 percent of the panels in both subject areas were comfortable or very comfortable of rating the clarity of increased expectations across grades. According to the survey, over two thirds of the panelists in both English language arts and mathematics believed that the Grade-Level-Expectations are aligned from grade to grade.

Generally we received very positive feedback about the workshop. The majority of participants reported that the workshop had provided them with an opportunity to review the expectations not just for one grade but also the adjacent grades and discuss these expectations with fellow teachers who work in different grades. The alignment activities were “very helpful to listen to above, middle, and below grades about the concepts” and “very helpful for going back to teaching.” For many teachers, through the alignment process, they created a clear vision of aligning the expectations from one grade to the next. To improve the process and the accuracy of alignment, the definition of each category (e.g., deep, broader, same) should be clearer and content-specific examples should be used.

Chapter 4: Recommendations

In this chapter, we present two types of recommendations. First, we provide recommendations for extending and improving the vertical alignment process. Second, we offer recommendations to the Delaware Department of Education for clarifying their grade level expectations and for using the alignment results in developing performance level descriptions.

Improvements to the Vertical Alignment Process

The opportunity to conduct a full-scale pilot of the vertical alignment process was extremely valuable. The workshop extended the vertical alignment process developed by CCSSO in several important ways. Specific extensions that appear worth replicating are the following:

The addition of importance ratings. The ratings of the importance of specific increases in expectation from one grade to the next will help content experts focus on key areas in developing performance level descriptions. Also, low-importance ratings are another way of identifying expectations were further consideration or clarification may be needed. A more in-depth discussion with panelists of what is meant by the importance of the difference between standards in adjacent grades may improve the process and agreement rates.

Introducing the term “clarity.” The vertical alignment concept paper talks about the quality of the vertical alignment of content standards (grade-level expectations). For most panelists, quality is somewhat ambiguous in this context; clarity is not.

Focus on the importance and clarity more than the nature of linkages in expectations. Panelists continued to struggle to distinguish whether increased expectations represent broadening or deepening. The distinction did not yield practical implications for improving the standards and expectations. While better training might have helped panelists distinguish these characteristics, the more important characteristic is that standards that are broader or deeper are related in a particular way to standards at the lower grade. That is, they are neither “new” nor “the same.”

Logistical innovations. The selection and pre-training of table leaders proved vital to moving the process along. In addition, breaking each table into grade-range subgroups proved very effective in promoting greater participation by all panelists and in covering a large number of standards and expectations in a limited time. The focus on transition grades for the whole-table discussions provided a useful degree of interaction across grade ranges while limiting redundancy in the work of the different grade-range subgroups.

Suggestions for Delaware’s Grade-Level Expectations

Notwithstanding relatively low agreement rates, a few of the specific findings about the nature and clarity of the vertical alignment of the grade-level expectations did stand out. These findings are summarized here by subject. A caveat: this was a pilot of a new procedure; therefore, the results must be interpreted with care. As noted earlier, individual panelist comments are likely to be the most useful source of information for reviewing the grade level expectations.

For mathematics, the large percent of expectations judged to be new at grade 9 (40 percent) suggests a possible disconnect between the nature and wording of the expectations for middle school grades and for high school. In addition, a significant proportion (33 percent) of the linkages from grade 9 to grade 10 mathematics were judged to be of low importance. Many of the linkages (29 percent) between mathematics expectations at the 3rd and 4th grade levels were also judged to be of low importance.

For language arts, a significant number (36 percent) of the expectations for grades 9 and 10 were judged the same, and a significant proportion (38 percent) of the linkages in expectations for these grades were judged to be of low clarity. Expectations for increases in knowledge and skill from the 8th to the 9th grade were also judged to be of lower clarity (28 percent were judged the same and 30 percent received low clarity ratings).

While the findings above have focused on areas where clarification of the grade-level expectations might be fruitful, it is important to keep in mind that most of the increases in grade-level expectations were judged to be clear and important. Overall, the results were fairly positive for the first exposure of these expectations.

Nonetheless, we offer some suggestions for further work in introducing and clarifying Delaware's grade-level expectations for mathematics and language arts.

Recommendation 1. Continue work to clarify the grade-level expectations, particularly as they are introduced to new teachers.

One valuable outcome of this workshop was the identification of specific questions that the panelists had about the wording and meaning of some of the expectations. These questions should be helpful in preparing additional explanatory material to clarify questions that teachers new to the grade-level expectations may have.

Recommendation 2. Some version of this process might also provide effective professional development for introducing the grade-level expectations to the teachers who must help students meet them.

Several teachers commented that it was very enlightening to review and discuss expectations for students at grade levels below and above the students they teach.

References

- Webb, N. L. (1997). *Criteria for alignment of expectations and assessments in mathematics and science education*. Council of Chief State School Officers and National Institute for Science Education Research Monograph No. 6. Madison: University of Wisconsin, Wisconsin Center for Education Research.
- Wise, L. L and Alt, M. (2005) Assessing vertical alignment. HumRRO Technical Report FR 95-05. Alexandria, VA: Human Resources Research Organization.

