

**Report on an Analysis of Correspondences between
the EFF Curriculum Frameworks and
the Common Core State Standards
August 2011**



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1. Purpose:

The purpose of this document is to report on an analysis of correspondences between the Equipped for the Future (EFF) Curriculum Frameworks for *Reading, Writing, Speaking, Listening, and Math*, and the *Common Core State Standards* (June 2, 2010), developed for K-12 by the Council of Chief State School Officers (CCSSO) & the National Governors Association Center for Best Practices (NGA Center).

Rationale:

The Common Core documents offer a new resource to the field; and, thus, a review of the upper levels of the EFF Curriculum Frameworks was undertaken to determine whether they adequately reflect the current knowledge about what students need to know and be able to do in order to succeed in college and careers. To more fully understand the specific knowledge, skills, and strategies proposed in both documents and implications for the field, the review also entailed a comparison of their key features and appropriateness for adult education.

2. Process:

To complete this analysis, a team of Equipped for the Future (EFF) staff and consultants with the Center for Literacy Studies, University of Tennessee, used the following documents:

- The June 2, 2010 *Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects*, and the *Common Core State Standards for Mathematics*. (This final version of both documents can be accessed at <http://www.corestandards.org/the-standards>.)
- The Equipped for the Future (EFF) Curriculum Frameworks for the content standards *Read with Understanding (2006)*, *Convey Ideas in Writing (2008)*, *Speak So Others Can Understand (2011)*, *Listen Actively (2011)*, and *Use Math to Solve Problems and Communicate (2010)*, developed in collaboration with a number of state partners.

EFF focused on the sections of each Common Core document that appeared to be most relevant to college and career readiness, using the standards and performance descriptions in those sections as the basis for comparison and contrast with the content of upper/transitional levels of the EFF Curriculum Frameworks. Specifically,

- From the *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects*, the consultants drew from the standards listed under the headings “College and Career Readiness Anchor Standards for Reading,” “College and Career Readiness Anchor Standards for Writing,” and “College and Career Readiness Anchor Standards for Speaking and Listening”; from the performance descriptions included in the section titled “Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language “ (though the Common Core authors are explicit that these are not standards); and specifically for *Read with Understanding*, from the Grades 11-12 items in each of the following: Reading Standards for Literature; Reading Standards for Informational Texts; Reading Standards for Literacy in History/Social Studies; and Reading Standards for Literacy in Science and Technical Subjects.
- From the *Common Core State Standards for Mathematics*, EFF drew on information offered in the sections titled “Standards for Mathematical Practice” and “Standards for Mathematical Content.”

For the analysis that led to identification of correspondences (and differences) with the *Common Core State Standards* for reading, writing, speaking/listening and math, EFF focused on the following aspects of each relevant EFF Curriculum Framework at its upper levels:

- Components of the EFF Standard
- Performance Indicators (including Examples of Performance)
- Teaching and Learning Objectives (benchmarks)
- OTHER (Content Examples, e.g.’s, etc.)

When this analysis was completed, each reviewer wrote a narrative summary of findings. What follows is a synthesis of those narrative summaries.

3. General Comments:

The two Common Core documents (i.e., for the English Language Arts and for math) were developed by different groups and use different organizing features, which makes general statements about “the” Common Core State Standards difficult to make. For instance:

- the *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects* present a set of common performance descriptions titled “Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language,” which is followed by a list of “College and Career Readiness Anchor Standards” for each individual content area (Reading, Writing, Speaking and Listening). These Anchor Standards articulate what students should know and be able to do to be “college and career-ready” and are followed by grade-level standards which form a progression leading to the exit performance described by the anchor standards. Meanwhile,
- the *Common Core State Standards for Mathematics* do not have the common performance descriptions nor Anchor Standards. There is no statement at all about what “college and career-ready” performance looks like. Instead, each set of standards for a grade level is organized into “Standards for Mathematical Practice” (which are the same across all levels) and “Standards for Mathematical Content” through Grade 8, after which high school standards are provided for different strands (e.g., Algebra, Geometry).

The EFF Curriculum Frameworks, on the other hand, use a consistent philosophy and format throughout. For instance, across all content areas, each EFF standard comprises a set of bulleted statements, or *components of performance*, which describe an integrated skill process used in the pursuit of important adult goals and purposes. Furthermore all the Curriculum Frameworks present the same kinds of information at each performance level:

- the content standard itself (the same integrated process is presented at every level);
- indicators and examples of proficient performance for that particular level;
- teaching and learning objectives (TLOs), or benchmarks, that include the knowledge, skills and strategies needed to perform at that level; and
- examples or “sub-objectives” of the TLOs (benchmarks), when appropriate.

This alignment across all the EFF Curriculum Frameworks – both in skill definition and in organization – helps users know how to navigate the documents as they plan and implement instruction, which facilitates ease of use and the ability to make general statements about the Frameworks as a group.

4. Key Findings:

- **Correspondences Across Content Areas**

The analysis confirmed that the Common Core State Standards and the EFF Curriculum Frameworks share many priorities and are not in conflict in any fundamental way.

Focus on College/Work Readiness: Both documents are intended to describe knowledge and skills, the development of which will lead to college or work readiness. In all content areas included in this analysis, then, it is possible to identify correspondences between the two documents, although some correspondences are much stronger and more consistent than others.

Some examples from the Individual Analyses include the following:

- The Common Core description of the English Language Arts/Literacy practices of college-and career-ready students represents a strong correspondence to elements of many of the EFF Curriculum Frameworks. For instance, according to the Common Core, “They (college/career-ready students) respond to the varying demands of audience, task, purpose, and discipline.” Many of the EFF Curriculum Frameworks at their upper levels describe the kind of competent skill performance (and application of the underlying knowledge, skills and strategies required to achieve that performance) that results in students’ ability to respond in this way. “Examples of Proficient Performance” and an “Illustration of [the EFF Standard]” at these upper levels provide especially clear pictures of adults addressing real-life skill needs.
- There are strong, consistent correspondences between the Common Core “Production and Distribution” Anchor Standards for Writing and the EFF Writing framework in matters of 1) relating writing to specific purposes/audiences/contexts, and 2) using strategies for planning and revision. This is where “the full writing process” so integral to the EFF Curriculum Framework seems to get most attention on the Common Core side.
- There is consistency between EFF and the Common Core regarding the belief that math is more than computation. Both the Common Core math standards and the EFF Curriculum Framework for Math reflect the National Research Council’s report *Adding It Up* (Center for Education (CFE), 2001. *Adding It Up: Helping Children Learn Mathematics*. Washington, DC: National Research Council.) which stresses that math proficiency involves adaptive reasoning, conceptual understanding, strategic competence, procedural fluency, and productive disposition.

Theoretical/Research Base: The EFF Curriculum Frameworks and the Common Core across all content areas share a strong basis in recognized theory and research, particularly in a theoretical model of skill development that is characterized by integrated growth in content knowledge, independence, fluency, and range (what EFF refers to as “the 4 dimensions of performance”). This shared theoretical basis results in numerous strong correspondences between the two sets of documents.

Some examples from the Individual Analyses include the following:

- Both the EFF and the Common Core documents highlight the role of content knowledge in supporting reading comprehension and prompt educators to make the learning of content related to the subject under study (e.g., social studies, science, career readiness, parenting) a feature of instruction.
- The Common Core Standards for Mathematical Practice rest on important “processes and proficiencies” with longstanding importance in mathematics education. Among these are the National Council of Teachers of Mathematics (NCTM) process standards of problem solving, reasoning and proof, communication, representation, and connections (National Council of Teachers of Mathematics, 2000. *Principles and standards for school mathematics*. Reston, VA: National Council of Teachers of Mathematics.)The EFF *Use Math* Curriculum Framework is also based on these NCTM Standards, which have been developed, tested, and continually revisited over 25 years.

Nature of Teaching/Learning Guidance: Both documents provide an overall sense of what should be taught and learned at a particular level without requiring that a teacher (or student) use a particular strategy to facilitate that learning. The choice of useful strategies depends on the task and situation. As a result of this similar approach to teaching/learning guidance, the analysis often revealed multiple correspondences between each Common Core document and its parallel EFF Curriculum Framework.

- **Differences Across Content Areas**

The analysis also uncovered some differences between the Common Core documents and the EFF Curriculum Frameworks.

Learning Purposes: The two documents differ in that the Common Core focuses on academic (and to some extent, vocational) purposes for all, while EFF contextualizes skills within a fuller range of adult family-related, work-related, and civic purposes at all levels. For example, in its

Speaking and Listening standards, the Common Core’s emphasis on well-reasoned, informed argument suggests that its primary interest is in academic purposes. While the EFF documents address these academic purposes, they also include preparation for effective listening and speaking for non-academic adult purposes, such as clear communication with family or successful participation in daily life tasks.

What Is Being Described by Standards: Another key area of difference is in what the “standard” attempts to describe. Each EFF content standard describes a transferable skill process that can be applied to a wide variety of adult purposes and tasks. EFF state partners maintain that the central focus of this skill process as the overarching “content standard” for a skill (e.g., reading, math) reminds programs to engage students in rich, meaningful tasks (whether academic or “life”- focused) that require students to use and manage the full process and make decisions about which knowledge, skills, and strategies to apply and integrate.

In contrast, the Common Core documents target discrete skills and sub-skills which, like other sets of K-12 standards, may lead teachers to focus only on each sub-skill and not also provide learning activities which help students apply and transfer their skills outside of the immediate learning situation. The EFF documents do include lists of discrete knowledge and sub-skills— and have received high marks from teachers for them. However, what gets called a “standard,” and thus focuses administrative, instructor, and student attention, is the problem-solving skill process itself.

For example,

- The EFF writing standard/framework describes – often explicitly – an integrated writing process in which a writer employs purposeful planning, text generation, attention to English language conventions, and revision to meet an adult writing goal:
 - Determine the purpose for communicating.
 - Organize and present information to serve the purpose, context and audience.
 - Pay attention to conventions of English language usage, including grammar, spelling, and sentence structure, to minimize barriers to readers’ comprehension.
 - Seek feedback and revise to enhance the effectiveness of the communication.

It is this writing process that college- and career-ready students need to use in order to accomplish the standards (in many cases, presented as “writing products”) outlined in the Common Core document. The first set of the Common Core Anchor Standards for writing, for instance, is squarely focused on the ability to produce good examples of specific rhetorical forms of writing – persuasion, exposition, and narration. Meanwhile, the EFF Curriculum Framework both elaborates the writing process that leads to production of such “finished” texts and also specifically addresses persuasion, exposition and narration in the content examples for transition-level teaching/learning objectives.

Role of Metacognition: Both the Common Core and the EFF developers discuss the importance of metacognitive strategies, but these are not treated as part of the “standards” in the Common Core documents. Since the standards themselves guide teachers more than any introductory materials that accompany them, it is beneficial to have metacognitive strategies as a prominent feature of the EFF Curriculum Frameworks. While the Common Core does include core practices for various content areas (such as demonstrating independence, building content knowledge, comprehending as well as critiquing, etc.), it does not explicitly address metacognition (such as the ability to surface and build on prior knowledge, an awareness of what one knows and needs to know, the ability to monitor learning and adjust strategies to enhance it, etc.).

Research, Technology, and Media: The Common Core documents across most content areas emphasize applications related to research, technology, and media. The EFF Curriculum Frameworks do not currently include intentional emphasis in these areas (in part, possibly, because the overall EFF content framework includes standards specifically addressing two of the areas – *Learn Through Research* and *Use Information and Communications Technology* – and another standard that at minimum involves attention to media -- *Observe Critically*).

Some examples from the Individual Analyses include the following:

- The strategic and capable use of media and technology is mentioned in both the EFF Listening and Speaking documents, but it does not play as prominent a role as in the Common Core document, where they are mentioned specifically in two of the six standards for Speaking and Listening. By comparison, technology is less apparent in the EFF documents, where it appears as a sub-benchmark under the Communication/Comprehension Strategies Benchmarks.
- While it was challenging to find correspondences between the Teaching and Learning Objectives (benchmarks) for the EFF Writing Curriculum Framework and

the Common Core Writing standards explicitly related to technology use, the EFF framework does address using technology as a writing strategy appropriate for particular purposes (such as generating and organizing ideas in the pre-writing stage of the writing process), and the internet both as an avenue of communication and as a source of writing tools/resources.

Given the increasingly important role that technology in particular is playing in the ways that adults operate and accomplish tasks in the world, the relevance and usefulness of the EFF Curriculum Frameworks may be strengthened by more explicitly integrating the EFF *Use Technology* standard with the instructional guidance that the Frameworks offer. For instance, broad phrases such as “use appropriate technology tools for the purpose and audience” might be added at the level of Teaching/Learning Objectives in each content area where interpretation/comprehension and application strategies are addressed. Some specific examples might then be added under “Content Examples” for the appropriate TLOs.

5. Conclusion:

With the developing understanding of the role Adult Basic Education should play in preparing adults for career training and college, the Center for Literacy Studies welcomed the opportunity to explore more fully what students need to know and be able to do to transition to these types of “next steps”, and how completely the current forms of the Curriculum Frameworks address transition-level knowledge, skills and strategies. The Common Core State Standards provide a useful resource to support this endeavor.

This report has described the results of a systematic comparison of the EFF Curriculum Frameworks with the Common Core State Standards. The findings indicate that there are some ways in which the two sets of documents are similar; the findings also suggest some differences between the two sets of documents, both across all content areas and within specific disciplines.

Ways that the two documents overlap include

- A focus on the knowledge and skills that support readiness for post-secondary education and employment (though not always to the “transition” level on the EFF side);
- A grounding in a research-based concept of skill development; and
- A commitment to providing overall guidance about the content of instruction without mandating the use of particular instructional methods or strategies.

Among the differences between the two documents uncovered in the analyses are

- A difference in conception of learning purposes, with the Common Core focusing on academic (and to some extent, vocational) purposes, and EFF focusing on a fuller range of adult family-related, work-related, and civic learning purposes.
- A difference in what the “standards” articulated in each set of documents attempt to describe, with the Common Core standards targeting discrete skills/ sub-skills and specific products/outcomes, and the EFF content standards each describing a transferable skill process that can be applied to a wide variety of adult purposes and tasks.
- A difference in the way that Metacognition is addressed, with metacognitive strategies being discussed in the Common Core introductory materials but not in the standards document, and these strategies (surfacing/building on prior knowledge, monitoring learning and adjusting strategies to enhance it, etc.) comprising a prominent feature of the EFF Curriculum Frameworks.
- A difference in approach to Research, Technology, and Media, with the Common Core documents integrating applications related to research, technology, and media into their content areas, and the EFF Curriculum Frameworks pulling these applications out as distinct Standards that may be overlooked as states focus on the Communication and Math Standards. In consideration of the increasingly important role that technology in particular plays in adults’ lives, it may be useful to incorporate the EFF *Use Technology* standard more fully into instruction.

Appendices

1. Analysis for EFF Standard *Read with Understanding*
2. Analysis for EFF Standard *Use Math to Solve Problems and Communicate*
3. Analysis for EFF Standard *Convey Ideas in Writing*
4. Analysis for EFF Standards *Speak So Others Can Understand & Listen Actively*

Analysis for EFF Standard

Read with Understanding

EFF Curriculum Framework / Common Core State Standards (CCSS)
Skill Area: READ WITH UNDERSTANDING

Summary of Correspondences

Because the *Read with Understanding (RWU) Curriculum Framework* and the Common Core State Standards (CCSS) are grounded in a common framework for understanding the development of expertise, there are many strong correspondences between them. Both documents, for instance, evidence an understanding of the role of content knowledge in supporting reading comprehension and prompt educators to teach content related to the subject under study (e.g., social studies, science, career readiness, parenting), in addition to the skill. Both documents also emphasize the importance of range—preparing students for a variety of reading purposes, audiences, and tasks—and for independence in skill use.

Another strong correspondence is in the emphasis in both documents on the important role of text challenge in developing reading skills. Although they handle this issue in different ways, both documents provide a considerable amount of guidance to teachers about the kinds of texts which can provide the appropriate challenge at different levels.

The CCSS and EFFCF have further correspondences in the area of analysis and critique. Both provide strong guidance as to what needs to be taught and learned to support the development of critical readers. Attention to the author’s purpose, the organization/structure of text, the development of ideas, and the credibility of arguments put forth by the author are elements of each set of standards.

Summary of Differences

The difference in the overall approach taken in each documents results in a different set of strengths and weaknesses for each. For instance, while the EFF CF provides prompts for practitioners to teach reading as a process, as described by the EFF Read With Understanding content standard, the CCSS does not provide information for teachers about the various strategic components of reading. Furthermore, the CCSS document assumes that the underlying skills for reading progress in a predictable way and ceases mention of word analysis/recognition and fluency skills after fifth grade. Drawing from the research on adult reading profiles which shows that adult learners often have significant strengths and weaknesses in the underlying skills of reading even at the higher levels, the EFF CF provides more guidance as to expectations for students in the areas of alphabets and fluency at every level, including the transition level (Level 6).

The EFF CF document is focused on supporting the adult learner in developing the metacognitive and cognitive strategies required for lifelong reading and learning, as indicated by the reading instruction research and literature. As such, the document prompts educators to structure learning activities in which adult learners make decisions about what they read and for what purposes, while also making room for directed reading in which adults are required to read specific texts for specific purposes (as in an academic or work environment). In contrast, the CCSS is solely focused on “other-directed” texts and tasks, with the “independence” it seeks being in the ability to accomplish assigned tasks (not, necessarily, in discovering and using reading as a tool for accomplishing one’s own goals).

One major difference between the CCSS and the EFF CF is in what the documents attempt to support. The *Read with Understanding (RWU)* curriculum framework is intentionally structured to support reading performance in work readiness, family literacy, EL/Civics, and academic contexts. Thus, the document describes an overall reading process and the underlying knowledge, skills, and strategies that can be applied to a wide variety of reading tasks (e.g., *Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points*). In contrast, for Grades 11-12, the CCSS has a separate set of standards for Literature, Informational Texts, History/Social Studies, Science & Technical Subjects. Each set of standards mentioned above is based on the College and Career-Ready Anchor Standards, with customization for the particular subject area. The result is a comprehensive set of 40 standards—just in reading—which could prove daunting in the context of adult education, where instructors teach multiple subjects for a fraction of the time available in K-12. In contrast, the EFF CF attempts to describe generative skills, which can be applied in a multitude of contexts and supports a reading-across-the-curriculum approach.

Another difference between the documents is found in the prominence given to texts from different media, including digital and visual texts. The CCSS document, likely because it is more current and is drawing from the increased attention given to these kinds of texts in the transition literature, is more intentional about specifying these kinds of texts. Although electronic texts receive significant mention as examples in the Sample Texts section of the EFF CF, there is not a strong reference in the language of the TLO’s or Content Examples themselves.

The grain-size of skill information provided in the documents is another difference. The Common Core standards are written at a broad, global level and may not provide sufficient information about the underlying knowledge, skills, and strategies that students need in order to accomplish the broader standard. The EFF CF document provides increasingly more detail about each major skill, moving from Indicators, to Teaching and Learning Objectives (TLOs), to Content Examples. A related difference between the two documents is that the EFF CF clearly distinguishes between the skill

process (“content standard”), reading purposes/tasks (“Examples of Proficient Performance”), and the discrete knowledge and sub-skills required to perform at a particular level (“indicators” and “teaching & learning objectives”). The Common Core document, however, sometimes mixes in specific tasks with a list of skills.

Recommendations

Since the EFF CF describes the generative knowledge, skills, and strategies applicable to a wide range of contexts, its current form should suffice to support its use in classes which aim to prepare students for college-level work. However, because of its academic-oriented nature, the CCSS focuses more fully on the types of texts that support success in a college setting (e.g., primary vs. secondary sources and “foundational” texts in American and British history and literature). Critics have pointed out that “foundational” is never defined and the exclusive mention of American and British texts may seem restrictive, but these weaknesses aside, the attention to types of texts with which entering college students would be expected to know is a support for educators preparing students for college. More academic-oriented examples could be added to the EFF CF as tools for adult educators in these transition classes. Another recommendation is to embed references to media and visual texts in the Examples of Proficient Performance, TLOs, and Content Examples. Finally, a stem might be added to the beginning of the Read With Understanding content standard that better introduces the components as a problem-solving process and focuses attention on the need to be able to apply the process with a variety of texts and a variety of purposes.

CORRESPONDENCE CHART
Skill Area: READ WITH UNDERSTANDING

CCSS Documents used for alignment:

- College and Career Readiness (CCR) Anchor Standards for Reading
- Grade 11-12 in each of the following: Reading Standards for Literature; Reading Standards for Informational Texts; Reading Standards for Literacy in History/Social Studies; and Reading Standards for Literacy in Science and Technical Subjects

Table 1 – Capacities of the Literate Individual

| Capacities of the Literate Individual (in Intro) | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|----------------------------|--|--|---|------------------------|
| They demonstrate independence. | | PI: “to independently accomplish” | | | |
| They build strong content knowledge. | | PI: Demonstrate familiarity with extensive specialized content knowledge and vocabulary... PI: Integrate prior knowledge with new information in texts to develop deep understanding of the information | 6A2 Evaluate and apply relevant prior knowledge to support comprehension 6B1 Recognize most words and abbreviations found in a wide range of texts, including words specific to a variety of specialized areas 6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics. | 6A2 Content knowledge related to a wide range of specialized topics | |

| Capacities of the Literate Individual (in Intro) | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|--|---|---|--|------------------------|
| They respond to the varying demands of audience, task, purpose, and discipline. | (Whole standard) | PI: Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings. | 6A1 Read a wide range of texts for real-life purposes 6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly and in combination | | |
| They comprehend as well as critique. | Monitor comprehension and adjust reading strategies Analyze the information and reflect on its underlying meaning | PI: Use a wide range of strategies to guide reading of long texts; PI: Identify both directly stated and implied important information; PI: Monitor and enhance comprehension using a wide range of strategies (such as brainstorming and question formulation techniques); | 6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly and in combination 6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A3: a. Preview text aids b. Pose and answer own questions that elicit high levels of critical thinking c. Take and organize written notes d. Develop graphic organizers/text maps e. Write summaries, clearly organizing major and minor ideas 6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details | |

| Capacities of the Literate Individual (in Intro) | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|----------------------------|---|--------------------------------|--|------------------------|
| | | <p>PI: Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading | | <p>6A5</p> <ol style="list-style-type: none"> a. Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing b. Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose c. Identify the techniques used to develop themes arguments, and explanations d. Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points e. Draw conclusions about the themes in and implications of the author’s message f. Compare and contrast complex information and ideas presented in two or more texts | |

| Capacities of the Literate Individual (in Intro) | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|---|--|--|
| They value evidence. | Analyze the information and reflect on its underlying meaning | PI: Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 3A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points | The CCSS doc wants students to cite specific evidence. This is assumed in the EFF doc but could be made explicit by adding, “citing textual evidence” to certain TLO’s |
| They use technology and digital media strategically and capably. | | | 6A1 Read a wide range of texts for real-life purposes | “Internet websites” listed in <i>Sample Texts</i> | EFF CF could: <ul style="list-style-type: none"> • address more digital media in EPPs • insert into several of the TLOs and content examples |
| They come to understand other perspectives and cultures. | | | 6A2 Evaluate and apply relevant prior knowledge to support comprehension | 6A2d Cultural understandings 6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing | EFF CF could add “literature from a variety of periods, cultures, and world views” (CCSS language) to Sample Texts or mention in NTRO |

Table 2 – CCS Anchor Standards

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|--|---|---|---|---|
| <p>1. Read closely to determine what the 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.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Identify both directly stated and implied important information;</p> | <p>6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details</p> <p>6A5e Draw conclusions about the themes in and implications of the author’s message</p> | <p>EFF CF could add something about “supporting with textual evidence” (as in MA and OR docs)</p> |
| <p>2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading | <p>6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly, and in combination</p> <p>6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts</p> | <p>6A3e Write summaries, clearly organizing major and minor ideas</p> <p>6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details</p> | |

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|---|--|--|---|
| 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading | 4A5 Analyze and interpret meanings in common informational and literary texts | 4A5c Consider how narrative elements interact to develop a story (e.g., character development as a result of events, role of setting in plot development) | Mentioned at level 4 in the EFF CF, with literary texts. Assumed at higher levels (per the structure of the CF) |
| 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. | Analyze the information and reflect on its underlying meaning | PI - Recognize and interpret terms, signs, symbols, acronyms, and abbreviations PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents; | 6A5b Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics | 6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose 6C1a Recognize relationships within and across comprehensive and complex sets of words and terms | EFF CF could include specific reference to connotations/nuances, as in OR doc |

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|--|---|--|--|---|
| 6. Assess how point of view or purpose shapes the content and style of a text. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A1c Identify the intended audience and the general and specific purposes of the author/text 6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing 6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose | |
| 7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words. | Analyze the information and reflect on its underlying meaning Integrate it with prior knowledge to address reading purpose. | EPP- Adults performing at Level 6 can accomplish a variety of goals, such as: <ul style="list-style-type: none"> ● Reading information about financial aid for higher education to decide whether to apply for loans and to understand options available if applying for aid ● Reading a brochure on workplace medical benefits to distinguish differences between types of plans | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose | 6A5f Compare and contrast complex information and ideas presented in two or more texts 6A6a Act on information provided in the text 6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community. | The focus of the CCR standard is unclear: is the point to integrate and evaluate from multiple sources or to read material in diverse formats? EPP’s and Sample Texts give concrete examples of diverse formats; could reference more explicitly digital media, tables, graphs, etc. |

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|----------------------------------|----------------------------|---|--------------------------------|--|------------------------|
| | | <ul style="list-style-type: none"> • Reading newspaper editorials that take opposite stands on the same issue and decide which argument is more persuasive to develop a personal position on the issue • Reading a consumer guide about long-distance telephone services to choose a personal home service • Reading a journal article on childhood bullying to get ideas about how to cope with a child’s bullying behavior • Reading data sheets on material safety to get guidance about safely handling toxic materials in the workplace • Reading a company’s employee handbook to get up-to-date information about the company’s employment leave policies | | <p>6A6c Answer questions and/or ask new ones</p> <p>6A6d Articulate (orally or in writing) the impact of a text on own views, ideas, and/or decisions</p> <p>Sample Texts list:</p> <ul style="list-style-type: none"> ❖ College application materials ❖ Financial aid information ❖ Tax and insurance forms ❖ Consumer guides ❖ Work manuals ❖ Magazine essays ❖ Information books ❖ Internet websites ❖ High school textbooks ❖ Novels ❖ Poems ❖ Plays and screenplays | |

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|---|---|------------------------|
| 8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5c Identify the techniques used to develop themes arguments, and explanations 6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points | |
| 9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take. | Analyze the information and reflect on its underlying meaning | EPP: Reading newspaper editorials that take opposite stands on the same issue and decide which argument is more persuasive to develop a personal position on the issue | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5f Compare and contrast complex information and ideas presented in two or more texts | |

| CCR Anchor Standards for Reading | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|----------------------------|--|--------------------------------|--|--|
| 10. Read and comprehend complex literary and informational texts independently and proficiently | | PI - Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings. | | <p>Sample Texts list:</p> <ul style="list-style-type: none"> ❖ College application materials ❖ Financial aid information ❖ Tax and insurance forms ❖ Consumer guides ❖ Work manuals ❖ Magazine essays ❖ Information books ❖ Internet websites ❖ High school textbooks ❖ Novels ❖ Poems ❖ Plays and screenplays | <p>EFF CF includes attention to task, not just text</p> <p>Could add stem to the EFF standard, as with OR's standard</p> |

Table 3 – Reading Literature: Grades 11-12

| Reading: Literature Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|---|---|--|---|
| 1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. | Analyze the information and reflect on its underlying meaning | PI - Identify both directly stated and implied important information | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5e Draw conclusions about the themes in and implications of the author’s message | Citing evidence is not addressed in the EFF CF (is in OR) Inferencing in literary reading is not specified in the EFF CF |
| 2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5c Identify the techniques used to develop themes, arguments, and explanations 6A5e Draw conclusions about the themes in and implications of the author’s message | EFF CF doesn’t mention “two or more themes” specifically. |

| Reading: Literature Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|--|--|---|--|
| 3. Analyze the impact of the author’s choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed). | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5c Identify the techniques used to develop themes, arguments, and explanations More explicit in Level 4: 4A5c Consider how narrative elements interact to develop a story (e.g., character development as a result of events, role of setting in plot development] | EFF CF could carry 4A5c up through Level 6 to be more explicit (though, according to how doc is constructed, it should be assumed). CCSS are more specific about focusing on the choices author makes |
| 4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.) | Analyze the information and reflect on its underlying meaning | PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents | 6A5b Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics | 6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose 6C1a Recognize relationships within and across comprehensive and complex sets of words and terms | More could be said in the EFF CF about connotative meanings, as in MA and OR docs. |

| Reading: Literature Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|--|--|--|---------------------------|
| | | | 6C2 Draw easily from an array of strategies to discern the meanings of unfamiliar words found in a wide range of texts | 6C2a Apply knowledge of meanings of a range of roots and affixes 6C2b Use a dictionary, identifying the appropriate definition and/or using etymological information | |
| 5. Analyze how an author’s choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose 6A5c Identify the techniques used to develop themes, arguments, and explanations | |

| Reading: Literature Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|---|---|---|
| 6. Analyze a case in which grasping a point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement). | Analyze the information and reflect on its underlying meaning | <ul style="list-style-type: none"> • Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5c Draw conclusions about the themes in and implications of the author’s message | <p>CCSS is overly specific (“analyze a specific case”). This is more like an EPP in the EFF doc.</p> <p>EFF CF could reference satire, irony, etc., more specifically (as in MA and OR).</p> |
| 7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.) | Analyze the information and reflect on its underlying meaning | <ul style="list-style-type: none"> • Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> <p>6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose</p> | <p>6A5f Compare and contrast complex information and ideas presented in two or more texts</p> <p>6A6c Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community.</p> | <p>The CCSS standard reads more like an EFF EPP.</p> <p>Although an activity like that described in the CCSS might “fall under” the corresponding EFF CF items, the EFF items would not lead an instructor to including the CCSS activity.</p> <p>CCSS is specific in designating authors</p> |

| Reading: Literature Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|-------------------------------|---|---|--|--|
| 8. (Not applicable to literature) | | | | | |
| 9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics. | | | <p>6A1 Read a wide range of texts for real-life purposes</p> <p>6A2 Evaluate and apply relevant prior knowledge to support comprehension</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A2e Content knowledge related to a wide range of specialized topics <i>[types of literature would be included]</i></p> <p>6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing</p> <p>6A5f Compare and contrast complex information and ideas presented in two or more texts</p> | <p>Does CCSS define “foundational”? (OR LSF does)</p> <p>6A2 Content Examples need a verb</p> <p>The CCSS standard is about more than analyzing—students need to be familiar with certain texts.</p> |
| 10. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11–CCR text complexity band independently and proficiently. | | Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings. | | <p>Sample Texts include:</p> <ul style="list-style-type: none"> ❖ Novels ❖ Poems ❖ Plays and screenplay ❖ High school textbooks | |

Table 4 – Reading Informational Text: Grades 11-12

| Reading: Informational Text Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|---|---|---|
| 1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. | Analyze the information and reflect on its underlying meaning | PI - Identify both directly stated and implied important information | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5e Draw conclusions about the themes in and implications of the author’s message | Citing evidence is not mentioned (is in OR) |
| 2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly, and in combination 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A3e Write summaries, clearly organizing major and minor ideas 6A5c Identify the techniques used to develop themes arguments, and explanations 6A5e Draw conclusions about the themes in and implications of the author’s message | EFF CF doesn’t specify “two or more” or “central” |

| Reading: Informational Text Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|--|--|---|--|
| 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. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5c Identify the techniques used to develop themes, arguments, and explanations | EFF CF doesn't specify how “individuals, ideas, or events interact and develop”. |
| 4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10). | Analyze the information and reflect on its underlying meaning | PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents; | 6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics 6C2 Draw easily from an array of strategies to discern the meanings of unfamiliar words found in a wide range of texts | 6C1a Recognize relationships within and across comprehensive and complex sets of words and terms 6C2a Apply knowledge of meanings of a range of roots and affixes 6C2b Use a dictionary, identifying the appropriate definition and/or using etymological information | |

| Reading: Informational Text Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|---|--|--|
| 5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging. | Analyze the information and reflect on its underlying meaning | <p>PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents;</p> <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details</p> <p>6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points</p> | |
| 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. | Analyze the information and reflect on its underlying meaning | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A1 Read a wide range of texts for real-life purposes</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A1c Identify the intended audience and the general and specific purposes of the author/text</p> <p>6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose</p> <p>6A5c Identify the techniques used to develop themes arguments, and explanations</p> | EFF doesn’t specifically link “determining author’s point of view or purpose” with “style” |

| Reading: Informational Text Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|---|--|---|---|
| 7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem. | Analyze the information and reflect on its underlying meaning | PI - Integrate prior knowledge with new information in texts to develop deep understanding of the information | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points 6A5f Compare and contrast complex information and ideas presented in two or more texts | EFF CF doesn’t address visual/quantitative info explicitly (Why would you integrate without evaluating?) |
| 8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses). | Analyze the information and reflect on its underlying meaning | PI: Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings. | 6A1 Read a wide range of texts for real-life purposes 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A1c Identify the intended audience and the general and specific purposes of the author/text 6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing 6A5c Identify the techniques used to develop themes arguments, and explanations 6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points | CCSS is unrealistically high EFF doesn’t mention specifically “seminal U.S. texts”. |

| Reading: Informational Text Grade 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|--|--|---|--|--|
| <p>9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln’s Second Inaugural Address) for their themes, purposes, and rhetorical features.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings.</p> <p>PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents</p> | <p>6A1 Read a wide range of texts for real-life purposes</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing</p> <p>6A5b Determine the effectiveness of the use of language and literary devices to achieve the author’s purpose</p> <p>6A5c Identify the techniques used to develop themes arguments, and explanations</p> <p>6A5e Draw conclusions about the themes in and implications of the author’s message</p> | <p>EFF CF doesn’t mention US documents specifically and would not necessarily prompt practitioners to attend to these.</p> |
| <p>10. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.</p> | | <p>PI: Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings.</p> | | <p>Sample Texts include:</p> <ul style="list-style-type: none"> ❖ College application materials ❖ Financial aid information ❖ Tax and insurance forms ❖ Consumer guides ❖ Work manuals ❖ Magazine essays ❖ Information books ❖ Internet websites ❖ High school textbooks | |

Table 5 – History/Social Studies: Grades 11-12

| History/Social Studies Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|--|--|--|--|
| 1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole. | Analyze the information and reflect on its underlying meaning | <p>PI - Identify both directly stated and implied important information</p> <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading | 6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts | 6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details | <p>Citing evidence is not mentioned in EFF (is in OR)</p> <p>Primary and secondary sources aren’t in EFF’s doc</p> |
| 2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas. | Analyze the information and reflect on its underlying meaning | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly, and in combination</p> <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A3e Write summaries, clearly organizing major and minor ideas</p> <p>6A5c Identify the techniques used to develop themes arguments, and explanations</p> <p>6A5e Draw conclusions about the themes in and implications of the author’s message</p> | Primary and secondary sources aren’t in EFF’s doc |

| History/Social Studies Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|--|--|---|---------------------------|
| 3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing 6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points | |
| 4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10). | Analyze the information and reflect on its underlying meaning | PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents; | 6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics 6C2 Draw easily from an array of strategies to discern the meanings of unfamiliar words found in a wide range of texts | 6C1a Recognize relationships within and across comprehensive and complex sets of words and terms 6C2a Apply knowledge of meanings of a range of roots and affixes 6C2b Use a dictionary, identifying the appropriate definition and/or using etymological information | |

| History/Social Studies Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|---|---|--|---|
| 5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole. | Analyze the information and reflect on its underlying meaning | PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents; | 6A4 Attend to text features and author's organization of ideas to understand complex documents and informational and literary texts | 6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details 6A4d Recognize a wide range of signal words that organize text | EFF CF doesn't specify "primary source" |
| 6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing "big picture" conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A5a Draw conclusions about how historical/cultural contexts, the author's personal history, and the author's biases have impacted the writing 6A5d Evaluate the accuracy/reasonableness and relevance of the author's major and minor points 6A5f Compare and contrast complex information and ideas presented in two or more texts | |

| History/Social Studies Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|--|---|---|--|---|
| 7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem . | Analyze the information and reflect on its underlying meaning Integrate it with prior knowledge to address reading purpose. | | 6A1 Read a wide range of texts for real-life purposes 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose | 6A5f Compare and contrast complex information and ideas presented in two or more texts 6A6a Act on information provided in the text 6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community. 6A6c Answer questions and/or ask new ones 6A6d Articulate (orally or in writing) the impact of a text on own views, ideas, and/or decisions | EFF CF could include an EPP or two related to reading multiple historical documents for a specific purpose Overlaps with #6. Both deal with multiple source of information. The focus here must be on diverse texts. |
| 8. Evaluate an author’s premises, claims, and evidence by corroborating or challenging them with other information. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5d Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose | 6A5c Identify the techniques used to develop themes arguments, and explanations 6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points 6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community. | EFF CF could add “confirm with another source” as an A3 strategy There seems to be considerable overlap between #3, 6, 7, and 8. |

| History/Social Studies Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|---|--|--|---|
| 9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources. | Integrate it (information) with prior knowledge to address reading purpose. | PI - Integrate prior knowledge with new information in texts to develop deep understanding of the information | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents 6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose | 6A5f Compare and contrast complex information and ideas presented in two or more texts 6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community. | EFF CF doesn't specify "noting discrepancies" |
| 10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently. | | Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings. | | Sample Texts include: ❖ Information books ❖ Internet websites ❖ High school textbooks | |

Table 6 – Science/Technical: Grades 11-12

| Science/Technical Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|--|--|--|---|--|
| <p>1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> | <p>6A5c Identify the techniques used to develop themes arguments, and explanations</p> <p>6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points</p> | <p>Citing evidence is not mentioned in EFF (is in OR)</p> <p>Science and technical texts aren’t specifically mentioned in EFF CF</p> |
| <p>2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A3 Monitor and enhance comprehension by using a wide range of strategies flexibly, and in combination</p> <p>6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts</p> | <p>6A3e Write summaries, clearly organizing major and minor ideas</p> <p>6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details</p> | <p>Term “central idea” is not used in EFF’s doc (is in OR)</p> |

| Science/Technical Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|---|---|--|--|
| 3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. | <p>Monitor comprehension and adjust reading strategies</p> <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts</p> <p>6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose</p> | <p>6A4a Locate information and/or follow directions on business, legal, academic and community documents (e.g., financial aid applications, tax forms, insurance forms, consumer guides, textbooks)</p> <p>6A6a Act on information provided in the text</p> <p>6A6d Articulate (orally or in writing) the impact of a text on own views, ideas, and/or decisions</p> | “analyzing the results based on explanation in the text” |
| 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. | Analyze the information and reflect on its underlying meaning | <p>PI - Recognize and interpret terms, signs, symbols, acronyms, and abbreviations</p> <p>PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents</p> | <p>6C1 Understand meanings of most words/phrases found in everyday texts and of complex and varied sets of terms related to a range of specialized topics</p> <p>6C2 Draw easily from an array of strategies to discern the meanings of unfamiliar words found in a wide range of texts</p> | <p>6C1a Recognize relationships within and across comprehensive and complex sets of words and terms</p> <p>6C2a Apply knowledge of meanings of a range of roots and affixes</p> <p>6C2b Use a dictionary, identifying the appropriate definition and/or using etymological information</p> | |

| Science/Technical Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|--|---|---|---|--|---|
| 5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. | Analyze the information and reflect on its underlying meaning | PI - Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents; | 6A4 Attend to text features and author’s organization of ideas to understand complex documents and informational and literary texts | 6A4c Determine how authors organize ideas, identifying the principal arguments/points (stated and unstated) and the supporting details 6A4d Recognize a wide range of signal words that organize text | |
| 6. Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. | Analyze the information and reflect on its underlying meaning | PI - Analyze information and reflect upon its meaning using a wide range of strategies such as: <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | 6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents | 6A1c Identify the intended audience and the general and specific purposes of the author/text 6A5a Draw conclusions about how historical/cultural contexts, the author’s personal history, and the author’s biases have impacted the writing | CCSS specifies “author’s purpose” and “unresolved” issues |

| Science/Technical Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|---|---|---|---|--|
| <p>7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> | <p>Analyze the information and reflect on its underlying meaning</p> <p>Integrate it with prior knowledge to address reading purpose.</p> | <ul style="list-style-type: none"> • EPP - Reading data sheets on material safety to get guidance about safely handling toxic materials in the workplace | <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> <p>6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose</p> | <p>6A5f Compare and contrast complex information and ideas presented in two or more texts</p> <p>6A6a Act on information provided in the text</p> <p>6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community.</p> <p>6A6c Answer questions and/or ask new ones</p> <p>6A6d Articulate (orally or in writing) the impact of a text on own views, ideas, and/or decisions</p> | <p>EFF CF could include an EPP or two related to reading multiple scientific/technical documents for a purpose</p> |
| <p>8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</p> | <p>Analyze the information and reflect on its underlying meaning</p> | <p>PI - Analyze information and reflect upon its meaning using a wide range of strategies such as:</p> <ul style="list-style-type: none"> ○ applying relevant information to multiple scenarios, ○ summarizing, and ○ drawing “big picture” conclusions and generalizations from detailed reading; | <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> <p>6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose</p> | <p>6A5c Identify the techniques used to develop themes arguments, and explanations</p> <p>6A5d Evaluate the accuracy/reasonableness and relevance of the author’s major and minor points</p> <p>6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community.</p> | |

| Science/Technical Grades 11-12 | Components of the Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER: Content Examples, Sample Texts, Intro | Notes/ Recommendations |
|---|--|--|---|---|---|
| <p>9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> | <p>Integrate it (information) with prior knowledge to address reading purpose.</p> | <p>PI - Evaluate and apply relevant prior knowledge to support comprehension</p> <p>PI - Integrate prior knowledge with new information in texts to develop deep understanding of the information</p> | <p>6A5 Analyze and interpret meanings in long and complex informational and literary texts and evaluate the contents</p> <p>6A6 Extend, revise, and/or re-organize prior knowledge to address reading purpose</p> | <p>6A5f Compare and contrast complex information and ideas presented in two or more texts</p> <p>6A6b Make connections between the text and personal experience, the text and another written or visual text, and/or the text and the larger community.</p> | <p>EFF CF doesn't specify "resolving conflicting information"</p> <p>CCSS doesn't include reference to how prior knowledge affects ability to "[resolve] conflicting information". EFF CF includes:</p> <p>6A2 Evaluate and apply relevant prior knowledge to support comprehension</p> |
| <p>10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–12 text complexity band independently and proficiently.</p> | | <p>Read and comprehend long, complex texts at an appropriate pace and with good comprehension, to independently accomplish structured or unstructured, complex reading activities in a variety of familiar and novel settings.</p> | | <p>Sample Texts include:</p> <ul style="list-style-type: none"> ❖ Information books ❖ Internet websites ❖ High school textbooks | <p>Reference to an example or two of a science text could be added to EPPs and Sample Texts</p> |

Analysis for EFF Standard

Use Math to Solve Problems and Communicate

**Common Core State High School Mathematics Standards Correspondence with EFF Curriculum
Framework
Skill Area: Math**

Document used for Analysis: *Common Core State Standards for Mathematics*
(http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf).

Comments

The EFF Use Math to Solve Problems and Communicate is addressed within the Standards for Mathematical Practice (Part 1). The Common Core Standards for Mathematical Practice suggest that these eight Standards are part of the process for using math. “These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).” (p.6)

The EFF Framework includes the four dimensions (knowledge base, independence, range, and fluency). The Common Core Standards focuses on the knowledge base (which develops from K – HS), fluency (especially procedural fluency, strategic competence), and range (including adaptive reasoning).

Some of the Common Core Standards for High School are minimally addressed at level 6 (the highest level of the EFF Curriculum Framework), while others are not addressed at all. The EFF Teaching & Learning Objectives are usually much broader statements than the CC Standards. These broad statements almost suggest that some of the more detailed Common Core Standards could fit within the Teaching & Learning Objective; however, in almost all cases the e.g.’s that follow each Objective offer examples that are at a lower knowledge/skill level than described by the CC Standards.

While the Standards for Mathematics Practice seem to correspond to the philosophy behind EFF, the EFF Teaching & Learning Objectives at Level 6, in general, are lower than what is expected for the Common Core High School Mathematics Standards. [The Notes/Recommendations section includes some specific examples of content that would need to be addressed in order for there to be correspondences between the two documents. However, Level 6 of the EFF Curriculum Framework aligns with the National Reporting System’s Level 6. Research now tells us that there is a huge gap between completing high school and being ready for college-level math. The new Common Core State Math Standards document is an attempt to bridge that gap. Rather than try to cram more math skills into level 6, it seems more appropriate to create a new level – Level 7 (transitions) – that would include

many of the CCSS skills missing in the present EFF Curriculum Framework. This would create more correspondences between the two documents and would also create a bridge between NRS level 6 and what is expected for college and career readiness.]

Table 1: Standards for Mathematical Practice

| Standards for Mathematical Practice | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|--|---|--------------------------------|--------------------------------------|------------------------|
| Make sense of problems and persevere in solving them. | <p>Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carryout a task that has a mathematical dimension.</p> <p>Solve problems using appropriate quantitative procedures and verify that the results are reasonable.</p> | <p>Adults performing at Level 6 can easily select and apply the knowledge, skills, and strategies at this level to independently accomplish minimally structured, complex math tasks in a variety of comfortable and familiar settings.</p> | | | |
| Reason abstractly and quantitatively. | | <p>Independently research, select, organize and integrate mathematical information of different types in carrying out procedures, describing patterns, and/or measuring with appropriate tools, to solve the problem and to verify that the solution is reasonable.</p> | | | |
| Construct viable arguments and critique the reasoning of others. | <p>Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carryout a task that has a mathematical dimension.</p> | | | | |
| Model with mathematics. | <p>Communicate results using a variety of mathematical representations, including graphs, charts, tables, and algebraic models.</p> | | | | |

| Standards for Mathematical Practice | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|---|--|--------------------------------|--------------------------------------|------------------------|
| Use appropriate tools strategically. | Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carryout a task that has a mathematical dimension. | Independently research, select, organize and integrate mathematical information of different types in carrying out procedures, describing patterns, and/or measuring with appropriate tools, to solve the problem and to verify that the solution is reasonable. | | | |
| Attend to precision. | Determine the degree of precision required by the situation. | Evaluate the degree of precision needed for the solution. | | | |
| