ACT Connections

Utah Core Standards and ACT Subtests

Content, Assessment, & Design | December 2018

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Table of Contents

Contents

Content, Assessment, & Design | November 2018 1
Table of Contents 2
Introduction 3
Suggestions for Use 4
Frequently Asked Questions ACT 5
ACT English Test Connections with Utah Core State Standards 8
Grades K–5, English 10
Grades 6–8, English 14
Grades 9–12, English 18
ACT Reading Test Connections with Utah Core State Standards 22
Grades K–5, Reading 24
Grades 6–8, Reading 27
Grades 9–12, Reading 31
ACT Mathematics Test Connections with Utah Core State Standards 35
Big Picture of Utah Mathematics Concepts, K–12 37
Side-by-Side Example: Number and Quantity Strand Connectivity Between the ACT and Utah Core State Standards in Mathematics 38
Side-by-Side Example: Strand Comparison Chart Connectivity Between Utah Mathematics Strands and ACT Mathematics Domains 49
ACT Science Test Connections with Utah Core State Standards 50
Grades K–5, Science 52
Grades 6–8, Science 54
Grades 9-12, Science 56
ACT Writing Test Connections with Utah Core State Standards 58
Grades K–5, Writing 60
Grades 6–8, Writing 63
Grades 9–12, Writing 66

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The format of this crosswalk is based on Tennessee's ACT Connections document (Tennessee Department of Education, 2017). This document is adapted for Utah with permission from Philip Jacobs, Tennessee Department of Education.

Introduction

The Utah State Board of Education's *Education Elevated,* (https://www.schools.utah.gov/File/01ed1d4a-2612-4e72-ad02-b6969dec5bc3) lays out the state's goal to increase the number of students earning an ACT composite score of 18 or higher by 2022. The desire to raise Utah's ACT average is rooted in our vision to improve postsecondary and career readiness for all Utah students. To reach our goal, it is essential that administrators, educators, parents, and students know that **all grade levels play an important part in ensuring college and career readiness**.

This document provides a snapshot of the academic skills students need to meet or exceed expectations for college and career readiness as assessed by the ACT. The document also highlights important connections between ACT College and Career Readiness Standards and Utah Core State Standards.

Notes

- The ACT is a summative assessment used by postsecondary institutions and employers to measure college and career readiness.
- The ACT as administered through state-funded testing for all public high school juniors in Utah consists of four multiple-choice subtests (English, mathematics, reading, and science) and participation in the writing test, as directed by the Utah State Board of Education.
- The development of academic skills necessary to be successful on the ACT extends across all grade levels.
- This document is not about "test prep;" it is about the progression of learning across grade levels and the connections between Utah expectations for what students should know in each subject each year and ACT expectations for what students should know by the end of high school.
- This document highlights some of the connections between the Utah Core State Standards and the ACT assessment, but it is not an exhaustive document.

Suggestions for Use

The intent of this guide is to provide LEAs, schools, and teachers with a **starting point** for aligning instruction across content areas and grade levels to support student success on the ACT. While this document focuses on standards in English language arts, mathematics, and science, **teachers of all content areas play an essential role** in preparing students for college and career.

By providing this basic overview of the connections between our Utah Core State Standards and ACT College and Career Readiness Standards, we believe that Utah educators will be better equipped to align their curriculum planning, pacing, and daily instruction to ensure student success.

We recommend that districts and schools take the following next steps:

- **Conduct a curriculum review.** Instructional supervisors and content experts can utilize the following worksheets to chart when and where students are exposed to ACT standards within their current curriculum.
    - English Curriculum Review Worksheet (http://www.act.org/content/dam/act/unsecured/documents/CCRS-EnglishCurriculumWorksheet.pdf)
    - Mathematics Curriculum Review Worksheet (http://www.act.org/content/dam/act/unsecured/documents/CCRS-MathCurriculumWorksheet.pdf)
    - Reading Curriculum Review Worksheet (http://www.act.org/content/dam/act/unsecured/documents/CCRS-ReadingCurriculumWorksheet.pdf)
    - Science Curriculum Review Worksheet (http://www.act.org/content/dam/act/unsecured/documents/CCRS-ScienceCurriculumWorksheet.pdf)
    - Writing Curriculum Review Worksheet (http://www.act.org/content/dam/act/unsecured/documents/CCRS-WritingCurriculumWorksheet.pdf)

- **Gather elementary, middle, and high school instructional leaders to vertically align curriculum.**
    - Once teachers understand how their standards connect to ACT College and Career Readiness Standards, it is important to understand how a student's knowledge and skills are developed over time.
    - If teachers throughout K–12 are making explicit connections between the standards they teach and the ACT, they can make students and parents aware of student progress toward college and career readiness well before they take the official ACT exam.

- **Provide targeted support to students based on their current progress.**
    a. *Ideas for Progress in College and Career Readiness* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html): On their website, ACT, Inc. provides lists of recommended instructional activities organized according to skills tested in each subject area and grouped by score ranges (e.g., 1–12, 13–15, 16–19, etc.).
    b. By matching required skills to scores in specific ranges on the ACT, teachers can understand how their content and grade-level standards impact students' ability to progress toward college and career readiness.

Frequently Asked Questions

ACT

1. What is the purpose or goal of the ACT?

The ACT is a nationally recognized benchmark assessment for college and career readiness that provides a snapshot of a student's K-12 academic career. The ACT assesses students' cumulative knowledge from grades K-12 while end-of-year tests, like RISE, assess content in specific grades and subjects more deeply. By taking the ACT, students gain valuable information on their readiness for postsecondary education and the workforce. A student's ACT results can be used for the following:

Admission to postsecondary education

Opportunities for scholarships (e.g., University tuition scholarships, Sterling Scholar consideration, etc.)

Placement into postsecondary coursework (including remedial, non-credit bearing courses, as well as advanced college entry courses)

Prediction of postsecondary success

2. Why does improving ACT scores matter?

The desire to increase student ACT scores is rooted in improving postsecondary and career readiness for all Utah students. This goal reflects the reality that Utah students will enter a workforce that requires some type of postsecondary training. The Utah State Board of Education's *Education Elevated,* (https://www.schools.utah.gov/File/01ed1d4a-2612-4e72-ad02-b6969dec5bc3) lays out the state's goal to increase the percentage of students in the state who achieve an ACT composite score of 18 or higher by 2022. With a composite score of 18 or higher, students are predicted to be more successful in both college and career.

3. How is the ACT designed?

The ACT is an assessment that consists of four multiple-choice tests and one open-ended writing test. The four subtests include English, reading, mathematics, and science. The ACT allows students to demonstrate skills that predict success in college and career including critical thinking, problem solving, complex reading, and cross-curricular knowledge; additionally, the ACT provides a culminating view of a student's entire academic career. The skills and knowledge assessed on the ACT are introduced in early elementary grades.

Subject	ACT
English	On the English subtest, students have 45 minutes to answer 75 questions about usage/mechanics (punctuation, grammar and usage, sentence structure) and rhetorical skills (strategy, organization, and style).
Reading	On the reading subtest, students have 35 minutes to read four complex passages and answer 40 questions. The reading test is made up of four sections, each containing one long or two shorter prose passages that are representative of the level and kinds of text commonly encountered in first-year college curricula. Passages are on topics in social studies, natural sciences, literary narrative (including prose fiction), and the humanities (fine arts, philosophy).

Mathematics	ACT measures how quickly and accurately a student can employ a wide variety of mathematical skills and procedures that have been taught over a student's entire academic career. Questions are multiple choice and designed to assess specific mathematical skills. This is a 60-question, 60-minute test designed to assess mathematics skills students have typically acquired in courses taken up through grade 12. For example, students will be assessed on fourth grade, seventh grade, and high school skills all intertwined within the same assessment. Students may use an approved calculator on the entire mathematics portion of the ACT.
Science	The science subtest of the ACT does not assess specific understanding or comprehension of scientific subject areas (e.g., biology, chemistry, physics). Instead, the ACT aims to measure a student's ability to solve problems and interpret information under strict time constraints and use scientific reasoning. The test presents several sets of scientific information, each followed by several multiple-choice test questions, including data representation, research summaries, and conflicting viewpoints. This subtest has 40 questions to complete in 35 minutes.
Writing	The ACT writing test is designed to assess students' ability to take a position on an issue, develop the position with supporting ideas, and articulate the position and ideas through effective use of language. The prompt briefly describes an issue and provides three different perspectives on the issue. Students are required to develop and communicate their own perspective, while incorporating an analytical comparison to one of the provided perspectives. Students have 40 minutes to complete the essay.

4. Are the Utah Core State Standards aligned to ACT expectations?

The ACT standards are encompassed within the Utah Core State Standards, ensuring that students who show strong growth and achievement on RISE and Utah Aspire Plus will also be well prepared to meet the college- and career-readiness benchmarks on the ACT.

Mathematics:
Mastery of the Utah Core State Standards in Mathematics prepares a student to be successful on the ACT assessment. The expectation for the ACT mathematics assessment is that students should be able to quickly and accurately answer a wide variety of mathematics questions, many of which are grounded in the procedural fluency and problem-solving expectations embedded in the Utah mathematics standards. By stressing conceptual understanding at all levels, the Utah mathematics standards are designed to prepare students not only to master this wide array of mathematical skills but also to retain conceptual knowledge from year to year.

English language arts:
The skills of the ACT English and reading subtests extend across grade levels; however, the biggest differentiator of success is the ability to read complex text proficiently. The Utah Core State Standards call for students to have regular practice with complex text. Students should read a range of nonfiction/informational text from the natural sciences, social sciences, and humanities throughout the school year and across all content areas.

Science:
ACT's science assessment measures students' ability to apply scientific reasoning regardless of the subject area focus of the assessment questions. The science subtest evaluates students' interpretive, analytical, reasoning, and problem-solving skills when applied in a scientific context. The questions are drawn largely from the domains of biology, chemistry, Earth/space sciences, and physics and ask students to read graphs, interpret data, read graphs, identify hypotheses and conclusions, and analyze conflicting hypotheses based on evidence presented in articles. These skills are integral parts of the Utah Science Core State Standards and are taught across subject areas.

Writing:
Writing is included in all core subject areas in the Utah Core State Standards. Cross-curricular writing experience provides Utah students with the skills necessary to effectively analyze, organize, and convey written information. These abilities are developed starting in kindergarten and continue to build in complexity throughout a student's educational career. The ACT writing test is a 40-minute essay test that measures students' writing skills. Students develop and convey their own perspective on a given issue, and analyze the relationship between their own perspective and one or more other perspectives. By emphasizing skilled cross-curricular writing, the Utah Core State Standards guide student mastery of effective written communication.

5. Can we use Utah Aspire Plus to compute ACT score projections?

The Utah Aspire Plus generates composite scores that can be used to project ACT composite scores.

6. How are ACT composite scores used for school accountability purposes?

ACT composite scores from the state's eleventh grade ACT administration are used in calculating part of the Postsecondary Readiness accountability indicator for ACT performance at the school level.

7. How should I be preparing my students for the ACT and in the limited time I have?

The best way teachers can prepare students for the ACT is by implementing high-quality instruction in the Utah Core Standards every day. Rigorous, evidence-based, student-centered instruction aligned to the Utah Core State Standards is strong preparation for the ACT. While students will benefit from regular practice and familiarity with the format of the ACT exam, the skills that they need to do well (strong reading fluency, comprehension, and stamina; strong critical thinking and analytical skills in mathematics, including algebra and geometry; data interpretation and scientific reasoning in biology and other science courses) are encompassed in the Utah Core State Standards.

English, mathematics, and science ACT questions are based on skills and standards taught from elementary school through high school. This means that students who have a strong foundation in mathematics and reading and who consistently perform well on RISE and Utah Aspire Plus will use the same skills to perform well on the ACT. Additionally, all academic areas have a crucial part to play in preparing students for ACT success. Science teachers at all grade levels should encourage experimentation, data collection and analysis, and use of evidence to support conclusions. Social studies teachers at all grade levels should teach students to read and analyze complex text in their content areas. English, mathematics, and science teachers at all levels should be aware of ACT benchmarks that are addressed within their grade level, some as early as the second grade.

ACT English Test
Connections with Utah Core State Standards

Questions & Answers

1. **What determines student success on the ACT English subtest?**

The skills measured on the ACT English subtest extend across grade levels. Students begin studying the foundational rules of usage, punctuation, and sentence composition in the early grades. In the upper grades, students hone these skills as they compose sentences and paragraphs with more complex structures to convey more sophisticated ideas. Students' ability to manipulate language for different purposes, audiences, and styles is crucial for communicating their ideas effectively.

2. **Did you know that the ACT has separate sections for English and reading?**

The ACT assesses English and reading separately. The English section consists of five essays or passages, each of which is accompanied by a sequence of multiple-choice questions that ask students to revise or edit the passage as needed, measuring their mastery of usage, mechanics, and rhetorical skills. The reading subtest blends text from four major disciplines and measures students' ability to read closely, discern key ideas, analyze craft and structure, and integrate information.

3. **Did you know the ACT English subtest covers three major topics and six separate skills?**

The English subtest is a 45-minute test with 75 questions divided into three major categories: Production of Writing (e.g., organization, cohesion, and topic focus), Knowledge of Language (e.g., rhetoric and style), and Conventions of Standard English Grammar (e.g., sentence structure, usage conventions, punctuation conventions)**.**

4. **When should we begin preparing students for the ACT English subtest?**

Early grades are incredibly important to a student's academic journey. In the elementary grades, students learn the foundational rules of usage and mechanics. In fact, many of the ACT benchmark standards for English are aligned to Utah Core State Standards found in the elementary grade levels. For example, the English benchmark standard *USG 302 Ensure straightforward subject-verb agreement* is aligned with a Utah standard found in grade 3 (*3.L.1.f Ensure subject-verb and pronoun-antecedent agreement*).

Please note: This document is intended to highlight connections between the Utah Core State Standards and the ACT College and Career Readiness Standards, but it is **not** an exhaustive document that details every standard or every connection.

Many of the ACT standards are aligned to the Utah cornerstone standards, which spiral through each grade level. Instead of listing every applicable standard, this document may list the cornerstone standard, when appropriate, or a single grade-level standard as an example. For instance, the skill assessed in the ACT standard *SST 201 Determine the need for punctuation or conjunctions to join simple clauses* is encompassed within the Utah standards *L.1 and L.2 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking, and demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.*
However, the skill is also referenced specifically in a grade 4 standard (*4.L.2.c Use commas before coordinating conjunction in a compound sentence)*.

While the *Utah Core Standards for English Language Arts* (https://www.schools.utah.gov/curr/elasecondary) are organized by domain and grade level, the *ACT College and Career Readiness Standards* (http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-standards.html) are organized by reporting category (domain) and score range.

ACT Score Range	ACT Standard Coding
13–15	200
16–19*	300
20–23	400
24–27	500
28–32	600
33–36	700

**The benchmark score for the ACT English subtest is 18. Many of the ACT English benchmark standards can be found in the Utah English, Reading and Writing standards for grades K–5.*

Grades K–5, English

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
Production of Writing Questions in this category test how well students develop a given topic (TOD) by choosing expressions appropriate to an essay's audience and purpose; judging the effect of adding, revising, or deleting supporting material; judging the relevance of statements in context; organizing ideas; and choosing effective opening, transitional, and closing sentences (ORG).	**TOD 301** Delete material because it is obviously irrelevant in terms of the topic of the essay **ORG 201** Determine the need for transition words or phrases to establish time relationships in simple narrative essays (e.g., *then, this time)* **ORG 405** Rearrange the sentences in a straightforward paragraph for the sake of logic	**2.L.1.i** Produce, expand, and rearrange simple and compound sentences. **3.W.2.b, 4.W.2.b, 5.W.2.b*** Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. **3.W.2.c** Use linking words and phrases to connect ideas within and across categories of information. **4.W.2.c** Link ideas within categories of information using words and phrases. **5.W.2.c** Link ideas within and across categories of information using words, phrases, and clauses. **3.W.5, 4.W.5, 5.W.5** With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. **The ACT standards are written from the perspective of a selected-response assessment (i.e., recognizing errors embedded in text and correcting them). The Utah Core Standards are written with an*	Have students regularly write informal and formal responses to literary and informational text to gain writing fluency. Have students reread their drafts and check that their ideas are communicated clearly. Take a model essay or paragraph and cut it into paragraphs or sentences. Have students work in teams to organize the essay or paragraph logically. Give students a model essay with missing words and phrases. Have students work in pairs to provide the most appropriate transitional words and phrases. Give students a paragraph with one or more unrelated sentences. Have students work in pairs to determine which sentence(s) is irrelevant and should be omitted from the paragraph. Give students a paragraph and/or paragraphs from an authentic student response. Have students work in pairs to determine which edits need to be made to improve the writing for clarity.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
		instructional focus on producing an authentic product (e.g., writing an essay). Although students do not compose a written response on the ACT English subtest, the skills they have developed through the Utah writing standards will help them in selecting the appropriate corrections or revisions on the English subtest.	**Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html)* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Knowledge of Language (KLA) Questions in this category test how well students choose precise and appropriate words and images; maintain the level of style and tone in an essay; manage sentence elements for rhetorical effectiveness; and avoid ambiguous pronoun references, wordiness, and redundancy.	**KLA 403** Determine the need for conjunctions to create straightforward logical links between clauses **KLA 404** Use the word or phrase most appropriate in terms of the content of the sentence when the vocabulary is relatively common	**3.L.6** Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and time relationships. **4.L.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic. **5.L.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships. **5.L.1.f** Use correlative conjunctions.	Provide students with a paragraph containing only simple sentences. Have students work in pairs to combine the sentences into compound and complex sentences by adding appropriate conjunctions. Try out different words in a draft; discuss the words' connotations and effect on meaning. Begin building capacity for conjunctions as transitional terms. Use the anchors of "and," "but," and "so" to begin charting synonyms more commonly used as transitional terms. Build students' academic vocabulary by presenting them with content-rich complex texts.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
Conventions of Standard English Grammar, Usage, and Punctuation Questions in the sentence structure and formation subcategory (SST) assess students' understanding of relationships between and among clauses, placement of modifiers, and shifts in construction. Questions in the usage conventions subcategory (USG) assess students' understanding of agreement between subject and verb, between pronoun and antecedent, and between modifiers and the word modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage. Questions in the punctuation conventions subcategory (PUN) assess students' knowledge of the conventions of internal and	**SST 201** Determine the need for punctuation or conjunctions to join simple clauses **SST 202** Recognize and correct inappropriate shifts in verb tense between simple clauses in a sentence or between simple adjoining sentences **SST 301** Determine the need for punctuation or conjunctions to correct awkward-sounding fragments and fused sentences **USG 201** Form the past tense and past participle of irregular but commonly used verbs **USG 202** Form comparative and superlative adjectives **USG 302** Ensure straightforward subject-verb agreement **USG 303** Ensure straightforward pronoun-antecedent agreement **PUN 302** Use appropriate punctuation in straightforward situations (e.g., simple items in a series) **PUN 404** Delete apostrophes used incorrectly to form plural nouns	**1.L.2.c** Use commas in dates and to separate single words in a series. **2.L.1.g** Form and use the past tense of frequently occurring irregular verbs. **3.L.1.d** Form and use regular and irregular plural nouns. **3.L.1.f** Form and use regular and irregular verbs. **3.L.1.h** Ensure subject-verb agreement and pronoun-antecedent agreement.* **3.L.1.i** Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified. **3.L.1.j** Use coordinating and subordinating conjunctions. **4.L.1.h** Produce complete sentences; recognize and correct inappropriate fragments and run-ons.* **4.L.2.c** Use a comma before a coordinating conjunction in a compound sentence. **5.L.1.e** Recognize and correct inappropriate shifts in verb tense.	When reading, have students highlight the author's correct use of agreement, verb tense, adjectives, conjunctions, and punctuation. In a writers' workshop, have students rewrite a short piece in different tenses (i.e., rewrite a piece in present tense in past and in future tense) and discuss the difference in the message. During an editing workshop, have students look for errors in agreement, verb tenses, run-ons, or fragments. Differentiate student feedback by focusing on specific usage and punctuation errors at different points throughout the year. Create an anchor chart with examples of common incorrect grammar, usage, and/or punctuation. Send students on a "scavenger hunt" to find incorrect uses in everyday experiences (e.g., signs, advertisements, etc.). Invite students to contribute to the list with their observations.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (e.g., avoiding ambiguity, indicating appositives).		**These standards are reinforced in the upper grade levels as sentence structure becomes increasingly complex.*	

