



STATE MATCH

Oregon
Common
Curriculum Goals,
Grade-Level
Standards

English/Language Arts,
Mathematics, and Science

and

ACT[®]

EXPLORE, PLAN,
and ACT

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About the Report

EXECUTIVE SUMMARY

(pp. 1–2)

This portion summarizes the findings of the alignment between EXPLORE® (8th and 9th grades); PLAN® (10th grade); and the ACT (11th and 12th grades) and Oregon’s Common Curriculum Goals and Grade-Level Standards. It also presents ACT’s involvement in meeting NCLB requirements and describes additional critical information that ACT could provide to Oregon.

SECTION A

(pp. 3–6)

This section provides tables by content area (English language arts, Mathematics, and Science) listing the precise number of Oregon’s Grade-Level Standards measured by ACT’s tests by grade level.

SECTION B

(pp. 7–51)

All Oregon Grade-Level Standards are listed here; each one highlighted is measured by ACT’s EPAS tests. Underlined science content indicates that the content topics are included, but are not directly measured by ACT’s EPAS Science Tests.

SECTION C

(pp. 53–62)

ACT’s College Readiness Standards appear here. Highlighting indicates that a statement reflects one or more statements in the Oregon Grade-Level Standards. College Readiness Standards not highlighted are not addressed in Oregon’s Grade-Level Standards.

A supplement is available that identifies the specific ACT College Readiness Standard(s) corresponding to each Oregon Grade-Level Standard, in a side-by-side format. To request this supplement, please e-mail ACT at statematch@act.org.



Executive Summary

We at ACT believe our programs offer many advantages to Oregon students and educators, and this report offers strong evidence for this belief. This alignment analysis clearly answers three critical questions:

1. To what extent do ACT's Educational Planning and Assessment System (EPAS™) tests—EXPLORE (8th and 9th grades); PLAN (10th grade); and the ACT (11th and 12th grades)—measure Oregon's Grade-Level Standards?
2. Can ACT's EPAS results be used to meet Oregon's NCLB requirement?
3. Why should Oregon choose ACT?

ACT'S TESTS MEASURE
MANY IMPORTANT
OREGON COMMON
CURRICULUM GOALS
AND GRADE-LEVEL
STANDARDS IN
ENGLISH/LANGUAGE
ARTS, MATHEMATICS,
AND SCIENCE.

1. Match Results: Comparisons conducted by our content specialists show that ACT's Reading, English, Writing, Mathematics and Science tests measure many of Oregon's English/Language Arts, Mathematics, and Science Grade-Level Standards:

■ English/Language Arts: 17 out of 28 Common Curriculum Goals

Many important English/Language Arts Common Curriculum Goals and Grade-Level Standards are covered by ACT's English, Reading, and Writing tests.

■ Mathematics: 20 out of 22 Common Curriculum Goals

Nearly all of Oregon's Mathematics Common Curriculum Goals and Grade-Level Standards are covered by ACT's Mathematics tests.

■ Science: 4 out of 4 Common Curriculum Goals in science process
12 out of 12 Common Curriculum Goals science content topics

Many of Oregon's Science Grade-Level Standards are covered by ACT's Science tests.

(A note about science content: ACT's Science Tests present content from biology, chemistry, physics, and Earth/space sciences. Although content knowledge in these content areas is needed to answer some of the test questions, the test questions emphasize scientific reasoning and are based in experimental science contexts. Factual content knowledge, although needed to answer some of the test questions, is not systematically sampled from the full content knowledge domain. Therefore, each ACT Science Test covers some, but not all, of the discrete science content knowledge specifically described in the Science Common Curriculum Goals and Grade-Level Standards.

To emphasize the point that content is included, but not necessarily covered in its entirety on every test form, science content match results appear in parentheses in Section A of this document (which describes the number of Grade-Level Standards measured by ACT's tests), and are underlined rather than highlighted in Section B. Our goal here is to clearly communicate that science content will be included, but each specific content topic will not be covered consistently enough for inferences to be made about student proficiency in all areas.)

Most exceptions to a match between ACT's tests and Oregon's Grade-Level Standards arise from standards not being assessable in group settings, standards that are personal in nature, and standards requiring measurement



**STATES CHOOSE ACT
BECAUSE:**

- **STUDENT MOTIVATION IS HIGH.**
- **ACT'S IS THE ONLY CURRICULUM-BASED ASSESSMENT SYSTEM THAT MEASURES STUDENT READINESS ALONG A CONTINUUM OF EMPIRICALLY DERIVED COLLEGE READINESS BENCHMARKS.**
- **EPAS DATA PROVIDE HELPFUL FEEDBACK FOR TEACHERS, STUDENTS, AND POLICYMAKERS TO MAKE EDUCATIONAL DECISIONS AND IDENTIFY WAYS TO IMPROVE.**

**ACT BUILDS ITS
DEFINITION OF COLLEGE
READINESS ON A
SOUND EMPIRICAL
BASE:**

- 1. THE ACT NATIONAL CURRICULUM SURVEY**
- 2. ACT'S COLLEGE READINESS BENCHMARK SCORES**
- 3. ACT'S COLLEGE READINESS STANDARDS**

over extended time. If additional testing is deemed necessary, ACT would be interested in working with Oregon on developing any necessary augmentation.

2. NCLB requirement? Yes; states like Illinois intend to use ACT EPAS components as part of testing that will be submitted to the U.S. Department of Education for NCLB approval.

3. Why choose ACT? States and school districts choose ACT's EPAS programs because student motivation is high, and EPAS is the *only curriculum-based assessment system that measures student readiness along a continuum of empirically derived college readiness benchmarks*. Various groups claim to describe what students truly need to know and be able to do for college and/or workplace readiness. Such groups typically ask individual experts in education to gather and discuss what they feel is important for students to understand. Not surprisingly, the answers vary. In contrast, ACT defines college readiness through a unique and rigorous empirical process:

- **The knowledge and skills necessary for students to be ready for college-level work are empirically identified via the ACT National Curriculum Survey[®].**

ACT surveys thousands of secondary and postsecondary instructors across the nation to determine which skills and knowledge are most important at each course level and for college and work readiness. The responses drive the test specifications for EXPLORE, PLAN, and the ACT.

- **The empirically derived performance levels necessary for students to be ready to succeed in college-level work are defined in ACT's College Readiness Benchmark Scores.**

ACT analyzed thousands of student records to identify the ACT scores associated with success in postsecondary coursework (i.e., a 50% chance of earning a B or better in credit-bearing first-year college courses): 18 for English, 22 for Math, 21 for Reading, and 24 for Science.

- **Skills and knowledge a student currently has, and areas for improvement, can be identified by the empirically derived ACT College Readiness Standards.**

Using thousands of student records and responses, content and measurement experts worked backwards to develop data-driven, empirically derived statements of what students typically know and are able to do in various score ranges on ACT's English, Reading, Writing, Mathematics, and Science Tests. These statements provide specific details about students' college readiness and can be used to identify next steps for improvement.

In sum, ACT's EPAS programs provide abundant data relevant to Oregon's Grade-Level Standards and to Oregon students' readiness for college and work.



**Section A: Number of Oregon Grade-Level Standards
Measured by EXPLORE, PLAN, and the ACT**

**Table A-1. Number of English/Language Arts Grade-Level Standards
Measured by EXPLORE, PLAN, and the ACT**

Oregon CCG Strand*		Number of Oregon's Grade-Level Standards Measured by ACT's Tests		Aspects of Not-Measured Oregon Grade-Level Standards
Reading	Decoding and Word Recognition	7th: 0 out of	1	Read aloud
		8th: 0 out of	1	Read at independent reading level
		CIM: 0 out of	1	
	Listen to and Read Informational and Narrative Text	7th: 1 out of	1	
		8th: 1 out of	1	
		CIM: 1 out of	1	
	Vocabulary	7th: 3 out of	4	Use knowledge of Greek, Latin, Anglo-Saxon to understand
	8th: 3 out of	4	Use dictionaries	
	CIM: 4 out of	5		
Read to Perform a Task	7th: 0 out of	4	Read textbooks, tables of contents	
	8th: 0 out of	3		
	CIM: 0 out of	3		
Informational Text: Demonstrate General Understanding	7th: 1 out of	2	Clarify understanding by creating outline, organizer	
	8th: 1 out of	2		
	CIM: 1 out of	2		
Informational Text: Develop an Interpretation	7th: 4 out of	4		
	8th: 3 out of	3		
	CIM: 5 out of	5		
Informational Text: Examine Content and Structure	7th: 3 out of	5	Contrast information about same topic after reading several articles	
	8th: 3 out of	6	Various categories of texts including newspapers, instructional manuals	
	CIM: 4 out of	10		
Literature	Listen to and Read Literary Text	7th: 1 out of	1	
		8th: 1 out of	1	
		CIM: 1 out of	1	
	Literary Text: Demonstrate General Understanding	7th: 1 out of	1	
	8th: 1 out of	1		
	CIM: 1 out of	1		
Literary Text: Develop an Interpretation	7th: 6 out of	6		
	8th: 5 out of	5		
	CIM: 5 out of	5		
Literary Text: Examine Content and Structure	7th: 1 out of	4	Different forms of prose	
	8th: 4 out of	7	General themes across works	
	CIM: 5 out of	11		



Table A-1. Number of English/Language Arts Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

Oregon CCG Strand*	Number of Oregon's Grade-Level Standards Measured by ACT's Tests			Aspects of Not-Measured Oregon Grade-Level Standards		
	7th	8th	CIM			
Writing	Planning, Evaluation, and Revision	1 out of 1	1 out of 1	1 out of 1		
	Writing	5 out of 7	5 out of 7	4 out of 4	11	Write to a specific audience or person Present an active and lively personal style
	Conventions: Spelling	0 out of 1	0 out of 1	1 out of 1	1	Spell correctly derivatives by applying spelling of bases and affixes
	Conventions: Grammar	3 out of 3	3 out of 3	3 out of 3	3	
	Conventions: Punctuation	1 out of 1	1 out of 1	1 out of 1	3	Comma after dependent clause Place question mark inside quotation marks when appropriate
	Conventions: Capitalization	0 out of 1	0 out of 1	1 out of 1	1	
	Conventions: Handwriting	0 out of 1	0 out of 1	1 out of 1	1	
	Writing Modes	0 out of 1	0 out of 1	0 out of 1	1	Select work sample from one of several modes
	Narrative Writing	0 out of 3	0 out of 3	0 out of 5	4	Write fictional, biographical, or autobiographical narratives
	Expository Writing: Response to Literary Text	0 out of 4	0 out of 4	0 out of 4	3	Write responses to literature
	Expository Writing: Research Reports/ Multi-Media Presentations	0 out of 5	0 out of 5	0 out of 7	5	Write research reports, analytical essays
	Persuasive Writing	0 out of 3	0 out of 3	4 out of 4	3	
	Summaries, etc.	0 out of 3	0 out of 5	0 out of 8	3	Write summaries, technical documents, business letters



Table A-1. Number of English/Language Arts Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

		Number of Oregon's Grade-Level Standards Measured by ACT's Tests		Aspects of Not-Measured Oregon Grade-Level Standards
Oregon CCG Strand*				
Writing (cont)	Research Report Writing	7th: 0 out of 5	8th: 0 out of 6	Identify topics
		CIM: 0 out of 7		Use effective note-taking Synthesize information from multiple sources Design and publish documents
Speaking and Listening	Speaking	7th: 0 out of 6	8th: 0 out of 7	Use speaking techniques
		CIM: 0 out of 9		Present clear thesis
	Listening	7th: 0 out of 3	8th: 0 out of 2	Analyze oral presentations
		CIM: 0 out of 2		Paraphrase a speaker's purpose
	Analysis	7th: 0 out of 2	8th: 0 out of 3	Analyze electronic journalism
		CIM: 0 out of 6		Identify and critique techniques Evaluate quality of speaker's points
TOTAL		7th: 31 out of 89	8th: 32 out of 88	
17 out of 28 CCG Strands		CIM: 43 out of 110		

*Refer to Oregon's English/Language Arts Grade-Level Standards on pages 11–25



Table A-1. Number of Mathematics Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

		Number of Oregon's Grade-Level Standards Measured by ACT's Tests		Aspects of Not-Measured Oregon Grade-Level Standards
Oregon CCG Strand*				
Calculation & Estimation	Numbers	7th: 7 out of 7 8th: 4 out of 4 CIM: 5 out of 5		
	Computation & Estimation	7th: 7 out of 7 8th: 4 out of 4 CIM: 5 out of 5		
	Operations & Properties	7th: 5 out of 5 8th: 4 out of 4 CIM: 4 out of 4		
Statistics & Probability	Statistics	7th: 1 out of 1 8th: 2 out of 2 CIM: 2 out of 2		
	Probability	7th: 4 out of 4 8th: 1 out of 2 CIM: 4 out of 4		Apply theoretical probability to determine if game is fair or unfair
	Collect & Display Data	7th: 3 out of 6 8th: 1 out of 2 CIM: 2 out of 3		Collect and display lists, tables Identify examples of populations that are normally distributed
	Data Analysis & Prediction	7th: 2 out of 3 8th: 1 out of 1 CIM: 3 out of 3		Make conjectures about the populations from which samples were taken
Algebraic Relationships	Patterns & Functions	7th: 1 out of 1 8th: 3 out of 3 CIM: 3 out of 4		Produce a valid conjecture
	Algebraic Relationships	7th: 4 out of 4 8th: 10 out of 10 CIM: 10 out of 10		
	Modeling	7th: 3 out of 3 8th: 3 out of 3 CIM: 2 out of 2		
	Change	7th: 1 out of 1 8th: 3 out of 3 CIM: 2 out of 2		
Measurement	Units & Tools	7th: 1 out of 2 8th: 3 out of 3 CIM: 2 out of 3		Select most appropriate unit of measure surface area and volume Determine the precision
	Direct & Indirect	7th: 5 out of 7 8th: 4 out of 4 CIM: 8 out of 8		Create examples of rectangular prisms



Table A-1. Number of Mathematics Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