Appendix A: Delaware Content Standards

English

Standard Code	Description.
E02	Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing.
E04	Students will use literary knowledge accessed through print and visual media to connect self to society and culture.

Writing

Standard Code	Description.
W01	Students will use written and oral English appropriate for various purposes and audiences.

Mathematics Reasoning

Standard Code	Description.
M01	Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.
M02	Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.
M03	Students will develop their ability to REASON MATHEMATICALLY, by solving problems in which there is a need to investigate significant mathematical ideas in all content areas; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking and to construct their own learning..
M04	Students will develop their ability to MAKE MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Mathematics Understanding

Standard Code	Description.
M05	Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.
M06	Students will develop NUMBER SENSE by solving problems in which there is a need to represent and model real numbers verbally, physically and symbolically; to use operations with understanding; to explain the relationships between numbers; to apply the concept of a unit; and to determine the relative magnitude of real numbers.
M07	Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

M08	Students will develop SPATIAL SENSE and an understanding of GEOMETRY by solving problems in which there is a need to recognize, construct, transform, analyze properties of, and discover relationships between, geometric figures.
M09	Students will develop an understanding of STATISTICS AND PROBABILITY by solving problems in which there is a need to collect, appropriately represent, and interpret data; to make inferences or predictions; to present convincing arguments; and to model mathematical situations to determine the probability.
M10	Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Appendix B: Sample Rating Sheet for English Language Arts

Matching Expectations for Indicator 1.5: Persuasive

Grade	Expectation Number	Expectation
3	3.1.501	Take a position on an easily understood debatable "issue" or "question"
2	2.1.501	Take a position on an easily understood debatable "issue" that can initially be answered as a "yes" or "no"

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

- Different words are used for the same knowledge or skill

Which words? _____

- The same word(s) is (are) used in different ways

Which words? _____

- Differences between the two standards are not clear.

(They appear to be essentially the same.)

- The higher grade standard is unclear or imprecise.

- The lower grade standard is unclear or imprecise

- Other (explain):

Appendix C: Sample Rating Sheet for Mathematics

Topic: 1a Number Sense

Expectation:

3.101 CONNECT SKIP COUNTING TO MULTIPLICATION

Most Similar Grade 2 Expectation (Number from Grade 2, Sheet 1a) _____

Importance: _____ (High, Medium, Low)

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

- Different words are used for the same knowledge or skill
Which words? _____
- The same word(s) is (are) used in different ways
Which words? _____
- Differences between the two standards are not clear.
(They appear to be essentially the same.)
- The higher grade standard is unclear or imprecise.
- The lower grade standard is unclear or imprecise
- Other (explain):

Alternate Grade 2 Standard (No.): _____

Importance: _____ (High, Medium, Low)

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Quality of the Linkage Rating: _____ (3-High Quality to 1-Not Clear)

Source(s) of ambiguity:

- Different words are used for the same knowledge or skill
Which words? _____
- The same word(s) is (are) used in different ways
Which words? _____
- Differences between the two standards are not clear.
(They appear to be essentially the same.)
- The higher grade standard is unclear or imprecise.
- The lower grade standard is unclear or imprecise
- Other (explain):

Appendix D: Sample Reference Sheet for English Language Arts

Standard 1.

Students will use written and oral English appropriate for various purposes and audiences.

Performance Indicator 1.1

Writers will produce examples that illustrate the following discourse classifications; by the completion of the grade, writers will be able to write **persuasive** (audience-oriented), **informative** (subject-oriented), and **expressive** (author-oriented) texts.

Grade 2, Reference Sheet 1.1 - Process

Number	Text
2.1.101	Writers use and adapt the writing process (planning/brain storming/organizing, drafting, conferring, revisiting, editing, sharing, and publishing with ongoing revision throughout the process)
2.1.102	Writers engage in a writing process that is recursive (not linear, but spiraling or cyclical) and individual
2.1.103	Writers recognize that not all writing pieces go to the publication stage
2.1.104	Writers engage in self-assessment and reflection on their writing
2.1.105	Writers select their own topics and occasions for writing and also write in "on-demand" (prompted) occasions.
2.1.106	Writers engage in collaborative writing (e.g., "buddy writing," guided writing, interactive writing, shared writing)

Grade 2, Reference Sheet 1.2 - Purpose

Number	Text
2.1.201	Students understand that persuasive writing is audience-centered; the needs and perspective of the intended audience are the most important consideration. Students understand that persuasive writing involves taking a position on a debatable issue to convince an audience.
2.1.202	Students understand that informative writing is subject-centered; the need to communicate information clearly so that the audience can understand the content/subject is the most important consideration.
2.1.203	Students understand that expressive writing is author-centered; the most important consideration is the writer's intent to tell a story or make meaning of an experience (reflection, self-discovery), to achieve personal goals, or to create literary pieces.

Appendix E: Sample Reference Sheet for Mathematics

Standard 1: Number and Operations Reference Sheet

Grade 2 Sheet 1a: Number Sense

No. Text of Grade-Level Expectation

Building upon the K–1 expectations, all students in Grade 2 will be able to:

NUMBER SENSE

- 2.101** Use multiple strategies for counting using groups of 1s, 5s and 10s.
- 2.102** Connect number words for fractions ($\frac{1}{2}$'s and $\frac{1}{4}$'s) with pictures and numerals.
- 2.103** Compare size of two numbers by counting or counting back.
- 2.104** Use combinations of one and two-digit numbers to build larger (2 digit) numbers

Grade 2 Sheet 1b: Operations

OPERATIONS

- 2.105** Use number sentences to represent number combinations up to 20.
- 2.106** Use number sentences with missing addends to represent subtraction combinations up to 20.
- 2.107** Use a variety of strategies to model combination and separation problems up to 100.
- 2.108** Show number sentences that demonstrate that addition and subtraction are inverse operations (e.g., join, separate, part-part-whole, compare).
- 2.109** Represent repeated addition using pictures and models.
- 2.110** Understand that addition of whole numbers result in a larger number and subtraction of whole numbers result in a smaller number.

Appendix F: Table Leader Orientation Slides




Vertical Alignment Workshop Table Leader Orientation

Laress Wise
Human Resources Research Organization (HumRRO)

Delaware Vertical Alignment Workshop
April 20, 2005

Human Resources Research Organization



Workshop Goals

- **Context: States moving to meet NCLB requirements**
 - Define Reading, Mathematics, and Science Objectives for every grade (3-8 and High School), not just ends of grade ranges.
 - Administer assessments to all (at least 95%) students in every grade and set performance standards for proficiency.
- **Goal of the Vertical Alignment Workshop**
 - Take a detailed look at expectations for each grade level
 - Determine what "More" is expected at each grade
 - Begin to describe most important increases in expectation from one grade to the next
 - ✓ Performance level descriptions for each grade
 - ✓ Used in setting performance standards for each grade
 - ✓ Need to achieve consistent expectations of growth

April 20, 2005 Overview of Vertical Alignment 2

Human Resources Research Organization

Comparing Expectations Across Grades

What you will be asked to do:

1. Match each expectation to one or more expectations at the next lower grade
 - Language Arts expectations are already matched.
2. Describe how the matching expectations are related
3. Rate the importance of differences in expectation from one grade to the next
4. Rate the clarity of the differences in expectations and identify ambiguities in the grade-level expectations

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How are Matching Expectations Related?

- Types of Relationships
 - Knowledge or skills **Broadened** to wider range of content
 - ✓ Same skills applied to wider content
 - **Deeper** understanding (cognitive processes) for the same content
 - ✓ Watch the verbs (recognize => explain)
 - **New** (or different) content and/or skills
 - ✓ No matching expectation at next lower grade

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Importance of Differences

- We want to identify the most important differences in expectations from one grade to the next
 - High – differences in matched expectations are central to what “More” we want students to know and be able to do
 - Medium – differences are important, but not the most central
 - Low – differences are trivial or less important
- Ratings are individual judgments – there are no “Right” answers

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Quality of Content Alignment

- Content standards are **not** clearly articulated across grades if:
 - Related standards are not clearly differentiated.
 - ✓ What new knowledge or skill is required?
 - ✓ One or both standards may not be described in sufficient detail.
 - Differences in terminology are not explained.
 - ✓ Different words for the same skill?
 - Terminology drifts.
 - ✓ The meaning of terms appears to be expanded.

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Reference Sheets - Math

Grade-Level Expectations: Grade 2 Mathematics
Standard 1: Number and Operations Reference Sheet
Grade 2 Sheet 1a: Number Sense

No. Text of Grade-Level Expectation

Building upon the K-1 expectations, all students in Grade 2 will be able to:

Number Sense

- 2.101 Use multiple strategies for counting using groups of 1s, 5s and 10s.
- 2.102 Connect number words for fractions (1/2's and 1/4's) with pictures and numerals.
- 2.103 Compare size of two numbers by counting or counting back.
- 2.104 Use combinations of one and two-digit numbers to build larger (2 digit) numbers

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Reference Sheets – Language Arts

Grade-Level Expectations: Grade 2 Reading (Continued)

Standard 2. Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing.

Grade 2, Reference Sheet 2.04 – Retelling or Restating

Performance Indicator 2.04 [2.4d (2-8) 2.3d (9-10)]: Students will be able to demonstrate an overall understanding of printed texts by (d) **retelling** a story or **restating** an informative text through speaking and/or writing.

By the end of Grade 2, using 2nd grade or higher texts, students know and are able to do everything required in previous grades and

Expectation

<u>Number</u>	<u>Text</u>
2.2.0401	Retell the story, identifying the main characters and major events in a simple literary text
2.2.0402	Restate the main idea of a simple informative text with supporting details
2.2.0403	Identify (in sequence) the major events in a story

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Rater Training

- **Task 1: Identify matching objective from next lower grade (if any)**

Most Similar Grade *n*-1 Objective (No.): Enter Objective Number
▪ [For Language Arts, matching objective is already identified]

- **Task 2: Code the relationship of the matching objectives**

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

- **Task 3: Rate importance of differences**

Importance: _____ (High, Medium, Low)

- **Task 4: Rate quality of linkage and describe any source of ambiguity**

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear), Source(s) of ambiguity:

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1. Match Objectives

- Each Rating Sheet has a specific objective for the current target grade and standard (content area).
- Panelists are given a “Reference Sheet” listing **all** of the prior grade objectives for that standard.
- Panelists are asked to identify up to two objectives from the Reference Sheet that best match the target objective on the Rating Sheet.

- Enter the number for the matching prior-grade objective on the rating sheet. For example, if the matching 6th grade objective were 6.203, you would enter:

Most Similar Grade 6 Objective (No.): 6.203

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2. Code Relationship

➤ **Code one of four types of relationships:**
Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

- **Broaden** – content is broadened. For example
 - ✓ Integer operations are extended to whole numbers
 - ✓ Reading skills are applied to more complex texts
- **Deepen** – a deeper level of cognitive skill is required:
 - ✓ **Level 1: Recall**
 - ✓ **Level 2: Perform a simple task** (“classify,” “organize,” “estimate,” “make observations,” “collect and display data,” and “compare data”)
 - ✓ **Level 3: Strategic thinking** (reasoning, planning, using evidence, and a higher level of thinking than the previous two levels)
 - ✓ **Level 4: Extended thinking** (complex reasoning, planning, developing, and thinking *most likely* over an extended period of time.)
 - ✓ **Verbs:** recognize->understand->explain->analyze->evaluate
- **Same** – the same knowledge and skill are required.
- **New** – there is no matching objective for the prior grade.

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More on Depth of Knowledge

➤ Comparison of Webb, Porter, and Bloom taxonomies for cognitive complexity:

Webb	Porter	Bloom
Recall	Memorize	Recall of Data Comprehension
Simple Procedures	Perform Procedures Demonstrate Understanding	Application
Strategic Thinking	Conjecture, Generalize Prove	Analysis
Extended Thinking	Solve non-routine problems	Synthesis Evaluation

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3. Rate Importance

Importance: _____ (High, Medium, Low)

- High – Very important difference
 - Example: Perform one-digit addition/subtraction is Broadened to Perform one-digit addition/subtraction with three digit numbers
- Medium – Important difference
 - “Begin to identify information in a simple text to develop an opinion” versus “Identify information in a simple text to develop an opinion”
 - Difference is important, but not large (or Large, but less important)
- Low – Not an important difference
- Your own opinions - no “Right” answers
- Try not to rate everything at the same level

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4. Rate Linkage Quality

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity checklist:

- Different words are used for the same knowledge or skill.
Which words? _____
- The same word(s) is (are) used in different ways.
Which words? _____
- Differences between the two standards are not clear.
(They appear to be essentially the same.)
- The higher grade standard is unclear or imprecise.
- The lower grade standard is unclear or imprecise.
- Other (explain): _____

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Judgment Task Example 1

Grade 7 Estimation and Measurement Objective:

7.202 Use physical models to find the volume and surface area of cubes, prisms, and cylinders.

Matches which Grade 6 Objective?

- 6.201 Estimate, measure, and classification angles.
 - 6.202 Measure and find the ratio of the circumference and diameter of circular objects to estimate pi.
 - 6.203 Use physical models to find the area and perimeter of rectangles and triangles.
 - 6.204 Demonstrate an understanding of when to use a unit, a square unit, and a cubic unit.
 - 6.205 Use equivalent fractions to solve problems.
 - 6.206 Make estimates using benchmark fractions and decimals and determine if the estimate is reasonable.
- (+4 other, less related, Grade 6 objectives for Estimation and Measurement)

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Judgment Task Example 1 (Con't)

Grade 7 Objective: 7.202 Use physical models to find the volume and surface area of cubes, prisms, and cylinders

Most Similar Grade 6 Objective (No.): 6.203

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

- Different words are used for the same knowledge or skill.
Which words? _____
- The same word(s) is (are) used in different ways.
Which words? _____
- Differences between the two standards are not clear.
(They appear to be essentially the same.)
- The higher grade standard is unclear or imprecise.
- The lower grade standard is unclear or imprecise.
- Other (explain): _____

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Judgment Task Example 2

Grade 4 Science History/Nature Objective:

- 4.1.1 Contrast changes in scientific knowledge resulting from new discoveries (e.g., new knowledge leads to new questions).

Matches which Grade 3 Objective?

- 3.1.1 Recognize that scientific explanations may lead to new discoveries (e.g., new knowledge leads to new questions).
3.1.2 Study the lives and discoveries of scientists of different cultures and backgrounds.
5.1.3 Explore science careers in the community.

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Judgment Task Example 2 (Con't)

Grade 4 Objective: 4.1.1 Contrast changes in scientific knowledge resulting from new discoveries (e.g., new knowledge leads to new questions).

Most Similar Grade 3 Objective (No.): 3.1.1

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

Different words are used for the same knowledge or skill.

Which words? _____

The same word(s) is (are) used in different ways.

Which words? _____

Differences between the two standards are not clear.

(They appear to be essentially the same.)

The higher grade standard is unclear or imprecise.

The lower grade standard is unclear or imprecise.

Other (explain): _____

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Judgment Task Example 3

Grade 6 Reading Objective:

- 6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum

Matches which Grade 5 Objective?

- 5.1.1 Identify defining characteristics, build background knowledge and develop reading skills to understand a variety of literary passages and texts (e.g., fiction; nonfiction; myth; poems; fantasies; biographies; science fiction, tall tales; supernatural tales).
- 5.1.2 Increase amount of independent reading.
- 5.1.3 Determine main idea and locate supporting details in a literary passage and across the curriculum.
- 5.1.4 Analyze text to determine time and sequence.
- 5.1.5 Use comprehension skills (e.g., draw conclusions; predict; use context clues; summarize).
- (+ 9 other, less related, objectives for Grade 5 Reading)

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Judgment Task Example 3 (Con't)

What are the main differences between:

- 5.1.3 Determine main idea and locate supporting details in a literary passage and across the curriculum.

and

- 6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum.

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Judgment Task Example 3 (Con't)

Grade 6 Standard: 6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum

Most Similar Grade 5 Objective (No.): 5.1.3

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

Different words are used for the same knowledge or skill.

Which words? _____

The same word(s) is (are) used in different ways.

Which words? _____

Differences between the two standards are not clear.

(They appear to be essentially the same.)

The higher grade standard is unclear or imprecise.

The lower grade standard is unclear or imprecise.

Other (explain): _____

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Rating Process

- You will be assigned to one of three or four tables.
- Each table begins with a different standard
- Grade-Span Subgroups (Elementary, Middle, and High School) work separately at first (Round 1)
 - Paper-and-pencil ratings, using Grade-Span Rating sheets
- Tables come together to discuss results across all grade spans (Round 2)
 - Results entered into spreadsheets on laptops
- Continue with 2nd Standard (Rounds 3 and 4)

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Role of the Table Leaders

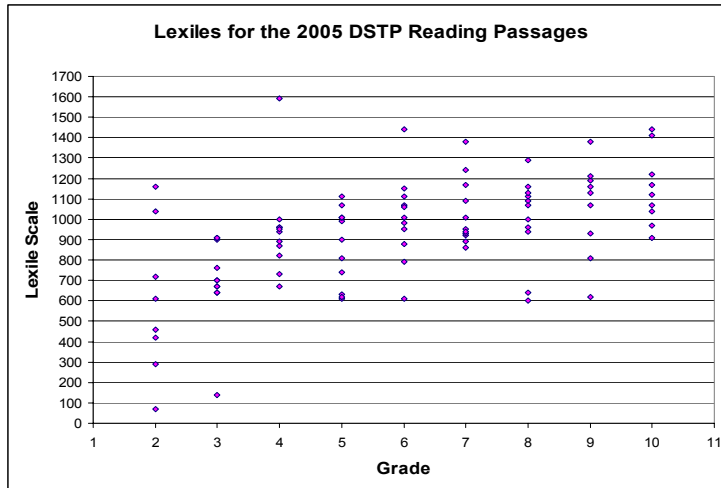
- Keep discussion moving and on topic
 - Limit criticism of expectations themselves (focus on alignment)
 - Help remove impediments to consensus
- Encourage participation by all panelists
 - Don't let one person dominate; ensure "equal time"
 - Promote balance across grade-span teams
- Clarify concerns and seek help as needed
 - Help articulate questions to content leaders or HumRRO staff
- Participate and enjoy!
 - You are playing an important role in clarifying expectations for all Delaware students.

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Day 2: Passage Complexity



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Discussion

➤ Questions and suggestions about:

- Why vertical alignment is needed? How results can be used?
- The proposed process and how it works.
- Other.

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Appendix G: Vertical Alignment Workshop Training Slides




Vertical Alignment Workshop

Laress Wise
Human Resources Research Organization (HumRRO)

Delaware Vertical Alignment Workshop
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Workshop Goals

- **Context: States moving to meet NCLB requirements**
 - Define Reading, Mathematics, and Science Objectives for every grade (3-8 and High School), not just ends of grade ranges.
 - Administer assessments to all (at least 95%) students in every grade and set performance standards for proficiency.
- **Goal of the Vertical Alignment Workshop**
 - Take a detailed look at expectations for each grade level
 - Determine what “More” is expected at each grade
 - Begin to describe most important increases in expectation from one grade to the next
 - ✓ Performance level descriptions for each grade
 - ✓ Used in setting performance standards for each grade
 - ✓ Need to achieve consistent expectations of growth

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Comparing Expectations Across Grades

What you will be asked to do:

1. Match each expectation to one or more expectations at the next lower grade
 - Language Arts expectations are already matched.
2. Describe how the matching expectations are related
3. Rate the importance of differences in expectation from one grade to the next
4. Rate the clarity of the differences in expectations and identify ambiguities in the grade-level expectations

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How are Matching Expectations Related?