Grades 6–8, English

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
Production of Writing Questions in this category test how well students develop a given topic by choosing expressions appropriate to an essay's audience and purpose; judging the effect of adding, revising, or deleting supporting material; judging the relevance of statements in context; organizing ideas; and choosing effective opening, transitional, and closing sentences.	**TOD 501** Determine the relevance of material in terms of the focus of the paragraph **ORG 401** Determine the need for transition words or phrases to establish straightforward logical relationships **ORG 403** Provide an introduction to a straightforward paragraph **ORG 302** Provide a simple conclusion to a paragraph or essay **ORG 505** Rearrange the paragraphs in an essay for the sake of logic	**6.W.2.a, 7.W.2.a, 8.W.2.a*** Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting, graphics, and multimedia when useful to aiding comprehension. **6.W.2.b, 7.W.2.b, 8.W.2.b** Develop the topic with facts, definitions, concrete details, quotations, or other information and examples. **6.W.1.e and 2.f, 7.W.1.e and 2.f, 8.W.1.e and 2.f** Craft an effective and relevant conclusion. **6.W.2.c, 7.W.2.c** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. **8.W.2.c** Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events. **6.W.5, 7.W.5, 8.W.5** With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing, or trying a new	Have students routinely write informal and formal responses to literary and informational text to strengthen writing fluency. Give students an authentic student essay. Have students work in teams to evaluate the relevance of the information presented. Where material is deemed irrelevant, have students provide suggestions for revisions. Recognize and experiment with sophisticated organizational structures (problem/solution, cause/effect, etc.). Take a model essay and cut it into paragraphs or sentences. Have students work in teams to organize the essay logically. Give students a model essay with missing words and phrases. Have students work in pairs to provide the most appropriate transitional words and phrases. During a writing workshop, have students focus on improving their introduction and conclusion in an essay through constructive feedback from teachers and peers.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
		approach focusing on how well purpose and audience have been addressed. **The ACT standards are written from the perspective of a selected-response assessment (i.e., recognizing errors embedded in text and correcting them). The Utah Core Standards are written with an instructional focus on producing an authentic product (e.g., writing an essay). Although students do not compose a written response on the ACT English subtest, the skills they have developed through the Utah writing standards will help them in selecting the appropriate corrections or revisions on the English subtest.*	**Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html)* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Knowledge of Language Questions in this category test how well students choose precise and appropriate words and images; maintain the level of style and tone in an essay; manage sentence elements for rhetorical effectiveness; and avoid ambiguous pronoun references, wordiness, and redundancy.	**KLA 402** Revise expressions that deviate from the style and tone of the essay **KLA 501** Revise vague, clumsy, and confusing writing **KLA 505** Use the word or phrase most appropriate in terms of the content of the sentence when the vocabulary is uncommon	**6.L.3.b and c** When writing and speaking, vary sentence patterns for meaning, reader/listener interest, and style; maintain consistency in style and tone. **7.L.3.a** When writing and speaking, choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.* **8.L.3.a** Use knowledge of language and its conventions when writing,	Have students discuss the author's purpose and audience when reading a mentor text. Have students identify their own audience and purpose when writing, and then write with a tone that fits that audience and purpose. Discuss what makes some writing "wordy" and the difference between repetition for emphasis and repetition that is redundant.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
		speaking, reading, or listening. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects. **6.L.6, 7.L.6, 8.L.6** Acquire and accurately use grade-appropriate general academic and domain-specific words and phrases; develop vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Provide students with authentic student work. Challenge them to revise the essay for concision without oversimplifying or altering the writer's original ideas. Try out different words in a draft; discuss the words' connotations and effect on the draft's style and tone. Build students' academic vocabulary by presenting them with content-rich complex texts.
Conventions of Standard English Grammar, Usage, and Punctuation Questions in the sentence structure and formation subcategory assess students' understanding of relationships between and among clauses, placement of modifiers, and shifts in construction. Questions in the usage conventions subcategory assess students' understanding of agreement between subject and verb, between pronoun and antecedent, and between	**SST 301** Recognize and correct inappropriate shifts in verb tense and voice when the meaning of the entire sentence must be considered **SST 401** Recognize and correct marked disturbances in sentence structure **SST 602** Maintain consistent and logical verb tense and voice and pronoun person on the basis of the paragraph or essay as a whole **USG 503** Recognize and correct vague and ambiguous pronouns **PUN 401** Delete commas when an incorrect understanding of the sentence suggests a pause that should be punctuated **PUN 404** Use commas to set off parenthetical elements	**6.L.1.a, b. and d** When writing or speaking, use pronouns (case, intensive pronouns, pronoun-antecedent agreement) effectively. **6.L.2.a** When reading or writing, explain the functions of commas, parentheses, and dashes to set off parenthetical elements and use them correctly to do so. **7.L.1.b and c** When writing or speaking, produce simple, compound, and complex sentences with effectively-placed modifiers. **8.L.1.b, c, and d** When reading or listening, explain the function of the voice (active and passive) and the mood of a verb and its application in text.	When reading, discuss the author's correct use of agreement, verb tense, and commas. Have students focus on revising misplaced modifiers and unclear pronoun references in an editing workshop. Differentiate student feedback by focusing on specific usage and punctuation errors at different points throughout the year. Have students record a peer's retelling of a story and then type up the story using correct punctuation. Have students work with peers to create a punctuation handbook for younger students' use, utilizing examples from their own drafts.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
modifiers and the word modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage. Questions in the punctuation conventions subcategory assess students' knowledge of the conventions of internal and end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (e.g., avoiding ambiguity, indicating appositives).		**8.L.1.a** When speaking, reading, and writing, explain the functions of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.	

Grades 9–12, English

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
Production of Writing Questions in this category test how well students develop a given topic by choosing expressions appropriate to an essay's audience and purpose; judging the effect of adding, revising, or deleting supporting material; judging the relevance of statements in context; organizing ideas; and choosing effective opening, transitional, and closing sentences.	**TOD 601** Determine relevance when considering material that is plausible but potentially irrelevant at a given point in the essay **TOD 703** Use a word, phrase or sentence to accomplish a subtle purpose **ORG 702** Provide a sophisticated introduction or conclusion to or transition within a paragraph or essay, basing decision on a thorough understanding of the paragraph and essay	**9-10.W.2.a, 11-12.W.2.a*** Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting, graphics, and multimedia when useful to aiding comprehension. **9-10.W.2.b** Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. **11-12.W.2.b** Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. **9-10.W.2.f, 11-12.W.2.f** Provide a concluding statement or section that follows from and supports the information or explanation presented.	Have students regularly write informal and formal, on-demand and extended research responses to literary and informational text to broaden and strengthen their writing fluency. When reading mentor texts, have students evaluate the relevance of the author's use of evidence and validity of reasoning. When reading mentor texts, have students analyze rhetorical strategies. Have students rewrite essays to adjust for a new audience or purpose. Discuss how the tone, meaning, or purpose of a sentence changes when a single word or phrase is altered. During a writing workshop, have students focus on improving their introduction and conclusion in an essay through constructive feedback from the teacher and peers. Have students engage in regular peer-editing workshops.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
		9-10.W.5, 11-12.W.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. **The ACT standards are written from the perspective of a selected-response assessment (i.e., recognizing errors embedded in text and correcting them). The Utah Core Standards are written with an instructional focus on producing an authentic product (e.g., writing an essay). Although students do not compose a written response on the ACT English subtest, the skills they have developed through the Utah writing standards will help them in selecting the appropriate corrections or revisions on the English subtest.*	**Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html)* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Knowledge of Language Questions in this category test how well students choose precise and appropriate words and images, maintain the level of style and tone in an essay,	**KLA 601** Revise vague, clumsy, and consuming writing involving sophisticated language **KLA 702** Use the word or phrase most appropriate in terms of the content of the sentence when the vocabulary is sophisticated	**9-10.L.3, 11-12.L.3** Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to	During a writers' workshop, focus on revising for precision and concision. Select mentor texts that are rich in interesting word choice. Have students write a response to a text, mirroring the tone or mood of the original mentor text.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
manage sentence elements for rhetorical effectiveness, and avoid ambiguous pronouns references, wordiness, and redundancy.		comprehend more fully when reading or listening. **9-10.L.6, 11-12.L.6** Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the postsecondary and workforce level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Build students' academic vocabulary by presenting them with content-rich complex texts.
Conventions of Standard English Grammar, Usage, and Punctuation Questions in the **sentence structure and formation** subcategory assess students' understanding of relationships between and among clauses, placement of modifiers, and shifts in construction. Questions in the **usage conventions** subcategory assess students' understanding of agreement between subject and verb,	**SST 601** Recognize and correct subtle disturbances in sentence structure (e.g., weak conjunctions between independent clauses, run-ons that would be acceptable in conversational English, lack of parallelism within a complex series of phrases or clauses) **PUN 501** Delete commas in long or involved sentences when an incorrect understanding of the sentence suggests a pause that should be punctuated **PUN 601** Use commas to avoid ambiguity when the syntax or language is sophisticated	**9-10.L.1.a** and b Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; use effective parallel structure and various types of phrases and clauses to convey specific meaning and add variety and interest to writing or presentations. **9-10.L.2.a, b, and c** Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing; when reading and writing; explain the functions of semicolons and colons to separate related ideas and use	When reading, discuss the author's effective use of parallelism and stylistic punctuation. During an editing workshop, have students look for examples of ineffective style and make suggestions for revisions. Differentiate student feedback by focusing on specific usage and punctuation errors at different points throughout the year.

Category	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
between pronoun and antecedent, and between modifiers and the word modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage. Questions in the **punctuation conventions** subcategory assess students' knowledge of the conventions of internal and end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (e.g., avoiding ambiguity, indicating appositives).	**PUN 604** Use a semicolon to link closely related independent clauses **PUN 702** Use a colon to introduce an example or elaboration	them correctly to do so; write and edit work so that it conforms to a style guide appropriate for the discipline and writing type. **11-12.L.1.a and b** Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; consider complex and contested matters of usage and convention. **11-12.L.2 and 3** Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing; when reading and writing, use knowledge of punctuation to enhance sentence style to support the content of the sentence; write and edit work so that it conforms to a style guide appropriate for the discipline and writing type.	

ACT Reading Test
Connections with Utah Core State Standards

Questions & Answers

1. **What determines student success on the ACT reading subtest?**
   The **biggest** differentiator of success on the ACT reading subtest is the ability to read **complex** text proficiently. Therefore, when we say students will attain a score of 21 or higher, we are really saying that we are committed to presenting students with appropriately complex informational and literary texts at each grade level. The work that happens in early grades impacts the work in upper grades.

2. **Did you know that three of the four passages students read on the ACT are nonfiction/informational texts?**
   Passages are on topics in social studies, natural sciences, the humanities (fine arts, philosophy), and literary narrative (including prose fiction). This does not mean that 75 percent of instructional time should be spent on nonfiction/informational text. It does mean that students should read a range of nonfiction/informational text from the natural sciences, social sciences, and humanities throughout the school year *across* content areas in *all* grade levels. Reading should be fostered in all core and elective courses.

3. **Are students asked to bring prior knowledge to the ACT reading subtest?**
   No, students are not asked to bring any prior knowledge of any specific subject to the reading subtest of the ACT. Students are asked to read text independently and proficiently on grade level. In fact, much of the text on the ACT is complex and will require a close, careful reading to determine the correct answer to questions.

4. **When should we begin preparing students for the ACT reading subtest?**
   Beginning in kindergarten, the Utah Core State Standards expect students to interact with complex texts to discern meaning, ask questions, make inferences, synthesize information, and generate new ideas. This document is not about "test prep;" it is about building upon a strong foundation to achieve success by grade 11.

   Please note: This document is intended to highlight connections between the Utah Core State Standards and the ACT College and Career Readiness Standards, but it is **not** an exhaustive document that details every standard or every connection. Many of the ACT standards are aligned to the Utah Core State Anchor Standards, which spiral through each grade level. Instead of listing every connection, this document may list the Anchor Standard or a single grade-level standard as an example. As stated in the Utah Core State Standards, "The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity."

While the *Utah Core State Standards for English Language Arts* (https://utah.gov/governor/docs/utahcorestandards/English_Language_Arts_2013.pdf) are organized by domain and grade level, the *ACT College and Career Readiness Standards*

(http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-standards.html)are organized by reporting category (domain) and score range.

ACT Score Range	ACT Standard Coding
13–15	200
16–19	300
20–23*	400
24–27	500
28–32	600
33–36	700

**The benchmark score for the ACT Reading subtest is 22. Many of the skills found in the ACT Reading benchmark standards are first introduced in the Utah reading standards for grades K-5. In the middle grades, students strengthen this reading foundation and build stamina as they encounter increasingly complex texts. In high school, the standards focus on students' ability to recognize archetypal patterns, nuances of language, and inter-textual connections.*

Grades K–5, Reading

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
Key Ideas and Details Questions in this category test students' ability to read texts closely in order to determine central ideas and themes; summarize information and ideas accurately; understand relationships; and draw logical inferences and conclusions.	**CLR 302** Draw simple logical conclusions in somewhat challenging passages **IDT 402** Identify a clear central idea or theme in somewhat challenging passages or their paragraphs **IDT 403** Summarize key supporting ideas and details in somewhat challenging passages **REL 301** Identify clear comparative relationships between main characters in somewhat challenging literary narratives **REL 403** Identify clear cause-effect relationships in somewhat challenging passages	**3.RL.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. **4.RL.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. **5.RL.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. **3.RL/I.2, 4.RL/I.2, 5.RL/I.2** Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. **3.RI.3** Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. **4.RI.3** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific	• Read relevant and interesting literary texts (e.g., short stories, novels, memoirs, poems, and personal essays) that are quantitatively and qualitatively complex. • Read relevant and interesting informational texts about social sciences, natural sciences, and humanities that are quantitatively and qualitatively complex. • Ask text-dependent questions that require a close, careful reading of the text. • Encourage active reading with text markers and annotations. • Ask students to find evidence in a text by paying attention to specific details in text that help develop the main idea. • Ask students to visualize characters, settings, or events and sketch relevant and challenging scenes with details from the text. • Ask students to search for patterns or clues that indicate cause-effect relationships.

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
		information in a text. **5.RL.3** Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in a text.	**Additional ideas for instructional practices can be found in the resource* *Ideas for Progress in College and Career Readiness* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Craft and Structure Questions in this category test students' ability to determine the meaning of words and phrases; analyze author's word choice; analyze text structure; and analyze the author's purpose and perspective.	**WME 301** Analyze how the choice of a specific word or phrase shapes meaning or tone in somewhat challenging passages when the effect is simple **WME 302** Interpret basic figurative language as it is used in a passage **TST 404** Analyze the overall structure of somewhat challenging passages **PPV 401** Identify a clear purpose of somewhat challenging passages and how that purpose shapes content and style **PPV 402** Understand point of view in somewhat challenging passages	**3.RL.4** Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language **3.RI.4, 4.RI.4, 5.RI.4** Determine the meaning of general academic and domain-specific words and phrases in a text **4.RL.4** Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology **5.RL.4** Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. **3.RI.6** Distinguish reader point of view from that of an author of a text.	• Work with students to build vocabulary and word knowledge, including Tier II vocabulary, through building an understanding of how to use context clues. • Help students build Tier III vocabulary through word study and reading several texts on the same topic or idea. • Help students to differentiate between denotative and connotative meanings of words in complex texts. • Have students explore how an author's or narrator's word choice can shape meaning and affect readers' understanding. • Have students examine the organization patterns used by

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
		4.RI.5 Describe the overall structure of events, ideas, and concepts of information in a text or part of a text. **5.RL.6** Describe how a narrator's or speaker's point of view influences how events are described.	the author of a text. ● Provide examples of one event or topic from the perspective of two different narrators or authors.
Integration of Knowledge and Ideas Questions in this category test students' ability to evaluate authors' claims, differentiate between facts and opinions, and use evidence to make connections between different texts that are related by topic.	**ARG 201** Analyze how one or more sentences in somewhat challenging passages offer reasons for or support a claim **SYN 301** Make straightforward comparisons between two passages **SYN 501** Draw logical conclusions using information from two informational texts	**3.RI.9** Compare and contrast the most important points and key details presented in two texts on the same topic. **4.RI.8** Explain how an author uses reasons and evidence to support particular points in a text. **4.RI.9** Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably. **5.RI.8** Explain how an author uses reasons and evidence to support points in a text, identifying which reasons and evidence support which points. **5.RL.9** Compare and contrast stories in the same genre on their approaches to similar themes and topics.	● Have students read a traditional fairy tale or fable and compare it to one written by another author, particularly one that is derived from the original source. ● Use selections from literary texts to supplement informational units; for instance, when studying U.S. history, read an excerpt of a literary text set in the same time period. ● Use text in science and social studies instruction. ● Build student knowledge through a deep exploration of one topic.

Grades 6–8, Reading

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
Key Ideas and Details Questions in this category test students' ability to read texts closely in order to determine central ideas and themes; summarize information and ideas accurately; understand relationships; and draw logical inferences and conclusions.	**CLR 402** Draw logical conclusions in somewhat challenging passages **IDT 501** Infer a central idea or theme in somewhat challenging passages or their paragraphs **IDT 503** Summarize key supporting ideas and details in more challenging passages **REL 502** Understand implied or subtly stated comparative relationships in somewhat challenging passages **REL 504** Understand implied or subtly stated cause-effect relationships in somewhat challenging passages	**6.RL/I.1, 7.RL/I.1, 8.RL/I.1** Read closely to determine what a text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. **6.RL/I.2, 7.RL/I.2, 8.RL/I.2** Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. **7.RI.3** Analyze the relationships and interactions among individuals, events, and/or ideas in a text.	• Read relevant and interesting literary texts (e.g., short stories, novels, memoirs, poems, and personal essays) that are appropriately quantitatively and qualitatively complex. • Read relevant and interesting informational text about the social sciences, natural sciences, and humanities that are quantitatively and qualitatively complex. • Ask text-dependent questions that require a close, careful reading of the text. • Ask students to find evidence in text by paying attention to specific details in text that help create the claim or central idea. • Encourage active reading with text markers and annotations. • Ask students to trace character development through literature by looking for specific places in the text that highlight how the characters change. • Ask students to examine events in text to determine the primary cause(s) and final outcome(s).

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
			**Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html)* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Craft and Structure Questions in this category test students' ability to determine the meaning of words and phrases; analyze author's word choice; analyze text structure; and analyze the author's purpose and perspective.	**WME 401** Analyze how the choice of a specific word or phrase shapes meaning or tone in somewhat challenging passages **WME 402** Interpret most words and phrases as they are used in somewhat challenging passages, including determining technical, connotative, and figurative meanings **TST 401** Analyze how one or more sentences in somewhat challenging passages relate to the whole passage **TST 505** Analyze the overall structure of more challenging passages **PPV 501** Infer a purpose in somewhat challenging passages and how that purpose shapes content and style	**6.RI.4, 7.RI.4, 8.RI.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts. **6.RL.5** Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot. **7.RI.5** Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas. **8.RI.6** Determine an author's point of view or purpose in a text and analyze how the author	• Work with students to build vocabulary and word knowledge, including Tier II vocabulary, through building an understanding of how to use context clues. • Help students build Tier III vocabulary through word study and reading several texts on the same topic or idea. • Have students predict how changes to the wording of a text might convey a different tone or attitude. • Provide examples of text where structure contributes to meaning: For example, have students read a graphic novel and contrast its structure and its impact on meaning to the structure of a traditional text about the same event or topic.

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
		acknowledges and responds to conflicting evidence or viewpoints.	• Have students analyze the relationship between an author's or narrator's intended message and the rhetorical devices used to convey that message. • Have students search for clues in a text that convey the author's or narrator's point of view.
Integration of Knowledge and Ideas Questions in this category test students' ability to evaluate authors' claims, differentiate between facts and opinions, and use evidence to make connections between different texts that are related by topic.	**ARG 501** Analyze how one or more sentences in more challenging passages offer reasons for or support a claim **ARG 502** Infer a central claim in somewhat challenging passages **SYN 401** Draw logical conclusions using information from two literary narratives **SYN 501** Draw logical conclusions using information from two informational texts	**6.RI.8** Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. **6.RL.9** Compare and contrast texts in different forms or genres in terms of their approaches to similar themes and topics. **7.RI.8** Trace and evaluate the argument and specific claims in a text, assessing whether the evidence is relevant and sufficient to support the claims. **7.RI.9** Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts. **8.RI.8** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the	• Use text in science and social studies instruction. • Have students defend or challenge an author's assertions by locating several key pieces of evidence in a text. • Build student knowledge through reading multiple texts on the same topic and asking students to synthesize information across the texts. • Use selections from literary nonfiction to supplement informational units; for instance, when studying the Great Depression, read an excerpt of a memoir from the same time period.

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
		evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.	

Grades 9–12, Reading

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
Key Ideas and Details Questions in this category test students' ability to read texts closely in order to determine central ideas and themes; summarize information and ideas accurately; understand relationships; and draw logical inferences and conclusions.	**CLR 603** Draw subtle logical conclusions in more challenging passages **IDT 701** Identify or infer a central idea or theme in complex passages or their paragraphs **IDT 602** Summarize key supporting ideas and details in complex passages **REL 702** Understand implied or subtly stated comparative relationships in complex passages **REL 704** Understand implied or subtly stated cause-effect relationships in complex passages	**9-10.RL/I.1, 11-12.RL/I.1** Read closely to determine what a text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. **9-10.RL/I.2, 11-12.RL/I.2** Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. **11-12.RI.3** Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	• Read relevant and interesting literary texts (e.g., short stories, novels, memoirs, poems, and personal essays) that are quantitatively and qualitatively complex. • Read relevant and interesting informational text about the social sciences, natural sciences, and humanities that is quantitatively and qualitatively complex. • Use text in science and social studies instruction. • Ask text-dependent questions that require a close, careful reading of the text. • Ask students to find evidence in a text by examining specific details in text that help create the claim or central idea. • Encourage active reading through the use of text markers and annotations. • Have students analyze subtle relationships between and among people, objects, events, and ideas in complex texts. • Have students identify implications and possible

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
			consequences of actions in complex texts. **Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html)* (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) *on the ACT website.*
Craft and Structure Questions in this category test students' ability to determine the meaning of words and phrases; analyze author's word choice; analyze text structure; and analyze the author's purpose and perspective.	**WME 701** Analyze how the choice of a specific word or phrase shapes meaning or tone in passages when the effect is subtle or complex **WME 702** Interpret words and phrases as they are used in complex passages, including determining technical, connotative, and figurative meanings **TST 601** Analyze how one or more sentences in complex passages relate to the whole passage **TST 602** Infer the function of paragraphs in more challenging passages **TST 603** Analyze the overall structure of complex passages **PPV 701** Identify or infer a purpose in complex passages and how that purpose shapes content and style	**9-10.RL/I.4, 11-12.RL/I.4** Interpret words and phrases as they are used in a text, including technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. **9-10.RI.5** Analyze how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text. **9-10.RL.6** Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature. **11-12.RL.5** Analyze how an author's choices concerning the structure of	• Help students build academic and Tier II vocabulary through an understanding of how to use context to discern meaning. • Help students build Tier III vocabulary through word study and reading several texts on the same topic or idea. • Have students predict how changes to the wording of a text might convey a different tone or attitude. • Have students explain how some sentence constructions (e.g., using parallel structures, many or no conjunctions, purposeful repetition) affect the meaning of the text. • Have students analyze the relationship between an author's

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
		specific parts of a text contribute to its overall structure, meaning, and aesthetic impact. **11-12.RI.6** Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.	or narrator's intended message and the rhetorical devices used to convey that message. • Have students search for subtle evidence in a text that conveys the author's or narrator's point of view.
Integration of Knowledge and Ideas Questions in this category test students' ability to evaluate authors' claims, differentiate between facts and opinions, and use evidence to make connections between different texts that are related by topic.	**ARG 701** Analyze how one or more sentences in passages offer reasons for or support a claim when the relationship is subtle or complex **SYN 401** Draw logical conclusions using information from two literary narratives **SYN 501** Draw logical conclusions using information from two informational texts	**9-10.RI.8** Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning. **11-12.RI.8** Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning and the premises, purposes, and arguments in works of public advocacy **9-10.RL.9** Analyze how an author draws on and transforms source material in a specific work **11-12.RI.9** Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary	• Build student knowledge through reading multiple texts on the same topic and asking students to synthesize information across the texts. • Encourage students to conduct research on topics of personal interest that require reading of complex informational text. • Use selections from literature and literary nonfiction to supplement informational units; for instance, when studying the Holocaust, include an excerpt from a personal memoir from the same time period or a literary text set in the same time period. • Have students analyze details in a complex text in order to verify

Reading Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
		significance for their themes, purposes, and rhetorical features.	or contradict a specific point or claim made by an author.

ACT Mathematics Test
Connections with Utah Core State Standards

Questions & Answers

1. What determines student success on the ACT mathematics subtest?

The mathematics skills assessed on the ACT extend across all grade levels. The ACT College and Career Readiness Standards for mathematics are a combination of skills taught beginning as early as grade 2 and extending through the Secondary Mathematics III course. For a student to attain an 18 or higher, the student needs instruction focused on developing a content-rich, conceptual understanding of mathematics at all grade levels. Additionally, students need to have developed a strong foundation in procedural fluency and problem solving. To be successful on the ACT mathematics subtest, students need to develop an understanding of the following:

- *which* ideas are useful in a particular context for problem solving;
- *why and how* certain key ideas aid in problem solving, through the systematic progression of mathematics;
- *how and why* an idea or procedure is mathematically defensible and *when* it is most efficient to use a particular procedure; and
- *how* to flexibly adapt previous experience to new-problem-solving situations.

2. What is the structure of the ACT mathematics test?

The ACT mathematics test is a 60-minute test with 60 questions that are designed to assess the mathematical skills students have acquired across the entirety of their mathematical academic career and the efficiency with which they are able to access and apply those skills. The test presents multiple-choice questions that require a student to use reasoning skills grounded in both procedural fluency and to utilize problem-solving strategies to work through practical problems in mathematics. In preparation for the ACT mathematics test, it is essential to have working knowledge of basic formulas and computational skills but recall of complex formulas and extensive computation is not required.

3. When should we begin preparing students for the ACT mathematics subtest?

The ACT mathematics questions are based on skills and standards taught from elementary school through high school. This means that students who have a strong foundation in mathematics and who consistently perform well in each grade level will use the same skills to perform well on the ACT. Therefore, all academic grades have a crucial part to play in preparing students for ACT mathematics success.

Please note: This document is intended to highlight connections between Utah Core Standards and the ACT mathematics test, but it is not an exhaustive document that details every connection.

While the *Utah Core Standards for Mathematics* (https://www.schools.utah.gov/curr/mathematics/coreguides) are organized by strands and standards, the *ACT College and Career Readiness Standards* (http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-standards.html) are organized by reporting category (domain) and score range.

ACT Score Range	ACT Standard Coding
13-15	200
16-19	300
20-23*	400
24-27	500
28-32	600
33-36	700

**The ACT College and Career Readiness benchmark score for the ACT mathematics subtest is 22. Many of the skills a student needs to master to reach this benchmark are embedded in the Utah Core State Standards for mathematics in grades 6-8. In the middle grades, students develop an understanding of quantities, operations with rational numbers, and basic algebraic thinking. These skills are anchored in concepts introduced in earlier grades (such as fractions). Reinforcing these foundational connections as students continue into high school courses (such as Secondary Mathematics I, II, and III) is necessary for students to be successful on the foundational skills that define the readiness benchmark.*

Big Picture of Utah Mathematics Concepts, K–12

Mathematics is broken into strands, which are the buckets of main concepts that students learn over the course of time. As previously mentioned, success on the ACT is dependent upon the **entirety of a student's mathematics career from elementary school through high school**. The following chart shows how the strands within the current Utah Core State Standards in mathematics build on one another. In the chart below, you will see which mathematics strands students are learning holistically throughout a given year and how the mathematics strands build on one another across a student's academic career.

Utah Core State Standards Domain Progressions

<table>
<tr><th>K</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>HS</th></tr>
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</table>

The domains of the ACT College and Career Readiness Standards for mathematics are similar to the strands of the Utah mathematics standards: geometry, statistics and probability, number and quantity, algebra, and functions. Standards unique to ACT are assigned to each category and can be found here: ACT mathematics college and career standards (http://www.act.org/content/dam/act/unsecured/documents/CCRS-MathStandards.pdf).

Side-by-Side Example: Number and Quantity Strand

Connectivity Between the ACT and Utah Core State Standards in Mathematics

Multiple Utah Core State Standards are embedded within a single ACT College and Career Readiness Standard for mathematics. The following chart highlights a small, representative sample of connections between selected ACT standards and the Utah Core State Standards in the domains that are tested. This is for illustrative purposes only, as students should be consistently exposed to all of the Utah Core State Standards to be successful on the ACT mathematics subtest.

These examples illustrate how the ACT mathematics subtest assesses the entirety of a student's academic career in mathematics. Even though students take the ACT in high school, if building blocks are left out—even in the early grades—students are less prepared to be successful on this important measure of college and career readiness.

Category	ACT Readiness Standards	Utah Core State Standards
Number and Quantity (N) Questions in this category test students' ability to understand and reason with numerical quantities in many forms in the real and complex number systems.	**N 201**. Perform one-operation computation with whole numbers and decimals	**2.NBT.5**. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. **3.OA.7a**. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) **3.OA.7b.** By the end of Grade 3, know from memory all products of two one-digit numbers **3.NBT.2**. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **4.NBT.4**. Fluently add and subtract multi-digit whole numbers using the standard algorithm (Expectations in this strand are limited to whole numbers less than or equal to 1,000,000). **4.OA.3**. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies, including rounding. **5.NBT.5**. Fluently multiply multi-digit whole numbers using the standard algorithm. **5.NBT.7**. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and

Category	ACT Readiness Standards	Utah Core State Standards
		explain the reasoning used. In this standard, dividing decimals is limited to a whole number dividend with a decimal divisor or a decimal dividend with a whole number divisor. Compare the value of the quotient on the basis of values of the dividend and divisor. **6.NS.2**. Fluently divide multi-digit numbers using the standard algorithm. **6.NS.3**. Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation. Fluently divide multi-digit decimals using the standard algorithm, limited to a whole number dividend with a decimal divisor or a decimal dividend with a whole number divisor. Solve division problems in which both the dividend and the divisor are multi-digit decimals; develop the standard algorithm by using models, the meaning of division, and place value understanding.
	N 202. Recognize equivalent fractions and fractions in lowest terms	**3.NF.3a**. Understand two fractions as equivalent if they are the same size, or the same point on a number line. **3.NF.3b**. Recognize and generate simple equivalent fractions, such as 1/2 =2/4, 4/6 = 2/3. Explain why the fractions are equivalent by using a visual fraction model, for example. **3.NF.3c**. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *For example, express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.* **4.NF.1**. Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
	N 302. Identify a digit's place value	**2.NBT.1**. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; for example, 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: 100 can be thought of as a bundle of ten tens called a "hundred". The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). **4.NBT.** Generalize place value understanding for multi-digit whole numbers by analyzing patterns, writing whole numbers in a variety of ways, making comparisons, and rounding. Use place value understanding and properties of operations to perform multidigit addition, subtraction, multiplication, and division using a one-digit divisor. Expectations in this strand are limited to whole numbers less than or equal to 1,000,000.

Category	ACT Readiness Standards	Utah Core State Standards
		5.NBT. Understand the place value system. Perform operations with multidigit whole numbers and with decimals to hundredths.
	N 404. Understand absolute value in terms of distance	**6.NS.7c.** Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world context. *For example, an account balance of -30 dollars, write |-30| = 30* to describe the size of the debt in dollars. **7.NS.1b**. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
	N 603. Apply number properties involving positive/negative numbers	**6.NS.5**. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (for example, temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of zero in each situation. **6.NS.6a**. Recognize opposite signs of numbers as indicating locations on opposite sides of zero on the number line; recognize that the opposite of the opposite of a number is the number itself. For example, –(–3) = 3, and zero is its own opposite. **7.NS. 1a**. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.* **7.NS. 1b**. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. **7.NS. 1c**. Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. **7.NS. 1d**. Apply properties of operations as strategies to add and subtract rational numbers. **7.NS.2a**. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

Category	ACT Readiness Standards	Utah Core State Standards
		7.NS.2b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real world contexts. **7.NS.2c**. Apply properties of operations as strategies to multiply and divide rational numbers. **7.NS.3**. Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.
	N 606. Multiply two complex numbers	**SII.N.CN.2**. Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. Limit to multiplications that involve i^2 as the highest power of i.

Category	ACT Readiness Standards	Utah Core State Standards
Algebra (A) Questions in this category test students' ability to solve, graph, and model multiple	**A 401.** Evaluate algebraic expressions by substituting integers for unknown quantities	**3.OA.4.** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number – product, factor, quotient, dividend, or divisor – that makes the equation true in each of the equations* $8 \times ? = 45$, $5 = ? \div 3$, $6 \times 6 = ?$. **6.EE.2c.** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including

Category	ACT Readiness Standards	Utah Core State Standards
types of expressions. Students will see but are not limited to linear, polynomial, radical, and exponential relationships.		those involving whole-number exponents, applying the Order of Operations when there are no parentheses to specify a particular order. *For example, use the formulas $V = s^3$ and $A=6s^2$ to find the volume and surface area of a cube with sides of length s=1/2.* **6.EE.5.** Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equations or inequality true.
	A 406. Exhibit knowledge of slope	**6.RP.3a.** Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. **7.RP.2a.** Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. **7.RP.2b.** Identify the constant of proportionality (unit rate) in tables, graphs, equation, diagrams, and verbal descriptions of proportional relationships. **8.EE.6.** Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a lint intercepting the vertical axis at b. **SMI.F.IF.6.** Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.
	A 505. Add, subtract, and multiply polynomials.	**SMII.A.APR.1.** Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
	AF 603. Interpret and use information from graphs in the coordinate plane	**8.F.4.** Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x , y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

Category	ACT Readiness Standards	Utah Core State Standards
		8.F.5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. **SMI.A.REI.10**. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). **SMI.F.IF.4, SMII.F.IF.4.** For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior.* **SMI.F.IF.7.** Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
Functions (F) Questions in this category test students' knowledge of function definition, notation, representation, and application. Students will see but are not limited to linear, radical, piecewise, polynomial, and logarithmic functions.	**F 201/301.** Extend a given pattern by a few terms for patterns that have a constant increase or decrease/factor between terms	**2.NBT.2.** Count within 1,000; skip-count by fives, tens, and hundreds. **3.OA.9.** Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. *For example, observe that four times a number is always even, and explain why four times a number can be decomposed into two equal addends.* **4.OA.5.** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.* **5.OA.3.** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "add 3" and the starting number 0, and given the rule "add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequences. Explain informally why this is so.*
	AF 402.	**3.OA.8b.** Represent two-step problems using equations with a letter standing for the unknown quantity. Create accurate equations to match word problems.

Category	ACT Readiness Standards	Utah Core State Standards
	Perform straightforward word-to-symbol translations.	**4.OA.3a.** Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equation with a letter standing for the unknown quantity. **6.EE.2a.** Write expressions that record operations with numbers and with letters representing numbers. *For example, express the calculations "Subtract y from 5" and 5 – y and express "Jane had $105.00 in her bank account. One year later she had x dollars more." Write an expression that shows her new balance as $105.00 = x.* **6.EE.6.** Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. **7.EE.4.** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
	F 502. Find the next term in a sequence described recursively	**SMI.F.IF.3.** Recognize that sequences are functions, sometimes defined recursively, whose strand is a subset of the integers. Emphasize arithmetic and geometric sequences as examples of linear and exponential functions. *For example, the Fibonacci sequence is defined recursively by f(0) = f(1)-1, f(n + 1) = f(n) + f(n – 1) for* $n \geq 1$. **SMI.F.BF.2.** Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. Limit to linear and exponential functions. Connect arithmetic sequences to linear functions and geometric sequences to exponential functions. **SMII.F.BF.1a.** Write a quadratic or exponential function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from a context.
	F 706. Use trigonometric concepts and basic identities to solve problems	**SMII.F.TF.8.** Prove the Pythagorean identity $sin^2(\theta) + cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. **SMIII.F.TF.7.** Use inverse functions to solve trigonometric equations that arise in modeling context; evaluate the solutions using technology and interpret them in terms of context. Limit solutions to a given interval.

Category	ACT Readiness Standards	Utah Core State Standards
Geometry (G) Questions in this category test students' knowledge of shapes and solids, such as congruence and similarity relationships or surface area and volume measurements, understanding composition of objects, solving for missing values, and using trigonometric ratios and equations.	**G 203.** Perform common conversions of money and of length, weight, mass, and time within a measurement system (e.g., dollars to dimes, inched to feet, and hours to minutes)	**2.MD.7.** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. **2.MD.8.** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *For example, if you have 2 dimes and 3 pennies, how many cents do you have?* **3.MD.1.** Tell and write time to the nearest minute and measure time intervals in minutes. *Solve word problems involving addition and subtraction time intervals in minutes, for example, by representing the problem on a number line diagram.* **4.MD.1.** Know relative sizes of measurement units within each system of units (standard and metric), including kilometers, meters, and centimeters; liters and milliliters; kilograms and grams; pounds and ounces; hours, minutes, and seconds. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that one foot is 12 times as long as one inch. Express the length of a four-foot snake as 48 inches. Know that one meter is 100 times as long as one centimeter. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36)…* **4.MD.2.** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money **5.MD.1.** Convert among different-sized standard measurement units within a given measurement system *(for example, convert 5 cm to 0.05 m)*; use these conversions in solving multi-step, real-world problems.
	G 301. Exhibit some knowledge of the angles associated with parallel lines	**4.G.1.** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. **4.G.2.** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles. **SMI.G.GPE.5.** Prove the slope criteria for parallel and perpendicular lines; use the to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a give point). **SMII.G.CO.11.** Prove theorems about parallelograms. *Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals*

Category	ACT Readiness Standards	Utah Core State Standards
	G 501. Use several angle properties to find an unknown angle measure	**4.MD.7.** Recognize angle measure as additive **7.G.5.** Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. **8.G.5.** Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.* **SMII.G.CO.9.** Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.* **SMII.G.CO.10.** Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.*
	G 506. Compute the area of triangles and rectangles when one or more additional simple steps are required	**3.MD.6.** Measure area by counting unit squares (square centimeters, square meters, square inches, square feet, and improvised units) **3.MD.7.** Relate are to the operation of multiplication and addition. **4.MD.3.** Apply the area and perimeter formulas for rectangles in real-world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.* **6.G.1.** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
	G 604. Apply basic trigonometric ratios to solve right-triangle problems	**8.G.7.** Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real -world and mathematical problems in two and three dimensions. **SMII.G.SRT.7.** Explain and use the relationship between sine and cosine of complementary angles. **SMII.G.SRT.8.** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems

Category	ACT Readiness Standards	Utah Core State Standards
Statistics and Probability (S) Questions in this category test students' knowledge of center and spread of distribution, data collection methods, relationships in bivariate data, and probability calculations	**S 201.** Calculate the average of a list of positive whole numbers	**6.SP.2.** Understand that a set of data collected to answer a statistical question has a distribution that can be described by its center, spread/range, and overall shape. **6.SP.5c.** Summarize numerical data sets in relation to their context, such as by: giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. **SMI.S.ID.2.** Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
	S 403. Determine the probability of a simple event	**7.SP.6.5.** Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. **7.SP.6.** Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.* **7.SP.8.** Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
	S 502. Manipulate data from tables and charts	**4.MD.4.** Make a line plot to display a data set of measurements in fractions of a unit (halves, quarters, and eighths). Solve problems involving addition and subtraction with like denominators of fractions by using information presented in line plots. *For example, use a line plot to find and interpret the difference in length between the longest and shortest pencils in a classroom* **8.SP.1.** Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

Category	ACT Readiness Standards	Utah Core State Standards
		8.SP.4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*
	S 605. Recognize the concepts of conditional and joint probability expressed in real-world contexts	**SMII.S.ID.5.** Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and condition relative frequencies). Recognize possible associations and trends in the date **SMII.S.CP.4.** Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among mathematics, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.* **SMII.S.CP.5.** Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.* **SMII.S.CP.6.** Find the conditional probability of *A* given *B* as the fraction of *B*'s outcomes that also belong to *A*, and interpret the answer in terms of the model.

Side-by-Side Example: Strand Comparison Chart
Connectivity Between Utah Mathematics Strands and ACT Mathematics Domains

Multiple Utah Core Standards are embedded within a single ACT College and Career Readiness Standard for mathematics. The following chart shows the connection and overlap between the strands of the current Utah mathematics standards and the domains of ACT standards. **The navy-blue areas indicate where Utah mathematics standards overlap with ACT standards within each domain.**

Side-by-Side Example: Domain Comparison Chart

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</table>

ACT Science Test
Connections with Utah Core State Standards

Questions & Answers

1. What determines student success on the ACT science test?

Although basic content knowledge in biology, chemistry, physics, and earth science is recommended, advanced knowledge of the subject-specific content is not expected. Instead, the ACT science test measures a student's scientific reasoning abilities, such as analysis, interpretation, evaluation, and problem solving under strict time conditions: 40 questions in 35 minutes.

2. Did you know that scientific information is presented in three distinct formats on the ACT science test?

The ACT science test consists of seven passages presented in one of the following formats:

- **Data Representation** (30-40 percent): This format includes graphics and tables for student analysis and interpretation. These questions measure a student's ability to read graphs, interpret scatterplots, and interpret information presented in tables.
- **Research Summaries** (45-55 percent): This format includes descriptions of one or more related experiments. These questions measure the student's ability to interpret experimental design and associated results.
- **Conflicting Viewpoints** (15-20 percent): This format presents alternative hypotheses expressed in response to incomplete data or differing views. These questions measure the student's ability to understand, analyze, and compare inconsistent viewpoints or hypotheses.

3. *How can we support the development of scientific reasoning skills from grades K–12*?

Preparation begins with developing in our students' critical thinking skills that enable them to interpret data, understand methodology used in complex experimental design, and evaluate both models and experimental results. The development of these skills is best fostered through consistent exposure to the process of science, both through inquiry and text, beginning in kindergarten. The instructional crosswalk beginning on the next page connects our current Utah Core State Standards with the science skills tested on the ACT and shares some suggestions for practice within each grade band. Preparing our students to meet or exceed the ACT College Readiness Benchmark is possible through **intentional**, **thoughtful** and **rigorous** teaching of our current K–12 science standards with emphasis **on science literacy and the embedded inquiry and technology and engineering standards.**

Please note: This document is intended to highlight connections between Utah's Core State Standards and the ACT science test, but it is not an exhaustive document that details every connection.

While the *Utah Core State Standards for Science* (https://www.schools.utah.gov/curr/science) are organized by Disciplinary Core Ideas, the *ACT College and Career Readiness Standards* (http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-standards.html) are organized by reporting category (domain) and score range.

ACT Score Range	ACT Standard Coding
13–15	200
16–19	300
20–23*	400
24–27	500
28–32	600
33–36	700

**The benchmark score for the ACT Science subtest is 23. It is important to note that the ACT benchmark standards are content-agnostic, meaning they represent critical science reasoning skills and knowledge that are found across disciplines and content areas. Many of these skills are introduced as early as elementary school and are used to describe, model, and communicate science content across all areas through high school. It is critical that elementary and middle school science teachers are aware of these skills and introduce them as they teach their content standards. It is critical that high school science teachers are also asking their students to use these skills to demonstrate their knowledge of specific scientific concepts. For example, determining if data is consistent with a prediction can be introduced as early as K–5 and reinforced through formative assessment and activities in upper grades.*

Grades K–5, Science

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades K–5?
Interpretation of Data (IOD) This category measures students' ability to manipulate and analyze scientific data presented in tables, graphs and diagrams. Approximately 45-55% of the science subtest questions are in this category.	**IOD 201**. Select one piece of data from a simple data presentation (e.g., a simple food web diagram). **IOD 202**. Identify basic features of a table, graph, or diagram (e.g. units of measurement). **IOD 203.** Find basic information in text that describes a simple data presentation.	**Grade 3 Standard V. Objective 2c:** *Predict, measure, and graph* the temperature changes produced by a variety of mechanical or electrical devices while they are operating. **Grade 4 Standard II. Objective 2:** *Interpret recorded* weather *data for simple patterns.* b. *Graph recorded data to show* daily and seasonal *patterns* in weather.	• Have students locate data in simple tables and graphs. • Have students become familiar with different types of graphs (e.g., line graphs, pie charts, bar graphs). • Have students become familiar with units of measurement commonly used in science.
Scientific Investigation (SIN) This category measures student knowledge of experimental tools, procedures and experimental design – including identifying variables and controls. Questions in this category may ask students to compare, extend, and modify experiments. Approximately 20-30% of the science subtest questions are in this category.	**SIN 202.** Understand the tools and functions of tools used in a simple experiment. **SIN 401.** Understand a simple experimental design.	**Grade 3 ILO.2.c**: *Pose questions about objects, events and processes*. **Grade 4 ILO.2.h**: *Use observations to construct a reasonable explanation* **Grade 5 ILO.1.f:** *Plan and conduct simple experiments.* **Grade 5 ILO.1.g:** *Formulate simple research questions*	• Have students observe experiments being performed and discuss what was done and why. • Have students design a procedure to investigate a specific research question.

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades K–5?
Evaluation of Models, Inferences, and Experimental Results (EMI) Questions on EMI ask students to judge the validity of scientific information and formulate conclusions and predictions based on the provided information. These questions comprise about 25-35% of the science subtest.	**EMI 201.** Find basic information in a model (conceptual). **EMI 401.** Determine which simple hypothesis, prediction, or conclusion is, or is not, consistent with a data presentation, model, or piece of information in text.	**Grade 4 Standard III. Objective 3b:** *Diagram or model* a soil profile showing topsoil, subsoil, and bedrock, and how the layers differ in composition. **Grade 4 ILO.1.c:** *Make simple predictions and inferences based upon observations.*	• Discuss what hypotheses and conclusions are and how they are different from each other. • Have students analyze data and conclusions from multiple investigations and text. • Discuss why scientists may have differing viewpoints or conclusions based on an incomplete data set.

**Italicized sections* indicate direct alignment of the Utah Science Standard to the ACT

Grades 6–8, Science

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades 6–8?
Interpretation of Data (IOD) This category measures students' ability to manipulate and analyze scientific data presented in tables, graphs and diagrams. Approximately 45-55% of the science subtest questions are in this category.	**IOD 301.** Select two or more pieces of data from a simple data presentation. **IOD 304.** Determine how the values of variables change as the value of another variable changes in a simple data presentation.	**Standard 6.3.2** *Investigate the interactions* between air masses *that cause changes* in weather conditions. *Collect and analyze* weather *data to provide evidence* for how air masses flow from regions of high pressure to low pressure causing a change in weather. **Standard 7.5.2.** *Analyze and interpret data for patterns* in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth, under the assumption that natural laws operate today as in the past. **Standard 8.2.1** *Use computational thinking to analyze data about the relationship* between the mass and speed of objects and the relative amount of kinetic energy of the objects. Emphasis should be on the quantity of mass and relative speed to the observable effects of the kinetic energy. Examples could include a full cart vs. an empty cart or rolling spheres with different masses down a ramp to measure the effects on stationary masses. Calculations of kinetic and potential energy will be learned at the high school level.	• Have students examine line graphs to determine if they show a direct or inverse relationship between variables. • Have students become familiar with scatterplots. • Have students determine a simple mathematical relationship between two variables. • Integrate scientific information from popular sources (e.g., newspapers, magazines, the internet) with that found in textbooks. • Have students collect and analyze data. Examples of data collection could include field observations, laboratory experiments, weather maps, or diagrams.
Scientific Investigation (SIN) This category measures student knowledge of experimental tools,	**SIN 201.** Find the basic information in text that describes a simple experiment. **SIN 301.** Understand the methods used in a simple experiment.	**Standard 6.2.3** *Plan and carry out an investigation to determine the relationship* between temperature, the amount of heat transferred, and the change of average particle motion in various types or amounts	• Have students perform several repetitions of an experiment to determine the reliability of results.

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades 6–8?
procedures and experimental design – including identifying variables and controls. Questions in this category may ask students to compare, extend, and modify experiments. Approximately 20-30% of the science subtest questions are in this category.		of matter. *Emphasize recording and evaluating data, and communicating the results of the investigation.* **Standard 8.3.1** *Plan and conduct an investigation and use the evidence to construct an explanation* of how photosynthetic organisms use energy to transform matter. Emphasize molecular and energy transformations during photosynthesis.	• Have students plan and conduct experiments and identify the procedures and steps required to complete their experiments. • Have students identify a researcher's question, method, and conclusion in a simple research article or summary.
Evaluation of Models, Inferences, and Experimental Results (EMI) Questions on EMI ask students to judge the validity of scientific information and formulate conclusions and predictions based on the provided information. These questions comprise about 25-35% of the science subtest.	**EMI 301.** Identify implications in a model. **EMI 302.** Determine which models present certain basic information. **EMI 401.** Determine which simple hypothesis, prediction, or conclusion is, or is not, consistent with a data presentation, model, or piece of information in text.	**Standard 7.4.4** *Obtain, evaluate, and communicate information* about the technologies that have changed the way humans affect the inheritance of desired traits in organisms. *Analyze data from tests or simulations to determine the best solution* to achieve success in cultivating selected desired traits in organisms. Examples could include artificial selection, genetic modification, animal husbandry, and gene therapy. **Standard 8.2.3** *Engage in argument to identify the strongest evidence that supports the claim* that the kinetic energy of an object changes as energy is transferred to or from the object. Examples could include observing temperature changes as a result of friction, applying force to an object, or releasing potential energy from an object.	• Have students evaluate whether the data produced by an experiment adequately supports a given conclusion. • Have students compare and contrast two different models about a scientific phenomenon. • Have students evaluate the effectiveness of two different experimental designs or models.

Grades 9-12, Science

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades 9–12?
Interpretation of Data (IOD) This category measures students' ability to manipulate and analyze scientific data presented in tables, graphs and diagrams. Approximately 45-55% of the science subtest questions are in this category.	**IOD 401.** Select data from a complex data presentation (e.g. phase diagram). **IOD 402.** Compare or combine data from a simple data presentation (e.g., order or sum data from a table). **IOD 404.** Perform a simple interpolation or simple extrapolation using data in a table or graph.	**Earth Science Standard III, Objective 2 e**. *Design and conduct* a weather *investigation, use an appropriate display of the data, and interpret the observations and data.* **Chemistry Standard V Objective 1 b**. *Use information from graphs to draw warranted conclusions* about reaction rates. **Physics Standard 1 Objective 1 e.** *Collect, graph, and interpret data* for position vs. time *to describe* the motion of an object *and compare* this motion to the motion of *another object*.	• Have students relate scientific information contained in written text to numerical data. • Have students manipulate algebraic equations that represent data. • Have students draw conclusions by reading data tables and using graphs • Have students analyze relationships between variables and make predictions based on the relationships.
Scientific Investigation (SIN) This category measures student knowledge of experimental tools, procedures and experimental design – including identifying variables and controls. Questions in this category may ask students to compare, extend, and modify experiments. Approximately 20-	**SIN 402.** Understand the methods used in a complex experiment. **SIN 403.** Identify a control in an experiment. **SIN 404.** Identify similarities and differences between experiments.	**Biology Standard I Objective 3** b. *Formulate and test a hypothesis specific to the effect of changing one variable upon another* in a small ecosystem **Chemistry Standard V Objective 1 a.** *Design and conduct an investigation* of the factors affecting reaction rate *and use the findings to generalize the results* of other reactions.	• Have students determine the hypothesis of an experiment that requires more than one step. • Have students determine alternate methods of testing a hypothesis. • Have students argue and defend the presentation of data through scientific reasoning and fact.

Category	ACT Readiness Standards in Science	Example(s) of Related Utah Science Standards	What could this look like in practices in grades 9–12?
30% of the science subtest questions are in this category.			
Evaluation of Models, Inferences, and Experimental Results (EMI) Questions on EMI ask students to judge the validity of scientific information and formulate conclusions and predictions based on the provided information. These questions comprise about 25-35% of the science subtest.	**EMI 402.** Identify key assumptions in a model. **EMI 404.** Identify similarities and differences between models. **EMI 501.** Determine which simple hypothesis, prediction, or conclusion is, or is not, consistent with two or more data presentations, models, and/or pieces of information in text. **EMI 502.** Determine whether presented information, or new information, supports or contradicts a simple hypothesis or conclusion, and why.	**Biology Standard V Objective 2 e.** *Review a scientific article and identify the research methods used to gather evidence* that documents the evolution of a species. **Biology Standard III Objective 2 e.** *Compare the structure and function* of organ systems *in one* organism *to the structure and function in another* organism (e.g., chicken to sheep digestive system; fern to peach reproductive system). **Chemistry Standard VI Objective 1 d.** *Design and conduct an experiment to determine the factors* (e.g., agitation, particle size, temperature) *affecting* the relative rate of dissolution.	• Have students communicate the findings of an experiment and compare conclusions with peers. • Have students formulate hypotheses, predictions, or conclusions by comparing and contrasting several different sets of data from different experiments. • Have students evaluate the merits of a conclusion based on the analysis of several sets of data. • Have students compare and contrast the utility and accuracy of different models.

* *Italicized sections* indicate direct alignment of the Utah Science Standard to the ACT

ACT Writing Test
Connections with Utah Core State Standards

Questions & Answers

1. ***What determines student success on the ACT writing test?***

The ability to communicate effectively is one of the most important skills students must master for college and career readiness. The ACT writing test measures the writing skills taught in high school English classes and entry-level college composition courses. Students must take a clear position on an issue; support that position with focused ideas, meaningful examples, and sound reasoning; and explain the significance of their ideas in the broader context of the issue. Student writing is measured on a four-trait rubric: ideas and analysis, development and support, organization, and language and conventions.

2. **How is the ACT writing test constructed?**

ACT assesses only argumentative writing. No authentic stimulus text is provided; instead, students are presented with three different perspectives on a contemporary issue. Students are asked to analyze the perspectives and write an essay explaining their own position. Students are given 40 minutes to plan and write their essay. The writing test is not optional for ACT in Utah.

3. ***Are students asked to bring prior knowledge to the ACT writing test?***

Because the ACT does not provide a stimulus text, students must use general background knowledge of the issue and critical thinking skills to develop their position and ideas.

4. ***When and how should we begin preparing students for the ACT writing test?***

Teaching the depth and breadth of the Utah Core State Standards and building knowledge through content-rich texts at all grade levels will prepare students to be successful on the ACT writing test.

Please note: This document is intended to highlight connections between the Utah Core State Standards and the ACT writing test, but it is not an exhaustive document that details every connection.

While the Utah Core State Standards for English Language Arts (https://utah.gov/governor/docs/utahcorestandards/English_Language_Arts_2013.pdf) are organized by domain and grade level, the ACT College and Career Readiness Standards (http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-

standards.html) are organized by reporting category and score range. The ACT writing test is scored on a 12-point rubric (http://www.act.org/content/act/en/products-and-services/the-act/scores/writing-test-scores.html).

ACT Writing Score Range	ACT Writing Standard Coding
3–4	200
5–6	300
7–8	400
9–10	500
11–12	600

Grades K–5, Writing

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
Ideas and Analysis Scores in this domain reflect the ability to generate productive ideas and engage critically with multiple perspectives on the given issue. Competent writers understand the issue they are invited to address, the purpose for writing, and the audience. They generate ideas that are relevant to the situation.	**EXJ 301** Show a basic understanding of the persuasive purpose of the task by taking a position on the issue in the prompt	**2.W.1** Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. **3.W.1** Write opinion pieces on topics or texts, supporting a point of view with reasons. **4.W.1** Write opinion pieces on topics or texts, supporting a point of view with reasons and information. **5.W.1** Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	• Have students discuss the goal of a persuasive essay with a partner. • Have students identify a local community or school issue; phrase the issue in the form of a question; and experiment with ways to clearly answer that question. • Have students generate a list of reasons that would support a position; decide which of those reasons are most relevant to the overall argument; explain how the reasons were chosen and why they are relevant. **Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) on the ACT website.*
Development and Support Scores in this domain reflect the ability to discuss ideas,	**DEV 401** Provide adequate development in support of ideas; clarify ideas by	**2.W.1** Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion,	• Provide students with model paragraphs and have them work in teams to analyze the topic

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
offer rationale, and bolster an argument. Competent writers explain and explore their ideas, discuss implications, and illustrate through examples. They help the reader understand their thinking about the issue.	using some specific reasons, details, and examples	supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. **3.W.1.a and b** Develop an opinion with reasons that support the opinion. **4.W.1.a and b** Develop an opinion with reasons that are supported by facts and details. **5.W.1.a and b** Develop an opinion through logically-ordered reasons that are supported by facts and details.	sentences and identify how the idea in each topic sentence is explained by the rest of the sentences in that paragraph. • Provide students with a model essay to discuss how the supporting details help to clarify the main idea. • Have students use prewriting strategies to explain or illustrate ideas.
Organization Scores in this domain reflect the ability to organize ideas with clarity and purpose. Organizational choices are integral to effective writing. Competent writers arrange their essay in a way that clearly shows the relationships between ideas, and they guide the reader through their discussion.	**ORI 401** Provide an adequate but simple organizational structure by logically grouping most ideas **ORI 402** Use some appropriate transitional words and phrases **ORI 403** Present a somewhat developed introduction and conclusion	**2.W.1, 3.W.1, 4.W.1, 5.W.1** Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. **3.W.1.a and b** Create an organizational structure that lists supporting reasons. **3.W.1.c** Use linking words and phrases to connect opinion and reasons. **4.W.1.a** Create an organizational structure in which related ideas are grouped to support the writer's purpose.	• Have students use clustering, concept mapping, or another visual organizer to identify relationships among ideas. • Have students create a list of transitional words and discuss when and where to use them. • Have student analyze introductions and conclusions of model essays, paying careful attention to their structure and function.

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades K–5?*
		4.W.1.d, **5.W.1.d** Provide a concluding statement or section related to the opinion presented. **4.W.1.c** Link opinion and reasons using words and phrases. **5.W.1.a** Create an organizational structure in which ideas are logically grouped to support the writer's purpose. **5.W.1.c** Link opinion and reasons using words, phrases, and clauses.	
Language and Conventions Scores in this domain reflect the ability to use written language to convey arguments with clarity. Competent writers make use of the conventions of grammar, syntax, word usage, and mechanics. They are also aware of their audience and adjust the style and tone of their writing to communicate effectively.	**USL 401** Show adequate use of language to communicate by • correctly employing many of the conventions of standard English grammar, usage, and mechanics • choosing words that are appropriate	**3.L.6** Acquire and use accurately grade-appropriate conversational, general academic, and strand-specific words and phrases, including those that signal spatial and time relationships. **4.L.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic. **5.L.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.	• Have students routinely write informal entries in a journal. • Have students read model essays, noting their use of language. • Have students practice peer editing to identify errors in conventions of standard English grammar, usage, and mechanics.

Grades 6–8, Writing

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
Ideas and Analysis Scores in this domain reflect the ability to generate productive ideas and engage critically with multiple perspectives on the given issue. Competent writers understand the issue they are invited to address, the purpose for writing, and the audience. They generate ideas that are relevant to the situation.	**EXJ 401** Show clear understanding of the persuasive purpose of the task by taking a position on the issue in the prompt and offering some context for discussion	**6.W.1, 7.W.1, 8.W.1** Write arguments to support claims with clear reasons and relevant evidence.	• Have students choose an issue and discuss possible contexts in which the issue might exist. • Have students take a position on the issue and generate a list of supporting reasons and identify which are best; generate a list of possible objections others might have to that position; and list possible outcomes if this position were adopted or enacted. **Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) on the ACT website.*
Development and Support Scores in this domain reflect the ability to discuss ideas, offer rationale, and bolster an argument. Competent writers explain and explore their ideas, discuss implications, and illustrate through examples. They	**DEV 501** Provide thorough development in support of ideas; extend ideas by using specific, logical reasons and illustrative examples	**6.W.1.b, 7.W.1.a and b** Support claim(s) with logical reasoning and relevant, sufficient evidence; acknowledge alternate or opposing claim(s). **8.W.1.a and b** Support claim(s) with logical reasoning and relevant, sufficient evidence; acknowledge	• Have students identify the thesis statements in a variety of model essays. • Have students generate an outline or visual representation of all major ideas in a model essay and the examples and details that support them.

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
help the reader understand their thinking about the issue.		and refute alternate or opposing claim(s).	• In a writers' workshop, have students submit and critique writing to identify ideas that need further development to be persuasive or clear.
Organization Scores in this domain reflect the ability to organize ideas with clarity and purpose. Organizational choices are integral to effective writing. Competent writers arrange their essay in a way that clearly shows the relationships between ideas, and they guide the reader through their discussion.	**ORI 501** Provide a coherent organizational structure with some logical sequencing of ideas **ORI 502** Use accurate and clear transitional words and phrases to convey logical relationships between ideas **ORI 503** Present a generally well-developed introduction and conclusion	**6.W.1.a**, **7.W.1.a**, **8.W.1.a** Introduce claims. **6.W.1.a and c, 7.W.1.a and c, 8.W.1.a and c** Organize the reasons and evidence clearly and clarify the relationships among claim(s) and reasons. **6.W.1.e, 7.W.1.e, 8.W.1.e** Provide a concluding statement or section that follows from the argument presented. **6.W.2.c, 7.W.2.c, 8.W.2.c** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.	• Have students compare the outline of an original essay to the outline of a model essay and discuss ways to reorganize the original writing to make it more effective. • In an editing workshop, have students review others' writing to see if smooth transitions are provided from one paragraph to the next. • Have students practice writing an introduction that briefly but effectively introduces a context for the discussion as well as a thesis. • Encourage students to consider ways to conclude an essay that emphasize the thesis without restating the discussion or otherwise being repetitive.
Language and Conventions Scores in this domain reflect the ability to use written language to convey arguments with clarity.	**USL 501** Show competent use of language to communicate ideas by • correctly employing most conventions of standard	**6.L.1, 7.L.1, 8.L.1** Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	• Have students read original writing aloud to hear and identify language errors. • In an editing workshop, have students revise writing to reduce

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 6-8?*
Competent writers make use of the conventions of grammar, syntax, word usage, and mechanics. They are also aware of their audience and adjust the style and tone of their writing to communicate effectively.	English grammar, usage, and mechanics • generally choosing words that are precise and varied • using several kinds of sentence structures to vary pace and to support meaning	**6.L.2, 7.L.2, 8.L.2** Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. **6.L.6, 7.L.6, 8.L.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; develop vocabulary knowledge when considering a word or phrase important to comprehension or expression.	unnecessary repetition of words or phrases and to replace vague language with more precise words. • In a writer's workshop, have students experiment with more sophisticated sentence structure.

Grades 9–12, Writing

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
Ideas and Analysis Scores in this domain reflect the ability to generate productive ideas and engage critically with multiple perspectives on the given issue. Competent writers understand the issue they are invited to address, the purpose for writing, and the audience. They generate ideas that are relevant to the situation.	**EXJ 601** Show advanced 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	**9-10.W.1, 11-12.W.1** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	Select an argument from a published text and have students identify assumptions on which the arguments rest and determine if the assumptions are reasonable and open to challenge. **Additional ideas for instructional practices can be found in the resource [Ideas for Progress in College and Career Readiness](http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) (http://www.act.org/content/act/en/k12-educators-and-administrators/college-and-career-readiness/benchmarks/ideas-for-progress.html) on the ACT website.*
Development and Support Scores in this domain reflect the ability to discuss ideas, offer rationale, and bolster an argument. Competent writers explain and explore their ideas, discuss implications, and illustrate through examples. They help the reader understand their thinking about the issue.	**EV 601** Provide ample development in support of ideas; substantiate ideas with precise use of specific, logical reasons and illustrative examples	**9-10.W.1.b, 11-12.W.1.b** Develop claim(s) and counterclaim(s) fairly, supplying evidence for each claim and counterclaim while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.	During a writers' workshop, have students practice elaborating on ideas fully by describing their logical connection to the essay's main idea and checking to see if the essay's treatment of each idea is proportional to the idea's importance.

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
Organization Scores in this domain reflect the ability to organize ideas with clarity and purpose. Organizational choices are integral to effective writing. Competent writers arrange their essay in a way that clearly shows the relationships between ideas, and they guide the reader through their discussion.	**ORI 601** Provide a unified, coherent organizational structure that presents a logical progression of ideas **ORI 602** Use precise transitional words, phrases, and sentences to convey logical relationships between ideas **ORI 603** Present a well-developed introduction that effectively frames the prompt's issue and writer's argument; present a well-developed conclusion that extends the essay's ideas	**9-10.W.1.a**, **11-12.W.1.a** Introduce precise claim(s). **9-10.W.1.a, 11-12.W.1.a** Create an organization that establishes cohesion and clear relationships among claim(s), counterclaim(s), reasons, and evidence. **9-10.W.1.e, 11-12.W.1.3** Provide a concluding statement or section that follows from and supports the argument presented. **9-10.W.2.d, 11-12.W.2.d** Use precise language and domain-specific vocabulary to manage the complexity of the topic.	• During a writers' workshop, have students practice composing thesis statements that clearly state a position on an issue and offer a rationale for taking that position. • During a writers' workshop, encourage students to experiment with how to conclude an essay while continuing to challenge the audience with critical questions or implications. • Have students consider how transitional phrases and sentences can help convey logical connections between ideas and between paragraphs.
Language and Conventions Scores in this domain reflect the ability to use written language to convey arguments with clarity. Competent writers make use of the conventions of grammar, syntax, word usage, and mechanics. They are also aware of their audience and adjust the	**USL 601** Show effective use of language to communicate ideas clearly by • correctly employing most conventions of standard English grammar, usage, and mechanics	**9-10.L.1, 11-12.L.1** Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. **9-10.L.2, 11-12.L.2** Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. **9-10.L.6, 11-12.L.6** Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading,	• Have students read a variety of texts to improve vocabulary and gain exposure to precise and effective language use. • Present students with model essays and have them discuss the effects of rhetorical devices. • In an editing workshop, have students edit sentences for meaningless words, wordiness, and redundancy.

Writing Reporting Categories	ACT Readiness Standards: Snapshot of Expected Skills	Utah Core State Standards: Snapshot of Expected Skills	What could this look like in practices in grades 9-12?*
style and tone of their writing to communicate effectively.	• consistently choosing words that are precise and varied • using a variety of kinds of sentence structures to vary pace and to support meaning	writing, speaking, and listening at the postsecondary and workforce readiness level; demonstrate independence in building vocabulary knowledge when considering a word or phrase important to comprehension or expression. **9-10.L.3, 11-12.L.3** Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	