		Number of Oregon's Grade-Level Standards Measured by ACT's Tests		Aspects of Not-Measured Oregon Grade-Level Standards
Oregon CCG Strand*				
Geometry	Properties & Relationships	7th: 4 out of 4 8th: 7 out of 8 CIM: 10 out of 12		Create and critique inductive and deductive arguments Construct and evaluate the validity of a logical argument Justify theorems
	Modeling	7th: 1 out of 2 8th: 0 out of 2 CIM: 1 out of 4		Model Draw Construct models
	Coordinate Geometry	7th: 1 out of 1 8th: 2 out of 2 CIM: 2 out of 2		
	Transformations & Symmetry	7th: 1 out of 1 8th: 1 out of 4 CIM: 6 out of 6		Classify transformations Know properties of dilated images
Mathematical Problem Solving	Conceptual Understanding	7th: 1 out of 1 8th: 1 out of 1 CIM: 1 out of 1		
	Processes & Strategies	7th: 1 out of 1 8th: 1 out of 1 CIM: 1 out of 1		
	Verification	7th: 0 out of 1 8th: 0 out of 1 CIM: 0 out of 1		Monitor and reflect on process of mathematical problems solving
	Communication	7th: 0 out of 1 8th: 0 out of 1 CIM: 0 out of 1		Use pictures, symbols, and/or vocabulary to convey the path to the identified solution
	Accuracy	7th: 1 out of 1 8th: 1 out of 1 CIM: 1 out of 1		
	TOTAL	7th: 54 out of 64 8th: 56 out of 66 CIM: 74 out of 84		
	20 out of 22 CCG Strands			

*Refer to Oregon's Mathematics Grade-Level Standards on pages 26–35



Table A-1. Number of Science Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

		Number of Oregon's Grade-Level Standards Measured by ACT's Tests		Aspects of Not-Measured Oregon Grade-Level Standards
Oregon CCG Strand*				
Physical Science	Matter	8th: (3) out of 3 CIM: (2) out of 3 PASS: (3) out of 4		Investigate through research
	Chemical & Physical Changes	8th: (4) out of 4 CIM: (5) out of 5		
	Force	8th: (4) out of 4 CIM: (4) out of 4		
	Energy	8th: (4) out of 4 CIM: (6) out of 6		
Life Science	Organisms	8th: (5) out of 5 CIM: (6) out of 7 PASS: (3) out of 4		Investigate through research
	Heredity	8th: (4) out of 4 CIM: (4) out of 5		Recognize the existence of technology that can alter inherited traits
	Diversity/ Interdependence	8th: (6) out of 6 CIM: (8) out of 8		
Earth & Space Science	Dynamic Earth	8th: (1) out of 1 CIM: (1) out of 1 PASS: (3) out of 4		Investigate through research
	Lithosphere, Atmosphere	8th: (10) out of 10 CIM: (9) out of 9		
	Earth, Space Science	8th: (2) out of 2		
	Earth in Space	8th: (1) out of 1 CIM: (2) out of 2		
	Universe	8th: (1) out of 1 CIM: (1) out of 1		
	TOTAL Content 12 out of 12 content topics	8th: (45) out of 45 CIM: (48) out of 51 PASS: (9) out of 12		
Science Inquiry	Forming the Question	8th: 1 out of 1 CIM: 1 out of 1 PASS: 1 out of 1		
	Designing the Investigation	8th: 1 out of 1 CIM: 1 out of 1 PASS: 1 out of 1		
	Collecting and Presenting Data	8th: 1 out of 1 CIM: 1 out of 1 PASS: 1 out of 1		



Table A-1. Number of Science Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT		
Oregon CCG Strand*	Number of Oregon's Grade-Level Standards Measured by ACT's Tests	Aspects of Not-Measured Oregon Grade-Level Standards
		Analyzing and Interpreting Results
TOTAL Process 4 out of 4	8th: 4 out of 4 CIM: 4 out of 4 PASS: 4 out of 4	

*Refer to Oregon's Science Grade-Level Standards on pages 36–42



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Section B: Oregon's Grades 9–12 Grade-Level Standards Measured by EXPLORE, PLAN, and the ACT

English/Language Arts

Table B-1A. OREGON English/Language Arts: READING Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Analyze words, recognize words, and learn to read grade-level text fluently across the subject areas.			
Decoding and Word Recognition	Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.	Read or demonstrate progress toward reading at an independent and instructional reading level appropriate to grade level.	Read at an independent and instructional reading level appropriate to grade level.
CCG: Listen to, read, and understand a wide variety of informational and narrative text across the subject areas at school and on own, applying comprehension strategies as needed.			
Listen to and Read Informational and Narrative Text			
Skills to Support Standards			
<ul style="list-style-type: none"> • Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information. • Make connections to text, within text, and among texts across the subject areas. • Demonstrate listening comprehension of more complex text through class and/or small group interpretive discussions across the subject areas. • Match reading to purpose—location of information, full comprehension, and personal enjoyment. • Understand and draw upon a variety of comprehension strategies as needed—re-reading, self-correcting, summarizing, class and group discussions, generating and responding to essential questions, making predictions, and comparing information from several sources. • Clearly identify specific words or wordings that are causing comprehension difficulties and use strategies to correct. 			
CCG: Increase word knowledge through systematic vocabulary development; determine the meaning of new words by applying knowledge of word origins, word relationships, and context clues; verify the meaning of new words; and use those new words accurately across the subject areas.			
Vocabulary	Determine meanings of words using contextual and structural clues.	Determine meanings of words using contextual and structural clues.	Determine meanings of words using contextual and structural clues.
	Demonstrate understanding of idioms and comparisons, such as analogies, metaphors, and similes, in prose (informational and literary text) and poetry.	Analyze idioms and comparisons, such as analogies, metaphors, and similes, to infer the literal and figurative meanings of phrases.	Identify and use the literal and figurative meanings of words and phrases.
	Clarify word meanings through the use of definition, inference, example, restatement, or contrast.	Verify the meaning of a word in its context, even when its meaning is not directly stated, through the use of definition, restatement, example, comparison, or contrast.	Distinguish between the denotative and connotative meanings of words, and interpret the connotative power of words.
	Use knowledge of Greek, Latin, and Anglo-Saxon roots and word parts to understand subject-area vocabulary.	Determine pronunciations, meanings, alternate word choices, parts of speech, or etymologies of words, using dictionaries and thesauruses.	Use general dictionaries, specialized dictionaries, glossaries, thesauruses, or related references to increase vocabulary.
			Understand technical vocabulary in subject area reading.
Skills to Support Standards			
<ul style="list-style-type: none"> • Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas. • Develop vocabulary by listening to and discussing both familiar and conceptually challenging selections read aloud across the subject areas. 			

Table B-1A. OREGON English/Language Arts: **READING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Find, understand, and use specific information in a variety of texts across the subject areas to perform a task.			
Read to Perform a Task	Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.	Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.	Read textbooks; biographical sketches; letters; diaries; directions; procedures; magazines; essays; primary source historical documents; editorials; news stories; periodicals; bus routes; catalogs; technical directions; consumer, workplace, and public documents.
	Locate information in titles, tables of contents, chapter headings, illustrations, captions, glossaries, indexes, graphs, charts, diagrams, and tables to aid understanding of grade-level text.	Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.	Synthesize information found in various parts of charts, tables, diagrams, glossaries, or related grade-level text to reach supported conclusions.
	Locate information by using consumer product information.	Understand and explain the use of a complex mechanical device by following technical directions.	Analyze the structure and format of job and consumer-related materials, including the graphics and headers, and explain how the features support the intended purposes.
	Understand and explain the use of a simple mechanical device by following technical directions.		Demonstrate sophisticated use of technology by following directions in technical manuals (e.g., those found with graphing calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).
CCG: Demonstrate general understanding of grade-level informational text across the subject areas.			
Informational Text: Demonstrate General Understanding	Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.	Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.	Identify and/or summarize sequence of events, main ideas, facts, supporting details, and opinions in informational and practical selections.
	Clarify understanding of informational texts by creating outlines, graphic organizers, diagrams, logical notes, or summaries.	Clarify understanding of informational texts by creating detailed outlines, graphic organizers, diagrams, logical notes, or summaries.	Clarify understanding of informational texts by creating detailed outlines, graphic organizers, diagrams, logical notes, or summaries.

Table B-1A. OREGON English/Language Arts: **READING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Develop an interpretation of grade-level informational text across the subject areas.			
Informational Text: Develop an Interpretation	Predict future outcomes supported by the text.	Predict probable future outcomes supported by the text, including foreshadowing clues.	Predict probable future outcomes supported by the text, including foreshadowing clues.
	Make valid inferences about an author's unstated meaning and valid conclusions about an author's stated meaning, based on facts, events, and images.	Determine an author's implicit and explicit assumptions and beliefs about a subject based on evidence in the selection.	Infer an author's unstated meaning and draw conclusions about an author's stated meaning based on facts, events, images, patterns or symbols found in text.
	Identify and trace the development of an author's argument, point of view, or perspective in a specific text through a graphic organizer or a summary.	Infer the main idea when it is not explicitly stated, and support with evidence from the text.	Make reasoned assertions about an author's arguments by using elements of the text to defend and clarify interpretations.
	Infer the main idea when it is not explicitly stated, and support with evidence from the text.		Analyze implicit relationships, such as cause-and-effect, sequence-time relationships, comparisons, classifications, and generalizations.
			Infer the main idea when it is not explicitly stated, and support with evidence from the text.
CCG: Examine content and structure of grade-level informational text across the subject areas.			
Informational Text: Examine Content and Structure	Determine the author's purpose and how the author's perspective influences the text.	Determine the author's purpose and perspective and relate them to specific details in the text.	Draw conclusions about the author's purpose based on evidence in the text.
	Differentiate between conclusions that are based on fact and those that are based on opinions.	Note and analyze instances of unsupported inferences, deceptive reasoning, persuasion, and propaganda in text.	Differentiate among reasoning based on fact versus reasoning based on opinions, emotional appeals, or other persuasive techniques.
	Analyze text to determine the type and purpose of the organizational structure being used by the author (e.g., description, sequential/chronological, categorization, prioritization, comparison/contrast, or cause-and-effect).	Compare and contrast information on the same topic after reading several passages or articles.	Evaluate if and how the author uses authoritative sources to establish credibility for arguments, proposed actions, or policies.
	Compare and contrast information on the same topic after reading several passages or articles.	Identify and analyze text that uses proposition (statement of argument) and support patterns (e.g., editorials).	Compare and contrast information on the same topic after reading several passages or articles.
	Understand and analyze the differences in structure and purpose between various categories of informational text, including textbooks, newspapers, instructional manuals, essays, editorials, biographies, and autobiographies.	Find similarities and differences between texts in the treatment, amount and depth of coverage, or organization of ideas on a particular subject.	Evaluate the logic, unity, and consistency of text.

Table B-1A. OREGON English/Language Arts: **READING** Goals and Standards

	Grade 7	Grade 8	CIM
Informational Text: Examine Content and Structure (cont)		Synthesize and use information from a variety of consumer and public documents to explain a situation or decision and to solve a problem.	Evaluate an author's argument or defense of a claim by evaluating the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent or bias affects the structure and tone of the text (e.g., in professional journals, sports journals, editorials, political speeches, primary source material).
			Evaluate the logic of documents (e.g., directions for assembly of an item, applications), examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
			Generate relevant questions about readings on issues that can be researched.
			Synthesize the content from several sources or works by a single author dealing with a single issue; paraphrase the ideas and connect them to other sources and related topics to demonstrate comprehension.
			Extend ideas presented in primary or secondary sources through original analysis, evaluation, and elaboration.
CCG: Listen to text and read text to make connections and respond to a wide variety of literature of varying complexity.			
Listen to and Read Literary Text			
Skills to Support Standards			
<ul style="list-style-type: none"> Listen to text and read text to make connections and respond to historically or culturally significant works of literature that enhance the study of other subjects. Demonstrate listening comprehension of more complex literary text through class and/or small group interpretive discussions. 			
CCG: Demonstrate general understanding of grade-level literary text.			
Literary Text: Demonstrate General Understanding	Identify and/or summarize sequence of events, main ideas, and supporting details in literary selections.	Identify and/or summarize sequence of events, main ideas, and supporting details in literary selections.	Identify and/or summarize sequence of events, main ideas, and supporting details in literary selections.

Table B-1A. OREGON English/Language Arts: **READING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Develop an interpretation of grade-level literary text.			
Literary Text: Develop an Interpretation	Predict future outcomes supported by the text.	Predict probable future outcomes supported by the text.	Predict probable future outcomes supported by the text.
	Identify events that advance the plot, and determine how each event explains past or present action(s) or foreshadows future action(s).	Identify the actions and motives (e.g., loyalty, selfishness, conscientiousness) of characters in a work of fiction, including contrasting motives that advance the plot or promote the theme, and discuss their importance to the plot or theme.	Analyze interactions between characters in a literary text (e.g., internal and external conflicts, motivations, relationships, influences) and how these interactions affect the plot.
	Analyze characterization as revealed through a character's thoughts, words, speech patterns, and actions; the narrator's description; and the thoughts, words, and actions of other characters.	Identify and analyze the development of themes in literary works based on evidence in the text.	Identify themes in literary works, and provide support for interpretations from the text.
	Identify and analyze development of themes conveyed through characters, actions, and images.	Infer the main idea when it is not explicitly stated, and support with evidence from the text.	Infer the main idea when it is not explicitly stated, and support with evidence from the text.
	Infer the main idea when it is not explicitly stated, and support with evidence from the text.	Infer unstated reasons for actions based on evidence in the text.	Identify and analyze unstated reasons for actions or beliefs based on explicitly stated information.
	Infer unstated reasons for actions based on events and images in the text.		
CCG: Examine content and structure of grade-level literary text.			
Literary Text: Examine Content and Structure	Explain the effects of common literary devices, such as symbolism, imagery, and metaphor in a variety of literary texts.	Identify significant literary devices, such as simile, metaphor, personification, symbolism, dialect, and irony which define a writer's style, and use those elements to analyze and evaluate the work.	Identify various literary devices, including figurative language, imagery, allegory, and symbolism; evaluate the significance of the devices; and explain their appeal.
	Evaluate how well literary elements contribute to the overall effectiveness of a selection (e.g., point of view, importance of the setting to create a mood).	Evaluate how well literary elements contribute to the overall effectiveness of a selection.	Interpret and evaluate the impact of subtleties, contradictions, and ironies in a text.
	Identify and analyze general themes, such as bravery, loyalty, friendship, loss, and loneliness that appear in many different works.	Analyze and contrast the use of point of view, such as first-person, third-person, limited and omniscient, and subjective and objective, in literary text, and explain how it affects text.	Explain how voice and the choice of a narrator affect characterization and the tone, plot, and credibility of a text.
	Differentiate among and discuss the purposes and characteristics of different forms of prose (e.g., short story, novel, essay).	Analyze the importance of the setting (place, time, customs) to the mood, tone, and meaning of the text.	Analyze an author's development of time and sequence, including the use of complex literary devices, such as foreshadowing or flashbacks.
		Analyze how dialogue is used to develop characters and mood in a selection.	Evaluate the impact of word choice and figurative language on tone, mood, and theme.

Table B-1A. OREGON English/Language Arts: **READING** Goals and Standards

	Grade 7	Grade 8	CIM
Literary Text: Examine Content and Structure (cont)		Evaluate the structural elements of the plot, such as subplots, parallel episodes, and climax, including the way in which conflicts are (or are not) addressed and resolved.	Identify and describe the function of dialogue, soliloquies, asides, character foils, and stage directions in dramatic literature.
		Identify and analyze recurring themes (e.g., good versus evil) across traditional and contemporary works.	Analyze the impact the choice of literary form has on the author's message or purpose.
			Analyze the way in which a work of literature is related to the themes and issues of its historical period.
			Compare works that express a universal theme, and provide evidence to support the ideas expressed in each work.
			Compare and contrast the presentation of a similar theme or topic across genres to explain how the selection of genre shapes the theme or topic.
			Analyze a work of literature, showing how it reflects the heritage, traditions, attitudes, and beliefs of its author.

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
<p>CCG: Communicate supported ideas across the subject areas, including relevant examples, facts, anecdotes, and details appropriate to audience and purpose that engage reader interest; organize information in clear sequence, making connections and transitions among ideas, sentences, and paragraphs; and use precise words and fluent sentence structures that support meaning.</p>			
Writing	Write for different purposes and to a specific audience or person, adjusting style and tone as necessary to engage the interest of the reader.	Create compositions that engage the reader, have a clear message, a coherent thesis, and end with a clear and well-supported conclusion.	Establish a coherent and clearly supported thesis that engages the reader, conveys a clear and distinctive perspective on the subject, maintains a consistent tone and focus throughout the piece of writing, and ends with a well supported conclusion.
	Write multi-paragraph compositions—descriptions, explanations, comparison-and-contrast papers, problem and solution essays—that:	Support theses or conclusions with quotations, opinions from experts, paraphrases, analogies, and/or similar devices.	Create an organizational structure that logically and effectively presents information using transitional elements that unify paragraphs and the work as a whole.
	State the thesis or purpose.	Establish coherence within and among paragraphs through effective transitions and parallel structures.	Use precise language, action verbs, sensory details, and appropriate modifiers.
	Explain the situation.	Use descriptive language that clarifies and enhances ideas by establishing tone and mood through figurative language, sensory images, and comparisons.	Demonstrate an understanding of sentence construction—including parallel structure and subordination—to achieve clarity of meaning, vary sentence types, and enhance flow and rhythm.
	Organize the composition clearly, following an organizational pattern appropriate to the type of composition—comparison and contrast; organization by categories; and arrangement by spatial order, order of importance, or climactic order.	To present a lively and effective personal style, use varied sentence types (simple, compound, complex, and compound-complex) and sentence openings.	
	Provide evidence to support arguments and conclusions.	To enhance clarity and to support meaning, use parallelism in sentence construction—to present items in a series and items juxtaposed for emphasis.	
	Support all statements and claims with anecdotes (first-person accounts), descriptions, facts and statistics, and/or specific examples.	To indicate clearly the relationship between ideas, use subordination, coordination, appositives, and other devices.	
	Use varied word choices to make writing interesting and more precise.		
	To achieve clarity of meaning, properly place modifiers (words or phrases that describe, limit, or qualify another word).		
	To convey a livelier effect, use the active voice rather than the passive voice.		
Vary sentence beginnings by using infinitives (to understand, to learn) and participles (dreaming, chosen, grown).			

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Demonstrate knowledge of spelling, grammar, punctuation, capitalization, and penmanship across the subject areas.			
Conventions			
<i>Spelling</i>	Spell correctly derivatives (words that come from a common base or root word) by applying the spellings of bases and affixes (prefixes and suffixes).	Use correct spelling conventions.	Produce writing that shows accurate spelling.
<i>Grammar</i>	Make clear references between pronouns and antecedents by placing the pronoun where it shows to what word it refers.	Use consistent verb tenses.	Show control of clauses, including main and subordinate, and phrases, including gerund, infinitive, and participial.
	Correctly use all parts of speech (verbs, nouns, pronouns, adjectives, adverbs, prepositions, conjunctions, and interjections) and types and structures of sentences.	Correctly use frequently misused words (e.g., <i>among</i> , <i>between</i> ; <i>fewer</i> , <i>less</i> ; <i>bring</i> , <i>take</i> ; and <i>good</i> , <i>well</i>).	Understand and use proper placement of modifiers.
	Demonstrate appropriate English usage.	Demonstrate appropriate English usage.	Demonstrate an understanding of proper English usage, including the consistent use of verb tenses and forms.
<i>Punctuation</i>	Use a comma after a dependent clause that introduces a sentence.	Use conventions of punctuation correctly, including commas, hyphens, dashes, and semicolons.	Use conventions of punctuation correctly, including semicolons, colons, ellipses, and hyphens.
	Use appropriate internal punctuation, including commas, semicolons, and colons.		
	Place a question mark or exclamation point inside quotation marks when it punctuates the quotation, and outside when it punctuates the main sentence.		
<i>Capitalization</i>	Use correct capitalization.	Use correct capitalization.	Use correct capitalization.
<i>Handwriting</i>	Write legibly.	Write legibly.	Write legibly.
CCG: Write narrative, expository, and persuasive texts, using a variety of written forms—including journals, essays, short stories, poems, research reports, research papers, business and technical writing—to express ideas appropriate to audience and purpose across the subject areas.			
Writing Modes	For the purposes of state assessment, students will choose from the shaded modes. Work Samples can be selected from any of the listed modes.	For the purposes of state assessment, students will choose from the shaded modes. Work Samples can be selected from any of the listed modes.	For the purposes of state assessment, students will choose from the shaded modes. Work Samples can be selected from any of the listed modes.
	Personal Narrative	Personal Narrative	Personal Narrative
	Fictional Narrative (Imaginative)	Fictional Narrative (Imaginative)	Fictional Narrative (Imaginative)
	Expository	Expository	Expository
	Persuasive	Persuasive	Persuasive

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
Writing Applications			
<i>Narrative Writing</i>	Write fictional or autobiographical narratives:	Write biographical or autobiographical narratives or short stories:	Write biographical or autobiographical narratives or short stories:
	Develop a standard plot line, including a beginning, conflict, rising action, climax, and resolution.	Relate a clear, coherent incident, event, or situation by using well-chosen details.	Relate a sequence of events, and communicate the significance of the events to the audience.
	Develop a point of view.	Reveal the significance of, or the writer's attitude about, the subject.	Locate scenes and incidents in specific places.
	Develop complex major and minor characters and a definite setting.	Use narrative and descriptive strategies, including relevant dialogue, specific action, physical description, background description, and comparison or contrast of characters.	Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the characters; use interior monologue to depict the characters' feelings.
	Use a range of appropriate strategies, such as dialogue; suspense; and the naming of specific narrative action, including movement, gestures, and expressions.		Pace the presentation of actions to accommodate changes in time and mood.
			Make effective use of descriptions of appearance, images, shifting perspectives, and sensory details.
<i>Expository Writing: Response to Literary Text</i>	Write responses to literature:	Write responses to literature:	Write responses to literature:
	Develop interpretations exhibiting careful reading, understanding, and insight.	Demonstrate careful reading and insight into interpretations.	Demonstrate an understanding of the significant ideas of literary works.
	Organize interpretations around several clear ideas, premises, or images from the literary work.	Connect the student's own responses to the writer's techniques and to specific textual references.	Support important ideas and viewpoints through accurate and detailed references to the text or to other works.
	Justify interpretations through use of sustained examples and textual evidence.	Draw supported inferences about the effects of a literary work on its audience.	Demonstrate an awareness of the author's use of stylistic devices and an appreciation of the effects created.
		Support interpretations through references to the text, other works, other authors, or to personal knowledge.	Identify and analyze the impact of perceived ambiguities, nuances, and complexities within the text.

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
<i>Expository Writing: Research Reports/Multi-media Presentations</i>	Write research reports:	Write research reports:	Write analytical essays and research reports:
	Pose relevant questions about the topic.	Specify a thesis.	Gather evidence in support of a thesis, including information on all relevant perspectives.
	Distinguish credible sources.	Use a variety of primary and secondary sources, and distinguish the nature and value of each.	Convey information and ideas from primary and secondary sources accurately and coherently.
	Convey clear and accurate perspectives on the subject.	Include important ideas, concepts, and direct quotations from significant information sources, and paraphrase and summarize different perspectives on the topic, as appropriate.	Make distinctions between the relative value and significance of specific data, facts, and ideas.
	Include evidence compiled through the formal research process, including use of the Reader's Guide to Periodical Literature, a computer catalog, magazines, newspapers, dictionaries, and other reference books.	Organize and display information on charts, tables, maps, and graphs.	Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
	Document sources.	Document sources.	Anticipate and address readers' potential misunderstandings, biases, and expectations.
			Use technical terms and notations accurately.
			Document sources.
<i>Persuasive Writing</i>	Write persuasive compositions:	Write persuasive compositions:	Write persuasive compositions:
	State a clear position or perspective in support of a proposition or proposal.	Include a well-defined thesis that makes a clear and knowledgeable judgment or appeal.	Structure ideas and arguments in a sustained and logical fashion.
	Describe the points in support of the proposition, employing well-articulated evidence.	Present detailed evidence, examples, and reasoning to support arguments, differentiating between facts and opinions.	Use specific rhetorical (communication) devices to support assertions, such as appealing to logic through reasoning; appealing to emotion or ethical beliefs; or relating a personal anecdote, case study, or analogy.
	Anticipate and address reader concerns and counter-arguments.	Provide details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counter-arguments.	Clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, and expressions of commonly accepted beliefs and logical reasoning.
			Address readers' concerns, counter-claims, biases, and expectations.

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
<i>Summaries, Business Letters, Job Applications and Resumes, Technical Writing</i>	Write summaries for a variety of informational text:	Write documents related to career development, including simple business letters, job applications and resumes that:	Write business letters:
	Include the main ideas and most significant details.	Present information purposefully and succinctly, meeting the needs of the intended audience.	Provide clear and purposeful information and address the intended audience appropriately.
	Use the student's own words, except for quotations.	Follow the conventional format for the type of document (e.g., letter of inquiry, memorandum).	Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the intended audience.
	Reflect underlying meaning, not just the superficial details.	Write technical documents:	Emphasize central ideas or images.
		Identify the sequence of activities needed to design a system, operate a tool, or explain the bylaws of an organization's constitution or guidelines.	Follow a conventional style with page formats, fonts, and spacing that contributes to the document's readability and impact.
		Include all the factors and variables that need to be considered.	Write technical documents, such as a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, or minutes of a meeting:
		Use formatting techniques, including headings, and changing the fonts to aid comprehension.	Report information and convey ideas logically and correctly.
			Offer detailed and accurate specifications.
			Include scenarios, definitions, and examples to aid comprehension.
			Anticipate readers' problems, mistakes, and misunderstandings.

Table B-1B. OREGON English/Language Arts: **WRITING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Investigate topics of interest and importance across the subject areas, selecting appropriate media sources, using effective research processes, and demonstrating ethical use of resources and materials.			
Research Report Writing	Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research.	Identify topics; develop high-level questions for inquiry; develop sub-questions to guide research of sub-topics.	Use clear research questions and suitable research sources, including the library, electronic media, and personal interviews, to gather and present evidence from primary and secondary print or Internet sources.
	Use effective note-taking techniques to ensure appropriate documentation of quoted as well as paraphrased material.	Use effective note-taking techniques to ensure appropriate documentation of quoted as well as paraphrased material.	Use effective note-taking techniques to ensure appropriate documentation of quoted as well as paraphrased material.
	Check the validity and accuracy of information obtained from research, including differentiating fact from opinion, and identifying strong versus weak arguments, recognizing that personal values influence the conclusions an author draws.	Plan and conduct multiple-step information searches by using computer networks.	Develop the main ideas within the body of the composition through supporting evidence, such as scenarios, commonly held beliefs, hypotheses, and definitions.
	Create documents by using word-processing skills and publishing programs; develop simple databases and spreadsheets to manage information and prepare reports.	Analyze the validity and reliability of primary and secondary sources, and use the information appropriately.	Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, and technical documents. Integrate quotations and citations into a written text while maintaining the flow of ideas.
	Give credit for both quoted and paraphrased information by using a consistent format for parenthetical citations (e.g., Works Cited Entries—MLA, Reference Entries—APA).	Achieve an effective balance between documented researched information and original ideas.	Use appropriate conventions for documentation in text, notes, and works cited, following the formats in specific style manuals (e.g., Works Cited Entries—MLA, Reference Entries—APA).
		Use appropriate methods of citation for quoted as well as paraphrased material (e.g., Works Cited Entries—MLA, Reference Entries—APA).	Design and publish documents by using publishing software and graphics programs.
			Reflect manuscript requirements, including title page presentation, pagination, spacing and margins, and integration of source and support material, such as citing sources within the text, using direct quotations, and paraphrasing.

Table B-1C. OREGON English/Language Arts: **SPEAKING AND LISTENING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Communicate supported ideas across the subject areas using oral, visual, and multi-media forms in ways appropriate to topic, context, audience, and purpose; organize oral, visual, and multi-media presentations in clear sequence, making connections and transitions among ideas and elements; use language appropriate to topic, context, audience, and purpose; and demonstrate control of eye contact, speaking rate, volume, enunciation, inflection, gestures, and other non-verbal techniques.			
Speaking	Develop a focus and point of view to achieve particular purposes and to appeal to the background and interests of the audience.	Develop a focus and present information to achieve particular purposes by matching the message, vocabulary, voice modulation, expression, and tone to the audience and purpose.	Present and support a clear thesis statement and choose appropriate types of proof (e.g., statistics, testimony, specific instances) that meet standard tests for evidence, including credibility, validity, and relevance.
	Organize information, arranging details, reasons, descriptions, and examples effectively and persuasively in relation to the audience.	Outline a speech based on a chosen pattern of organization, including an introduction; transitions, previews, and summaries; a logically developed body; and an effective conclusion.	Choose appropriate techniques for developing the introduction and conclusion (e.g., by using literary quotations, anecdotes, references to authoritative sources).
	Use traditional structures for conveying information, including cause-and-effect, similarity and difference, and posing and answering a question.	Use credible and relevant information to convey message.	Choose logical patterns of organization (e.g., chronological, topical, cause-and-effect) to inform and to persuade, by seeking agreement or action, or uniting audiences behind a common belief or cause.
	Use a variety of descriptive and accurate words appropriate to audience and purpose.	Use feedback, including both verbal and nonverbal cues to reconsider and modify the organizational structure and to rearrange words and sentences to clarify the meaning.	Recognize and use elements of speech forms (e.g., introduction, first and second transitions, body, conclusion) in formulating rational arguments and applying the art of persuasion and debate.
	Use correct grammar consistently.	Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.	Analyze the occasion and the interests of the audience, and choose effective verbal techniques and language.
	Use speaking techniques, including voice inflection, tempo, enunciation, and eye contact for effective presentations.	Use appropriate grammar.	Use appropriate grammar.
		Use appropriate enunciation, pace, eye contact, and gestures to engage the audience during formal presentations.	Use props, visual aids, graphs, and/or electronic media to enhance the appeal and accuracy of rehearsed presentations (not part of scoring guide criteria).
			Produce concise notes for extemporaneous speaking (not part of scoring guide criteria).
			Analyze the occasion and the interests of the audience, and choose effective verbal and nonverbal techniques, such as volume, expression, rate, gestures, eye contact for presentations.