- Types of Relationships
 - Knowledge or skills **Broadened** to wider range of content
 - ✓ Same skills applied to wider content
 - **Deeper** understanding (cognitive processes) for the same content
 - ✓ Watch the verbs (recognize => explain)
 - **New** (or different) content and/or skills
 - ✓ No matching expectation at next lower grade

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4

Importance of Differences

- We want to identify the most important differences in expectations from one grade to the next
 - High – differences in matched expectations are central to what “More” we want students to know and be able to do
 - Medium – differences are important, but not the most central
 - Low – differences are trivial or less important
- Ratings are individual judgments – there are no “Right” answers

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Quality of Content Alignment

- Content standards are **not** clearly articulated across grades if:
 - Related standards are not clearly differentiated.
 - ✓ What new knowledge or skill is required?
 - ✓ One or both standards may not be described in sufficient detail.
 - Differences in terminology are not explained.
 - ✓ Different words for the same skill?
 - Terminology drifts.
 - ✓ The meaning of terms appears to be expanded.

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Reference Sheets - Math

Grade-Level Expectations: Grade 2 Mathematics
Standard 1: Number and Operations Reference Sheet
Grade 2 Sheet 1a: Number Sense

No. Text of Grade-Level Expectation

Building upon the K-1 expectations, all students in Grade 2 will be able to:

Number Sense

- 2.101 Use multiple strategies for counting using groups of 1s, 5s and 10s.
- 2.102 Connect number words for fractions (1/2's and 1/4's) with pictures and numerals.
- 2.103 Compare size of two numbers by counting or counting back.
- 2.104 Use combinations of one and two-digit numbers to build larger (2 digit) numbers

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Reference Sheets – Language Arts

Grade-Level Expectations: Grade 2 Reading (Continued)

Standard 2. Students will construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing.

Grade 2, Reference Sheet 2.04 – Retelling or Restating

Performance Indicator 2.04 [2.4d (2-8) 2.3d (9-10)]: Students will be able to demonstrate an overall understanding of printed texts by (d) **retelling** a story or **restating** an informative text through speaking and/or writing.

By the end of Grade 2, using 2nd grade or higher texts, students know and are able to do everything required in previous grades and

Expectation

<u>Number</u>	<u>Text</u>
2.2.0401	Retell the story, identifying the main characters and major events in a simple literary text
2.2.0402	Restate the main idea of a simple informative text with supporting details
2.2.0403	Identify (in sequence) the major events in a story

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Rater Training

- **Task 1: Identify matching objective from next lower grade (if any)**

Most Similar Grade *n*-1 Objective (No.): Enter Objective Number

- [For Language Arts, matching objective is already identified]

- **Task 2: Code the relationship of the matching objectives**

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

- **Task 3: Rate importance of differences**

Importance: _____ (High, Medium, Low)

- **Task 4: Rate quality of linkage and describe any source of ambiguity**

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear), Source(s) of ambiguity:

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1. Match Objectives

- Each Rating Sheet has a specific objective for the current target grade and standard (content area).
- Panelists are given a “Reference Sheet” listing **all** of the prior grade objectives for that standard.
- Panelists are asked to identify up to two objectives from the Reference Sheet that best match the target objective on the Rating Sheet.
 - Enter the number for the matching prior-grade objective on the rating sheet. For example, if the matching 6th grade objective were 6.203, you would enter:

Most Similar Grade 6 Objective (No.): 6.203

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2. Code Relationship

➤ **Code one of four types of relationships:**

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

- **Broaden** – content is broadened. For example
 - ✓ Integer operations are extended to whole numbers
 - ✓ Reading skills are applied to more complex texts
- **Deepen** – a deeper level of cognitive skill is required:
 - ✓ **Level 1: Recall**
 - ✓ **Level 2: Perform a simple task** (“classify,” “organize,” “estimate,” “make observations,” “collect and display data,” and “compare data”)
 - ✓ **Level 3: Strategic thinking** (reasoning, planning, using evidence, and a higher level of thinking than the previous two levels)
 - ✓ **Level 4: Extended thinking** (complex reasoning, planning, developing, and thinking most likely over an extended period of time.)
 - ✓ **Verbs:** recognize->understand->explain->analyze->evaluate
- **Same** – the same knowledge and skill are required.
- **New** – there is no matching objective for the prior grade.

More on Depth of Knowledge

➤ Comparison of Webb, Porter, and Bloom taxonomies for cognitive complexity:

Webb	Porter	Bloom
Recall	Memorize	Recall of Data Comprehension
Simple Procedures	Perform Procedures Demonstrate Understanding	Application
Strategic Thinking	Conjecture, Generalize Prove	Analysis
Extended Thinking	Solve non-routine problems	Synthesis Evaluation

3. Rate Importance

Importance: _____ (High, Medium, Low)

- High – Very important difference
 - Example: Perform one-digit addition/subtraction is Broadened to Perform one-digit addition/subtraction with three digit numbers
- Medium – Important difference
 - “Begin to identify information in a simple text to develop an opinion” versus “Identify information in a simple text to develop an opinion”
 - Difference is important, but not large (or Large, but less important)
- Low – Not an important difference
- Your own opinions - no “Right” answers
- Try not to rate everything at the same level

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4. Rate Linkage Quality

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity checklist:

- Different words are used for the same knowledge or skill.
Which words? _____
- The same word(s) is (are) used in different ways.
Which words? _____
- Differences between the two standards are not clear.
(They appear to be essentially the same.)
- The higher grade standard is unclear or imprecise.
- The lower grade standard is unclear or imprecise.
- Other (explain): _____

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Judgment Task Example 1

Grade 7 Estimation and Measurement Objective:

7.202 Use physical models to find the volume and surface area of cubes, prisms, and cylinders.

Matches which Grade 6 Objective?

6.201 Estimate, measure, and classification angles.

6.202 Measure and find the ratio of the circumference and diameter of circular objects to estimate pi.

6.203 Use physical models to find the area and perimeter of rectangles and triangles.

6.204 Demonstrate an understanding of when to use a unit, a square unit, and a cubic unit.

6.205 Use equivalent fractions to solve problems.

6.206 Make estimates using benchmark fractions and decimals and determine if the estimate is reasonable.

(+4 other, less related, Grade 6 objectives for Estimation and Measurement)

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Judgment Task Example 1 (Con't)

Grade 7 Objective: **7.202 Use physical models to find the volume and surface area of cubes, prisms, and cylinders**

Most Similar Grade 6 Objective (No.): **6.203**

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

Different words are used for the same knowledge or skill.

Which words? _____

The same word(s) is (are) used in different ways.

Which words? _____

Differences between the two standards are not clear.

(They appear to be essentially the same.)

The higher grade standard is unclear or imprecise.

The lower grade standard is unclear or imprecise.

Other (explain): _____

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Judgment Task Example 2

Grade 4 Science History/Nature Objective:

- 4.1.1 Contrast changes in scientific knowledge resulting from new discoveries (e.g., new knowledge leads to new questions).

Matches which Grade 3 Objective?

- 3.1.1 Recognize that scientific explanations may lead to new discoveries (e.g., new knowledge leads to new questions).
3.1.2 Study the lives and discoveries of scientists of different cultures and backgrounds.
5.1.3 Explore science careers in the community.

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Judgment Task Example 2 (Con't)

Grade 4 Objective: 4.1.1 Contrast changes in scientific knowledge resulting from new discoveries (e.g., new knowledge leads to new questions).

Most Similar Grade 3 Objective (No.): 3.1.1

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

Different words are used for the same knowledge or skill.

Which words? _____

The same word(s) is (are) used in different ways.

Which words? _____

Differences between the two standards are not clear.

(They appear to be essentially the same.)

The higher grade standard is unclear or imprecise.

The lower grade standard is unclear or imprecise.

Other (explain): _____

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Judgment Task Example 3

Grade 6 Reading Objective:

6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum

Matches which Grade 5 Objective?

5.1.1 Identify defining characteristics, build background knowledge and develop reading skills to understand a variety of literary passages and texts (e.g., fiction; nonfiction; myth; poems; fantasies; biographies; science fiction, tall tales; supernatural tales).

5.1.2 Increase amount of independent reading.

5.1.3 Determine main idea and locate supporting details in a literary passage and across the curriculum.

5.1.4 Analyze text to determine time and sequence.

5.1.5 Use comprehension skills (e.g., draw conclusions; predict; use context clues; summarize).

(+ 9 other, less related, objectives for Grade 5 Reading)

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Judgment Task Example 3 (Con't)

What are the main differences between:

➤ 5.1.3 Determine main idea and locate supporting details in a literary passage and across the curriculum.

and

➤ 6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum.

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Judgment Task Example 3 (Con't)

Grade 6 Standard: **6.1.3 Determine theme and locate supporting details in a literary passage and across the curriculum**

Most Similar Grade 5 Objective (No.): **5.1.3**

Nature of Linkage Code(s): _____ (Broaden, Deepen, Same, New)

Importance: _____ (High, Medium, Low)

Quality of the Linkage Rating: _____ (3-High Quality, 2-Minor Ambiguity, 1-Not Clear)

Source(s) of ambiguity:

Different words are used for the same knowledge or skill.

Which words? _____

The same word(s) is (are) used in different ways.

Which words? _____

Differences between the two standards are not clear.

(They appear to be essentially the same.)

The higher grade standard is unclear or imprecise.

The lower grade standard is unclear or imprecise.

Other (explain): _____

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Rating Process

- You will be assigned to one of three or four tables.
- Each table begins with a different standard
- Grade-Span Subgroups (Elementary, Middle, and High School) work separately at first (Round 1)
 - Paper-and-pencil ratings, using Grade-Span Rating sheets
- Tables come together to discuss results across all grade spans (Round 2)
 - Results entered into spreadsheets on laptops
- Continue with 2nd Standard (Rounds 3 and 4)

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Discussion

➤ Questions and suggestions about:

- Why vertical alignment is needed? How results can be used?
- The proposed process and how it works.
- Other.

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Appendix H: Summary of Responses to Debriefing Questions

1. Do the Grade-Level Expectations cover the major content objectives from one grade to the next across grades?

- some gaps (ex., place value in grade 4) [see notes in bookmarks]
- reasonable coverage of material but not enough mention of technology
- difficulty with decimals, place value, fractions (consistency across grades not clear enough for these particular concepts)

2. How well do the Grade-Level Expectations reflect student progress from one grade to the next across grades?

- generally good process
- weak in grade 4 (especially in number sense)
- number sense needs to be looked at (more confusion) gaps → might be simple ambiguity in language

3a. The following question is for English/Language Arts Group:

How well do the sample reading passages and attached items reflect the increasing complexity of the Grade-Level Expectations across grades?

3b. The following question is for Mathematics Group:

Did the activity help you understand the increasing complexity of mathematical reasoning across grades?

- examples and non-examples of GLEs would clarify the language
 - importance of glossary
 - conceptual development of GLE mentioned by Sally was helpful.
- * Helpful to listen to above, middle, and below grades about concepts
- * Item was helpful when studying reasoning aspects at grade level → more concrete to link to GLEs and reasoning

4. Did this workshop help you understand how expectations for student achievement increase from one grade to the next?

- very good refresher of other grades' expectations
- workshop very helpful for going back to teaching. Unfortunately, doesn't reach everyone
- need to understand how valuable it is for a grade span
- repeat process and workshop at State-wide Professional Development in October

5. Did this workshop help you understand the most important expectations for the grades you work with?

- * Need clear and concise documents so distribution in each district is less of an issue.

6. What were the strengths of the Vertical Alignment process?

- was well done and worked pretty well
- overlap was very valuable for grades 5 and 8 due to different levels

- enlightened some teachers about the foundation and was come next and an awareness/learning of language not familiar in that grade. Especially true in the elementary grades.

7. What are the weaknesses of the Vertical Alignment process?

Rating sheet was a good tool but definitions of “broaden and deeper” need more training

8. Your recommendations for improvement:

- * Need to do another workshop for other teachers before final draft.

Appendix I: Vertical Alignment Workshop Evaluation Survey

Technical and Community College, Dover, DE

April 20-21, 2005

This survey is used to evaluate the vertical alignment workshop and collect feedback to improve the alignment process. Thank you for your help.

Part I: Orientation

1. How well do you feel the orientation and training prepared you for the consensus process?

1	2	3	4
Not Well	Somewhat	Adequately	Very Well

2. Please provide us with your recommendations or suggestions to improve the orientation process.

Part II: Vertical Alignment Ratings

3. How comfortable did you feel about matching expectations across grades?

1	2	3	4
Uncomfortable	Somewhat	Comfortable	Very
	Comfortable		Comfortable

4. How comfortable did you feel about identifying the type of match?

1	2	3	4
Uncomfortable	Somewhat	Comfortable	Very
	Comfortable		Comfortable

5. How comfortable did you feel about identifying the type of match?

1	2	3	4
Uncomfortable	Somewhat	Comfortable	Very
	Comfortable		Comfortable

6. How comfortable did you feel rating the importance of increased expectations?

1	2	3	4
Uncomfortable	Somewhat	Comfortable	Very
	Comfortable		Comfortable

7. How comfortable did you feel rating the clarity of increased expectations?

1	2	3	4
Uncomfortable	Somewhat	Comfortable	Very
	Comfortable		Comfortable

8. Overall, how well do you think the expectations for different grades were aligned?

1	2	3	4
Minimally	Somewhat	Adequately	Fully
Aligned	Aligned	Aligned	Aligned

Part III: Discussion of Complexity

9. How helpful was the discussion of complexity during the second morning?

1	2	3	4
Not Helpful	Somewhat	Moderately	Very Helpful

Part IV: Discussion of Results

10. How helpful was the discussion of results at the end of the workshop?

1	2	3	4
Not Helpful	Somewhat	Moderately	Very Helpful

11. Please provide us with your recommendations or suggestions to improve the vertical alignment process.

Subject: _____ Your Grade Level _____

