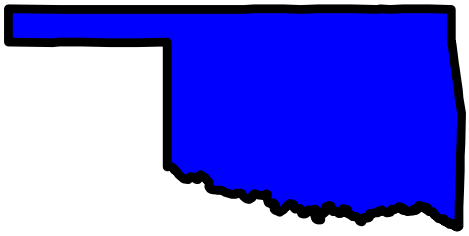

STATE MATCH

Oklahoma Priority Academic Student Skills

Language Arts, Mathematics, and Science
Grades 7–12

and

ACT

EXPLORE, PLAN, and ACT

December 2005

About This 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 Oklahoma's Priority Academic Student Skills. It also presents ACT's involvement in meeting NCLB requirements and describes additional critical information that ACT could provide to Oklahoma.

SECTION A

(pp. 3–7)

This section provides tables by content area (Language Arts, Mathematics, and Science) listing the precise number of Oklahoma Standards measured by ACT's EPAS tests by grade level.

SECTION B

(pp. 8–63)

All Oklahoma Standards are listed here; each one highlighted is measured by ACT's EPAS tests. Underlined science content indicates that the content topics are included in, but not directly measured by, ACT's EPAS Science Tests.

SECTION C

(pp. 65–74)

ACT's College Readiness Standards appear here. Highlighting indicates that a statement reflects one or more statements in the Oklahoma Standards. College Readiness Standards not highlighted are not addressed in the Oklahoma Priority Academic Student Skills.

A supplement is available that identifies the specific ACT College Readiness Standard(s) corresponding to each Oklahoma 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 Oklahoma 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 Oklahoma's Standards?
2. Can ACT's EPAS test results be used to meet Oklahoma's NCLB requirement?
3. Why should Oklahoma choose ACT?

ACT'S TESTS MEASURE MANY IMPORTANT OKLAHOMA PRIORITY ACADEMIC STUDENT SKILLS IN 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 Oklahoma's Language Arts, Mathematics, and Science Standards:

- Language Arts: 6 out of 9 standards

  Many important Language Arts standards are covered by ACT's English, Reading, and Writing tests.

- Mathematics: 103 out of 115 standards

  Almost all of Oklahoma's Mathematics Standards are covered by ACT's Mathematics tests.

- Science: *Process Standards:* 6 out of 6
  (*Content Standards:* 27 out of 27)

  All of Oklahoma's Science 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 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 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 Oklahoma's Standards arise from standards not being assessable in group settings, standards that are personal in nature, and standards requiring measurement over extended time. If additional testing is deemed necessary, ACT would be interested in working with Oklahoma on developing any necessary augmentation.

ACT

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**

2. NCLB requirement? Yes; states like Illinois intend to use ACT 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, the ACT's EPAS programs provide abundant data relevant to Oklahoma's Priority Academic Student Skills and to Oklahoma students' readiness for college and work.

Section A: Number of Oklahoma Priority Academic Student Skills Measured by EXPLORE, PLAN, and the ACT

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

Oklahoma Standard*	Number of Oklahoma's Objectives Measured by ACT's tests	Aspects of Not-Measured Oklahoma Priority Academic Student Skills
Vocabulary	7th: 2 out of 3 8th: 2 out of 3 9th: 2 out of 5 10th: 2 out of 5 11th: 3 out of 5 12th: 2 out of 4	Word origins Apply knowledge of Greek and Latin Expand vocabulary through wide reading Use reference materials
Fluency	7th: 0 out of 5 8th: 0 out of 5	Read at specified rate
Comprehension	7th: 5 out of 5 8th: 5 out of 5 9th: 4 out of 4 10th: 4 out of 4 11th: 4 out of 4 12th: 4 out of 4	Use of different media
Literature	7th: 2 out of 4 8th: 2 out of 4 9th: 2 out of 5 10th: 2 out of 4 11th: 2 out of 4 12th: 2 out of 4	Demonstrate appreciation of different forms of literature Read and respond to historically significant works Compare works
Research and Information	7th: 0 out of 2 8th: 0 out of 2 9th: 0 out of 2 10th: 0 out of 2 11th: 0 out of 2 12th: 0 out of 2	Conduct research and organize information
Writing Process	7th: 5 out of 6 8th: 5 out of 6 9th: 5 out of 6 10th: 5 out of 6 11th: 6 out of 6 12th: 6 out of 7	
Modes and Forms of Writing	7th: 1 out of 10 8th: 1 out of 10 9th: 1 out of 10 10th: 1 out of 9 11th: 2 out of 7 12th: 2 out of 6	Write biography, research reports, etc.

ACT

Grammar and Usage	7th: 3 out of 3 8th: 3 out of 3 9th: 3 out of 3 10th: 3 out of 3 11th: 3 out of 4 12th: 3 out of 4	Apply manuscript conventions including title page, etc.
Oral Language/Listening and Speaking	7th: 0 out of 8 8th: 0 out of 8 9th: 0 out of 9 10th: 0 out of 7 11th: 0 out of 9 12th: 0 out of 11	Listen for information and pleasure. Express ideas orally.
Visual Literacy	7th: 0 out of 7 8th: 0 out of 7 9th: 0 out of 6 10th: 0 out of 6 11th: 0 out of 6 12th: 0 out of 6	Interpret, evaluate, and compose visual messages.
TOTALS	7th: 18 out of 53 8th: 18 out of 53 9th: 17 out of 50 10th: 17 out of 46 11th: 20 out of 47 12th: 19 out of 48	

*Refer to Oklahoma's Language Arts Standards on pages 8–37

Table A-2. Number of Mathematics Standards Measured by EXPLORE, PLAN, and the ACT		
Oklahoma Standard*	**Number of Oklahoma's Objectives Measured by ACT's tests**	**Aspects of Not-Measured Oklahoma Priority Academic Student Skills**
Algebraic Reasoning	7th: 2 out of 2 8th: 2 out of 2	
Number Sense	7th: 3 out of 3 8th: 2 out of 3	
Geometry	7th: 3 out of 3 8th: 1 out of 2	
Measurement	7th: 2 out of 2 8th: 3 out of 3	
Data Analysis and Probability	7th: 3 out of 3 8th: 2 out of 3	Determine how samples are chosen
Process Standard 1: Problem Solving	7/8: 5 out of 6	
Process Standard 2: Communication	7/8: 2 out of 3	Select and use appropriate terminology when discussing math concepts and ideas
Process Standard 3: Reasoning	7/8: 3 out of 4	
Process Standard 4: Connections	7/8: 2 out of 2	
Process Standard 5: Representation	7/8: 3 out of 4	Develop a variety of mathematical representations
Algebra I	13 out of 13	
Algebra II	20 out of 20	
Geometry	17 out of 18	Use a protractor
TOTALS	7th: 28 out of 32 8th: 25 out of 32 AlgI: 13 out of 13 Geo: 20 out of 20 AlgII: 17 out of 18	

*Refer to Oklahoma's Mathematics Standards on pages 38–46

Table A-3. Number of Science Process Standards Measured by EXPLORE, PLAN, and the ACT		
Oklahoma Process Standard*	**Number of Oklahoma's Objectives Measured by ACT's tests**	**Aspects of Not-Measured Oklahoma Standards**
Observe and Measure	7/8: 3 out of 3 PhySci: 3 out of 3 Bio: 3 out of 3 Chem: 3 out of 3 Physics: 3 out of 3	
Classify	7/8: 2 out of 2 PhySci: 2 out of 2 Bio: 2 out of 2 Chem: 2 out of 2 Physics: 3 out of 3	
Experiment	7/8: 6 out of 6 PhySci: 5 out of 5 Bio: 5 out of 5 Chem: 5 out of 5 Physics: 5 out of 5	
Interpret and Communicate	7/8: 4 out of 5 PhySci: 6 out of 8 Bio: 6 out of 8 Chem: 6 out of 8 Physics: 6 out of 8	Communicate scientific procedures Prepare written reports
Inquiry	7/8: 4 out of 4 PhySci: 3 out of 4 Bio: 3 out of 4 Chem: 3 out of 4 Physics: 3 out of 4	
Model	PhySci: 3 out of 3 Bio: 3 out of 3 Chem: 3 out of 3 Physics: 3 out of 3	
TOTALS	7/8: 19 out of 20 PhySci: 22 out of 25 Bio: 22 out of 25 Chem: 22 out of 25 Physics: 23 out of 26	**Process Standards**

*Refer to Oklahoma's Science Standards on pages 47–63

ACT

Table A-4. Number of Science Content Standards Measured by EXPLORE, PLAN, and the ACT				
Oklahoma Content Standards*	Number of Oklahoma's Objectives Measured by ACT's tests			Aspects of Not-Measured Oklahoma Standards
Grade 7	(6)	out of	(6)	
Grade 8	(5)	out of	(5)	
Biology	(6)	out of	(6)	
Physical Science	(5)	out of	(5)	
Chemistry	(2)	out of	(2)	
Physics	(3)	out of	(3)	
TOTALS	(27)	out of	(27)	**Science Content Standards**

*Refer to Oklahoma's Science Standards on pages 47–63

Section B: Oklahoma's Grades 7–12 Priority Academic Student Skills Measured by EXPLORE, PLAN, and the ACT

Language Arts

OKLAHOMA Grade 7 Language Arts Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Words in Context - Verify the meaning of a word in its context, even when its meaning is not directly stated, through the use of definitions, restatement, example, comparison, or contrast.
2. Word Origins
   a. Identify the origins and meanings of foreign words frequently used in English and use these words accurately in speaking and writing.
   b. Use knowledge of Greek and Latin word parts and roots to determine the meaning of subject area vocabulary.
3. Idioms and Comparisons - Identify and explain idioms and comparisons, such as analogies, metaphors, and similes, to infer the literal and figurative meanings of phrases.

   Idioms: expressions that cannot be understood just by knowing the meanings of the words in the expression, such as *the apple of his eye* or *beat around the bush*.

   a. Analogies: comparisons of the similar aspects of two different things
   b. Metaphors: implies comparisons, such as, *The street light was my security guard.*
   c. Similes: comparisons that use *like* or *as*, such as *A gentle summer breeze feels like a soft cotton sheet.*

Standard 2: Fluency

The student will identify words rapidly so that attention is directed to the meaning of the text.

1. Read regularly in independent-level materials (texts in which no more than 1 in 20 words is difficult for the reader) fluently and accurately, and with appropriate time, change in voice, and expression.
2. Read regularly in instructional-level materials that are challenging but manageable (text in which no more than approximately 1 in 10 words is difficult for the reader; a "typical" seventh grader reads 135 words per minute).
3. Increase silent reading speed and comprehension through daily, independent reading.
4. Read silently for increased periods of time.
5. Use punctuation as a cue for pausing and characterization while reading.

Standard 3: Comprehension

The student will interact with the words and concepts in a text to construct an appropriate meaning.

1. Literal Understanding
   a. Apply prereading strategies when reading both fiction and nonfiction that is appropriately designed for grade level.
      - Determine the purpose for reading such as to be informed, entertained, or persuaded.
      - Preview the material and use prior knowledge to make connections between text and personal experience.
   b. Recognize transition words to guide understanding of the text (e.g., as a result, first of all, furthermore).
   c. Show understanding by asking questions and supporting answers with literal information from text.
2. Inference and Interpretation
   a. Make inferences and draw conclusions with evidence drawn from the text and/or student experiences.
   b. Make inferences supported by a character's thoughts, words, and actions or the narrator's description.
3. Summary and Generalization
   a. Summarize the main idea and how it is supported with specific details.
   b. Recall major points in the text and make and revise predictions.

c. Recognize the importance and relevance of details on the development of the plot.
d. Support reasonable statements by reference to relevant aspects of text and examples.

4. Analysis and Evaluation
   a. Compare and contrast points of view, such as first person, third person, limited and omniscient, and explain their effect on the overall theme of a literary work.
   b. Evaluate events that advance the plot of a literary work and how those events relate to past, present, or future actions.
   c. Analyze character traits, conflicts, motivations, points of view, and changes that occur within the story and discuss the importance to the plot or theme.
   d. Evaluate the accuracy or appropriateness of the evidence used by the author to support claims and assertions.
   e. Distinguish between stated fact, reasoned judgment, and opinion in text.
5. Monitoring and Correction Strategies
   a. Monitor the understanding of text and use correcting strategies, such as rereading a portion, using reference aids, or searching for content when needed.
   b. Make, confirm, and revise predictions when reading.
   c. Adjust reading rate and determine appropriate strategies to match the purpose, difficulty, and characteristics of the text.

Standard 4: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - Demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres, including short story, novel, drama, poetry, and nonfiction.
   b. Analyze characteristics of subgenres, including autobiography, biography, fable, folk tale, mystery, and myth.
2. Literary Elements - Demonstrate knowledge of literary elements and techniques and how they affect the development of a literary work.
   a. Analyze and explain elements of fiction, including plot, conflict, resolution, character, setting, theme, and point of view.
   b. Identify and explain techniques of direct and indirect characterization in fiction.
   c. Describe how the author's perspective, argument, or point of view affects the text.
   d. Analyze inferred and recurring themes in literary works (e.g., bravery, loyalty, historical).
3. Figurative Language and Sound Devices: The student will identify figurative language and sound devices and will analyze how they affect the development of a literary work.
   a. Identify and explain the use of figurative language in literary works to convey mood, images, and meaning, including metaphor, personification, and simile.
   b. Identify and explain the use of sound devices in literary works to convey mood, images, and meaning, including alliteration, onomatopoeia, and rhyme.
   c. Analyze poetry and evaluate poetic styles (e.g., rhymed, free verse, and patterned [cinquain, diamante]).
4. Literary Works - The student will read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and evaluate literature from various cultures to broaden cultural awareness.
   c. Compare similar characters, settings, and themes from varied literary traditions.

Standard 5: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose.
   a. Use card catalogs and computer databases to locate sources for research topics.
   b. Access a variety of primary and secondary sources to locate information relevant to research questions.
   c. Gather data for research purposes through interviews (e.g., prepare and organize relevant questions, make notes of responses, and compile the information).
   d. Use organizational strategies as an aid to comprehend increasingly difficult content material.
   e. Note instances of persuasion, propaganda, and faulty reasoning in text.

f. Use reference features of printed text, such as citations, endnotes, and bibliographies to locate relevant information about a topic.

2. Interpreting Information - The student will analyze and evaluate information from a variety of sources.
   a. Record, organize, and display relevant information from multiple sources in systematic ways (e.g., outlines, graphic organizers, or note cards).
   b. Interpret and use graphic sources of information such as graphs, maps, timelines, or tables, to address research questions.
   c. Analyze and paraphrase or summarize information gathered from a variety of sources into a research paper.
   d. Determine the appropriateness of an information source for a research topic.
   e. Identify and credit the sources used to gain information for both quoted and paraphrased information in a bibliography using a consistent format.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop composition skills. Students are expected to use prewriting strategies, write and revise multiple drafts, edit, and share their compositions.
2. Use details, examples, reasons, and evidence to develop an idea.
3. Use spatial, chronological, and climactic organizational patterns as appropriate to purpose.
4. Use precise word choices, including figurative language, that convey specific meaning and tone.
5. Use a variety of sentence structures, types, and lengths to contribute to fluency and interest.
6. Edit for errors in Standard English usage, sentence structure, mechanics, and spelling.

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write biographical or autobiographical narratives (stories) that:
   a. identify a real person, living or not, who has had a special influence on other people.
   b. provide a sequence of factual events and communicate the significance of the events to the person.
   c. isolate specific scenes and incidents in times and places significant to defining the person's influence.
   d. use anecdotes or describe with specific details the sights, sounds, and smells of a scene, and the specific actions, moments, gestures, and feelings of the person; use interior monologue (what a person says silently to self) to show the person's qualities and beliefs.
   e. presents action segment to accommodate changes in time and mood.
2. Write research reports that:
   a. include relevant and focused questions about the topic.
   b. communicate clear and accurate perspectives on the subject.
   c. include evidence and supporting details compiled through the formal research process, including use of a card catalog, computer catalog, magazines, newspapers, dictionaries, and other reference books.
   d. document sources with reference notes and a bibliography.
3. Write persuasive compositions that:
   a. state a clear position or perspective in support of a proposition or proposal.
   b. describe the points in support of the proposition, employing well-articulated evidence, and effective emotional appeal.
   c. identify and address reader concerns and counterarguments.
4. Write reflective papers that accomplish one of these purposes:
   a. describe personal learning growth and changes in perspective.
   b. express the individual's insight into conditions or situations.
   c. compare a scene from a work of fiction with a lesson learned from experience.
   d. complete a self-evaluation on a class performance.

5. Use appropriate essay test-taking and time-writing strategies that:
   a. address and analyze the question (prompt).
   b. use organizational methods required by the prompt.
6. Write responses to literature that:
   a. develop interpretations that show careful reading, understanding, and insight.
   b. organize the interpretation around several clear ideas, premises, or images for the literary work.
   c. justify interpretation through sustained use of examples and evidence from the text.
7. Write summaries of reading material that:
   a. include the main ideas and most significant details.
   b. use the student's own words, except quotations.
   c. reflect underlying meaning, not just the superficial details.
8. Write for different purposes and to a specific audience or person, adjusting tone and style as necessary to make writing interesting.
9. Write friendly letters and business letters, and continue to produce other writing forms introduced in earlier grades.
10. Use handwriting/penmanship to copy and/or compose text, in manuscript or cursive, using correct spacing and formation of letters.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying grammatical knowledge to the revising and editing stages of writing.

1. Standard English Usage - Demonstrate correct use of Standard English in speaking and writing.
   a. Recognize the principal parts of regular and irregular verbs.
   b. Use the principal parts of verbs to form verb tenses.
   c. Make subjects and verbs agree.
   d. Identify direct objects, indirect objects, objects of prepositions, predicate nominatives, and predicate adjectives.
   e. Use nominative, objective, and possessive pronouns correctly.
   f. Make pronouns agree with their antecedents.
   g. Use correct pronoun reference.
   h. Correctly form and use the comparative and superlative forms of adjectives.
   i. Use prepositional phrases to elaborate written ideas.
   j. Identify appositives and appositive phrases.
   k. Correctly use conjunctions.
   l. Distinguish commonly confused words (e.g., there, their, they're; two, to, too; accept, except; affect, effect).
2. Mechanics and Spelling - Demonstrate appropriate language mechanics in writing.
   a. Apply the capitalization rules appropriately in writing.
   b. Punctuate correctly in writing, including:
      - end punctuation.
      - commas to separate words in a series, city and state, quotation and sentence, and to set off nonrestrictive phrases.
      - quotation marks.
      - apostrophes in contractions and possessives.
      - conventions of letter writing.
   c. Distinguish correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure - Demonstrate appropriate sentence structure in writing.
   a. Correct sentence run-ons and fragments.
   b. Correct dangling and misplaced modifiers.
   c. Differentiate between dependent and independent clauses.
   d. Write simple, compound, and complex sentences.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Identify the major ideas and supporting evidence in informative and persuasive messages.
2. Listen in order to identify and discuss topic, purpose, and perspective.
3. Recognize and understand barriers to effective listening (i.e., internal and external distractions, personal biases, and conflicting demands).
4. Evaluate the spoken message in terms of content, credibility, and delivery.

Standard 2: Speaking

The student will express ideas and opinions in group or individual situations.

1. Analyze purpose, audience, and occasion and consider this information in planning an effective presentation or response.
2. Compose a presentation with a well-organized introduction, body, and conclusion that is appropriate for different purposes, audiences, and occasions.
3. Communicate oral presentations to the class using appropriate delivery (volume, rate, enunciation, and movement).
4. Use level-appropriate vocabulary in speech (e.g., metaphorical language, sensory details, or specialized vocabulary).

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers, including graphic artists, illustrators, and news photographers, represent meaning.

1. Interpret a variety of messages conveyed by visual images.
2. Identify film and television features that characterize different style of dress and genres (e.g., setting in a western or a drama).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Identify the different ways in which people are stereotyped in visual media and consider alternative representations (e.g., clever people wear glasses, super heroes wear capes, scientists wear white coats).
2. Identify basic elements of advertising in visual media (e.g., sales approaches and techniques aimed at children).
3. Analyze the effect on the viewer of text, sound, images, and organization in electronic media and discuss the techniques used to create the effects.

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Select, organize, or produce visuals such as maps, charts, graphics, video segments, or technology presentations to complement and extend meaning for a selected topic.
2. Use media forms to create a visual message that will compare and contrast ideas and points of view.

OKLAHOMA Grade 8 Language Arts
Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Words in Context - Verify the meaning of a word in its context, even when its meaning is not directly stated, through the use of definitions, restatement, example, comparison, or contrast.
2. Word Origins - Recognize and analyze the influence of historical events on English word meaning and vocabulary expansion.
3. Idioms and Comparisons - Analyze idioms and comparisons, such as analogies, metaphors, and similes, to infer the literal and figurative meanings of phrases.
   a. Idioms: expressions that cannot be understood just by knowing the meanings of the words in the expression, such as *Rush hour traffic moves at a snail's pace* or *as plain as day.*
   b. Analogies: comparisons of the similar aspects of two different things.
   c. Metaphors: implies comparisons, such as, *The cup of hot tea was the best medicine for my cold.*
   d. Similes: comparisons that use *like* or *as*, such as, *The ice was smooth as glass before the skaters entered the rink.*

Standard 2: Fluency

The student will identify words rapidly so that attention is directed to the meaning of the text.

1. Read regularly in independent-level materials (texts in which no more than 1 in 20 words is difficult for the reader) fluently and accurately, and with appropriate time, change in voice, and expression.
2. Read regularly in instructional-level materials that are challenging but manageable (text in which no more than approximately 1 in 10 words is difficult for the reader; a "typical" eighth grader reads 150 words per minute).
3. Increase reading speed and comprehension through daily, independent reading.
4. Read silently for increased periods of time.
5. Use punctuation as a cue for pausing and characterization while reading.

Standard 3: Comprehension

The student will interact with the words and concepts in the text to construct an appropriate meaning.

1. Literal Understanding
   a. Apply prereading strategies when reading both fiction and nonfiction that is appropriately designed for grade level.
      - Determine the purpose for reading such as to be informed, entertained, persuaded, understand.
      - Preview the text and use prior knowledge and experience to make connections to text.
   b. Show understanding by asking questions and supporting answers with literal information from text.
2. Inferences and Interpretating
   a. Make inferences and draw conclusions supported by text evidence and student experiences.
   b. Connect, compare, and contrast ideas, themes, and issues across texts.
3. Summary and Generalization
   a. Determine the main (or major) idea and how those ideas are supported with specific details.
   b. Paraphrase and summarize text to recall, inform, or organize ideas.
4. Analysis and Evaluation
   a. Distinguish between stated fact, reasoned judgment, and opinion in various texts.
   b. Use text's structure or progression of ideas, such as cause and effect or chronology (sequential order).
   c. Compare/contrast to determine similarities and differences in treatment, scope, or organization.
   d. Problem/solution - offer observations, make connections, react, speculate, interpret, and raise questions in response to text.
   e. Analyze character traits, conflicts, motivations, points of view, and changes that occur within the story.

f. Analyze the structural elements of the plot, subplot, and climax and explain the way in which conflicts are or are not resolved.

5. Monitoring and Correction Strategies
   a. Monitor the understanding of text and use correcting strategies, such as rereading a portion, using reference aids, or searching for content when needed.
   b. Make, confirm, and revise predictions when reading.
   c. Adjust reading rate and determine appropriate strategies to match the purpose, difficulty, and characteristics of the text.

Standard 4: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - The student will demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres, including short story, novel, drama, lyric poetry, nonfiction, historical fiction, and informational texts.
   b. Identify and distinguish characteristics of subgenres, including autobiography, biography, fable, folk tale, mystery, myth, limericks, tall tales, and plays.
2. Literary Elements - Demonstrate knowledge of literary elements and techniques and how they affect the development of a literary work.
   a. Analyze and explain elements of fiction including plot, conflict, character, mood, setting, theme, point of view, and author's purpose.
   b. Identify and explain various points of view and how they affect a story's interpretation.
3. Figurative Language and Sound Devices - Identify figurative language and sound devices and analyze how they affect the development of a literary work.
   a. Identify and explain the use of figurative language, in literary works to convey mood, images, and meaning, including metaphor, personification, and simile.
   b. Identify and explain the use of sound devices in literary works to convey mood, images, and meaning, including alliteration, onomatopoeia, and rhyme.
   c. Identify and interpret literary devices such as flashback, foreshadowing, symbolism, and imagery.
4. Literary Works - The student will read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and determine distinctive and common characteristics of literature from various cultures to broaden cultural awareness.
   c. Compare similar characters, settings, and themes from varied literary traditions that cross cultures.

Standard 5: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose, locate information relevant to research questioning.
   a. Access information from a variety of primary and secondary sources, including electronic text, experts, and prime resources, to locate information relevant to research questioning.
   b. Use text organizers, including headings, graphic features (e.g., boldface, italic type), and tables of contents, to locate and organize information.
   c. Use organizational strategies to learn and recall important ideas from texts, such as preview, questions, reread, and record, as an aid to comprehend increasingly difficult content material.
   d. Note instances of persuasion, propaganda, and faulty reasoning in text.
2. Interpreting Information - Analyze and evaluate information from a variety of sources.
   a. Record, organize, and display relevant information from multiple sources in systematic ways (e.g., outlines, timelines, graphic organizers, or note cards).
   b. Analyze and paraphrase or summarize information from a variety of sources into a research paper.
   c. Identify and credit the sources used to gain information (e.g., bibliographies, footnotes, appendix).
   d. Identify and apply test-taking strategies by answering different types and levels of questions, such as open-ended, literal, and interpretive as well as test-like questions, such as multiple choice, true/false, and short answer.
   e. Interpret and use graphic sources of information such as maps, graphs, timelines, or tables to address research questions.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop composition skills. Students are expected to use prewriting strategies, write and revise multiple drafts, edit, and share their compositions.
2. Use details, examples, reasons, and evidence to develop an idea.
3. Use spatial, chronological, and climactic organizational patterns as appropriate to purpose.
4. Use precise word choices, including figurative language, that convey specific meaning and tone.
5. Use a variety of sentence structures, types, and lengths to contribute to fluency and interest.
6. Edit for errors in Standard English usage, sentence structure, mechanics, and spelling.

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write biographical or autobiographical narratives or short stories that:
   a. tell about an incident, event, or situation by using well-chosen details.
   b. reveal the significance of, or the writer's attitude about the subject.
   c. include narrative and descriptive strategies, such as, relevant dialogue, specific action, physical description, background description, and comparison or contrast characters.
2. Write research reports that:
   a. define a thesis (a statement of position on the topic).
   b. include important ideas, concepts, and direct quotations from significant information sources, including print reference material and the Internet, and paraphrase and summarize all perspectives on the topic, as appropriate.
   c. identify a variety of primary and secondary sources and distinguish the nature and value of each.
   d. organize and display information on charts, tables, maps, and graphs.
   e. document sources with reference notes and a bibliography.
3. Write persuasive compositions that:
   a. include a well-defined thesis that makes a clear and knowledgeable appeal.
   b. present detailed evidence, examples, and reasoning to support effective arguments and emotional appeal.
   c. provide details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counterarguments.
4. Write technical documents that:
   a. identify the sequence of activities needed to design a system, operate a tool, or explain the bylaws or rules of an organization's constitution or guidelines.
   b. include all the factors and variables that need to be considered.
   c. include formatting techniques, such as, heading and changing the fonts (typeface) to aid comprehension.
5. Write reflective papers that may address one of the following purposes:
   a. express the individual's insight into conditions or situations.
   b. compare a scene from a work of fiction with a lesson learned from experience.
   c. complete a self-evaluation on a class performance.
6. Use appropriate essay test-taking and time-writing strategies that:
   a. address and analyze the question (prompt).
   b. use organizational methods required by the prompt.
7. Write responses to literature that:
   a. demonstrate careful reading and insight into interpretations.
   b. connect responses to the writer's techniques and to specific textual references.
   c. make supported inferences about the effects of a literary work on its audience.

d. support judgments through references to the text, other works, other authors, or to personal knowledge.

8. Write for different purposes and to a specific audience or person, adjusting tone and style as necessary to make writing interesting.
9. Write friendly letters and business letters and continue to produce other writing forms introduced in earlier grades.
10. Use handwriting/penmanship to copy and/or compose text, in manuscript or cursive, using correct spacing and formation of letters.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying grammatical knowledge to the revising and editing stages of writing.

1. Standard English Usage - Demonstrate correct use of Standard English in speaking and writing.
   a. Use the principal parts of verbs and progressive verb forms.
   b. Make subjects and verbs agree.
   c. Use nominative, objective, and possessive pronouns correctly.
   d. Make pronouns agree with their antecedents.
   e. Use correct pronoun reference.
   f. Correctly form and use the comparative and superlative forms of adjectives.
   g. Identify and use appositives and appositive phrases.
   h. Use infinitives, gerunds, and participles to vary sentence structure in writing.
   i. Correctly use conjunctions for coordination and subordination.
   j. Distinguish commonly confused words (e.g., there, their, they're; two, to, too; accept, except; affect, effect).
2. Mechanics and Spelling - Demonstrate appropriate language mechanics in writing.
   a. Apply the capitalization rules appropriately in writing.
   b. Punctuate correctly in writing, including:
      i. Commas
      ii. Quotation marks
      iii. Apostrophes
      iv. Colons
      v. Conventions of letter writing
   c. Distinguish correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure - Demonstrate appropriate sentence structure in writing.
   a. Correct sentence run-ons and fragments.
   b. Correct dangling and misplaced modifiers.
   c. Differentiate between dependent and independent clauses.
   d. Write simple, compound, complex, and compound-complex sentences.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Identify the major ideas and supporting evidence in informative and persuasive messages.
2. Listen in order to identify and discuss topic, purpose, and perspective.
3. Recognize and understand barriers to effective listening (i.e., internal and external distractions, personal biases, and conflicting demands).
4. Evaluate the spoken message in terms of content, credibility, and delivery.

Standard 2: Speaking

The student will express ideas and opinions in group or individual situations.

1. Analyze purpose, audience, and occasion and consider this information in planning an effective presentation or response.
2. Compose a presentation with a well-organized introduction, body, and conclusion that is appropriate for different purposes, audiences, and occasions.
3. Communicate oral presentations to the class using appropriate delivery (volume, rate, enunciation, and movement).
4. Use level-appropriate vocabulary in speech (e.g., metaphorical language, sensory details, or specialized vocabulary.

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers, including graphic artists, illustrators, and news photographers, represent meaning.

1. Interpret how language choice is used to enhance visual media (e.g., language or particular television or film genre, the use of emotional or logical arguments in commercials).
2. Identify and explain reasons for varied interpretations of visual media (e.g., different purposes or circumstances while viewing, influence of personal knowledge and experiences, focusing on different stylistic features).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Use a variety of criteria to evaluate and form viewpoints of visual media (e.g., evaluates the effectiveness of informational media, such as Web sites, documentaries, news programs, and recognizes a range of viewpoints and arguments).
2. Establish criteria for selecting or avoiding specific programs.
3. Assess how language medium and presentation contribute to the message.

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Produce visual images, messages, and meanings that communicate with others.
2. Use media forms to create a visual message that will compare and contrast ideas and points of view.

OKLAHOMA Grade 9 Language Arts
Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Apply a knowledge of Greek (e.g., tele/phone. micro/phone), Latin (e.g., flex/ible), and Anglo-Saxon (e.g., un/friend/ly) roots, prefixes, and suffixes to determine word meanings.
2. Use word meanings within the appropriate context and verify those meanings by definition, restatement, example, and analogy.
3. Expand vocabulary through wide reading, listening, and discussing.
4. Use reference material such as glossary, dictionary, thesaurus, and available technology to determine precise meaning and usage.
5. Identify the relation of word meanings in analogies, homonyms, synonyms/antonyms, and connotations and denotations.

Standard 2: Comprehension

The student will interact with the words to construct an appropriate meaning.

1. Literal Understanding
   a. Examine the structures and format of functional workplace documents, including graphics and headers, and explain how authors use the features to achieve their purpose.
   b. Draw upon own background to provide connections to text.
   c. Monitor reading strategies and modify them when understanding breaks down such as rereading, using resources, and questioning.
   d. Recognize text structures such as compare and contrast, cause and effect, and chronological ordering.
   e. Use study strategies such as skimming and scanning, note taking, outlining, and using study-guide questions to better understand texts.
2. Inferences and Interpretating
   a. Analyze characteristics of text, including its structure, word choice, and intended audience.
   b. Draw inferences such as conclusions, generalizations, and predictions, and support them with text evidence and personal experience.
   c. Recognize influences on a reader's response to a text (e.g., personal experience and values; perspective shapes by age, gender, class, or nationality).
3. Summary and Generalization
   a. Identify the main idea and supporting details by producing summaries of text.
   b. Use text features and elements to support inferences and generalizations about information.
   c. Summarize and paraphrase complex, implicit hierarchic structures in informational texts, including relationships among concepts and details in those structures.
4. Analysis and Evaluation
   a. Discriminate between fact and opinion and fiction and nonfiction.
   b. Recognize deceptive and/or faulty arguments in persuasive texts.
   c. Analyze the structure and format of informational and literary documents and explain how authors use the features to achieve their purposes.
   d. Identify techniques (e.g., language, organization, tone, context) used to convey point of view or impressions.

Standard 3: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - Demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres including short story, novel, drama, poetry, and essay.
   b. Analyze the characteristics of subgenres including tragedy, sonnet, epic, lyric, and narrative poetry.

2. Literary Elements - Demonstrate knowledge of literary elements and techniques and show how they affect the development of a literary work.
   a. Recognize the theme (general observation about life or human nature) within a text.
   b. Explain how author's voice and/or choice of a narrator affect the characterization and the point of view, tone, plot, mood and credibility of a text.
   c. Recognize and understand the significance of various literary devices, including figurative language, imagery, allegory (the use of fictional figures and actions to express truths about human experiences), and symbolism (the use of a symbol to represent an idea or theme), and explain their appeal.
   d. Analyze interactions between characters in a literary text and explain the way those interactions affect the plot in narrative text.
   e. Analyze characters and identify author's point of view.
   f. Identify literary forms and terms such as author, drama, biography, autobiography, myth, tall tale, dialogue, tragedy and comedy, structure in poetry, epic, ballad, protagonist, antagonist, paradox, analogy, dialect, and comic relief as appropriate to the selections being read.
3. Figurative Language and Sound Devices - Identify figurative language and sound devices and analyze how they affect the development of a literary work.
   a. Identify and explain figurative language including metaphor, personification, and simile.
   b. Identify and explain sound devices including alliteration, onomatopoeia, and rhyme.
   c. Identify the melodies of literary language, including its use of evocative words, rhythms and rhymes.
   d. Recognize and interpret poetic elements such as metaphor, simile, personification, and the effect of sound on meaning.
4. Literary Works - The student will read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and evaluate literature from various cultures to broaden cultural awareness.
5. Compare works that express the recurrence of archetypal (universal modes or patterns) characters, settings, and themes in literature and provide evidence to support the ideas expressed in each work.

Standard 4: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose.
   a. Access information from a variety of primary and secondary sources.
   b. Skim text for an overall impression and scan text for particular information.
   c. Use organizational strategies as an aid to comprehend increasingly difficult content material (e.g., compare/contrast, cause/effect, problem/solution, sequential order).
2. Interpreting Information - The student will analyze and evaluate information from a variety of sources.
   a. Summarize, paraphrase, and/or quote relevant information.
   b. Determine the author's viewpoint to evaluate source credibility and reliability.
   c. Organize and convert information into different forms such as charts, graphs and drawings to create multiple formats to interpret information for multiple audiences and purposes, and cite sources completely.
   d. Identify complexities and inconsistencies in the information and the different perspectives found in each medium, including almanacs, microfiche news sources, in-depth field studies, speeches, journals, technical documents, or Internet sources.
   e. Draw conclusions from information gathered.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop and refine composition skills. Students are expected to:
   a. use prewriting strategies to generate ideas such as brainstorming, using graphic organizers, keeping notes and logs.
   b. develop multiple drafts both alone and collaboratively to categorize ideas, organizing them into paragraphs, and blending paragraphs into larger text.

c. organize and reorganize drafts and refine style to suit occasion, audience, and purpose.
d. proofread writing for appropriateness of organization, content and style.
e. edit for specific purposes to ensure standard usage, varied sentence structure, appropriate word choice, mechanics and spelling.
f. refine selected pieces frequently to publish for general and specific audiences.

2. Use extension and elaboration to develop an idea.
3. Demonstrate organization, unity, and coherence by using transitions and sequencing.
4. Use precise word choices, including figurative language, that convey specific meaning and tone.
5. Use a variety of sentence structures, types, and lengths to contribute to fluency and interest.
6. Evaluate own writing and others' writing (e.g., determine the best features of a piece of writing, determine how own writing achieves its purpose, ask for feedback, respond to classmates' writing).

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write biographical or autobiographical narratives or short stories that:
   a. identify a real person, living or not, who has had a special influence on other people.
   b. provide a sequence of factual events and communicate the significance of the events to the person.
   c. isolates specific scenes and incidents in time and places significant to defining the person's influence.
   d. uses anecdotes or describe with specific details the sight, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the person; use interior monologue (what characters say silently to self) to show the person's qualities and beliefs.
   e. Present action segments to accommodate changes in time and mood.
2. Write expository compositions, including analytical essays and research reports that:
   a. include evidence in support of a thesis (position on the topic) including information on all relevant perspectives.
   b. communicates information and ideas from primary and secondary sources accurately and coherently.
   c. shows distinctions between the relative value and significance of specific dates, facts, and ideas.
   d. includes a variety of reference sources, including word, pictorial, audio, and Internet sources, to locate information in support of topic.
   e. includes visual aids by using technology to organize and record information on charts, data tables, maps, and graphs.
   f. identifies and address reader's potential misunderstanding, biases, and expectations.
   g. uses technical terms and notations accurately.
3. Write persuasive compositions that:
   a. organize ideas and appeal in a sustained and effective fashion with the strongest emotion first and the least powerful last.
   b. use specific rhetorical (communication) devices to support assertions, such as appealing to logic through reasoning; appealing to emotion or ethical beliefs; or relating to a personal anecdote, case study, or analogy.
   c. clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, expressions of commonly accepted beliefs, and logical reasoning.
   d. address reader's concerns, counterclaims, biases, and expectations.
4. Write documents related to career development, including simple business letters and job applications that:
   a. present information purposefully and in brief to meet the need of the intended audience.
   b. follow a conventional business letter or memorandum format.
5. Write reflective papers that may address one of the following purposes:
   a. express the individual's insight into conditions or situations.
   b. compare a scene from a work of fiction with a lesson learned from experience.
   c. complete a self-evaluation on a class performance.
6. Use appropriate essay test-taking and time-writing strategies that:
   a. address and analyze the question (prompt).
   b. use organizational methods required by the prompt.

7. Write responses to literature that:
   a. demonstrate a comprehensive grasp of the significant ideas of literary works.
   b. support important ideas and viewpoints through accurate and detailed reference to the text or to other works.
   c. demonstrate awareness of author's style and an appreciation of the effects created.
   d. identify and assess the impact of ambiguities, nuances, and complexities within the text.
8. Write for different purposes and to a specific audience or person, adjusting tone and style as necessary to make writing interesting.
9. Write friendly letters and business letters, and continue to produce other writing forms introduced in earlier grades.
10. Write documented papers incorporating the techniques of Modern Language Association (MLA) or similar parenthetical styles.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying grammatical knowledge to the revising and editing stages of writing.

1. Standard English Usage - Demonstrate correct use of Standard English in speaking and writing.
   a. Distinguish commonly confused words (e.g., there, their, they're; two, too, to; accept, except; affect, effect).
   b. Use correct verb forms and tenses.
   c. Use correct subject-verb agreement.
   d. Use active and passive voice.
   e. Correct pronoun/antecedent agreement and clear pronoun reference.
   f. Use correct forms of comparative and superlative adjectives.
2. Mechanics and Spelling - Demonstrate appropriate language mechanics in writing.
   a. Demonstrate correct use of capitals.
   b. Use correct formation of plurals.
   c. Demonstrate correct use of punctuation and recognize its effect on sentence structure.
   d. Distinguish correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure – Demonstrate appropriate sentence structure in writing.
   a. Use parallel structure.
   b. Correct dangling and misplaced modifiers.
   c. Correct run-on sentences.
   d. Correct fragments.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Focus attention on the speaker's message.
2. Use knowledge of language and develop vocabulary to accurately interpret the speaker's message.
3. Listen and respond appropriately to presentations and performances of peers or published works such as original essays or narratives, interpretations of poetry, and individual or group performances.
4. Monitor speaker's message and clarity and understanding to formulate and provide effective verbal and nonverbal feedback.
5. Use feedback to evaluate own effectiveness and set goals for future presentations.

Standard 2: Speaking

1. The student will express ideas and opinions in group or individual situations.
2. Use formal, informal, standard, and technical language effectively to meet the needs of purpose, audience, occasion, and task.
3. Prepare, organize, and present a variety of informative messages effectively.

4. Analyze purpose, audience, and occasion to choose effective verbal and nonverbal strategies such as pitch and tone of voice, posture, and eye contact.

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers, including graphic artists, illustrators, and news photographers, represent meaning.

1. Document the use of stereotypes and biases in visual media (e.g., distorted representations of society; imagery and stereotyping in advertising; elements of stereotypes such as physical characteristics, manner of speech, beliefs and attitudes).
2. Indicate how symbols, images, sounds, and other conventions are used in visual media (e.g., time lapse in films; set elements that identify a particular time period or culture).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Select people with special interests and expectations who are the target audience for particular messages or products in visual media.
2. Define and design language and content that reflect the target audience for particular messages and products (e.g., in advertising and sales techniques aimed specifically towards teenagers; in products aimed toward different classes, races, ages, genders; in the appeal of popular television shows and films for particular audience).

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Create media products to include a billboard, cereal box, short editorials, and a three-minute documentary or print ad to engage specific audiences.
2. Create, present, test, and revise a project and analyze a response, using data-gathering techniques such as questionnaires, group discussions, and feedback forms.

OKLAHOMA Grade 10 Language Arts
Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Apply a knowledge of Greek (e.g., tele/phone. micro/phone), Latin (e.g., flex/ible), and Anglo-Saxon (e.g., un/friend/ly) roots, prefixes, and suffixes to determine word meanings.
2. Research word origins as an aid to understanding meaning, derivations, and spelling as well as influences on the English language.
3. Use reference material such as glossary, dictionary, thesaurus, and available technology to determine precise meaning and usage.
4. Discriminate between connotative and denotative meanings and interpret the connotative power of words.
5. Use word meanings within the appropriate context and verify these meanings by definition, restatement, example, and analogy.

Standard 2: Comprehension

The student will interact with the words and concepts on the page to understand what the writer has said.

1. Literal Understanding
   a. Identify the structures and format of various informational documents and explain how authors use the features to achieve their purpose.
   b. Understand specific devices an author uses to accomplish purpose (persuasive techniques, style, literary forms or genre, portrayal of themes, language).
   c. Use a range of automatic monitoring and self-correcting methods (e.g., rereading, slowing down, subvocalizing, consulting resources, questioning).
   d. Recognize signal/transitional words and phrases and their contributions to the meaning of the text (e.g., however, in spite of, for example, consequently).
2. Inferences and Interpretation
   a. Use elements of the text to defend responses and interpretations.
   b. Draw inferences such as conclusions, generalizations, and predictions, and support them with text evidence and personal experience.
   c. Investigate influences on a reader's response to a text (e.g., personal experience and values; perspective shapes by age, gender, class, nationality).
3. Summary and Generalization
   a. Determine the main idea, locate and interpret minor or subtly stated details in complex passages.
   b. Use text features and elements to support inferences and generalizations about information.
   c. Summarize and paraphrase complex, implicit hierarchic structures in informational texts, including relationships among concepts and details in those structures.
4. Analysis and Evaluation
   a. Discriminate between fact and opinion and fiction and nonfiction.
   b. Evaluate deceptive and/or faulty arguments in persuasive texts.
   c. Analyze the structure and format of informational and literary documents and explain how authors use the features to achieve their purposes.
   d. Analyze techniques (e.g., language, organization, tone, context) used to convey opinions or impressions.

Standard 3: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - Demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres including short story, novel, drama, narrative and lyric poetry, and essay.
   b. Analyze the characteristics of subgenres such as satire, sonnet, epic, myths and legends, mystery, and editorials.

2. Literary Elements - Demonstrate knowledge of literary elements and techniques and show how they affect the development of a literary work.
   a. Describe and analyze elements of fiction including plot, conflict, character, setting, theme, mood, point of view and how they are addressed and resolved.
   b. Explain how an author's viewpoint, or choice of a narrator affects the characterization and the tone, plot, mood and credibility of a text.
   c. Analyze characters' traits by what the characters say about themselves in narration, dialogue, and soliloquy (when they speak out loud to themselves).
   d. Evaluate the significance of various literary devices and techniques, including imagery, irony, tone, allegory (the use of fictional figures and actions to express truths about human experiences), and symbolism (the use of symbols to represent an idea or theme), and explain their appeal.
   e. Evaluate the author's purpose and the development of time and sequence, including the use of complex literary devices, such as foreshadowing (providing clues to future events) or flashbacks (interrupting the sequence of events to include information about an event that happened in the past).
3. Figurative Language and Sound Devices - Identify and use figurative language and sound devices in writing and recognize how they affect the development of a literary work.
   a. Identify and use figurative language such as analogy, hyperbole, metaphor, personification, and simile.
   b. Identify and use sound devices such as rhyme, alliteration, and onomatopoeia.
   c. Analyze the melodies of literary language, including its use of evocative words, rhythms and rhymes.
4. Literary Works - The student will read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and evaluate literature from various cultures to broaden cultural awareness.
   c. Compare works that express the recurrence of archetypal (universal modes or patterns) characters, settings, and themes in literature and provide evidence to support the ideas expressed in each work.

Standard 4: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose.
   a. Access information from a variety of primary and secondary sources.
   b. Skim text for an overall impression and scan text for particular information.
   c. Use organizational strategies as an aid to comprehend increasingly difficult content material (e.g., compare/contrast, cause/effect, problem/solution, sequential order).
2. Interpreting Information - Analyze and evaluate information from a variety of sources.
   a. Summarize, paraphrase, and/or quote relevant information.
   b. Determine the author's viewpoint to evaluate source credibility and reliability.
   c. Synthesize information from multiple sources to draw conclusions that go beyond those found in any of the individual studies.
   d. Identify complexities and inconsistencies in the information and the different perspectives found in each medium, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, or Internet sources.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop and refine composition skills. Students are expected to:
   a. use prewriting strategies to generate ideas such as brainstorming, using graphic organizers, keeping notes and logs.
   b. develop multiple drafts both alone and collaboratively to categorize ideas organizing them into paragraphs, and blending paragraphs into larger text.
   c. organize and reorganize drafts and refine style to suit occasion, audience, and purpose.
   d. proofread writing for appropriateness of organization, content, and style.

e. edit for specific purposes such as to ensure standard usage, varied sentence structure, appropriate word choice, mechanics, and spelling.
f. refine selected pieces frequently to publish for general and specific audiences.

2. Use extension and elaboration to develop an idea.
3. Demonstrate organization, unity, and coherence by using transitions and sequencing.
4. Use precise word choices, including figurative language, that convey specific meaning.
5. Use a variety of sentence structures, types, and lengths to contribute to fluency and interest.
6. Evaluate own writing and others' writing (e.g., determine the best features of a piece of writing, determine how own writing achieves its purpose, ask for feedback, respond to classmates' writing).

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write biographical or autobiographical narratives or short stories that:
   a. identify a real person, living or not, who has had a special influence on other people.
   b. provide a sequence of factual events and communicate the significance of the events to the person.
   c. isolate specific scenes and incidents in times and places significant to defining the person's influence.
   d. use anecdotes or describe with specific details the sight, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the person; use interior monologue (what person says silently to self) to show the person's qualities and beliefs.
   e. present action segments to accommodate changes in time and mood.
2. Write expository compositions, including analytical essays and research reports that:
   a. include evidence in support of a thesis (position on the topic) including information on all relevant perspectives.
   b. communicate information and ideas from primary and secondary sources accurately and coherently.
   c. show distinctions between the relative value and significance of specific date, facts, and ideas.
   d. include a variety of reference sources such as pictorial, audio, and Internet sources, to locate information in support of topic.
   e. include visual aids using technology to organize and record information on charts, data tables, maps, and graphs.
   f. identify and address reader's potential misunderstanding, biases, and expectations.
   g. use technical terms and notations accurately.
3. Write persuasive compositions that:
   a. present ideas and appeals in a sustained and effective fashion with the strongest emotion first and the least powerful last.
   b. use specific rhetorical (communication) devices to support assertions, such as appealing to logic through reasoning; appealing to emotion or ethical beliefs; or relating to a personal anecdote, case study, or analogy.
   c. clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, expressions of commonly accepted beliefs, and logical reasoning.
   d. address reader's concerns, counterclaims, biases, and expectations.
4. Write business letters that:
   a. provide clear and purposeful information and address the intended audience appropriately.
   b. 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.
   c. emphasize main ideas or images.
   d. follow conventional style with page formats, fonts (typeface), and spacing that contribute to the document's readability and impact.
5. Write reflective papers that may address one of the following purposes:
   a. express the individual's insight into conditions or situations.
   b. compare a scene from a work of fiction with a lesson learned from experience.
   c. complete a self-evaluation on a class performance.
6. Use appropriate essay test-taking and time-writing strategies that:

a. address and analyze the question (prompt).
b. use organizational methods required by the prompt.

7. Write responses to literature that:
   a. demonstrate a comprehensive grasp of the significant ideas of literary works.
   b. support important ideas and viewpoints through accurate and detailed reference to the text or other works.
   c. demonstrate awareness of author's style and an appreciation of the effects created.
   d. identify and assess the impact of ambiguities, nuances, and complexities within the text.
   e. extend writing by changing mood, plot, characterization, or voice.
8. Write for different purposes and audiences, adjusting tone, style, and voice as appropriate and continue to produce other writing forms introduced in earlier grades.
9. Write documented papers incorporating the techniques of Modern Language Association (MLA) or similar parenthetical styles.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying Standard English conventions of the revising and editing stages of writing.

1. Standard English Usage - The student will demonstrate correct use of Standard English in speaking and writing.
   a. Distinguish commonly confused words (e.g., there, their, they're; two, too, to; accept, except; affect, effect).
   b. Use correct verb forms and tenses.
   c. Use correct subject-verb agreement.
   d. Distinguish active and passive voice.
   e. Use correct pronoun/antecedent agreement and clear pronoun reference.
   f. Use correct forms of comparative and superlative adjectives.
2. Mechanics and Spelling - The student will demonstrate appropriate language mechanics in writing.
   a. Demonstrate correct use of capitals.
   b. Use correct formation of plurals.
   c. Demonstrate correct use of punctuation and recognize its effect on sentence structure.
   d. Distinguish correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure - The student will demonstrate appropriate sentence structure in writing.
   a. Use parallel structure.
   b. Correct dangling and misplaced modifiers.
   c. Correct run-on sentences.
   d. Correct fragments.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Engage in critical, empathetic, appreciative, and reflective listening to interpret, respond, and evaluate speaker's messages.
2. Listen and respond appropriately to presentations and performances of peers or published works such as original essays or narratives, interpretations of poetry, and individual or group performances.
3. Evaluate informative and persuasive presentations of peers, public figures, and media presentations.
4. Use feedback to evaluate own effectiveness and set goals for future presentations.

Standard 2: Speaking

The student will express ideas and opinions in group or individual situations.

1. Use formal, informal, standard, and technical language effectively to meet the needs of purpose, audience, occasion, and task.
2. Prepare, organize, and present a variety of informative and persuasive messages effectively.

3. Use a variety of verbal and nonverbal techniques in presenting oral messages and demonstrate poise and control while presenting.

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers such as graphic artists, illustrators, and news photographers represent meaning.

1. Identify the use of stereotypes and biases in visual media (e.g., distorted representations of society; imagery and stereotyping in advertising; elements of stereotypes such as physical characteristics, manner of speech, beliefs, attitudes).
2. Investigate how symbols, images, sound, and other conventions are used in visual media (e.g., time lapse in films; set elements that identify a particular time period or culture).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Recall that people with special interests and expectations are the target audience for particular messages or products in visual media.
2. Select and design language and content that reflect this appeal (e.g., in advertising and sales techniques aimed specifically towards teenagers; in products aimed toward different classes, races, ages, genders; in the appeal of popular television shows and films for particular audience).

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Investigate and present the sources of a media presentation or production such as who made it and why it was made.
2. Analyze a media presentation to get the main idea of the message's content and compose one using a similar format.

OKLAHOMA Grade 11 Language Arts
Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Apply knowledge of Greek, Latin, and Anglo-Saxon roots and word parts to draw inferences about the meaning of scientific and mathematical terminology.
2. Use reference material such as glossary, dictionary, thesaurus, and available technology to determine precise meaning and usage.
3. Analyze the meaning of analogies encountered, analyzing specific comparisons as well as relationships and inferences.
4. Rely on context to determine meanings of words and phrases such as figurative language, connotations and denotations of words, analogies, idioms, and technical vocabulary.
5. Use word meanings within the appropriate context and verify these meanings by definition, restatement, example, and analogy.

Standard 2: Comprehension

The student will interact with the words and concepts on the page to understand what the writer has said.

1. Literal Understanding
   a. Identify the structures and format of various informational documents and explain how authors use the features to achieve their purpose.
   b. Select and explain specific devices an author uses to accomplish purpose (persuasive techniques, style, literary forms or genre, portrayal of themes, language).
   c. Use study strategies such as note taking, outlining, and using study guide questions to better understand texts.
   d. Constructs images such as graphic organizers based on text descriptions and text structures.
2. Inferences and Interpretation
   a. Interpret the possible inferences of the historical context on literary works.
   b. Describe the development of plot and identify conflict and how they are addressed and resolved.
   c. Investigate influences on a reader's response to a text (e.g., personal experience and values; perspective shapes by age, gender, class, or nationality).
   d. Make reasonable assertions about author's arguments by using elements of the text to defend and clarify interpretations.
3. Summary and Generalization
   a. Determine the main idea, locate and interpret minor subtly stated details in complex passages.
   b. Use text features and elements to support inferences and generalizations about information.
   c. Summarize and paraphrase complex, implicit hierarchic structures in informational texts, including relationships among concepts and details in those structures.
4. Analysis and Evaluation
   a. Compare and contrast aspects of texts such as themes, conflicts, and allusions both within and across texts.
   b. Analyze the structure and format of informational and literary documents and explain how authors use the features to achieve their purposes.
   c. Examine the way in which clarity of meaning is affected by the patterns of organization, repetition of the main ideas, organization of language, and word choice in the text.
   d. Analyze the way in which authors have used archetypes (universal modes or patterns) drawn from myth and tradition in literature, film, political speeches, and religious writings.

Standard 3: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - Demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres including short story, novel, drama, poetry, and essay.
   b. Analyze the characteristics of subgenres including allegory and ballad.
2. Literary Elements - Demonstrate knowledge of literary elements and techniques and show how they affect the development of a literary work.
   a. Analyze the way in which the theme or meaning of a selection represents a view or comment on life, using textual evidence to support the claim.
   b. Analyze the way in which irony, tone, mood, the author's style, and the "sound" of language achieve specific rhetorical (communication) or aesthetic (artistic) purposes or both.
   c. Analyze characters' traits by what the characters say about themselves in narration, dialogue, and soliloquy (when they speak out loud to themselves).
   d. Evaluate the significance of various literary devices and techniques, including imagery, irony, tone, allegory (the use of fictional figures and actions to express truths about human experiences), and symbolism (the use of symbols to represent an idea or theme), and explain their appeal.
   e. Evaluate the author's purpose and the development of time and sequence, including the use of complex literary devices, such as foreshadowing (providing clues to future events) or flashbacks (interrupting the sequence of events to include information about an event that happened in the past).
3. Figurative Language and Sound Devices - Identify figurative language and sound devices and analyze how they affect the development of a literary work.
   a. Identify and explain figurative language including analogy, hyperbole, metaphor, personification, and simile.
   b. Identify and explain sound devices including alliteration and rhyme.
   c. Analyze the melodies of literary language, including its use of evocative words, rhythms and rhymes.
4. Literary Works - Read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and evaluate literature from various cultures to broaden cultural awareness.
   c. Compare works that express the recurrence of archetypal (universal) characters, settings, and themes in literature and provide evidence to support the ideas expressed in each work.
   d. Analyze the clarity and consistency of political assumptions in a selection of literary works or essays on a topic.

Standard 4: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose.
   a. Access information from a variety of primary and secondary sources.
   b. Skim text for an overall impression and scan text for particular information.
   c. Use organizational strategies as an aid to comprehend increasingly difficult content material (e.g., compare/contrast, cause/effect, problem/solution, sequential order).
2. Interpreting Information - Analyze and evaluate information from a variety of sources.
   a. Summarize, paraphrase, and/or quote relevant information.
   b. Determine the author's viewpoint to evaluate source credibility and reliability.
   c. Synthesize information from multiple sources to draw conclusions that go beyond those found in any of the individual studies.
   d. Identify complexities and inconsistencies in the information and the different perspectives found in each medium, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, or Internet sources.
   e. Develop presentations by using clear research questions and creative and critical research strategies, such as field studies, oral histories, interviews, experiments, and Internet sources.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop and refine composition skills. Students are expected to:
   a. use prewriting strategies to generate ideas such as brainstorming, using graphic organizers, keeping notes and logs.
   b. develop multiple drafts both alone and collaboratively to categorize ideas, organizing them into paragraphs, and blending paragraphs into larger text.
   c. organize and reorganize drafts and refine style to suit occasion, audience, and purpose.
   d. proofread writing for appropriateness of organization, content and style.
   e. edit for specific purposes to ensure standard usage, varied sentence structure, appropriate word choice, mechanics and spelling.
   f. refine selected pieces frequently to publish for general and specific audiences.
2. Demonstrate an understanding of the elements of discourse, such as purpose, speaker, audience, and form when completing narrative expository, persuasive, or descriptive writing assignments.
3. Use language in creative and vivid ways to establish a specific tone.
4. Use point of view, characterization, style, and related elements for specific rhetorical (communication) and aesthetic (artistic) purposes.
5. Structure ideas and arguments in a sustained and persuasive way and support them with precise and relevant examples.
6. Evaluate own writing and others' writing to highlight the individual voice, improve sentence variety and style, and enhance subtlety of meaning and tone in ways that are consistent with the purpose, audience, and form of writing.

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write fictional, biographical or autobiographical narratives that:
   a. narrate a sequence or events and communicate their significance to the audience.
   b. identify scenes and incidents in specific places.
   c. describe with specific details the sight, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the character; use interior monologue (what character says silently to self) to show the character's feelings.
   d. Present action segments to accommodate changes in time and mood.
2. Job applications and resumes that:
   a. provide clear and purposeful information and address the intended audience appropriately.
   b. indicate varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
   c. modify the tone to fit the purpose and audience.
   d. follow the conventional style for that type of document (résumé, cover letter of application) and use page format, fonts (typeface), and spacing that contribute to the readability and impact of the document.
3. Write historical investigations that:
   a. use expository, narration, description, argumentation, or some combination of rhetorical strategies to support the main argument.
   b. analyze several historical records of a single event, examining critical relationships between elements of the topic.
   c. explain the perceived reason or reasons for the similarities and differences in historical records with information derived from primary and secondary sources to support or enhance the presentation.
   d. include information from all relevant perspectives and take into consideration the validity and reliability of sources.
   e. include a formal bibliography.
4. Write reflective compositions that may address one of the following purposes:
   a. explore the significance of personal experiences, events, conditions, or concerns by using rhetorical strategies, including narration, description, exposition, and persuasion.
   b. draw comparisons between specific incidents and broader themes that illustrate the writer's important beliefs or generalizations about life.
   c. maintain a balance in describing individual incidents and relate those incidents to more general and abstract ideas.
5. Write responses to literature that:
   a. demonstrate a comprehensive understanding of the significant ideas in works or passages.
   b. analyze the use of imagery, language, universal themes, and unique aspects of the text.

c. support important ideas and viewpoints through accurate and detailed reference to the text or to other works.
d. demonstrate an understanding of author's style and an appreciation of the effects created.
e. identify and assess the impact of ambiguities, nuances, and complexities within the text.

6. Write for different purposes and to a specific audience or person, adjusting tone and style as necessary to make writing interesting. Continue to produce other writing forms introduced in earlier grades.
7. Write documented papers incorporating the techniques of Modern Language Association (MLA) or similar parenthetical styles.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying Standard English conventions to the revising and editing stages of writing.

1. Standard English Usage - Demonstrate correct use of Standard English in speaking and writing.
   a. Distinguish commonly confused words (e.g., there, their, they're; two, too, to; accept, except; affect, effect).
   b. Use correct verb forms and tenses.
   c. Use correct subject-verb agreement.
   d. Use active and passive voice.
   e. Use correct pronoun/antecedent agreement and clear pronoun reference.
   f. Use correct forms of comparative and superlative adjectives.
2. Mechanics and Spelling - Demonstrate appropriate language mechanics in writing.
   a. Demonstrate correct use of capitals.
   b. Use correct formation of plurals.
   c. Demonstrate correct use of punctuation and recognize its effect on sentence structure.
   d. Use correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure - Demonstrate appropriate sentence structure in writing.
   a. Use parallel structure.
   b. Correct dangling and misplaced modifiers.
   c. Correct run-on sentences.
   d. Correct fragments.
4. Apply appropriate manuscript conventions in writing including title page presentation, pagination, spacing and margins, and integration of sources and support material, by citing sources within the text, using direct quotations, and paraphrasing.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Demonstrate proficiency in critical, empathetic, appreciative, and reflective listening to interpret, respond and evaluate speaker's messages.
2. Use effective strategies for listening that prepares for listening, identifies the types of listening, and adopts appropriate strategies.
3. Listen and respond appropriately to presentations and performances of peers or published works such as original essays or narratives, interpretations of poetry, and individual or group performances.
4. Use effective strategies to evaluate own listening such as asking questions for clarification, comparing and contrasting interpretations with others, and researching points of interest or contention.
5. Use effective listening to provide appropriate feedback in a variety of situations such as conversations and discussions and informative, persuasive, or artistic presentations.

Standard 2: Speaking

The student will express ideas and opinions in group or individual situations.

1. Use a variety of verbal and nonverbal techniques in presenting oral messages such as pitch and tone of voice, posture, and eye contact, and demonstrate poise and control while presenting.
2. Use logical, ethical, and emotional appeals that enhance a specific tone and purpose.
3. Evaluate when to use different kinds of effects (including visuals, music, sound, and graphics) to create effective presentations.
4. Ask clear questions for a variety of purposes and respond appropriately to the questions of others.

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers including graphic artists, illustrators, and news photographers represent meaning.

1. Use a range of strategies to interpret visual media (e.g., draw conclusions, make generalizations, synthesize material viewed, refer to images or information in visual media to support point of view).
2. Describe how editing shapes meaning in visual media (e.g., omission of alternative perspectives; filtered or implied viewpoints; emphasis of specific ideas, images, or information in order to serve particular interests).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Use a variety of criteria (e.g., clarity, accuracy, effectiveness, bias, relevance of facts) to evaluate informational media (e.g., Web sites, documentaries, news programs.
2. Identify the rules and expectations about genre that can be manipulated for particular effects or purposes (e.g., combining or altering conventions of different genres, such as presenting news as entertainment; blurring of genres, such as dramadocumentaries).

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Design and develop genres such as nightly news, news magazines, and documentaries and identify the unique properties of each.
2. Compare, contrast, and critique various media coverage of the same events such as in newspapers, television, and on the Internet, and compose a study of the results.

OKLAHOMA Grade 12 Language Arts
Standards

Reading/Literature

The student will apply a wide range of strategies to comprehend, interpret, evaluate, appreciate, and respond to a wide variety of texts.

Standard 1: Vocabulary

The student will expand vocabulary through word study, literature, and class discussion.

1. Apply knowledge of Greek, Latin, and Anglo-Saxon roots and word parts to draw inferences about new words that have been created in the fields of science and mathematics (gene splicing, genetic engineering).
2. Research unfamiliar words based on characters, themes, or historical events.
3. Analyze the meaning of analogies encountered, analyzing specific comparisons as well as relationships and inferences.
4. Rely on context to determine meanings of words and phrases such as figurative language, connotations and denotations of words, analogies, idioms, and technical vocabulary.

Standard 2: Comprehension

The student will interact with the words and concepts on the page to understand what the writer has said.

1. Literal Understanding
   a. Identify the structures and format of various informational documents and explain how authors use the features to achieve their purpose.
   b. Explain specific devices an author uses to accomplish purpose (persuasive techniques, style, literary forms or genre, portrayal of themes, language).
   c. Use study strategies such as note taking, outlining, and using study-guide questions to better understand texts.
   d. Construct images such as graphic organizers based on text descriptions and text structures.
   e. Read silently with comprehension for a sustained period of time.
2. Inferences and Interpretation
   a. Interpret the possible inferences of the historical context on literary works.
   b. Describe the development of plot and identify conflict and how they are addressed and resolved.
   c. Identify influences on a reader's response to a text (e.g., personal experience and values; perspectives shapes by age, gender, class, or nationality).
   d. Make reasonable assertions about authors' arguments by using elements of the text to defend and clarify interpretations.
3. Summary and Generalization
   a. Determine the main idea and supporting details by producing summaries of text.
   b. Use text features and elements to support inferences and generalizations about information.
   c. Summarize and paraphrase complex, implicit hierarchic structures in informational texts, including relationships among concepts and details in those structures.
   d. Compare and contrast elements of text such as themes, conflicts, and allusions both within and across text.
4. Analysis and Evaluation
   a. Investigate both the features and the rhetorical (communication) devices of different types of public documents, such as policy statements, speeches, or debates, and the ways in which authors use those features and devices.
   b. Examine the structure and format of informational and literary documents and explain how authors use the features to achieve their purposes.
   c. Analyze the way in which clarity of meaning is affected by the patterns of organization, repetition of the main ideas, organization of language, and word choice in the text.
   d. Analyze the way in which authors have used archetypes (universal modes or patterns) drawn from myth and tradition in literature, film, political speeches, and religious writings.
   e. Evaluate the credibility of information sources, including how the writer's motivation may affect that credibility.

Standard 3: Literature

The student will read, construct meaning, and respond to a wide variety of literary forms.

1. Literary Genres - Demonstrate a knowledge of and an appreciation for various forms of literature.
   a. Analyze the characteristics of genres including short story, novel, drama, poetry, and essay.
   b. Analyze the characteristics of subgenres including allegory, ballad, elegy, ode, parody, pastoral, satire and tragedy.
2. Literary Elements - Demonstrate knowledge of literary elements and techniques and show how they affect the development of a literary work.
   a. Evaluate the way in which the theme or meaning of a selection represents a view or comment on life, using textual evidence to support the claim.
   b. Analyze the way in which irony, tone, mood, the author's style, and the "sound" of language achieve specific rhetorical (communication) or aesthetic (artistic) purposes or both.
   c. Analyze characters' traits by what the characters say about themselves in narration, dialogue, and soliloquy (when they speak out loud to themselves).
   d. Evaluate the significance of various literary devices and techniques, including imagery, allegory (the use of fictional figures and actions to express truths about human experiences), and symbolism (the use of symbols to represent an idea or theme), and explain their appeal.
   e. Evaluate the author's purpose and the development of time and sequence, including the use of complex literary devices, such as foreshadowing (providing clues to future events) or flashbacks (interrupting the sequence of events to include information about an event that happened in the past).
3. Figurative Language and Sound Devices - Identify figurative language and sound devices and analyze how they affect the development of a literary work.
   a. Identify and explain figurative language including analogy, hyperbole, metaphor, personification, and simile.
   b. Identify and explain sound devices including alliteration and rhyme.
   c. Analyze the melodies of literary language, including its use of evocative words, rhythms and rhymes.
4. Literary Works - Read and respond to historically and culturally significant works of literature.
   a. Analyze and evaluate works of literature and the historical context in which they were written.
   b. Analyze and evaluate literature from various cultures to broaden cultural awareness.
   c. Compare works that express the recurrence of archetypal (universal modes or patterns) characters, settings, and themes in literature and provide evidence to support the ideas expressed in each work.
   d. Analyze the clarity and consistency of political assumptions in a selection of literary works or essays on a topic.

Standard 4: Research and Information

The student will conduct research and organize information.

1. Accessing Information - Select the best source for a given purpose.
   a. Access information from a variety of primary and secondary sources.
   b. Skim text for an overall impression and scan text for particular information.
   c. Use organizational strategies as an aid to comprehend increasingly difficult content material (e.g., compare/contrast, cause/effect, problem/solution, sequential order).
2. Interpreting Information - Analyze and evaluate information from a variety of sources.
   a. Summarize, paraphrase, and or quote relevant information.
   b. Determine the author's viewpoint to evaluate source credibility and reliability.
   c. Synthesize information from multiple sources to draw conclusions that go beyond those found in any of the individual studies.
   d. Identify complexities and inconsistencies in the information and the different perspectives found in each medium, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, or Internet sources.
   e. Develop presentations by using clear research questions and creative and critical research strategies, such as field studies, oral histories, interviews, experiments, and Internet sources.
   f. Compile written ideas and information into reports, summaries, or other formats and draw conclusions.

Writing/Grammar/Usage and Mechanics

The student will express ideas effectively in written modes for a variety of purposes and audiences.

Standard 1: Writing Process

The student will use the writing process to write coherently.

1. Use a writing process to develop and refine composition skills. Students are expected to:
   a. use prewriting strategies to generate ideas such as brainstorming, using graphic organizers, keeping notes and logs.
   b. develop multiple drafts both alone and collaboratively to categorize ideas organizing them into paragraphs, and blending paragraphs into larger text.
   c. organize and reorganize drafts and refine style to suit occasion, audience, and purpose.
   d. proofread writing for appropriateness of organization, content and style.
   e. edit for specific purposes such as to ensure standard usage, varied sentence structure, appropriate word choice, mechanics and spelling.
   f. refine selected pieces frequently to publish for general and specific audiences.
2. Demonstrate an understanding of the elements of discourse, such as purpose, speaker, audience, and form when completing narrative expository, persuasive, or descriptive writing assignments.
3. Enhance meaning by using rhetorical devices, including the extended use of parallelism, repetition, and analogy and the issuance of a call for action.
4. Use point of view, characterization, style, and related elements for specific rhetorical (communication) and aesthetic (artistic) purposes.
5. Structure ideas and arguments in a sustained and persuasive way and support them with precise and relevant examples.
6. Evaluate own writing and others' writing to highlight the individual voice, improve sentence variety and style, and enhance subtlety of meaning and tone in ways that are consistent with the purpose, audience, and form of writing.
7. Further develop unique writing style and voice, improve sentence variety, and enhance subtlety of meaning and tone in ways that are consistent with the purpose, audience, and of writing.

Standard 2: Modes and Forms of Writing

The student will write for a variety of purposes and audiences using narrative, descriptive, expository, persuasive, and reflective modes.

1. Write fictional, biographical, or autobiographical narratives that:
   a. narrate a sequence of events and communicate their significance to the audience.
   b. identify scenes and incidents in specific places.
   c. describe with specific details the sight, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the character; use interior monologue (what character says silently to self) to show the character's feelings.
   d. present action segments to accommodate changes in time and mood.
2. Write historical investigations that:
   a. use exposition, narration, description, argumentation, or some combination of rhetorical strategies to support the main argument.
   b. analyze several historical records of a single event, examining critical relationships between elements of the topic.
   c. explain the perceived reason or reasons for the similarities and differences in historical records with information derived from primary and secondary sources to support or enhance the presentation.
   d. include information from all relevant perspectives and take into consideration the validity and reliability of sources.
   e. include a formal bibliography.
3. Write reflective compositions that may address one of the following purposes:
   a. explore the significance of personal experiences, events, conditions, or concerns by using rhetorical strategies, including narration, description, exposition, and persuasion.
   b. draw comparisons between specific incidents and broader themes that illustrate the writer's important beliefs or generalizations about life.
   c. maintain a balance in describing individual incidents and relate those incidents to more general and abstract ideas.
4. Write responses to literature that:
   a. demonstrate a comprehensive understanding of the significant ideas in works or passages.
   b. analyze the use of imagery, language, universal themes, and unique aspects of the text.
   c. support important ideas and viewpoints through accurate and detailed reference to the text or to other works.
   d. demonstrate an understanding of author's style and an appreciation of the effects created.
   e. identify and assess the impact of ambiguities, nuances, and complexities within the text.

5. Write for different purposes and to a specific audience or person, adjusting tone and style as necessary to make writing interesting. Continue to produce other forms of writing introduced in earlier grades.
6. Write documented papers incorporating the techniques of Modern Language Association (MLA) or similar parenthetical styles.

Standard 3: Grammar/Usage and Mechanics

The student will demonstrate appropriate practices in writing by applying Standard English conventions to the revising and editing stages of writing.

1. Standard English Usage - Demonstrate correct use of Standard English in speaking and writing.
   a. Distinguish commonly confused words (e.g., there, their, they're; two, too, to; accept, except; affect, effect).
   b. Use correct verb forms and tenses.
   c. Use correct subject-verb agreement.
   d. Distinguish active and passive voice.
   e. Use pronouns effectively, correct pronoun/antecedent agreement, and clear pronoun reference.
   f. Use correct forms of comparative and superlative adjectives.
2. Mechanics and Spelling - Demonstrate appropriate language mechanics in writing.
   a. Demonstrate correct use of capitals.
   b. Use correct formation of plurals.
   c. Demonstrate correct use of punctuation and recognize its effect on sentence structure.
   d. Use correct spelling of commonly misspelled words and homonyms.
3. Sentence Structure – The student will demonstrate appropriate sentence structure in writing.
   a. Use parallel structure.
   b. Correct dangling and misplaced modifiers.
   c. Correct run-on sentences.
   d. Correct fragments.
4. Apply appropriate manuscript conventions in writing including title page presentation, pagination, spacing and margins, and integration of sources and support material, by citing sources within the text, using direct quotations, and paraphrasing.

Oral Language/Listening and Speaking

The student will demonstrate thinking skills in listening and speaking.

Standard 1: Listening

The student will listen for information and for pleasure.

1. Demonstrate proficiency in critical, empathetic, appreciative, and reflective listening to interpret, respond and evaluate speaker's messages.
2. Use effective strategies for listening that prepares for listening, identifies the types of listening, and adopts appropriate strategies.
3. Listen and respond appropriately to presentations and performances of peers or published works such as original essays or narratives, interpretations of poetry, and individual or group performances.
4. Use effective strategies to evaluate own listening such as asking questions for clarification, comparing and contrasting interpretations with others, and researching points of interest or contention.
5. Use effective listening to provide appropriate feedback in a variety of situations such as conversations and discussions and informative, persuasive, or artistic presentations.

Standard 2: Speaking

The student will express ideas and opinions in group or individual situations.

1. Use a variety of verbal and nonverbal techniques in presenting oral messages such as pitch and tone of voice, posture, and eye contact, and demonstrate poise and control while presenting.
2. Use language and rhetorical strategies skillfully in informative and persuasive messages.
3. Use logical, ethical, and emotional appeals that enhance a specific tone and purpose.
4. Use effective and interesting language, including informal expressions for effect, Standard English for clarity, and technical language for specificity.

5. Evaluate when to use different kinds of effects (including visuals, music, sound, and graphics) to create a presentation.
6. Ask clear questions for a variety of purposes and respond appropriately to the questions of others.

Visual Literacy

The student will interpret, evaluate, and compose visual messages.

Standard 1: Interpret Meaning

The student will interpret and evaluate the various ways visual image-makers including graphic artists, illustrators, and news photographers represent meaning.

1. Use a range of strategies to interpret visual media (e.g., draw conclusions, make generalizations, synthesize material viewed, refer to images or information in visual media to support point of view).
2. Demonstrate how editing shapes meaning in visual media (e.g., omission of alternative perspectives; filtered or implied viewpoints; emphasis of specific ideas, images, or information in order to serve particular interests).

Standard 2: Evaluate Media

The student will evaluate visual and electronic media, such as film, as compared with print messages.

1. Use a variety of criteria (e.g., clarity, accuracy, effectiveness, bias, relevance of facts) to evaluate informational media (e.g., Web sites, documentaries, news programs).
2. Identify the rules and expectations about genre that can be manipulated for particular effects or purposes (e.g., combining or altering conventions of different genres, such as presenting news as entertainment; blurring of genres, such as dramadocumentaries).

Standard 3: Compose Visual Messages

The student will create a visual message that effectively communicates an idea.

1. Use the effects of media on constructing his/her own perception of reality.
2. Use a variety of forms and technologies such as videos, photographs, and Web pages to communicate specific messages.

Mathematics

OKLAHOMA Grades 7–8
Process Standards

Process Standard 1: Problem Solving

1. Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
1. Use technology to generate and analyze data to solve problems.
2. Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
3. Evaluate results to determine their reasonableness.
4. Apply a variety of strategies (e.g., restate the problem, look for a pattern, diagrams, solve a simpler problem, work backwards, trial and error) to solve problems, with emphasis on multistep and nonroutine problems.
5. Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.

Process Standard 2: Communication

1. Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
2. Reflect on and justify reasoning in mathematical problem solving (e.g., convince, demonstrate, formulate).
3. Select and use appropriate terminology when discussing mathematical concepts and ideas.

Process Standard 3: Reasoning

1. Identify and extend patterns and use experiences and observations to make suppositions.
2. Use counter examples to disprove suppositions (e.g., all squares are rectangles, but are all rectangles squares?).
3. Develop and evaluate mathematical arguments (e.g., agree or disagree with the reasoning of other classmates and explain why).
4. Select and use various types of reasoning (e.g., recursive [loops], inductive [specific to general], deductive [general to specific], spatial, and proportional).

Process Standard 4: Connections

1. Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
2. Connect one area or idea of mathematics to another (e.g., relate equivalent number representations to each other, relate experiences with geometric shapes to understanding ratio and proportion).

Process Standard 5: Representation

1. Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
2. Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
3. Develop a variety of mathematical representations that can be used flexibly and appropriately (e.g., base-10 blocks to represent fractions and decimals, appropriate graphs to represent data).
4. Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).

OKLAHOMA Grade 7
Standards

Standard 1: Algebraic Reasoning

The student will use number properties to simplify and solve simple linear equations.

1. Identify and apply the commutative, associative, distributive, inverse and identity properties (e.g., n + 0 = n, 2(x + 3) = 2x + 6).
2. Use a variety of methods to model and solve one-step linear equations (e.g., use properties of equality, graph ordered pairs with paper and pencil, use graphing calculators).

Standard 2: Number Sense

The student will use numbers and number relationships to acquire basic facts and determine the reasonableness of results.

1. Integers
   a. Compare and order positive and negative integers and describe their use in reallife situations (e.g., temperature, sea level, stock market fluctuations, football yardage).
   b. Use the basic operations on integers to solve problems.
2. Ratio, Proportion and Percents
   a. Demonstrate the concept of ratio and proportion with models (e.g., similar geometric shapes, scale models).
   b. Set up equivalent ratios, estimate and solve problems using ratio, proportions, and percents including percents greater than 100 and less than 1 (e.g., determine missing sides of similar figures, heart rate per minute, cost per pound, pay to hours worked overtime).
   c. Solve percent application problems (e.g., discounts, tax, finding the missing value of percent/part/whole).
3. Exponents
   a. Analyze and develop generalizations of exponential patterns, including zero as an exponent, using manipulatives and calculators (e.g., model getting paid a penny the first day, 2 cents the second day, 4 cents the third day . . .).
   b. Build and recognize models of multiples to investigate squares and square roots (e.g., build rectangular arrays for numbers 1 to 100 and note which can be represented as squares).
   c. Estimate the square root of a number (e.g., between two consecutive integers).

Standard 3: Geometry

The student will apply the properties and relationships of plane geometry in a variety of contexts.

1. Classifying Geometric Figures
   a. Classify triangles according to their sides and angles.
   b. Classify quadrilaterals according to their sides and angles (e.g., determine whether all squares are rectangles).
2. Identify and compare bisectors, interior, exterior, and vertical angles (e.g., using graph paper, software, protractors to measure angles between parallel lines with a transversal).
3. Rectangular Coordinate System
   a. Locate points on a plane in all four quadrants.
   b. Identify geometric transformation of figures (rotations, translations, and reflections).

Standard 4: Measurement

The student will use measurement to solve problems in a variety of contexts.

1. Area and Perimeter
   a. Develop area and perimeter concepts (e.g., use grids to estimate the area of irregular shapes).
   b. Apply formulas to solve problems involving perimeter (circumference) and area of polygons and circles.

2. Customary and Metric Measurements
   a. Select and use appropriate tools for measurements in practical applications and make reasonable estimates of measurements in a particular situation using the appropriate unit.
   b. Use estimates to relate customary and metric measurements to each other.

Standard 5: Data Analysis and Probability

The student will use probability to formulate and justify predictions from a set of data.

1. Use data from a sample to predict possible outcomes and compute simple probabilities as fractions, decimals or percents (e.g., use data from lists, tree diagrams, frequency distribution tables, area models).
2. Determine the probability of an event involving “or”, “and”, or “not” (e.g., on a spinner with 1 blue, 2 red and 2 yellow sections, what is the probability of getting a red or a yellow?).
3. Find all possible combinations and permutations involving a limited number of variables.

OKLAHOMA Grade 8
Standards

Standard 1: Algebraic Reasoning

The student will graph and solve linear equations and inequalities in problem-solving situations.

1. Equations
   a. Model, write, and solve 2-step linear equations using a variety of methods.
   b. Graph and interpret the solution to linear equations on a number line with one variable and on a coordinate plane with two variables.
   c. Predict the effect on the graph of a linear equation when the slope changes (e.g., make predictions from graphs, identify the slope in the equation y = mx + b and relate to a graph).
2. Inequalities
   a. Model, write, and solve 1-step and 2-step linear inequalities with one variable.
   b. Graph the solution to linear inequalities with one variable on a number line.

Standard 2: Number Sense

The student will use numbers and number relationships to solve problems.

2. Rational Numbers and Proportional Reasoning
   a. Compare and order rational numbers (positive and negative integers, fractions, decimals) in real-life situations.
   b. Use the basic operations on rational numbers to solve problems in real-life situations (e.g., describe the effect of multiplying whole numbers by a fraction or a decimal less than 1).
   c. Apply ratios and proportions to solve problems.
3. Exponents
   a. Use the rules of exponents, including integer exponents, to solve problems (e.g., $7^2 \cdot 7^3 = 7^5$).
   b. Represent and interpret large numbers and numbers less than one in exponential and scientific notation.
   c. Use estimation strategies (e.g., rounding) to describe the magnitude of large numbers and numbers less than one.

Standard 3: Geometry

The student will use geometric properties to solve problems in a variety of contexts.

1. Construct models, sketch (from different perspectives), and classify solid figures such as rectangular solids, prisms, cones, cylinders, pyramids, and combined forms (e.g., draw a figure that could result from making 1, 2, or 3 cuts in a given solid).
2. Develop the Pythagorean Theorem and apply the formula to find the length of missing sides of a right triangle and the length of other line segments.

Standard 4: Measurement

The student will use measurement to solve problems in a variety of contexts.

1. Estimate and find the surface area and volume in real world settings (e.g., unwrap a box to explore surface area; use rice, 1-inch cubes, centimeter cubes, cups . . . to estimate the volume of boxes, irregular shaped objects, containers).
2. Apply knowledge of ratio and proportion to solve relationships between similar geometric figures (e.g., build a model of a 3-dimensional object to scale).
3. Formulas
   a. Select and apply appropriate formulas for given situations:
      i. an equation (e.g., d = rt, i = prt)
      ii. measurement problems (e.g., p = 2l + 2w, v = lwh)
   b. Find the area of a "region of a region" for simple composite figures (e.g., area of a rectangular picture frame).

Standard 5: Data Analysis and Statistics

The student will use data analysis and statistics to interpret data in a variety of contexts.

1. Select and apply appropriate formats (e.g., line plots, bar graphs, stem-and-leaf plots, scatter plots, histograms, circle graphs) to display collected data.

2. Measures of Central Tendency
   a. Find the measures of central tendency (mean, median and mode) of a set of data and understand why a specific measure provides the most useful information in a given context.
   b. Compute the mean, median, and mode for data sets and understand how additional data in a set may affect the measures of central tendency.
3. Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population (e.g., is the average height of a men's college basketball team a good representative sample for height predictions?).

OKLAHOMA Algebra I
Standards

Standard 1: Number Sense and Algebraic Operations

The student will use expressions and equations to model number relationships.

1. Translate word phrases and sentences into expressions and equations and vice versa.
2. Expressions
   a. Simplify and evaluate linear, absolute value, rational and radical expressions.
   b. Simplify polynomials by adding, subtracting or multiplying.

Standard 2: Relations and Functions

The student will use relations and functions to model number relationships.

1. Relations and Functions
   a. Distinguish between linear and nonlinear data.
   b. Distinguish between relations and functions.
   c. Identify dependent and independent variables, domain and range.
   d. Evaluate a function using tables, equations or graphs.
2. Recognize the parent graph of the functions y = k, y = x, y = |x|, and predict the effects of transformations on the parent graph (e.g., y = |x| + 2, change slope, change intercepts, change slope and intercept).
3. Calculate the slope of a line using a graph, an equation, two points or a set of data points.
4. Develop the equation of a line and graph linear relationships given the following:
   a. slope and y-intercept
   b. slope and one point on the line
   c. two points on the line
   d. x-intercept and y-intercept
   e. a set of data points
5. Slope Interpretation
   a. Use the slope to differentiate between lines that are parallel, perpendicular, horizontal, or vertical.
   b. Interpret the slope and intercepts within the context of everyday life (e.g., telephone charges based on base rate [y-intercept] plus rate per minute [slope]).
6. Linear Equations and Inequalities
   a. Solve linear equations by graphing or using properties of equality.
   b. Solve linear inequalities by graphing or using properties of inequalities.
   c. Match appropriate equations or inequalities (with 1 or 2 variables) to a graph, table, or situation and vice versa.
7. Solve a system of linear equations by graphing, substitution or elimination.
8. Problem Solving
   a. Use the formulas from measurable attributes of geometric models (perimeter, circumference, area and volume), science, and statistics to solve problems within an algebraic context.
   b. Solve two-step and three-step problems using concepts such as rules of exponents, probability, rate, distance, ratio and proportion, measures of central tendency and percent.
9. Nonlinear Functions
   a. Match exponential and quadratic functions to a table, graph or situation and vice versa.
   b. Solve quadratic equations by graphing, factoring, or using the quadratic formula.

Standard 3: Data Analysis and Statistics

The student will use data analysis and statistics to formulate and justify predictions from a set of data.

1. Data Analysis
   a. Translate from one representation of data to another and understand that the data can be represented using a variety of tables, graphs, or symbols and that different modes of representation often convey different messages.
   b. Make valid inferences, predictions, and/or arguments based on data from graphs, tables, and charts.
2. Collect data involving two variables and display on a scatter plot; interpret results using a linear model/equation and identify whether the model/equation is a line best fit for the data (e.g., given a scatter plot and several linear equations, which one is the best fit?).

OKLAHOMA Algebra II
Standards

Standard 1: Number Systems and Algebraic Operations

The student will perform operations with real numbers, complex numbers and matrices.

1. Define and perform operations on real and complex numbers.
2. Convert expressions from radical notations and vice versa.
3. Matrices
   a. Add, subtract, and multiply matrices to solve problems.
   b. Find the inverse and determinant of a matrix to solve problems.
   c. Use matrices to solve systems of equations.

Standard 2: Relations and Functions

The student will use functions and relations to solve problems.

1. Recognize the parent graph of the function $y = x^2$ and predict the effects of transformations on the parent graph (e.g., $y = x^2 + 3$ shifts the graph up 3, $y = 3x^2$ creates vertical stretching by a factor of 3).
2. Solve, graph and analyze systems of linear equations and inequalities.
3. Solve quadratic equations by graphing, factoring, completing the square and quadratic formula.
4. Compare the relationship between the x-intercepts (zeros) of a quadratic function and the roots of a quadratic equation to solve problems.
5. Interpret the maximum and minimum value and the y-intercept of a quadratic function.
6. Identify, graph, and write the equations of the conic sections.
7. Define and distinguish between relations and functions.
8. Use functional notation and specify domain and range.
9. Find and graph the inverse of a function.
10. Exponential and Logarithmic Functions
    a. Interpret and graph exponential and logarithmic functions.
    b. Apply the inverse relationship between exponential and logarithmic functions.
    c. Use exponential and logarithmic functions to solve problems (e.g., compound interest, exponential growth or exponential decay).
11. Solve multistep problems using concepts such as rate, distance, ratio and proportion, average, and percent.
12. Polynomials
    a. Use synthetic division to find the solutions of a polynomial.
    b. Use factoring to find the solutions of a polynomial.
    c. Graph a polynomial and identify the x- and y-intercepts, relative maximums and relative minimums.
13. Rational Expressions and Equations
    a. Simplify rational expressions.
    b. Solve rational equations.
    c. Graph rational expressions and identify x- and y-intercepts, horizontal asymptotes and vertical asymptotes.

Standard 3: Data Analysis and Statistics

The student will use data analysis and statistics to formulate and justify predictions from a set of data.

1. Collect data involving two variables and display on a scatter plot, interpret results using a linear, exponential or quadratic model/equation and identify whether the model/equation is a curve of best fit for the data.
2. Analyze and synthesize data using measures of central tendency and standard deviation.
3. Identify how given outliers affect representations of data (e.g., a regression line may be strongly affected by a few aberrant points while the same aberrant points might indicate a mistake on a scatter plot).
4. Differentiate between arithmetic and geometric sequences and series.

OKLAHOMA Geometry
Standards

Standard 1: Logical Reasoning

The student will use deductive and inductive reasoning to solve problems.

1. Properties and Relationships of Figures
   a. Identify the relationships of parallel lines with a transversal.
   b. Identify relationships between pairs of angles (e.g., adjacent, complementary, vertical).
2. Determine and use the relationships of congruency and similarity to determine unknown values.
3. Use logical reasoning skills (inductive and deductive) to make and test conjectures, formulate counter examples, follow logical arguments, judge the validity of arguments and construct simple valid arguments.

Standard 2: Properties of 2- and 3-Dimensional Figures

The student will use the properties and formulas of geometric figures to solve problems.

1. Polygons
   a. Identify and describe polygons (i.e., convex, concave, regular)
   b. Apply the interior and exterior angle sum of convex polygons to solve problems.
   c. Develop and apply the properties of quadrilaterals to solve problems (e.g., rectangles, parallelograms, rhombi, trapezoids, kites).
2. Draw and analyze 2- and 3-dimensional figures.
3. Use properties of 2- and 3-dimensional figures to determine unknown values (e.g., given the perimeter/circumference, find the area).
4. Compute length, perimeter or circumference, area, volume, and surface area of geometric figures with missing information and correctly identify the appropriate unit of measure of each.
5. Use geometric tools (e.g., protractor, compass, straight edge) to construct a variety of figures.
6. Find angle measures and arc measures related to circles.
7. Chords, Secants and Tangents
   a. Identify and describe the relationship between two chords that intersect in the interior of a circle.
   b. Identify and describe the relationship between two secants that intersect in the exterior of a circle.
   c. Identify and describe the relationship between a secant and a tangent that intersect in the exterior of a circle.

Standard 3: Coordinate Geometry

The student will solve problems with geometric figures in the coordinate plane.

1. Use transformations (reflection, rotation, translation) within coordinate geometry (e.g., reflect points across the y-axis).
2. Use coordinate geometry to find the distance between two points; the midpoint of a segment; and to calculate the slopes of parallel, perpendicular, horizontal, and vertical lines.
3. Given a set of points determine the type of figure based on its properties (e.g., parallelogram, isosceles triangle, regular octagon).

Standard 4: Angles, Triangles and Similar Polygons

The student will use the properties of angles, right triangles and similar polygons to solve problems.

1. Solve problems using properties of angles (e.g., interior, exterior, complementary, vertical, angle sums, 30-60-90).
2. Use the Pythagorean Theorem and its converse to find missing side lengths and to determine acute, right, and obtuse triangles.
3. Apply the 45-45-90 and 30-60-90 right triangle relationships to solve problems.
4. Express the trigonometric functions as ratios and derive the relationship between sine, cosine, and tangent ratios, and use to solve real-world problems.
5. Similar Polygons
   a. Use similar figures to construct ratios and solve for a missing side.
   b. Use ratios of similar figures to find linear distance, perimeter, area, and volume.

Science

OKLAHOMA Grades 7–8 Science
Process Standards

Process Standard 1: Observe and Measure

Observing is the first action taken by the learner to acquire new information about an object, organism, or event. Opportunities for observation are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The student will accomplish these objectives to meet this process standard.

1. Identify qualitative and/or quantitative changes given conditions (e.g., temperature, mass, volume, time, position, length) before, during, and after an event.
2. Use appropriate tools (e.g., metric ruler, graduated cylinder, thermometer, balances, spring scales, stopwatches) when measuring objects, organisms, and/or events.
3. Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e., micro-, milli-, centi-, and kilo-) when measuring objects, organisms, and/or events.

Process Standard 2: Classify

Classifying establishes order. Objects, organisms, and events are classified based on similarities, differences, and interrelationships. The student will accomplish these objectives to meet this process standard.

1. Use observable properties to place an object, organism, and/or event into a classification system (e.g., dichotomous keys).
2. Identify properties by which a set of objects, organisms, and/or events could be ordered.

Process Standard 3: Experiment

Experimenting is a method of discovering information. It requires making observations and measurements to test ideas. The student will accomplish these objectives to meet this process standard.

1. Ask questions about the world and design investigations that lead to scientific inquiry.
2. Evaluate the design of a scientific investigation.
3. Identify variables and/or controls in an experimental setup; independent (tested/experimental) variable and dependent (measured) variable.
4. Identify a testable hypothesis for an experiment.
5. Design and conduct experiments.
6. Recognize potential hazards and practice safety procedures in all science activities.

Process Standard 4: Interpret and Communicate

Interpreting is the process of recognizing patterns in collected data by making inferences, predictions, or conclusions. Communicating is the process of describing, recording, and reporting experimental procedures and results to others. Communication may be oral, written, or mathematical and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations, and mathematical equations. The student will accomplish these objectives to meet this process standard.

4. Report data in an appropriate method when given an experimental procedure or data.
5. Interpret data tables, line, bar, trend, and/or circle graphs.
6. Evaluate data to develop reasonable explanations, and/or predictions.
7. Accept or reject hypotheses when given results of an investigation.

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_____ = Standards content sampled by ACT's Science tests

8. Communicate scientific procedures and explanations.

Process Standard 5: Inquiry

Inquiry can be defined as the skills necessary to carry out the process of scientific or systemic thinking. In order for inquiry to occur, students must have the opportunity to ask a question, formulate a procedure, and observe phenomena. The student will accomplish these objectives to meet this process standard.

9. Use systematic observations, make accurate measurements, and identify and control variables.
10. Use technology to gather data and analyze results of investigations.
11. Review data, summarize data, and form logical conclusions.
12. Formulate and evaluate explanations proposed by examining and comparing evidence, pointing out statements that go beyond evidence, and suggesting alternative explanations.

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_____ = Standards content sampled by ACT's Science tests

OKLAHOMA Grade 7
Standards

Standard 1: Properties and Physical Changes in Matter

Physical characteristics of objects can be described using shape, size, and mass whereas the materials from which objects are made can be described using color and texture. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Matter has physical properties that can be measured (i.e., mass, volume, temperature, color, texture, and density). Physical changes of a substance do not alter the chemical nature of a substance (e.g., phase changes of water and/or sanding wood).
2. A mixture of substances often can be separated into the original substance using one or more of the physical properties.

Standard 2: Structure and Function in Living Systems

Living systems at all levels of organization demonstrate the complementary nature of structure and function. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Living systems are organized by levels of complexity (i.e., cells, tissues, organs, and/or systems).
2. Specialized structures perform specific functions at all levels of complexity (e.g., leaves on trees and wings on birds).

Standard 3: Reproduction and Heredity

Reproduction is the process by which organisms give rise to offspring. Heredity is the passing of traits to offspring. All organisms must be able to grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Characteristics of an organism result from inheritance and from interactions with the environment.
2. Reproduction is essential for species survival. Individual organisms with certain traits are more likely to survive and produce offspring.

Standard 4: Behavior and Regulations

All organisms must be able to grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment. Behavioral response is a set of actions determined in part by heredity and in part by experience. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Living organisms strive to maintain a constant internal environment (i.e., temperature regulation).
2. Living organisms have physical and/or behavioral responses to external stimuli (e.g., hibernation, migration, plant growth).

Standard 5: Structures of the Earth System

The earth is mostly rock, three-fourths of its surface is covered by a relatively thin layer of water, and the entire planet is surrounded by a relatively thin blanket of air, and is able to support life. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Global patterns of atmospheric movement influence local weather such as oceans' effect on climate.
2. Clouds, formed by the condensation of water vapor, affect local weather and climate.

Standard 6: Earth and the Solar System

The earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their moons, and smaller objects, such as, asteroids and comets. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Most objects in the solar system are in regular and predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, and eclipses.
2. Seasons result from variations in the amount of the sun's energy hitting the surface, due to the tilt of the earth's rotation on its axis and the length of the day.

= Standards measured by ACT's Science tests
= Standards content sampled by ACT's Science tests

OKLAHOMA Grade 8
Standards

Standard 1: Properties and Chemical Changes in Matter

Physical characteristics of objects can be described using shape, size, and mass. The materials from which objects are made can be described using color, texture, and hardness. These properties can be used to distinguish and separate one substance from another. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Substances react chemically with other substances to form new substances with different characteristics (e.g., rusting, burning, reaction between baking soda and vinegar).
2. Matter has physical properties that can be measured (i.e., mass, volume, temperature, color, texture, density, and hardness). In chemical reactions and physical changes, matter is conserved (e.g., compare and contrast physical and chemical changes).

Standard 2: Motions and Forces

The motion of an object can be described by its position, direction of motion, and speed. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. The motion of an object can be measured. The position of an object, its speed and direction can be represented on a graph.
2. An object that is not being subjected to a net force will continue to move at a constant velocity (in a straight line and a constant speed).

Standard 3: Diversity and Adaptations of Organisms

Millions of species of animals, plants, and microorganisms are alive today. Although different species might look dissimilar, the unity among organisms becomes apparent from an analysis of internal and external structures. Adaptation involves the selection of naturally occurring variations in populations. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. By classifying organisms, biologists consider details of internal and external structure.
2. Organisms have a great variety of internal and external structures that enable them to survive in a specific habitat such as echolocation of bats and seed dispersal methods.

Standard 4: Structures and Forces of the Earth and Solar System

The earth is mostly rock, three-fourths of its surface is covered by a relatively thin layer of water, and the entire planet is surrounded by a relatively thin blanket of air, and is able to support life. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Landforms result from constructive forces such as crustal deformation, volcanic eruption, and deposition of sediment and destructive forces such as weathering and erosion.
2. The formation, weathering, sedimentation, and reformation of rock constitute a continuing "rock cycle" in which the total amount of material stays the same as its form changes.
3. Gravity is the force that governs the motion of the solar system and holds us to the earth's surface.

Standard 5: Earth's History

The Earth's history involves periodic changes in the structures of the earth over time. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Earth's history has been punctuated by occasional catastrophic events, such as the impact of asteroids or comets, enormous volcanic eruptions, periods of continental glaciation, and the rise and fall of sea level.
2. Fossils provide important evidence of how life and environmental conditions have changed.

= Standards measured by ACT's Science tests
= Standards content sampled by ACT's Science tests

OKLAHOMA Physical Science
Process Standards

Process Standard 1: Observe and Measure

Observing is the first action taken by the learner to acquire new information about an object or event. Opportunities for observation are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The student will accomplish these objectives to meet this process standard.

1. Identify qualitative and quantitative changes given conditions (e.g., temperature, mass, volume, time, position, length) before, during, and after an event.
2. Use appropriate tools (e.g., metric ruler, graduated cylinder, thermometer, balances, spring scales, stopwatches) when measuring objects and/or events.
3. Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e. micro-, milli-, centi-, and kilo-) when measuring objects and/or events.

Process Standard 2: Classify

Classifying establishes order. Objects and events are classified based on similarities, differences, and interrelationships. The student will accomplish these objectives to meet this process standard.

1. Using observable properties, place an object or event into a classification system.
2. Identify the properties by which a classification system is based.

Process Standard 3: Experiment

Experimenting is a method of discovering information. It requires making observations and measurements to test ideas. The student will accomplish these objectives to meet this process standard.

1. Evaluate the design of a physical science investigation.
2. Identify the independent variables, dependent variables, and controls in an experiment.
3. Use mathematics to show relationships within a given set of observations.
4. Identify a hypothesis for a given problem in physical science investigations.
5. Recognize potential hazards and practice safety procedures in all physical science activities.

Process Standard 4: Interpret and Communicate

Interpreting is the process of recognizing patterns in collected data by making inferences, predictions, or conclusions. Communicating is the process of describing, recording, and reporting experimental procedures and results to others. Communication may be oral, written, or mathematical and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations, and mathematical equations. The student will accomplish these objectives to meet this process standard.

1. Select appropriate predictions based on previously observed patterns of evidence.
2. Report data in an appropriate manner.
3. Interpret data tables, line, bar, trend, and/or circle graphs.
4. Accept or reject hypotheses when given results of a physical science investigation.
5. Evaluate experimental data to draw the most logical conclusion.
6. Prepare a written report describing the sequence, results, and interpretation of a physical science investigation or event.
7. Communicate or defend scientific thinking that resulted in conclusions.
8. Identify and/or create an appropriate graph or chart from collected data, tables, or written description.

Process Standard 5: Model

Modeling is the active process of forming a mental or physical representation from data, patterns, or relationships to facilitate understanding and enhance prediction. The student will accomplish these objectives to meet this process standard.

1. Interpret a model which explains a given set of observations.
2. Select predictions based on models.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

3. Compare a given model to the physical world.

Process Standard 6: Inquiry

Inquiry can be defined as the skills necessary to carry out the process of scientific or systemic thinking. In order for inquiry to occur, students must have the opportunity to ask a question, formulate a procedure, and observe phenomena. The student will accomplish these objectives to meet this process standard.

1. Formulate a testable hypothesis and design an appropriate experiment relating to the physical world.
2. Design and conduct physical science investigations in which variables are identified and controlled.
3. Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.
4. Inquiries should lead to the formulation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigation) and arguments that encourage the revision of their explanations, leading to further inquiry.

= Standards measured by ACT's Science tests
= Standards content sampled by ACT's Science tests

OKLAHOMA Physical Science
Standards

Standard 1: Structure and Properties of Matter

All matter is made up of atoms. Its structure is made up of repeating patterns and has characteristic properties. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Matter is made up of minute particles called atoms, and atoms are composed of even smaller components (i.e., protons, neutrons, and electrons).
2. An element is composed of a single type of atoms. When elements are listed in order according to the number of protons (called the atomic number), repeating patterns of physical and chemical properties identify families of elements with similar properties.
3. Matter has characteristic properties, such as boiling points, melting points, and density, which distinguish pure substances and can be used to separate one substance from another.

Standard 2: Motion and Forces

The motion of an object can be described by its position, direction of motion, and speed. A change in motion occurs when a net force is applied. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Objects change their motion only when a net force is applied. Laws of motion are used to determine the effects of forces on the motion of objects.
2. Gravitation is a universal force that each mass exerts on any other mass.

Standard 3: Interactions of Energy and Matter

Energy, such as potential, kinetic, and field, interacts with matter and is transferred during these interactions. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. All energy can be considered to be either kinetic energy, which is the energy of motion; potential energy, which depends on relative position; or energy contained by a field, such as electromagnetic waves.
2. Waves, including sounds and seismic waves, waves on water, and light waves, have energy and can transfer energy when they interact with matter (such as used in telescopes, solar power, and telecommunication technology).

Standard 4: The Earth System

A system that has changed over time, which includes dynamic changes in the earth's crust, is the Earth system. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Geologic time can be estimated by observing rock sequences and using fossils to correlate the sequences at various locations.
2. The solid crust of the earth consists of separate plates that move very slowly pressing against one another in some places and pulling apart in other places (i.e., volcanoes, earthquakes and mountain building).

Standard 5: The Universe

The universe is an ever-changing system of matter and energy that exists now, in the past, and in the future. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. The stars differ from each other in size, temperature, and age, but they appear to be made up of the same elements that are found on the earth.
2. All stars have a life cycle including birth, development, and death. Fusion reactions in stars release great amounts of energy and matter over millions of years.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

OKLAHOMA Biology
Process Standards

Process Standard 1: Observe and Measure

Observing is the first action taken by the learner to acquire new information about an organism or event. Opportunities for observation are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The student will accomplish these objectives to meet this process standard.

1. Identify qualitative and quantitative changes in cells, organisms, populations, and ecosystems given conditions (e.g., temperature, mass, volume, time, position, length, quantity) before, during, and after an event.
2. Use appropriate tools (e.g., microscope, pipette, metric ruler, graduated cylinder, thermometer, balances, stopwatches) when measuring cells, organisms, populations, and ecosystems.
3. Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e., micro-, milli-, centi-, and kilo-) when measuring cells, organisms, populations, and ecosystems.

Process Standard 2: Classify

Classifying establishes order. Organisms and events are classified based on similarities, differences, and interrelationships. The student will accomplish these objectives to meet this process standard.

1. Using observable properties, place cells, organisms, and/or events into a biological classification system.
2. Identify the properties by which a biological classification system is based.

Process Standard 3: Experiment

Experimenting is a method of discovering information. It requires making observations and measurements to test ideas. The student will accomplish these objectives to meet this process standard.

1. Evaluate the design of a biology laboratory investigation.
2. Identify the independent variables, dependent variables, and controls in an experiment.
3. Use mathematics to show relationships within a given set of observations (e.g., population studies, biomass, probability).
4. Identify a hypothesis for a given problem in biology investigations.
5. Recognize potential hazards and practice safety procedures in all biology activities.

Process Standard 4: Interpret and Communicate

Interpreting is the process of recognizing patterns in collected data by making inferences, predictions, or conclusions. Communicating is the process of describing, recording, and reporting experimental procedures and results to others. Communication may be oral, written, or mathematical and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations, and mathematical equations. The student will accomplish these objectives to meet this process standard.

1. Select appropriate predictions based on previously observed patterns of evidence.
2. Report data in an appropriate manner.
3. Interpret data tables, line, bar, trend, and/or circle graphs.
4. Accept or reject hypotheses when given results of a biological investigation.
5. Evaluate experimental data to draw the most logical conclusion.
6. Prepare a written report describing the sequence, results, and interpretation of a biological investigation or event.
7. Communicate or defend scientific thinking that results in conclusions.
8. Identify and/or create an appropriate graph or chart from collected data, tables, or written description (e.g., population studies, plant growth, heart rate).

Process Standard 5: Model

Modeling is the active process of forming a mental or physical representation from data, patterns, or relationships to facilitate understanding and enhance prediction. The student will accomplish these objectives to meet this process standard.

1. Interpret a biological model which explains a given set of observations.
2. Select predictions based on models such as pedigrees, life cycles, energy pyramids.

= Standards measured by ACT's Science tests
= Standards content sampled by ACT's Science tests

3. Compare a given model to the living world.

Process Standard 6: Inquiry

Inquiry can be defined as the skills necessary to carry out the process of scientific or systemic thinking. In order for inquiry to occur, students must have the opportunity to ask a question, formulate a procedure, and observe phenomena. The student will accomplish these objectives to meet this process standard.

1. Formulate a testable hypothesis and design an appropriate experiment relating to the living world.
2. Design and conduct biological investigations in which variables are identified and controlled.
3. Use a variety of technologies, such as hand tools, microscopes, measuring instruments, and computers to collect, analyze, and display data.
4. Inquiries should lead to the formulation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigation) and arguments that encourage the revision of their explanations, leading to further inquiry.

= Standards measured by ACT's Science tests

_____ = Standards content sampled by ACT's Science tests

OKLAHOMA Biology
Standards

Standard 1: The Cell

Cells are the fundamental unit of life, composed of a variety of structures that perform functions necessary to maintain life. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Cells are composed of a variety of structures such as the nucleus, cell membrane, cell wall, cytoplasm, ribosomes, mitochondria, and chloroplasts.
2. Cells can differentiate and may develop into complex multicellular organisms (i.e., cells, tissues, organs, organ systems, organisms).

Standard 2: The Molecular Basis of Heredity

DNA determines the characteristics of organisms. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Cells function according to the information contained in the master code of DNA (i.e., cell cycle, DNA to DNA, and DNA to RNA). Transfer RNA and protein synthesis will be taught in life science courses with rigor greater than Biology I.
2. A sorting and recombination of genes in reproduction results in a great variety of possible gene combinations from the offspring of any two parents (i.e., Punnett squares and pedigrees). Students will understand the following concepts in a single trait cross: alleles, dominant trait, recessive trait, phenotype, genotype, homozygous, and heterozygous.

Standard 3: Biological Diversity

Diversity of species is developed through gradual processes over many generations. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Different species might look dissimilar, but the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry (e.g., homologous and analogous structures).
2. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology, which may enhance or limit the survival and reproductive success in a particular environment.

Standard 4: The Interdependence of Organisms

Interrelationships and interactions between and among organisms in an environment is the interdependence of organisms. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Matter on the earth cycles among the living and nonliving components of the biosphere.
2. Organisms both cooperate and compete in ecosystems (i.e., parasitism and symbiosis).
3. Living organisms have the capacity to produce populations of infinite size, but environments and resources limit population size (i.e., carrying capacity and limiting factors).

Standard 5: Matter, Energy, and Organization in Living Systems

Living systems require a continuous input of energy to maintain their chemical and physical organizations. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. The complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain the organism (i.e., photosynthesis and cellular respiration).
2. As matter and energy flow through different levels of organization of living systems and between living systems and the physical environment, chemical elements are recombined in different ways by different structures. Matter and energy are conserved in each change (i.e., water cycle, carbon cycle, nitrogen cycle, food webs, and energy pyramids).

Standard 6: The Behavior of Organisms

Organisms have behavioral responses to internal changes and to external stimuli. The student will engage in investigations that integrate the process standards and lead to the discovery of the following objectives:

1. Specialized cells enable organisms to monitor what is going on in the world around them (e.g., detect light, sound, specific chemicals, gravity, plant tropism, sense organs, homeostasis).

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

2. Responses to external stimuli can result from interactions with the organism's own species and others, as well as environmental changes; these responses either can be innate or learned. Broad patterns of behavior exhibited by animals have changed over time to ensure reproductive success.

= Standards measured by ACT's Science tests

_____ = Standards content sampled by ACT's Science tests

OKLAHOMA Chemistry
Process Standards

Process Standard 1: Observe and Measure

Observing is the first action taken by the learner to acquire new information about an object or event. Opportunities for observation are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The student will accomplish these objectives to meet this process standard.

1. Identify qualitative changes in reactions and quantitative changes in chemical reactions given conditions (e.g., temperature, mass, volume, time, position, length) before, during, and after an event.
2. Use appropriate tools (e.g., metric ruler, graduated cylinder, thermometer, balances, spring scales, stopwatches) when measuring objects and/or events.
3. Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e., micro-, milli-, centi-, and kilo-) when measuring mass volume and temperature.

Process Standard 2: Classify

Classifying establishes order. Objects and events are classified based on similarities, differences, and interrelationships. The student will accomplish these objectives to meet this process standard.

1. Using observable properties, place an object or event (i.e., chemical versus physical, electrons into charge, electron levels, and reaction types) into a classification system.
2. Identify properties by which a classification system is based.

Process Standard 3: Experiment

Experimenting is a method of discovering information. It requires making observations and measurements to test ideas. The student will accomplish these objectives to meet this process standard.

1. Evaluate the design of a chemistry laboratory investigation.
2. Identify the independent variables, dependent variables, and controls in an experiment.
3. Use mathematics to show relationships within a given set of observations (i.e., conservation of mass and stoichiometry).
4. Identify a hypothesis for a given problem in chemistry investigations.
5. Recognize potential hazards and practice safety procedures in all chemistry laboratory activities.

Process Standard 4: Interpret and Communicate

Interpreting is the process of recognizing patterns in collected data by making inferences, predictions, or conclusions. Communicating is the process of describing, recording, and reporting experimental procedures and results to others. Communication may be oral, written, or mathematical and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations, and mathematical equations. The student will accomplish these objectives to meet this process standard.

1. Select appropriate predictions based on previously observed patterns of evidence.
2. Report data in an appropriate manner.
3. Interpret data tables, line, bar, trend, and/or circle graphs.
4. Accept or reject hypotheses when given results of a chemistry investigation.
5. Evaluate experimental data to draw the most logical conclusion.
6. Prepare a written report describing the sequence, results, and interpretation of a chemistry investigation or event.
7. Communicate or defend scientific thinking that resulted in conclusions.
8. Identify and/or create an appropriate graph or chart from collected data, tables, or written description.

Process Standard 5: Model

Modeling is the active process of forming a mental or physical representation from data, patterns, or relationships to facilitate understanding and enhance prediction. The student will accomplish these objectives to meet this process standard.

1. Interpret an atomic model which explains a given set of observations.
2. Select predictions based on models such as electron configuration, bonding, and compound formation.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

3. Compare a given model to the physical world.

Process Standard 6: Inquiry

Inquiry can be defined as the skills necessary to carry out the process of scientific or systemic thinking. In order for inquiry to occur, students must have the opportunity to ask a question, formulate a procedure, and observe phenomena. The student will accomplish these objectives to meet this process standard.

1. Formulate a testable hypothesis and design an appropriate experiment to identify an unknown substance.
2. Design and conduct scientific investigations in which variables are identified and controlled.
3. Use a variety of technologies, such as hand tools, balances, conductivity apparatus, thermometers, graduated cylinders, volumetric flasks, and computers to collect, analyze, and display data.
4. Inquiries should lead to the formulation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigation) and arguments that encourage the revision of their explanations, leading to further inquiry.

= Standards measured by ACT's Science tests
= Standards content sampled by ACT's Science tests

OKLAHOMA Chemistry
Standards

Standard 1: Structure and Properties of Matter

All matter is made up of atoms. Its structure is made up of repeating patterns and has characteristic properties. The student will engage in investigations that integrate the process and inquiry standards and lead to the discovery of the following objectives:

1. Matter is made of atoms and atoms are composed of even smaller components (i.e., protons, neutrons and electrons).
2. Atoms interact with one another by transferring or sharing outer electrons that are farthest from the nucleus. These outer electrons govern the chemical properties of the element.
3. An element is composed of a single type of atom. When elements are listed in order according to the number of protons, repeating patterns of physical and chemical properties identify families of elements with similar properties.
4. A compound is formed when two or more kinds of atoms bind together chemically. Each compound has unique chemical and physical properties.
5. Solids, liquids, and gases differ in the energy that binds them together.

Standard 2: Chemical Reactions

A chemical reaction is a reaction in which one or more substances are converted into different substances. A chemical change cannot be reversed by physical means. The student will engage in investigations that integrate the process and inquiry standards and lead to the discovery of the following objectives:

1. A large number of important reactions involve the transfer of either electrons (oxidation/reduction) or hydrogen ions (acid/base reactions).
2. The rate of chemical reactions is affected by the concentration and temperature of the reacting materials. Catalysts accelerate chemical reactions.
3. Chemical substances react in definite molar weight proportions.
4. Mass is conserved in chemical reactions (balancing of equations).

OKLAHOMA Physics
Process Standards

Process Standard 1: Observe and Measure

Observing is the first action taken by the learner to acquire new information about an object or event. Opportunities for observation are developed through the use of a variety of scientific tools. Measurement allows observations to be quantified. The student will accomplish these objectives to meet this process standard.

1. Identify qualitative and quantitative changes given conditions (e.g., temperature, mass, volume, time, position, length) before, during, and after an event.
2. Use appropriate tools (e.g., metric ruler, graduated cylinder, thermometer, balances, spring scales, stopwatches) when measuring objects and/or events.
3. Use appropriate System International (SI) units (i.e., grams, meters, liters, degrees Celsius, and seconds); and SI prefixes (i.e., micro-, milli-, centi-, and kilo-) when measuring objects and/or events.

Process Standard 2: Classify

Classifying establishes order. Objects and events are classified based on similarities, differences, and interrelationships. The student will accomplish these objectives to meet this process standard.

1. Using observable properties, place an object or event into a classification system.
2. Identify the properties by which a classification system is based.
3. Graphically classify physical relationships (e.g., linear, parabolic, inverse).

Process Standard 3: Experiment

Experimenting is a method of discovering information. It requires making observations and measurements to test ideas. The student will accomplish these objectives to meet this process standard.

1. Evaluate the design of a physics investigation.
2. Identify the independent variables, dependent variables, and controls in an experiment.
3. Use mathematics to show relationships within a given set of observations.
4. Identify a hypothesis for a given problem in physics investigations.
5. Recognize potential hazards and practice safety procedures in all physics activities.

Process Standard 4: Interpret and Communicate

Interpreting is the process of recognizing patterns in collected data by making inferences, predictions, or conclusions. Communicating is the process of describing, recording, and reporting experimental procedures and results to others. Communication may be oral, written, or mathematical and includes organizing ideas, using appropriate vocabulary, graphs, other visual representations, and mathematical equations. The student will accomplish these objectives to meet this process standard.

1. Select appropriate predictions based on previously observed patterns of evidence.
2. Report data in an appropriate manner.
3. Interpret data tables, line, bar, trend, and/or circle graphs.
4. Accept or reject hypotheses when given results of a physics investigation.
5. Evaluate experimental data to draw the most logical conclusion.
6. Prepare a written report describing the sequence, results, and interpretation of a physics investigation or event.
7. Communicate or defend scientific thinking that resulted in conclusions.
8. Identify and/or create an appropriate graph or chart from collected data, tables, or written description.

Process Standard 5: Model

Modeling is the active process of forming a mental or physical representation from data, patterns, or relationships to facilitate understanding and enhance prediction. The student will accomplish these objectives to meet this process standard.

1. Interpret a model which explains a given set of observations.
2. Select predictions based on models.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

3. Compare a given model to the physical world.

Process Standard 6: Inquiry

Inquiry can be defined as the skills necessary to carry out the process of scientific or systemic thinking. In order for inquiry to occur, students must have the opportunity to ask a question, formulate a procedure, and observe phenomena. The student will accomplish these objectives to meet this process standard.

1. Formulate a testable hypothesis and design an appropriate experiment relating to the physical world.
2. Design and conduct physics investigations in which variables are identified and controlled.
3. Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.
4. Inquiries should lead to the formulation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigation) and arguments that encourage the revision of their explanations, leading to further inquiry.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

OKLAHOMA Physics
Standards

Standard 1: Motions and Forces

The motion of an object can be described by its position, direction of motion, and speed. A change in motion occurs when a net force is applied. The student will engage in investigations that integrate the process and inquiry standards and lead to the discovery of the following objectives:

1. Objects change their motion only when a net force is applied. Newton's laws of motion are used to calculate precisely the effects of forces on the motion of objects.
2. Gravitation is a universal force that each mass exerts on any other mass. The strength of the gravitational attractive force between two masses is proportional to the masses and inversely proportional to the square of the distance between them.
3. The electric force is a universal force that exists between any two charged objects. The strength of the force is proportional to the charges and, as with gravitation, inversely proportional to the square of the distance between them.
4. Electricity and magnetism are two aspects of a single electromagnetic force.

Standard 2: Conservation of Energy

The total energy of the universe is constant. The student will engage in investigations that integrate the process and inquiry standards and lead to the discovery of the following objectives:

1. Energy can be transferred but never destroyed. As these transfers occur, the matter involved becomes steadily less ordered.
2. All energy can be considered to be kinetic energy, potential energy, or energy contained by a field.
3. Heat consists of random motion and the vibrations of atoms, molecules, and ions. The higher the temperature, the greater the atomic or molecular motion.

Standard 3: Interactions of Energy and Matter

Energy (potential, kinetic and field) interacts with matter and is transferred during these interactions. The student will engage in investigations that integrate the process and inquiry standards and lead to the discovery of the following objectives:

1. Waves have energy and can transfer energy when they interact with matter. Sound waves and electromagnetic waves are fundamentally different.
2. Electromagnetic waves result when a charged object is accelerated or decelerated.

= Standards measured by ACT's Science tests
_____ = Standards content sampled by ACT's Science tests

Section C: ACT's College Readiness Standards Included in Oklahoma's Grades 7–12 Priority Academic Student Skills

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 Oklahoma's Standards. ACT Standards not highlighted are those statements that include specific content, complexity and/or proficiency level descriptions that were not described in Oklahoma's standards.

Because Oklahoma educators are the experts on the Oklahoma Priority Academic Student Skills, 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., *then*, *this time*)	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., *first*, *afterward*, *in response*) 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., *therefore*, *however*, *in addition*) 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	Use conjunctions or punctuation to join simple clauses Revise shifts in verb tense between simple clauses in a sentence or between simple adjoining sentences	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	Delete commas that create basic sense problems (e.g., between verb and direct object)
16–19	Determine the need for punctuation and conjunctions to avoid awkward-sounding sentence fragments and fused sentences Decide the appropriate verb tense and voice by considering the meaning of the entire sentence	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 Recognize and use the appropriate word in frequently confused pairs such as *there* and *their*, *past* and *passed*, and *led* and *lead*	Provide appropriate punctuation in straightforward situations (e.g., items in a series) Delete commas that disturb the sentence flow (e.g., between modifier and modified element)
20–23	Recognize and correct marked disturbances of sentence flow and structure (e.g., participial phrase fragments, missing or incorrect relative pronouns, dangling or misplaced modifiers)	Use idiomatically appropriate prepositions, especially in combination with verbs (e.g., *long for*, *appeal to*) Ensure that a verb agrees with its subject when there is some text between the two	Use commas to set off simple parenthetical phrases 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)
24–27	Revise to avoid faulty placement of phrases and faulty coordination and subordination of clauses in sentences with subtle structural problems Maintain consistent verb tense and pronoun person on the basis of the preceding clause or sentence	Ensure that a pronoun agrees with its antecedent when the two occur in separate clauses or sentences Identify the correct past and past participle forms of irregular and infrequently used verbs and form present-perfect verbs by using *have* rather than *of*	Use punctuation to set off complex parenthetical phrases 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 *and*) Use apostrophes to indicate simple possessive nouns Recognize inappropriate uses of colons and semicolons
28–32	Use sentence-combining techniques, effectively avoiding problematic comma splices, run-on sentences, and sentence fragments, especially in sentences containing compound subjects or verbs 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	Correctly use reflexive pronouns, the possessive pronouns *its* and *your*, and the relative pronouns *who* and *whom* 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)	Use commas to set off a nonessential/nonrestrictive appositive or clause Deal with multiple punctuation problems (e.g., compound sentences containing unnecessary commas and phrases that may or may not be parenthetical) Use an apostrophe to show possession, especially with irregular plural nouns Use a semicolon to indicate a relationship between closely related independent clauses
33–36	Work comfortably with long sentences and complex clausal relationships within sentences, avoiding weak conjunctions between independent clauses and maintaining parallel structure between clauses	Provide idiomatically and contextually appropriate prepositions following verbs in situations involving sophisticated language or ideas Ensure that a verb agrees with its subject when a phrase or clause between the two suggests a different number for the verb	Use a colon to introduce an example or an elaboration

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	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 Show limited recognition of the complexity of the issue in the prompt	Maintain a focus on the general topic in the prompt through most of the essay	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 Show little or no movement between general and specific ideas and examples
5–6	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 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	Maintain a focus on the general topic in the prompt throughout the essay	Offer limited development of ideas using a few general examples; resort sometimes to merely repeating ideas Show little movement between general and specific ideas and examples
7–8	Show understanding of the persuasive purpose of the task by taking a position on the issue in the prompt Show some recognition of the complexity of the issue in the prompt by • acknowledging counterarguments to the writer's position • providing some response to counter-arguments to the writer's position	Maintain a focus on the general topic in the prompt throughout the essay and attempt a focus on the specific issue in the prompt Present a thesis that establishes focus on the topic	Develop ideas by using some specific reasons, details, and examples Show some movement between general and specific ideas and examples
9–10	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 Show recognition of the complexity of the issue in the prompt by • partially evaluating implications and/or complications of the issue, and/or • posing and partially responding to counter-arguments to the writer's position	Maintain a focus on discussion of the specific topic and issue in the prompt throughout the essay Present a thesis that establishes a focus on the writer's position on the issue	Develop most ideas fully, using some specific and relevant reasons, details, and examples Show clear movement between general and specific ideas and examples
11–12	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 Show understanding of the complexity of the issue in the prompt by • examining different perspectives, and/or • evaluating implications or complications of the issue, and/or • posing and fully discussing counter-arguments to the writer's position	Maintain a clear focus on discussion of the specific topic and issue in the prompt throughout the essay Present a critical thesis that clearly establishes the focus on the writer's position on the issue	Develop several ideas fully, using specific and relevant reasons, details, and examples Show effective movement between general and specific ideas and examples

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

	Organizing Ideas	Using Language
3–4	Provide a discernible organization with some logical grouping of ideas in parts of the essay Use a few simple and obvious transitions Present a discernible, though minimally developed, introduction and conclusion	Show limited control of language by • 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	Provide a simple organization with logical grouping of ideas in parts of the essay Use some simple and obvious transitional words, though they may at times be inappropriate or misleading Present a discernible, though underdeveloped, introduction and conclusion	Show a basic control of language by • 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	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 Use some simple and obvious, but appropriate, transitional words and phrases Present a discernible introduction and conclusion with a little development	Show adequate use of language to communicate by • 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	Provide unity and coherence throughout the essay, sometimes with a logical progression of ideas Use relevant, though at times simple and obvious, transitional words and phrases to convey logical relationships between ideas Present a somewhat developed introduction and conclusion	Show competent use of language to communicate ideas by • 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	Provide unity and coherence throughout the essay, often with a logical progression of ideas Use relevant transitional words, phrases, and sentences to convey logical relationships between ideas Present a well-developed introduction and conclusion	Show effective use of language to clearly communicate ideas by • 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	Perform one-operation computation with whole numbers and decimals Solve problems in one or two steps using whole numbers Perform common conversions (e.g., inches to feet or hours to minutes)	Calculate the average of a list of positive whole numbers Perform a single computation using information from a table or chart	Recognize equivalent fractions and fractions in lowest terms	Exhibit knowledge of basic expressions (e.g., identify an expression for a total as $b + g$) Solve equations in the form $x + a = b$, where a and b are whole numbers or decimals
16–19	Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single-step percent Solve some routine two-step arithmetic problems	Calculate the average of a list of numbers Calculate the average, given the number of data values and the sum of the data values Read tables and graphs Perform computations on data from tables and graphs Use the relationship between the probability of an event and the probability of its complement	Recognize one-digit factors of a number Identify a digit's place value	Substitute whole numbers for unknown quantities to evaluate expressions Solve one-step equations having integer or decimal answers Combine like terms (e.g., $2x + 5x$)
20–23	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	Calculate the missing data value, given the average and all data values but one Translate from one representation of data to another (e.g., a bar graph to a circle graph) Determine the probability of a simple event Exhibit knowledge of simple counting techniques	Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor	Evaluate algebraic expressions by substituting integers for unknown quantities Add and subtract simple algebraic expressions Solve routine first-degree equations Perform straightforward word-to-symbol translations Multiply two binomials
24–27	Solve multistep arithmetic problems that involve planning or converting units of measure (e.g., feet per second to miles per hour)	Calculate the average, given the frequency counts of all the data values Manipulate data from tables and graphs Compute straightforward probabilities for common situations Use Venn diagrams in counting	Find and use the least common multiple Order fractions Work with numerical factors Work with scientific notation Work with squares and square roots of numbers Work problems involving positive integer exponents Work with cubes and cube roots of numbers Determine when an expression is undefined Exhibit some knowledge of the complex numbers	Solve real-world problems using first-degree equations 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) Identify solutions to simple quadratic equations Add, subtract, and multiply polynomials Factor simple quadratics (e.g., the difference of squares and perfect square trinomials) Solve first-degree inequalities that do not require reversing the inequality sign
28–32	Solve word problems containing several rates, proportions, or percentages	Calculate or use a weighted average Interpret and use information from figures, tables, and graphs Apply counting techniques Compute a probability when the event and/or sample space are not given or obvious	Apply number properties involving prime factorization Apply number properties involving even/odd numbers and factors/multiples Apply number properties involving positive/negative numbers Apply rules of exponents Multiply two complex numbers	Manipulate expressions and equations Write expressions, equations, and inequalities for common algebra settings Solve linear inequalities that require reversing the inequality sign Solve absolute value equations Solve quadratic equations Find solutions to systems of linear equations
33–36	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)	Distinguish between mean, median, and mode for a list of numbers Analyze and draw conclusions based on information from figures, tables, and graphs Exhibit knowledge of conditional and joint probability	Draw conclusions based on number concepts, algebraic properties, and/or relationships between expressions and numbers Exhibit knowledge of logarithms and geometric sequences Apply properties of complex numbers	Write expressions that require planning and/or manipulating to accurately model a situation Write equations and inequalities that require planning, manipulating, and/or solving Solve simple absolute value inequalities

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
• 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	• 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	• 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