Table B-1C. OREGON English/Language Arts: **SPEAKING AND LISTENING** Goals and Standards

	Grade 7	Grade 8	CIM
CCG: Listen critically and respond appropriately across the subject areas.			
Listening	Ask questions to obtain information, including evidence to support the speaker's claims and conclusions.	Analyze oral presentations, including language choice and delivery, and the effect of the speaker's interpretations on the listener.	Formulate judgments about ideas under discussion, and support those judgments with convincing evidence.
	Determine the speaker's attitude toward the subject.	Paraphrase a speaker's purpose and point of view, and ask relevant questions concerning the speaker's content, delivery, and purpose.	Follow complex verbal instructions that include technical vocabulary and processes.
	Respond to persuasive presentations with questions, challenges, or affirmations.		
CCG: Evaluate the significance and accuracy of information and ideas presented in oral, visual, and multi-media communications across the subject areas.			
Analysis	Analyze how images, text, and sound in electronic journalism affect the viewer; identify the techniques used to achieve the effects in each instance.	Provide constructive feedback to speakers concerning the coherence and logic of a speech's content and delivery and its overall impact upon the listener.	Evaluate the clarity, quality, and effectiveness of a speaker's important points, arguments, evidence, organization of ideas, delivery, diction, and syntax.
	Identify, analyze, and critique persuasive techniques, such as promises, dares, flattery, and glittering generalities used in oral presentations and media messages.	Evaluate the credibility of a speaker (e.g., hidden agendas, slanted or biased material).	Identify and analyze the types of arguments used by the speaker, including argument by causation, analogy, authority, emotion, and logic.
		Interpret and evaluate the various ways in which visual image-makers (e.g., graphic artists, illustrators, news photographers, film makers) communicate information and affect impressions and opinions.	Identify the aesthetic effects of a media presentation, and evaluate the techniques used to create them.
			Compare and contrast the ways in which media genres (e.g., televised news, news magazines, documentaries, online information) cover the same event.
			Analyze historically significant speeches (e.g., Abraham Lincoln's "Gettysburg Address," Martin Luther King, Jr.'s "I Have a Dream") to find the rhetorical devices and features that make them memorable.
			Analyze how language and delivery affect the mood and tone of the oral communication and make an impact on the audience.

Mathematics

Table B-2A. OREGON Mathematics: **CALCULATIONS AND ESTIMATIONS** Goals and Standards

Grade 7	Grade 8	CIM
Calculations and Estimation		
CCG: Numbers. Understand numbers, ways of representing numbers, relationships among numbers, and number systems		
Model, and compare rational numbers with an emphasis on integers	Compare numbers greater than one expressed in scientific notation	Compare real numbers
Express numbers greater than one in scientific and standard notation	Apply proportions to solve problems	Order and compare numbers expressed in scientific notation to each other and to other forms of real numbers
Use rates, ratios, and percents to solve problems	Locate rational numbers on a number line	Recognize that the set of real numbers contains the set of irrational numbers and the set of rational numbers and know the difference between them
Locate rational numbers (with an emphasis on integers) on a number line	Apply equivalent forms of rational numbers (including percents) to solve problems	Locate real numbers on a number line (including approximations of irrational numbers)
Interpret, model, and use percents greater than 100 and less than 1 to solve problems		Apply equivalent forms of real numbers to solve problems
Determine the prime factorization of a number less than 1000 and express the prime factorization using exponents when applicable		
Use factors (including greatest common factor of two or more numbers), multiples (including least common multiple of two or more numbers), prime factorization, and relatively prime numbers to solve problems		
CCG: Computation and Estimation. Compute fluently and make reasonable estimates		
Develop and analyze algorithms and compute with integers	Develop and analyze algorithms and compute with rational numbers	Compute with real numbers, including absolute value and numbers expressed in scientific notation
Multiply and divide fractions and mixed numbers	Use order of operation rules, including exponents	Compute with integer exponents and whole number roots
Compute with squares and cubes, with an emphasis on finding area, surface area, and volume	Develop and use strategies to estimate the results of rational number computations and judge the reasonableness of results	Mentally multiply and divide by powers of 10 to estimate results of computations involving numbers expressed in scientific notation
Solve problems involving percentages (including percent increase and decrease, interest rates, tax, discount, tips, and part-whole relationships)	Estimate square roots of whole numbers less than 100 and cube roots of whole numbers less than 1000 between two whole numbers	Develop and use strategies to estimate the results of real number computations, determine the amount of error, and judge the reasonableness of results
Apply order of operations including exponents, to simplify calculations and evaluate expressions		Estimate the results of computations with integer powers and roots of real numbers
Develop and use strategies to estimate the results of integer computations and judge the reasonableness of results		
Use referent numbers in estimating answers to calculations with fractions and percents (e.g., $12 \times \frac{3}{8} < 6$, since $\frac{3}{8} < \frac{1}{2}$ and $\frac{1}{2}$ of 12 is 6)		

Table B-2A. OREGON Mathematics: **CALCULATIONS AND ESTIMATIONS** Goals and Standards

Grade 7	Grade 8	CIM
CCG: Operations and Properties. Understand meanings of operations and how they relate to one another		
Demonstrate the meaning of whole number exponents as repeated multiplication	Demonstrate the meaning of square roots as lengths of the sides of squares and cube roots as lengths of edges of cubes	Recognize that taking the n th root of a number corresponds to prime factorization
Use inverse operations (addition and subtraction, multiplication and division) to solve problems and check solutions involving calculations with integers	Use the inverse operations of squares and square roots to solve problems and check solutions	Use the inverse operations of n th power and n th root to solve problems and check solutions
Apply the associative, commutative, and distributive properties to simplify computations with rational numbers (with an emphasis on integers)	Apply the associative, commutative, and distributive properties to simplify computations with rational numbers	Apply the associative, commutative, and distributive properties to simplify computations with real numbers
Describe the effects of multiplying or dividing a number by a number between 0 and 1	Apply the property of multiplicative inverses to determine solutions of linear equations and inequalities	Use properties of numbers to demonstrate whether assertions are true or false
Apply the property of additive inverses to determine solutions of equations		

Table B-2B. OREGON Mathematics: **STATISTICS AND PROBABILITY** Goals and Standards

Grade 7	Grade 8	CIM
Statistics and Probability		
CCG: Statistics. Select and use appropriate statistical methods to analyze data		
Find, use, and interpret measures of center and spread, including mean and interquartile range for given or derived data	Choose appropriate measures of central tendencies to describe given or derived data	Estimate from a graph or a set of data the mean and standard deviation of a normal distribution and draw conclusions about the distribution of data using measures of center and spread (e.g., analyze a variety of summary statistics and graphical displays)
	Estimate a line of best fit on a scatter plot and informally explain the meaning of the line and use the line to make predictions	Analyze bivariate data and identify the type of function (linear, quadratic, exponential) that could be used to model the data
CCG: Probability. Understand and apply basic concepts of probability		
Compute experimental probabilities from a set of data and theoretical probabilities for single and simple compound events, using various methods (e.g., organized lists, tree diagrams, area models)	Understand and use appropriate terminology to describe complementary and mutually exclusive events and determine their probabilities	Compute the probability of a compound event (e.g., toss a coin three times to find the probability of two heads)
Determine probabilities of simple independent and dependent events	Apply theoretical probability to determine if an event or game is fair or unfair and pose and evaluate modifications to change the fairness	Determine probabilities of dependent and independent events (e.g., use colored marbles with and without replacement)
Compare experimental probability of an event with the theoretical probability and explain any difference		Use conditional probability to solve problems (e.g., from a sample set for the roll of two tetrahedral die; given that a sum is even, what is the probability that the sum is 6?)
Determine all possible outcomes of a particular event or all possible arrangements of objects in a given set by applying various methods including tree diagrams and systematic lists		Determine all possible outcomes of a particular event or all possible arrangements of objects in a given set by applying counting strategies, combinations, and permutations
CCG: Collect and Display Data. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		
Formulate questions and design experiments or surveys to collect relevant data	Collect and display data as lists, tables, and plots using appropriate technology (e.g., graphing calculators, computer software)	Determine appropriate designs for simulations (surveys, observational studies, and experiments) and modeling to study a problem and construct empirical probability distributions to represent results
Identify situations in which it makes sense to sample and identify methods for selecting a sample (e.g., convenience sampling, responses to survey, random sampling) that are representative of a population	Represent bivariate data in a scatter plot and identify relationships in the plot	Use matrices, histograms, scatter plots, stem-and-leaf plots, and box-and-whisker plots to interpret data
Distinguish between random and biased samples and identify possible sources of bias in sampling		Identify examples of populations that are normally distributed
Represent and interpret data using frequency distribution tables, box-and-whisker plots, stem-and-leaf plots, and single- and multiple-line graphs		
Determine the graphical representation of a set of data that best shows key characteristics of the data		
Recognize distortions of graphic displays of sets of data and evaluate appropriateness of alternative displays		

Table B-2B. OREGON Mathematics: **STATISTICS AND PROBABILITY** Goals and Standards

Grade 7	Grade 8	CIM
CCG: Data Analysis and Predictions. Develop and evaluate inferences and predictions that are based on data		
Analyze data from frequency distribution tables, box-and-whisker plots, stem-and-leaf plots using measures of center and spread and draw conclusions	Estimate or predict the occurrence of future events using data	Make inferences and predictions from data in histograms, scatter plots, and parallel box plots
Predict and evaluate how adding data to a set of data affect measures of center		Make predictions about populations based on reported sample statistics
Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken		Understand that inferences about a population drawn from a sample involve uncertainty and that the role of statistics is to measure that uncertainty

Table B-2C. OREGON Mathematics: ALGEBRAIC RELATIONSHIPS Goals and Standards

Grade 7	Grade 8	CIM
Algebraic Relationships		
CCG: Patterns and Functions. Understand patterns, relations, and functions		
Represent, analyze and determine rules for finding patterns involving integers with tables, graphs, words, and when possible, symbolic rules	Represent, analyze and determine rules for finding patterns relating to linear functions, non-linear functions and arithmetic sequences with tables, graphs, and symbolic rules	Represent and generalize sequences resulting from linear, quadratic, and exponential relationships using recursive or explicit formulas, tables of values, and graphs
	Identify functions as linear or nonlinear from tables, graphs, or equations and contrast their properties	Produce a valid conjecture using inductive reasoning by generalizing from a pattern of observations
	Interpret the meaning of the rate of change and y-intercept of a linear relationship in a problem setting	Evaluate and make a table for two-variable formulas and match a graph or table of values to its formula
		Identify independent and dependent variables and determine the domain and range of a function in a problem situation
CCG: Algebraic Relationships. Represent and analyze mathematical situations and structures using algebraic symbols		
Algebraically represent situations and solve problems involving linear equations and inequalities	Represent and solve equations of the form $ax + b = c$ or $k(ax + b) = c$	Algebraically represent situations and solve problems involving quadratic and exponential equations, including exponential growth and decay
Evaluate algebraic expressions and formulas by substituting integers	Approximate solutions of systems of linear equations from a graph	Use graphs to solve non-linear equations, including quadratics
Interpret algebraic relationships represented by two-column tables, number lines and coordinate graphs (four quadrants)	Recognize and generate equivalent symbolic forms for algebraic expressions with an emphasis on linear relationships	Represent and solve system of linear equations with two variables using simultaneous equations and by graphing
Graph linear equations on a coordinate grid by making a table using integer coordinates	Evaluate algebraic expressions and formulas, including expressions involving exponents and parentheses, by substituting rational numbers	Recognize and generate equivalent forms for algebraic expressions, including combining like terms and expanding binomials
	Translate between and interpret linear relationships represented by words, symbols, tables, and graphs	Evaluate algebraic expressions and formulas by substituting real numbers
	Determine the slope and x- and y-intercepts given the graph of a linear equation	Translate between and interpret quadratic and exponential relationships represented by words, symbols, tables, and graphs
	Graph a linear equation given the slope and an initial value (y-intercept)	Determine and interpret maxima or minima and zeros of quadratic functions, and linear functions where $y = \text{constant}$
	Recognize and graph the solutions of linear inequalities on a number line	Graph linear inequalities in two variables
	Graph simple quadratic equations ($y = kx^2$ or $y = kx^2 + b$) by generating a table of values for a given equation	Graph quadratic and exponential equations
	Identify and describe the effects of changing the slope or y-intercept on the graph of a linear relationship of the form $y = kx$ or $y = kx + b$	Analyze how changing a parameter (i.e., k , b) in a quadratic or exponential function of the form $y = k^x + b$, $y = kx^2 + b$, or $y = k(x + b)^2$ affects its graph

Table B-2C. OREGON Mathematics: **ALGEBRAIC RELATIONSHIPS** Goals and Standards

Grade 7	Grade 8	CIM
CCG: Modeling. Use mathematical models to represent and understand quantitative relationships		
Model situations, make predictions and inferences, and solve problems using linear equations	Model situations, make predictions and inferences, and solve problems using linear equations and inequalities	Model situations, make predictions and inferences, and solve problems using linear, quadratic, and exponential functions
Recognize and represent direct variation using tables, graphs, and equations	Recognize and represent direct variation using tables, graphs, and equations	Determine when data represented in a table or graph represents a linear, quadratic, or exponential relationship
Identify and sketch a graph that models a given situation	Determine when data represented in a table or graph represents a linear or non-linear relationship	
CCG: Change. Analyze change in various contexts		
Identify and describe how a change in one variable relates to a change in a second variable	Understand that the rate of change in a linear function is constant and is equal to the slope of its graphed line	Approximate and interpret rates of change in graphical and numeric data
	Determine the slope of a line given two points on the line	Analyze the nature of change of each variable in a non-linear relationship as suggested by a table of values, a graph or a formula
	Analyze the nature of change in quantities in linear relationships represented by graphs, tables, or formulas	

Table B-2D. OREGON Mathematics: MEASUREMENT Goals and Standards

Grade 7	Grade 8	CIM
Measurement		
CCG: Units and Tools. Understand measurable attributes of objects and the units, systems and processes of measurement		
Select the most appropriate unit to measure surface area and volume	Determine an appropriate scale for representing an object in a scale drawing	Determine the appropriate units, scales, and tools for problem situations involving measurement
Convert from a measurement expressed in one unit within a system to another using a different unit within the same system to measure surface and volume	Carry out unit conversions between the metric and US customary systems of measurement given conversion ratios (e.g., 1 in = 2.54 cm)	Solve problems involving unit conversions (e.g., mi/hr to ft/sec) given the unit equivalencies
	Convert between units for large and small numbers in the metric system (e.g., mega- to kilo-)	Determine the precision of a given measuring tool (e.g., 1 degree for a standard protractor)
CCG: Direct and Indirect Measurement. Apply appropriate techniques, tools, and formulas to determine measurements		
Develop and use strategies and formulas for calculating surface area and volume of right prisms, pyramids, and cylinders	Calculate and analyze changes in area and volume in relation to changes in linear measures of figures	Develop and use strategies and formulas for calculating surface area and volume of cones and spheres
Develop strategies for determining approximate volumes of irregular shapes	Analyze how changes in surface area and volume of a solid affect the dimensions of the solid	Use formulas to solve problems involving finding missing dimensions given perimeter, area, surface area and volume of polygons, circles, prisms, pyramids, cones, cylinders, and spheres
Determine surface area and volume of three-dimensional block constructions, given a two-dimensional representation	Solve problems involving rates and derived measurements for such attributes as speed, velocity, and density	Develop and understand, and use the formula for determining arc length (e.g., portion of a circle)
Compare and contrast the formulas for surface area and volume of prisms and pyramids	Determine actual distances from scale drawings, blueprints, and maps and solve problems involving scale factors	Determine perimeter and area of shapes of circles and polygons (annulus, etc.) in context
Create examples of rectangular prisms having the same volume, but different surface areas		Determine the surface area and volume of a complex figure composed of a combinations of two or more geometric figures or a figure derived from a regular solid (e.g., hemisphere, frustum of a cone)
Describe what happens to the surface area and volume of a solid when its shape is changed		Compare and contrast the formulas for surface area and volume of cylinders and cones
Use referents to make estimates of surface area and volume and evaluate the reasonableness of the estimate		Determine a shape that has minimum or maximum perimeter, area, surface area, or volume under specified conditions
		Make and use scale drawings and models to solve problems

Table B-2E. OREGON Mathematics: **GEOMETRY** Goals and Standards

Grade 7	Grade 8	CIM
Geometry		
CCG: Properties and Relationships. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		
Determine defining properties that characterize classes of quadrilaterals including side and angle measurements and their component parts (e.g., altitudes, medians, diagonals, bisectors)	Determine defining properties that characterize classes of triangles including side and angle measurements and their component parts (e.g., angle bisectors, altitudes, medians)	Determine defining properties that characterize classes of three-dimensional figures and their component parts
Identify parallel and intersecting lines and pairs of angles formed (right, vertical, adjacent) by parallel lines cut by a transversal and determine their measure	Use proportional reasoning, drawings, models or technology to demonstrate similarity and congruence of polygons with an emphasis on triangles	Recognize and represent three-dimensional figures and their component parts
Use proportional reasoning, drawings, models or technology to demonstrate congruence and similarity of polygons with an emphasis on quadrilaterals	Determine the measures of corresponding sides and angles of congruent and similar triangles and their component parts	Justify and use theorems involving the angles formed by parallel lines cut by a transversal
Determine the measures of missing sides and angles in congruent quadrilaterals and their component parts	Use similar triangles to measure distances indirectly (e.g., flagpole and shadow)	Develop, understand, and apply properties of circles and of inscribed and circumscribed polygons
	Use the Pythagorean theorem to determine if triangles are right triangles and determine the lengths of missing sides in right triangles	Use measures of sides and of interior and exterior angles of polygons to classify figures and solve problems
	Investigate triangles and their component parts and draw conclusions about their properties	Prove congruence of two triangles or their corresponding component parts
	Create and critique inductive and deductive arguments to verify the Pythagorean theorem	Determine the measures of corresponding angles, sides, and corresponding part of congruent and similar figures
	Justify conclusions that two triangles are or are not congruent and are or are not similar	Use angle, side length and triangle inequality relationships to solve problems
		Use trigonometric functions, and angle and side relationships of special right triangles (30-60-right triangles and isosceles right triangles) to solve for an unknown length and determine distances and solve problems
		Investigate relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles
		Construct and judge the validity of a logical argument and give counterexamples to disprove a statement
		Justify and use theorems involving the properties of triangles, quadrilaterals, circles, and their component parts to verify congruence and similarity

Table B-2E. OREGON Mathematics: **GEOMETRY** Goals and Standards

Grade 7	Grade 8	CIM
CCG: Modeling. Use visualization, spatial reasoning, and geometric modeling to solve problems		
Model, sketch, and label prisms, pyramids, cylinders, and quadrilaterals with specified side lengths or angle measures	Draw to scale two-dimensional representations of rectangular prisms and triangles with specified side lengths or angle measures	Model, sketch, label and where appropriate construct cones and spheres, and basic elements of geometric figures (e.g., altitudes, midpoints, medians, angle bisectors, and perpendicular bisectors) using compass and straightedge or technology
Use two-dimensional representation of three-dimensional objects, including nets, to solve problems involving surface area and volume	Construct and read drawings and models made to scale	Describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect)
		Make a model of a three-dimensional figure from a two-dimensional drawing and make a two-dimensional representation of a three-dimensional object through scale drawings, perspective drawings, blueprints or computer simulations
		Recognize representations of three-dimensional objects from different perspectives and identify cross-sections of three-dimensional objects
CCG: Coordinate Geometry. Specify locations and describe spatial relationships using coordinate geometry and other representational systems		
Identify properties of quadrilaterals and their component parts on a coordinate graph	On a coordinate plane, determine the relative placement (e.g., intersecting, parallel, perpendicular) of two lines	Determine the relative placement (e.g., intersecting, parallel, perpendicular) of two lines on a coordinate plane given the algebraic equations representing them
	Determine the distance between two points on a coordinate graph using right triangles and the Pythagorean theorem	Calculate slope, distance and midpoint between points with an emphasis on practical applications (use coordinate formulas)
CCG: Transformations and Symmetry. Apply transformations and use symmetry to analyze mathematical situations		
Determine the image of a point (with integer coordinates) on a graph under translations and reflections	Classify transformations based on whether they produce congruent or similar noncongruent figures (e.g., compare pairs of shapes where the image has been transformed, identify the type of translation and use angles, diagonals and lines of symmetry to determine congruence)	Use coordinate geometry to determine whether a figure is symmetrical with respect to a line or a point
	Identify and sketch the figure that is the result of a given rotation, translation, reflection or dilation or a combination of two transformations	Determine whether a given pair of figures on a coordinate plane represent a translation, reflection, rotation and/or dilation
	Know properties of dilated images	Determine the image of a figure on a coordinate graph under translations, reflections, and rotations
	Determine the effects of a transformation on linear and area measurements of the original figure	Given a figure and its image on a coordinate graph, determine the translation vector or locate the axis of reflection
		Determine the coordinates of and draw the dilation of a figure on a coordinate graph
		Analyze the congruence, similarity, and line or rotational symmetry of figures using transformations

Table B-2F. OREGON Mathematics: **MATHEMATICAL PROBLEM SOLVING** Goals and Standards

Grade 7	Grade 8	CIM
Mathematical Problem Solving		
CCG: Conceptual Understanding. Select, apply, and translate among mathematical representations to solve problems.		
Interpret the concepts of a problem-solving task and translate them into mathematics	Interpret the concepts of a problem-solving task and translate them into mathematics	Interpret the concepts of a problem-solving task and translate them into mathematics
CCG: Processes and Strategies. Apply and adapt a variety of appropriate strategies to solve problems.		
Choose strategies that can work and then carry out the strategies chosen	Choose strategies that can work and then carry out the strategies chosen	Choose strategies that can work and then carry out the strategies chosen
CCG: Verification. Monitor and reflect on the process of mathematical problem solving.		
Produce identifiable evidence of a second look at the concepts/strategies/calculations to defend a solution	Produce identifiable evidence of a second look at the concepts/strategies/calculations to defend a solution	Produce identifiable evidence of a second look at the concepts/strategies/calculations to defend a solution
CCG: Communication. Communicate mathematical thinking coherently and clearly. Use the language of mathematics to express mathematical ideas precisely.		
Use pictures, symbols, and/or vocabulary to convey the path to the identified solution	Use pictures, symbols, and/or vocabulary to convey the path to the identified solution	Use pictures, symbols, and/or vocabulary to convey the path to the identified solution
CCG: Accuracy. Accurately solve problems that arise in mathematics and other contexts.		
Accurately solve problems using mathematics	Accurately solve problems using mathematics	Accurately solve problems using mathematics

Science

Table B-3A. OREGON Science: **PHYSICAL SCIENCE** Goals and Standards

Grade 8	CIM-CAM	PASS
PHYSICAL SCIENCE: Understand structures and properties of matter and changes that occur in the physical world.		
MATTER		
CCG: <u>Understand structure and properties of matter.</u>		PASS: <u>Know and apply fundamental concepts of the physical sciences.</u>
Content Standard: <u>Understand structure and properties of matter.</u>		PASS: <u>Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science.</u>
Benchmark 3: <u>Compare properties of specific substances.</u> <ul style="list-style-type: none"> • <u>Describe how to measure characteristic properties including boiling and melting points, solubility, and density.</u> • <u>Recognize that substances may be grouped by their physical properties.</u> • <u>Use the concept of density to evaluate which objects will float or sink in water.</u> 	CIM/CAM: <u>Describe properties of elements and their relationship to the periodic table.</u> <ul style="list-style-type: none"> • <u>Explain atoms and their base components (protons, neutrons, and electrons) as a basis for all matter.</u> • <u>Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</u> • <u>Recognize that the historical development of atomic theory demonstrates how scientific knowledge changes over time, and how those changes have had an impact on society.</u> 	PASS: <u>Use information, skills, and investigative processes employed in a field of science.</u> PASS: <u>Investigate, through research and inquiry, important principles, theories, and relationships from a field of science.</u>
CCG: <u>Understand chemical and physical changes.</u>		
Content Standard: <u>Describe and analyze chemical and physical changes.</u>		
Benchmark 3: <u>Compare physical and chemical changes.</u> <ul style="list-style-type: none"> • <u>Distinguish between examples of chemical changes and physical changes.</u> • <u>Describe processes that will separate the components of physical mixtures.</u> • <u>Describe events that accompany chemical changes, but not physical changes.</u> • <u>Explain how our understanding of the nature of matter and chemical reactions has changed over time.</u> 	CIM/CAM: <u>Analyze the effects of various factors on physical changes and chemical reactions.</u> <ul style="list-style-type: none"> • <u>Describe how transformations among solids, liquids, and gases occur (change of state).</u> • <u>Identify factors that can influence change of state, including temperature, pressure, and concentration.</u> • <u>Describe chemical reactions in terms of reactants and products.</u> • <u>Describe the factors that affect the rate of chemical reactions.</u> • <u>Recognize examples that show when substances combine or break apart in a chemical reaction, the total mass remains the same (conservation of mass).</u> 	
FORCE		
CCG: <u>Understand fundamental forces, their forms, and their effects on motion.</u>		
Content Standard: <u>Describe fundamental forces and the motions resulting from them.</u>		
Benchmark 3: <u>Explain interactions between force and matter and relationships among force, mass, and motion.</u>	CIM/CAM: <u>Describe and explain the effects of multiple forces acting on an object.</u>	

Table B-3A. OREGON Science: **PHYSICAL SCIENCE** Goals and Standards

Grade 8	CIM-CAM	PASS
PHYSICAL SCIENCE: Understand structures and properties of matter and changes that occur in the physical world.		
<ul style="list-style-type: none"> Recognize and describe the motion of an object based on its mass and the force exerted on it. 	<ul style="list-style-type: none"> Understand and apply the relationship $F = ma$ in situations in which one force acts on an object. 	
<ul style="list-style-type: none"> Predict the change in direction or speed of an object by changing the forces acting on it. 	<ul style="list-style-type: none"> Recognize that equal and opposite forces occur when one object exerts a force on another. 	
<ul style="list-style-type: none"> Explain inertia. 	<ul style="list-style-type: none"> Describe the forces acting on an object, based on the motion of that object. 	
<p>Benchmark 3: Recognize that every object exerts gravitational force on every other object.</p>	<p>CIM/CAM: Recognize that gravity is a universal force.</p>	
<ul style="list-style-type: none"> Describe the effect of gravitational force on objects at the Earth's surface. 	<ul style="list-style-type: none"> Describe the relationship of mass and distance to gravitational force. 	
ENERGY		
<p>CCG: Understand energy, its transformations, and interactions with matter.</p>		
<p>Content Standard: Explain and analyze the interaction of energy and matter.</p>		
<p>Benchmark 3: Compare forms and behaviors of various types of energy.</p>	<p>CIM/CAM: Describe differences and similarities between kinds of waves, including sound, seismic, and electromagnetic, as a means of transmitting energy.</p>	
<ul style="list-style-type: none"> Distinguish between the forms of energy including heat, chemical, mechanical, and gravitational potential energy. 	<ul style="list-style-type: none"> Recognize that waves of all kinds have energy that can be transferred when the waves interact with matter. 	
	<ul style="list-style-type: none"> Apply the concepts of frequency, wavelength, amplitude, and energy to electromagnetic and mechanical waves. 	
<p>Benchmark 3: Describe and explain various energy transfers and resulting transformations.</p>	<p>CIM/CAM: Describe and analyze examples of conservation of energy.</p>	
<ul style="list-style-type: none"> Trace the flow of energy transformations in a system. 	<ul style="list-style-type: none"> Recognize that heat energy is a byproduct of most energy transformations. 	
<ul style="list-style-type: none"> Explain the principle that energy is conserved, neither created nor destroyed. 	<ul style="list-style-type: none"> Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves. 	
<ul style="list-style-type: none"> Identify how technological advances have changed humankind's use of energy. 	<ul style="list-style-type: none"> Explain the difference between potential and kinetic energy. 	
	<ul style="list-style-type: none"> Analyze the flow of energy through a system by applying the law of conservation of energy. 	

Table B-3B. OREGON Science: LIFE SCIENCE Goals and Standards

Grade 8	CIM-CAM	PASS
LIFE SCIENCE: Understand structure, functions, and interactions of living organisms and the environment.		
ORGANISMS		
CCG: Understand the characteristics, structure, and functions of organisms.		
Content Standard: Describe the characteristics, structure, and functions of organisms.		
Benchmark 3: Describe and explain the relationship and interaction of organ systems.	CIM/CAM: Describe, explain, and compare the structure and functions of cells in organisms.	PASS: Know and apply fundamental concepts of the life sciences.
<ul style="list-style-type: none"> Identify organ systems at work during a particular activity and describe their effect on each other. 	<ul style="list-style-type: none"> Describe how biological systems can maintain equilibrium (homeostasis). 	PASS: Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science.
Benchmark 3: Describe and explain the structure and functions of an organism in terms of cells, tissues, and organs.	<ul style="list-style-type: none"> Identify unique structures in cells from plants, animals, and prokaryotes. 	PASS: Use information, skills, and investigative processes employed in a field of science.
<ul style="list-style-type: none"> Identify differences and similarities between plant and animal cells. 	<ul style="list-style-type: none"> Identify cell organelles and state how their activities contribute to a particular type of cell carrying out its functions. 	PASS: Investigate, through research and inquiry, important principles, theories, and relationships from a field of science.
<ul style="list-style-type: none"> Recognize how structural differences among organisms at the cellular, tissue, and organ level are related to their habitat and life requirements. 	<ul style="list-style-type: none"> Explain the role of the cell membrane in cell transport. 	
<ul style="list-style-type: none"> Identify photosynthesis as the process by which plants use the energy from light to make sugars out of carbon dioxide and water, and that this food can be used immediately for fuel or materials or it may be stored for later use. 	<ul style="list-style-type: none"> Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each. 	
<ul style="list-style-type: none"> Explain how our understanding of cells and microbes has changed over time. 	<ul style="list-style-type: none"> Describe photosynthesis as a chemical process and part of the carbon cycle. 	
	<ul style="list-style-type: none"> Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes. 	
HEREDITY		
CCG: Understand the transmission of traits in living things.		
Content Standard: Understand the transmission of traits in living things.		
Benchmark 3: Describe how the traits of an organism are passed from generation to generation.	CIM/CAM: Explain laws of heredity and their relationship to the structure and function of DNA.	
<ul style="list-style-type: none"> Distinguish between asexual and sexual reproduction. 	<ul style="list-style-type: none"> Describe the structure of DNA and the way that DNA functions to control protein synthesis. 	
<ul style="list-style-type: none"> Identify traits inherited through genes and those resulting from interactions with the environment. 	<ul style="list-style-type: none"> Recognize and understand the differences between meiosis and mitosis in cellular reproduction. 	
<ul style="list-style-type: none"> Use simple laws of probability to predict patterns of heredity with the use of Punnett squares. 	<ul style="list-style-type: none"> Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in organisms. 	
<ul style="list-style-type: none"> Explain how our understanding of heredity has changed over time. 	<ul style="list-style-type: none"> Apply concepts of inheritance of traits, including Mendel's laws, Punnett squares, and pedigrees, to determine the characteristics of offspring. 	

Table B-3B. OREGON Science: LIFE SCIENCE Goals and Standards

Grade 8	CIM-CAM	PASS
LIFE SCIENCE: Understand structure, functions, and interactions of living organisms and the environment.		
	<ul style="list-style-type: none"> Recognize the existence of technology that can alter and/or determine inherited traits. 	
<u>DIVERSITY/INTERDEPENDENCE</u>		
CCG: Understand the relationships among living things and between living things and their environments.		
Content Standard: Explain and analyze the interdependence of organisms in their natural environment.		
Benchmark 3: Identify and describe the factors that influence or change the balance of populations in their environment.	CIM/CAM: Describe and analyze the effect of species, including humans, on an ecosystem.	
<ul style="list-style-type: none"> Identify that sunlight is the major source of energy in most ecosystems and that energy then passes from organism to organism in food webs. 	<ul style="list-style-type: none"> Predict outcomes of changes in resources and energy flow in an ecosystem. 	
<ul style="list-style-type: none"> Identify populations of organisms within an ecosystem by the function that they serve. 	<ul style="list-style-type: none"> Explain how humans and other species can impact an ecosystem. 	
<ul style="list-style-type: none"> Differentiate between relationships among organisms including predator-prey, producer-consumer, and parasite-host. 	<ul style="list-style-type: none"> Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem. 	
<ul style="list-style-type: none"> Explain the importance of niche to an organism's ability to avoid direct competition for resources. 	CIM/CAM: Analyze how living things have changed over geological time, using fossils and other scientific evidence.	
Benchmark 3: Describe and explain the theory of natural selection as a mechanism for evolution.		
<ul style="list-style-type: none"> Identify and explain how random variations in species can be preserved through natural selection. 	<ul style="list-style-type: none"> Recognize that, over time, natural selection may result in development of a new species or subspecies. Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species. 	
<ul style="list-style-type: none"> Describe how animal and plant structures adapt to environmental change. 	<ul style="list-style-type: none"> Explain how biological evolution can account for the diversity of species developed over time. 	
	<ul style="list-style-type: none"> Explain the relationship between genetics, mutations, and biological evolution. 	
	<ul style="list-style-type: none"> Explain how our understanding of evolution has changed over time. 	

Table B-3C. OREGON Science: **EARTH AND SPACE SCIENCE** Goals and Standards

Grade 8	CIM-CAM	PASS
EARTH AND SPACE SCIENCE: Understand physical properties of the Earth, how those properties change, and the Earth's relationship to other celestial bodies.		
<u>THE DYNAMIC EARTH</u>		
PASS: Know and apply fundamental concepts of the earth and space sciences.		
PASS: Understand and correctly use essential principles, organizations, concepts, terminology, and notations from a field of science.		
PASS: Use information, skills, and investigative processes employed in a field of science.		
PASS: Investigate, through research and inquiry, important principles, theories, and relationships from a field of science.		
CCG: Understand the properties and limited availability of the materials which make up the Earth.		
Content Standard: Identify the structure of the Earth system and the availability and use of the materials that make up that system.		
Benchmark 3: Recognize that Earth materials are limited, and explore strategies for addressing this problem.	CIM/CAM: Describe how the importance and use of resources has changed over time with changes in economic and technological systems.	
<ul style="list-style-type: none"> Identify ways in which various resources can be recycled and reused. 	<ul style="list-style-type: none"> Predict consequences of increased consumption of renewable and nonrenewable resources. 	
CCG: Understand changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.		
Content Standard: Explain and analyze changes occurring within the lithosphere, hydrosphere, and atmosphere of the Earth.		
Benchmark 3: Explain the water cycle and its relationship to weather and climatic patterns.		
CIM/CAM: Analyze the relationship between global energy transfer and climate.		
<ul style="list-style-type: none"> Explain the water cycle. 	<ul style="list-style-type: none"> Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system. 	
<ul style="list-style-type: none"> Identify factors that cause or affect weather patterns. 	<ul style="list-style-type: none"> Describe how solar radiation and the amount that reaches Earth is affected by stratospheric ozone. 	
<ul style="list-style-type: none"> Identify factors that affect the rate of evaporation, condensation, and cloud formation. 	<ul style="list-style-type: none"> Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents. 	
<ul style="list-style-type: none"> Identify the difference between weather and climate. 	CIM/CAM: Analyze evidence of ongoing evolution of the Earth system.	
<ul style="list-style-type: none"> Explain how geography affects climate. 	<ul style="list-style-type: none"> Describe methods of determining ages of rocks and fossils. 	
Benchmark 3: Describe the Earth's structure and how it changes over time.		
<ul style="list-style-type: none"> Recognize the solid Earth is layered with a lithosphere, a hot convecting mantle, and a dense metallic core. 	<ul style="list-style-type: none"> Use rock sequences and fossil evidence to determine geologic history. 	
<ul style="list-style-type: none"> Identify the processes that result in different kinds of landforms. 	<ul style="list-style-type: none"> Describe and analyze theories of Earth's origin and early history using scientific evidence. 	
<ul style="list-style-type: none"> Identify factors affecting water flow, soil erosion, and deposition. 	<ul style="list-style-type: none"> Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions. 	
<ul style="list-style-type: none"> Give examples of landform changes that occur at different rates. 	<ul style="list-style-type: none"> Describe how the evolution of life caused dramatic changes in the composition of the Earth's atmosphere, which did not originally contain oxygen. 	
<ul style="list-style-type: none"> Describe the evidence for and the development of the theory of plate tectonics. 	<ul style="list-style-type: none"> Identify how volcanic eruptions and impacts of huge rocks from space can cause widespread effects on climate. 	

Table B-3C. OREGON Science: **EARTH AND SPACE SCIENCE** Goals and Standards

Grade 8	CIM-CAM	PASS
EARTH AND SPACE SCIENCE: Understand physical properties of the Earth, how those properties change, and the Earth's relationship to other celestial bodies.		
<ul style="list-style-type: none"> Explain the rock cycle in terms of <u>constructive (crustal deformation, volcanic eruption, and sediment deposition) and destructive (weathering and erosion) forces in land formation.</u> 		
<ul style="list-style-type: none"> Describe that the total amount of Earth material stays the same as its forms change in the rock cycle. 		
<u>THE EARTH IN SPACE</u>		
CCG: <u>Understand the Earth's place in the solar system and the universe.</u>		
Content Standard: <u>Explain relationships among the Earth, sun, moon, and the solar system.</u>		
Benchmark 3: <u>Explain the relationship of the Earth's motion to the day, season, year, phases of the moon, and eclipses.</u>	CIM/CAM: <u>Explain how mass and distance affect the interaction between Earth and other objects in space.</u>	
<ul style="list-style-type: none"> Explain the relationship between the <u>cycle of seasons and the tilt of the Earth on its axis.</u> 	<ul style="list-style-type: none"> Recognize that the sun's gravitational pull holds the Earth and other planets in their orbits, just as the planets' gravitational pull keeps their moons in orbit around them. 	
	<ul style="list-style-type: none"> Explain that the force of gravity between Earth and other objects in space depends only upon their masses and the distances between them. 	
<u>THE UNIVERSE</u>		
CCG: <u>Describe natural objects, events, and processes outside the Earth, both past and present.</u>		

Table B-3D. OREGON Science: **SCIENTIFIC INQUIRY** Goals and Standards

Grade 8	CIM-CAM	PASS
SCIENTIFIC INQUIRY: Use interrelated processes to pose questions and investigate the physical and living world.		
FORMING THE QUESTION/HYPOTHESIS		
CCG: Formulate and express scientific questions or hypotheses to be investigated.		
Content Standard: Make observations. Formulate and express scientific questions or hypotheses to be investigated based on the observations.		
Benchmark 3: Based on observations and scientific concepts, ask questions or form hypotheses that can be explored through scientific investigations.	CIM/CAM: Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.	PASS: Determine areas of inquiry, frame scientific problems, and pose research questions and hypotheses involving scientific relationships.
DESIGNING THE INVESTIGATION		
CCG: Design safe and ethical scientific investigations to address questions or hypotheses.		
Content Standard: Design scientific investigations to address and explain questions or hypotheses.	CIM/CAM: Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.	PASS: Design scientific investigations that use precise and appropriate methodology to address questions, examine scientific relationships, and test hypotheses.
Benchmark 3: Design a scientific investigation to answer questions or test hypotheses.		
COLLECTING AND PRESENTING DATA		
CCG: Conduct procedures to collect, organize, and display scientific data.		
Content Standard: Collect, organize, and display scientific data.		
Benchmark 3: Collect, organize, and display sufficient data to support analysis.	CIM/CAM: Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.	PASS: Conduct scientifically accepted procedures to collect, organize, and display data.
ANALYZING AND INTERPRETING RESULTS		
CCG: Analyze scientific information to develop and present conclusions.		
Content Standard: Analyze scientific information to develop and present conclusions.		
Benchmark 3: Summarize and analyze data including possible sources of error. Explain results and offer reasonable and accurate interpretations and implications.	CIM/CAM: Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.	PASS: Analyze and interpret data and relationships, evaluate investigations, and develop supported explanations.

Section C: **ACT's College Readiness Standards Included in Oregon's Grades 9–12 Grade-Level Standards**

Using thousands of student records and responses, content and measurement experts worked backwards to develop data-driven, empirically derived statements of what students know and are typically able to do in various score ranges on the English, Reading, Writing, Mathematics, and Science tests on the EXPLORE, PLAN, and ACT tests. These empirically derived score descriptors are called **ACT's College Readiness Standards**. Because of this unique way the ACT Standards were derived, ACT's Standards contain specific descriptions of proficiency and content, including descriptions of the complexity of the test material. The ACT standards prove to be an effective way to communicate the skills and knowledge measured by our EXPLORE, PLAN, and ACT tests.

In this section (Section C), the ACT Standards that are highlighted are those that are included in Oregon's Grade-Level Standards. ACT Standards not highlighted are those statements that include specific content, complexity and/or proficiency level descriptions that were not described in Oregon's Common Curriculum Goals and Grade-Level Standards.

Because Oregon educators are the experts on the Oregon Grade-Level Standards, we would strongly encourage them to examine this document and offer their interpretations.



Table C-1. ACT’s College Readiness Standards — English

	Topic Development in Terms of Purpose and Focus	Organization, Unity, and Coherence	Word Choice in Terms of Style, Tone, Clarity, and Economy
13–15		Use conjunctive adverbs or phrases to show time relationships in simple narrative essays (e.g., <i>then, this time</i>)	Revise sentences to correct awkward and confusing arrangements of sentence elements Revise vague nouns and pronouns that create obvious logic problems
16–19	Identify the basic purpose or role of a specified phrase or sentence Delete a clause or sentence because it is obviously irrelevant to the essay	Select the most logical place to add a sentence in a paragraph	Delete obviously synonymous and wordy material in a sentence Revise expressions that deviate from the style of an essay
20–23	Identify the central idea or main topic of a straightforward piece of writing Determine relevancy when presented with a variety of sentence-level details	Use conjunctive adverbs or phrases to express straightforward logical relationships (e.g., <i>first, afterward, in response</i>) Decide the most logical place to add a sentence in an essay Add a sentence that introduces a simple paragraph	Delete redundant material when information is repeated in different parts of speech (e.g., “alarmingly startled”) Use the word or phrase most consistent with the style and tone of a fairly straightforward essay Determine the clearest and most logical conjunction to link clauses
24–27	Identify the focus of a simple essay, applying that knowledge to add a sentence that sharpens that focus or to determine if an essay has met a specified goal Delete material primarily because it disturbs the flow and development of the paragraph Add a sentence to accomplish a fairly straightforward purpose such as illustrating a given statement	Determine the need for conjunctive adverbs or phrases to create subtle logical connections between sentences (e.g., <i>therefore, however, in addition</i>) Rearrange the sentences in a fairly uncomplicated paragraph for the sake of logic Add a sentence to introduce or conclude the essay or to provide a transition between paragraphs when the essay is fairly straightforward	Revise a phrase that is redundant in terms of the meaning and logic of the entire sentence Identify and correct ambiguous pronoun references Use the word or phrase most appropriate in terms of the content of the sentence and tone of the essay
28–32	Apply an awareness of the focus and purpose of a fairly involved essay to determine the rhetorical effect and suitability of an existing phrase or sentence, or to determine the need to delete plausible but irrelevant material Add a sentence to accomplish a subtle rhetorical purpose such as to emphasize, to add supporting detail, or to express meaning through connotation	Make sophisticated distinctions concerning the logical use of conjunctive adverbs or phrases, particularly when signaling a shift between paragraphs Rearrange sentences to improve the logic and coherence of a complex paragraph Add a sentence to introduce or conclude a fairly complex paragraph	Correct redundant material that involves sophisticated vocabulary and sounds acceptable as conversational English (e.g., “an aesthetic viewpoint” versus “the outlook of an aesthetic viewpoint”) Correct vague and wordy or clumsy and confusing writing containing sophisticated language
33–36	Determine whether a complex essay has accomplished a specific purpose Add a phrase or sentence to accomplish a complex purpose, often expressed in terms of the main focus of the essay	Consider the need for introductory sentences or transitions, basing decisions on a thorough understanding of both the logic and rhetorical effect of the paragraph and essay	Delete redundant material that involves subtle concepts or that is redundant in terms of the paragraph as a whole

Table C-1. ACT’s College Readiness Standards — English (continued)

	Sentence Structure and Formation	Conventions of Usage	Conventions of Punctuation
13–15	<p>Use conjunctions or punctuation to join simple clauses</p> <p>Revise shifts in verb tense between simple clauses in a sentence or between simple adjoining sentences</p>	<p>Solve such basic grammatical problems as how to form the past and past participle of irregular but commonly used verbs and how to form comparative and superlative adjectives</p>	<p>Delete commas that create basic sense problems (e.g., between verb and direct object)</p>
16–19	<p>Determine the need for punctuation and conjunctions to avoid awkward-sounding sentence fragments and fused sentences</p> <p>Decide the appropriate verb tense and voice by considering the meaning of the entire sentence</p>	<p>Solve such grammatical problems as whether to use an adverb or adjective form, how to ensure straightforward subject-verb and pronoun-antecedent agreement, and which preposition to use in simple contexts</p> <p>Recognize and use the appropriate word in frequently confused pairs such as <i>there</i> and <i>their</i>, <i>past</i> and <i>passed</i>, and <i>led</i> and <i>lead</i></p>	<p>Provide appropriate punctuation in straightforward situations (e.g., items in a series)</p> <p>Delete commas that disturb the sentence flow (e.g., between modifier and modified element)</p>
20–23	<p>Recognize and correct marked disturbances of sentence flow and structure (e.g., participial phrase fragments, missing or incorrect relative pronouns, dangling or misplaced modifiers)</p>	<p>Use idiomatically appropriate prepositions, especially in combination with verbs (e.g., <i>long for</i>, <i>appeal to</i>)</p> <p>Ensure that a verb agrees with its subject when there is some text between the two</p>	<p>Use commas to set off simple parenthetical phrases</p> <p>Delete unnecessary commas when an incorrect reading of the sentence suggests a pause that should be punctuated (e.g., between verb and direct object clause)</p>
24–27	<p>Revise to avoid faulty placement of phrases and faulty coordination and subordination of clauses in sentences with subtle structural problems</p> <p>Maintain consistent verb tense and pronoun person on the basis of the preceding clause or sentence</p>	<p>Ensure that a pronoun agrees with its antecedent when the two occur in separate clauses or sentences</p> <p>Identify the correct past and past participle forms of irregular and infrequently used verbs and form present-perfect verbs by using <i>have</i> rather than <i>of</i></p>	<p>Use punctuation to set off complex parenthetical phrases</p> <p>Recognize and delete unnecessary commas based on a careful reading of a complicated sentence (e.g., between the elements of a compound subject or compound verb joined by <i>and</i>)</p> <p>Use apostrophes to indicate simple possessive nouns</p> <p>Recognize inappropriate uses of colons and semicolons</p>
28–32	<p>Use sentence-combining techniques, effectively avoiding problematic comma splices, run-on sentences, and sentence fragments, especially in sentences containing compound subjects or verbs</p> <p>Maintain a consistent and logical use of verb tense and pronoun person on the basis of information in the paragraph or essay as a whole</p>	<p>Correctly use reflexive pronouns, the possessive pronouns <i>its</i> and <i>your</i>, and the relative pronouns <i>who</i> and <i>whom</i></p> <p>Ensure that a verb agrees with its subject in unusual situations (e.g., when the subject-verb order is inverted or when the subject is an indefinite pronoun)</p>	<p>Use commas to set off a nonessential/nonrestrictive appositive or clause</p> <p>Deal with multiple punctuation problems (e.g., compound sentences containing unnecessary commas and phrases that may or may not be parenthetical)</p> <p>Use an apostrophe to show possession, especially with irregular plural nouns</p> <p>Use a semicolon to indicate a relationship between closely related independent clauses</p>
33–36	<p>Work comfortably with long sentences and complex clausal relationships within sentences, avoiding weak conjunctions between independent clauses and maintaining parallel structure between clauses</p>	<p>Provide idiomatically and contextually appropriate prepositions following verbs in situations involving sophisticated language or ideas</p> <p>Ensure that a verb agrees with its subject when a phrase or clause between the two suggests a different number for the verb</p>	<p>Use a colon to introduce an example or an elaboration</p>

Table C-2. ACT’s College Readiness Standards — Reading

	Main Ideas and Author’s Approach	Supporting Details
13–15	Recognize a clear intent of an author or narrator in uncomplicated literary narratives	Locate basic facts (e.g., names, dates, events) clearly stated in a passage
16–19	Identify a clear main idea or purpose of straightforward paragraphs in uncomplicated literary narratives	Locate simple details at the sentence and paragraph level in uncomplicated passages Recognize a clear function of a part of an uncomplicated passage
20–23	Infer the main idea or purpose of straightforward paragraphs in uncomplicated literary narratives Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in uncomplicated passages	Locate important details in uncomplicated passages Make simple inferences about how details are used in passages
24–27	Identify a clear main idea or purpose of any paragraph or paragraphs in uncomplicated passages Infer the main idea or purpose of straightforward paragraphs in more challenging passages Summarize basic events and ideas in more challenging passages Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in more challenging passages	Locate important details in more challenging passages Locate and interpret minor or subtly stated details in uncomplicated passages Discern which details, though they may appear in different sections throughout a passage, support important points in more challenging passages
28–32	Infer the main idea or purpose of more challenging passages or their paragraphs Summarize events and ideas in virtually any passage Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in virtually any passage	Locate and interpret minor or subtly stated details in more challenging passages Use details from different sections of some complex informational passages to support a specific point or argument
33–36	Identify clear main ideas or purposes of complex passages or their paragraphs	Locate and interpret details in complex passages Understand the function of a part of a passage when the function is subtle or complex

Descriptions of the ACT Reading Passages

Uncomplicated Literary Narratives refers to excerpts from essays, short stories, and novels that tend to use simple language and structure, have a clear purpose and a familiar style, present straightforward interactions between characters, and employ only a limited number of literary devices such as metaphor, simile, or hyperbole.

More Challenging Literary Narratives refers to excerpts from essays, short stories, and novels that tend to make moderate use of figurative language, have a more intricate structure and messages conveyed with some subtlety, and may feature somewhat complex interactions between characters.

Complex Literary Narratives refers to excerpts from essays, short stories, and novels that tend to make generous use of ambiguous language and literary devices, feature complex and subtle interactions between characters, often contain challenging context-dependent vocabulary, and typically contain messages and/or meanings that are not explicit but are embedded in the passage.

Table C-2. ACT’s College Readiness Standards — Reading (continued)

	Sequential, Comparative, and Cause-Effect Relationships	Meanings of Words	Generalizations and Conclusions
13–15	Determine when (e.g., first, last, before, after) or if an event occurred in uncomplicated passages Recognize clear cause-effect relationships described within a single sentence in a passage	Understand the implication of a familiar word or phrase and of simple descriptive language	Draw simple generalizations and conclusions about the main characters in uncomplicated literary narratives
16–19	Identify relationships between main characters in uncomplicated literary narratives Recognize clear cause-effect relationships within a single paragraph in uncomplicated literary narratives	Use context to understand basic figurative language	Draw simple generalizations and conclusions about people, ideas, and so on in uncomplicated passages
20–23	Order simple sequences of events in uncomplicated literary narratives Identify clear relationships between people, ideas, and so on in uncomplicated passages Identify clear cause-effect relationships in uncomplicated passages	Use context to determine the appropriate meaning of some figurative and nonfigurative words, phrases, and statements in uncomplicated passages	Draw generalizations and conclusions about people, ideas, and so on in uncomplicated passages Draw simple generalizations and conclusions using details that support the main points of more challenging passages
24–27	Order sequences of events in uncomplicated passages Understand relationships between people, ideas, and so on in uncomplicated passages Identify clear relationships between characters, ideas, and so on in more challenging literary narratives Understand implied or subtly stated cause-effect relationships in uncomplicated passages Identify clear cause-effect relationships in more challenging passages	Use context to determine the appropriate meaning of virtually any word, phrase, or statement in uncomplicated passages Use context to determine the appropriate meaning of some figurative and nonfigurative words, phrases, and statements in more challenging passages	Draw subtle generalizations and conclusions about characters, ideas, and so on in uncomplicated literary narratives Draw generalizations and conclusions about people, ideas, and so on in more challenging passages
28–32	Order sequences of events in more challenging passages Understand the dynamics between people, ideas, and so on in more challenging passages Understand implied or subtly stated cause-effect relationships in more challenging passages	Determine the appropriate meaning of words, phrases, or statements from figurative or somewhat technical contexts	Use information from one or more sections of a more challenging passage to draw generalizations and conclusions about people, ideas, and so on
33–36	Order sequences of events in complex passages Understand the subtleties in relationships between people, ideas, and so on in virtually any passage Understand implied, subtle, or complex cause-effect relationships in virtually any passage	Determine, even when the language is richly figurative and the vocabulary is difficult, the appropriate meaning of context-dependent words, phrases, or statements in virtually any passage	Draw complex or subtle generalizations and conclusions about people, ideas, and so on, often by synthesizing information from different portions of the passage Understand and generalize about portions of a complex literary narrative

Uncomplicated Informational Passages refers to materials that tend to contain a limited amount of data, address basic concepts using familiar language and conventional organizational patterns, have a clear purpose, and are written to be accessible.

More Challenging Informational Passages refers to materials that tend to present concepts that are not always stated explicitly and that are accompanied or illustrated by more—and more detailed—supporting data, include some difficult context-dependent words, and are written in a somewhat more demanding and less accessible style.

Complex Informational Passages refers to materials that tend to include a sizable amount of data, present difficult concepts that are embedded (not explicit) in the text, use demanding words and phrases whose meaning must be determined from context, and are likely to include intricate explanations of processes or events.

Table C-3. ACT's College Readiness Standards — Writing

	Expressing Judgments	Focusing on the Topic	Developing a Position
3–4	<p>Show a little understanding of the persuasive purpose of the task but neglect to take or to maintain a position on the issue in the prompt</p> <p>Show limited recognition of the complexity of the issue in the prompt</p>	<p>Maintain a focus on the general topic in the prompt through most of the essay</p>	<p>Offer a little development, with one or two ideas; if examples are given, they are general and may not be clearly relevant; resort often to merely repeating ideas</p> <p>Show little or no movement between general and specific ideas and examples</p>
5–6	<p>Show a basic understanding of the persuasive purpose of the task by taking a position on the issue in the prompt but may not maintain that position</p> <p>Show a little recognition of the complexity of the issue in the prompt by acknowledging, but only briefly describing, a counterargument to the writer's position</p>	<p>Maintain a focus on the general topic in the prompt throughout the essay</p>	<p>Offer limited development of ideas using a few general examples; resort sometimes to merely repeating ideas</p> <p>Show little movement between general and specific ideas and examples</p>
7–8	<p>Show understanding of the persuasive purpose of the task by taking a position on the issue in the prompt</p> <p>Show some recognition of the complexity of the issue in the prompt by</p> <ul style="list-style-type: none"> acknowledging counterarguments to the writer's position providing some response to counterarguments to the writer's position 	<p>Maintain a focus on the general topic in the prompt throughout the essay and attempt a focus on the specific issue in the prompt</p> <p>Present a thesis that establishes focus on the topic</p>	<p>Develop ideas by using some specific reasons, details, and examples</p> <p>Show some movement between general and specific ideas and examples</p>
9–10	<p>Show clear understanding of the persuasive purpose of the task by taking a position on the specific issue in the prompt and offering a broad context for discussion</p> <p>Show recognition of the complexity of the issue in the prompt by</p> <ul style="list-style-type: none"> partially evaluating implications and/or complications of the issue, and/or posing and partially responding to counterarguments to the writer's position 	<p>Maintain a focus on discussion of the specific topic and issue in the prompt throughout the essay</p> <p>Present a thesis that establishes a focus on the writer's position on the issue</p>	<p>Develop most ideas fully, using some specific and relevant reasons, details, and examples</p> <p>Show clear movement between general and specific ideas and examples</p>
11–12	<p>Show clear understanding of the persuasive purpose of the task by taking a position on the specific issue in the prompt and offering a critical context for discussion</p> <p>Show understanding of the complexity of the issue in the prompt by</p> <ul style="list-style-type: none"> examining different perspectives, and/or evaluating implications or complications of the issue, and/or posing and fully discussing counterarguments to the writer's position 	<p>Maintain a clear focus on discussion of the specific topic and issue in the prompt throughout the essay</p> <p>Present a critical thesis that clearly establishes the focus on the writer's position on the issue</p>	<p>Develop several ideas fully, using specific and relevant reasons, details, and examples</p> <p>Show effective movement between general and specific ideas and examples</p>

Table C-3. ACT's College Readiness Standards — Writing (continued)

	Organizing Ideas	Using Language
3–4	<p>Provide a discernible organization with some logical grouping of ideas in parts of the essay</p> <p>Use a few simple and obvious transitions</p> <p>Present a discernible, though minimally developed, introduction and conclusion</p>	<p>Show limited control of language by</p> <ul style="list-style-type: none"> correctly employing some of the conventions of standard English grammar, usage, and mechanics, but with distracting errors that sometimes significantly impede understanding using simple vocabulary using simple sentence structure
5–6	<p>Provide a simple organization with logical grouping of ideas in parts of the essay</p> <p>Use some simple and obvious transitional words, though they may at times be inappropriate or misleading</p> <p>Present a discernible, though underdeveloped, introduction and conclusion</p>	<p>Show a basic control of language by</p> <ul style="list-style-type: none"> correctly employing some of the conventions of standard English grammar, usage, and mechanics, but with distracting errors that sometimes impede understanding using simple but appropriate vocabulary using a little sentence variety, though most sentences are simple in structure
7–8	<p>Provide an adequate but simple organization with logical grouping of ideas in parts of the essay but with little evidence of logical progression of ideas</p> <p>Use some simple and obvious, but appropriate, transitional words and phrases</p> <p>Present a discernible introduction and conclusion with a little development</p>	<p>Show adequate use of language to communicate by</p> <ul style="list-style-type: none"> correctly employing many of the conventions of standard English grammar, usage, and mechanics, but with some distracting errors that may occasionally impede understanding using appropriate vocabulary using some varied kinds of sentence structures to vary pace
9–10	<p>Provide unity and coherence throughout the essay, sometimes with a logical progression of ideas</p> <p>Use relevant, though at times simple and obvious, transitional words and phrases to convey logical relationships between ideas</p> <p>Present a somewhat developed introduction and conclusion</p>	<p>Show competent use of language to communicate ideas by</p> <ul style="list-style-type: none"> correctly employing most conventions of standard English grammar, usage, and mechanics, with a few distracting errors but none that impede understanding using some precise and varied vocabulary using several kinds of sentence structures to vary pace and to support meaning
11–12	<p>Provide unity and coherence throughout the essay, often with a logical progression of ideas</p> <p>Use relevant transitional words, phrases, and sentences to convey logical relationships between ideas</p> <p>Present a well-developed introduction and conclusion</p>	<p>Show effective use of language to clearly communicate ideas by</p> <ul style="list-style-type: none"> correctly employing most conventions of standard English grammar, usage, and mechanics, with just a few, if any, errors using precise and varied vocabulary using a variety of kinds of sentence structures to vary pace and to support meaning

Table C-4. ACT's College Readiness Standards — Mathematics

	Basic Operations & Applications	Probability, Statistics, & Data Analysis	Numbers: Concepts & Properties	Expressions, Equations, & Inequalities
13–15	<p>Perform one-operation computation with whole numbers and decimals</p> <p>Solve problems in one or two steps using whole numbers</p> <p>Perform common conversions (e.g., inches to feet or hours to minutes)</p>	<p>Calculate the average of a list of positive whole numbers</p> <p>Perform a single computation using information from a table or chart</p>	<p>Recognize equivalent fractions and fractions in lowest terms</p>	<p>Exhibit knowledge of basic expressions (e.g., identify an expression for a total as $b + g$)</p> <p>Solve equations in the form $x + a = b$, where a and b are whole numbers or decimals</p>
16–19	<p>Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single-step percent</p> <p>Solve some routine two-step arithmetic problems</p>	<p>Calculate the average of a list of numbers</p> <p>Calculate the average, given the number of data values and the sum of the data values</p> <p>Read tables and graphs</p> <p>Perform computations on data from tables and graphs</p> <p>Use the relationship between the probability of an event and the probability of its complement</p>	<p>Recognize one-digit factors of a number</p> <p>Identify a digit's place value</p>	<p>Substitute whole numbers for unknown quantities to evaluate expressions</p> <p>Solve one-step equations having integer or decimal answers</p> <p>Combine like terms (e.g., $2x + 5x$)</p>
20–23	<p>Solve routine two-step or three-step arithmetic problems involving concepts such as rate and proportion, tax added, percentage off, and computing with a given average</p>	<p>Calculate the missing data value, given the average and all data values but one</p> <p>Translate from one representation of data to another (e.g., a bar graph to a circle graph)</p> <p>Determine the probability of a simple event</p> <p>Exhibit knowledge of simple counting techniques</p>	<p>Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor</p>	<p>Evaluate algebraic expressions by substituting integers for unknown quantities</p> <p>Add and subtract simple algebraic expressions</p> <p>Solve routine first-degree equations</p> <p>Perform straightforward word-to-symbol translations</p> <p>Multiply two binomials</p>
24–27	<p>Solve multistep arithmetic problems that involve planning or converting units of measure (e.g., feet per second to miles per hour)</p>	<p>Calculate the average, given the frequency counts of all the data values</p> <p>Manipulate data from tables and graphs</p> <p>Compute straightforward probabilities for common situations</p> <p>Use Venn diagrams in counting</p>	<p>Find and use the least common multiple</p> <p>Order fractions</p> <p>Work with numerical factors</p> <p>Work with scientific notation</p> <p>Work with squares and square roots of numbers</p> <p>Work problems involving positive integer exponents</p> <p>Work with cubes and cube roots of numbers</p> <p>Determine when an expression is undefined</p> <p>Exhibit some knowledge of the complex numbers</p>	<p>Solve real-world problems using first-degree equations</p> <p>Write expressions, equations, or inequalities with a single variable for common pre-algebra settings (e.g., rate and distance problems and problems that can be solved by using proportions)</p> <p>Identify solutions to simple quadratic equations</p> <p>Add, subtract, and multiply polynomials</p> <p>Factor simple quadratics (e.g., the difference of squares and perfect square trinomials)</p> <p>Solve first-degree inequalities that do not require reversing the inequality sign</p>
28–32	<p>Solve word problems containing several rates, proportions, or percentages</p>	<p>Calculate or use a weighted average</p> <p>Interpret and use information from figures, tables, and graphs</p> <p>Apply counting techniques</p> <p>Compute a probability when the event and/or sample space are not given or obvious</p>	<p>Apply number properties involving prime factorization</p> <p>Apply number properties involving even/odd numbers and factors/multiples</p> <p>Apply number properties involving positive/negative numbers</p> <p>Apply rules of exponents</p> <p>Multiply two complex numbers</p>	<p>Manipulate expressions and equations</p> <p>Write expressions, equations, and inequalities for common algebra settings</p> <p>Solve linear inequalities that require reversing the inequality sign</p> <p>Solve absolute value equations</p> <p>Solve quadratic equations</p> <p>Find solutions to systems of linear equations</p>
33–36	<p>Solve complex arithmetic problems involving percent of increase or decrease and problems requiring integration of several concepts from pre-algebra and/or pre-geometry (e.g., comparing percentages or averages, using several ratios, and finding ratios in geometry settings)</p>	<p>Distinguish between mean, median, and mode for a list of numbers</p> <p>Analyze and draw conclusions based on information from figures, tables, and graphs</p> <p>Exhibit knowledge of conditional and joint probability</p>	<p>Draw conclusions based on number concepts, algebraic properties, and/or relationships between expressions and numbers</p> <p>Exhibit knowledge of logarithms and geometric sequences</p> <p>Apply properties of complex numbers</p>	<p>Write expressions that require planning and/or manipulating to accurately model a situation</p> <p>Write equations and inequalities that require planning, manipulating, and/or solving</p> <p>Solve simple absolute value inequalities</p>

Table C-4. ACT's College Readiness Standards — Mathematics (continued)

	Graphical Representations	Properties of Plane Figures	Measurement	Functions
13–15	Identify the location of a point with a positive coordinate on the number line		Estimate or calculate the length of a line segment based on other lengths given on a geometric figure	
16–19	Locate points on the number line and in the first quadrant	Exhibit some knowledge of the angles associated with parallel lines	Compute the perimeter of polygons when all side lengths are given Compute the area of rectangles when whole number dimensions are given	
20–23	Locate points in the coordinate plane Comprehend the concept of length on the number line Exhibit knowledge of slope	Find the measure of an angle using properties of parallel lines Exhibit knowledge of basic angle properties and special sums of angle measures (e.g., 90°, 180°, and 360°)	Compute the area and perimeter of triangles and rectangles in simple problems Use geometric formulas when all necessary information is given	Evaluate quadratic functions, expressed in function notation, at integer values
24–27	Identify the graph of a linear inequality on the number line Determine the slope of a line from points or equations Match linear graphs with their equations Find the midpoint of a line segment	Use several angle properties to find an unknown angle measure Recognize Pythagorean triples Use properties of isosceles triangles	Compute the area of triangles and rectangles when one or more additional simple steps are required Compute the area and circumference of circles after identifying necessary information Compute the perimeter of simple composite geometric figures with unknown side lengths	Evaluate polynomial functions, expressed in function notation, at integer values Express the sine, cosine, and tangent of an angle in a right triangle as a ratio of given side lengths
28–32	Interpret and use information from graphs in the coordinate plane Match number line graphs with solution sets of linear inequalities Use the distance formula Use properties of parallel and perpendicular lines to determine an equation of a line or coordinates of a point Recognize special characteristics of parabolas and circles (e.g., the vertex of a parabola and the center or radius of a circle)	Apply properties of 30°-60°-90°, 45°-45°-90°, similar, and congruent triangles Use the Pythagorean theorem	Use relationships involving area, perimeter, and volume of geometric figures to compute another measure	Evaluate composite functions at integer values Apply basic trigonometric ratios to solve right-triangle problems
33–36	Match number line graphs with solution sets of simple quadratic inequalities Identify characteristics of graphs based on a set of conditions or on a general equation such as $y = ax^2 + c$ Solve problems integrating multiple algebraic and/or geometric concepts Analyze and draw conclusions based on information from graphs in the coordinate plane	Draw conclusions based on a set of conditions Solve multistep geometry problems that involve integrating concepts, planning, visualization, and/or making connections with other content areas Use relationships among angles, arcs, and distances in a circle	Use scale factors to determine the magnitude of a size change Compute the area of composite geometric figures when planning or visualization is required	Write an expression for the composite of two simple functions Use trigonometric concepts and basic identities to solve problems Exhibit knowledge of unit circle trigonometry Match graphs of basic trigonometric functions with their equations

Table C-5. ACT’s College Readiness Standards — Science

	Interpretation of Data	Scientific Investigation	Evaluation of Models, Inferences, and Experimental Results
13–15	Select a single piece of data (numerical or nonnumerical) from a simple data presentation (e.g., a table or graph with two or three variables; a food web diagram) Identify basic features of a table, graph, or diagram (e.g., headings, units of measurement, axis labels)		
16–19	Select two or more pieces of data from a simple data presentation Understand basic scientific terminology Find basic information in a brief body of text Determine how the value of one variable changes as the value of another variable changes in a simple data presentation	Understand the methods and tools used in a simple experiment	
20–23	Select data from a complex data presentation (e.g., a table or graph with more than three variables; a phase diagram) Compare or combine data from a simple data presentation (e.g., order or sum data from a table) Translate information into a table, graph, or diagram	Understand the methods and tools used in a moderately complex experiment Understand a simple experimental design Identify a control in an experiment Identify similarities and differences between experiments	Select a simple hypothesis, prediction, or conclusion that is supported by a data presentation or a model Identify key issues or assumptions in a model
24–27	Compare or combine data from two or more simple data presentations (e.g., categorize data from a table using a scale from another table) Compare or combine data from a complex data presentation Interpolate between data points in a table or graph Determine how the value of one variable changes as the value of another variable changes in a complex data presentation Identify and/or use a simple (e.g., linear) mathematical relationship between data Analyze given information when presented with new, simple information	Understand the methods and tools used in a complex experiment Understand a complex experimental design Predict the results of an additional trial or measurement in an experiment Determine the experimental conditions that would produce specified results	Select a simple hypothesis, prediction, or conclusion that is supported by two or more data presentations or models Determine whether given information supports or contradicts a simple hypothesis or conclusion, and why Identify strengths and weaknesses in one or more models Identify similarities and differences between models Determine which model(s) is(are) supported or weakened by new information Select a data presentation or a model that supports or contradicts a hypothesis, prediction, or conclusion
28–32	Compare or combine data from a simple data presentation with data from a complex data presentation Identify and/or use a complex (e.g., nonlinear) mathematical relationship between data Extrapolate from data points in a table or graph	Determine the hypothesis for an experiment Identify an alternate method for testing a hypothesis	Select a complex hypothesis, prediction, or conclusion that is supported by a data presentation or model Determine whether new information supports or weakens a model, and why Use new information to make a prediction based on a model
33–36	Compare or combine data from two or more complex data presentations Analyze given information when presented with new, complex information	Understand precision and accuracy issues Predict how modifying the design or methods of an experiment will affect results Identify an additional trial or experiment that could be performed to enhance or evaluate experimental results	Select a complex hypothesis, prediction, or conclusion that is supported by two or more data presentations or models Determine whether given information supports or contradicts a complex hypothesis or conclusion, and why

Science College Readiness Standards are measured in the context of science topics students encounter in science courses. These topics may include:

Life Science/Biology	Physical Science/Chemistry, Physics	Earth & Space Science
<ul style="list-style-type: none"> • Animal behavior • Animal development and growth • Body systems • Cell structure and processes • Ecology • Evolution • Genetics • Homeostasis • Life cycles • Molecular basis of heredity • Origin of life • Photosynthesis • Plant development, growth, structure • Populations • Taxonomy 	<ul style="list-style-type: none"> • Atomic structure • Chemical bonding, equations, nomenclature, reactions • Electrical circuits • Elements, compounds, mixtures • Force and motions • Gravitation • Heat and work • Kinetic and potential energy • Magnetism • Momentum • The Periodic Table • Properties of solutions • Sound and light • States, classes, and properties of matter • Waves 	<ul style="list-style-type: none"> • Earthquakes and volcanoes • Earth’s atmosphere • Earth’s resources • Fossils and geological time • Geochemical cycles • Groundwater • Lakes, rivers, oceans • Mass movements • Plate tectonics • Rocks, minerals • Solar system • Stars, galaxies, and the universe • Water cycle • Weather and climate • Weathering and erosion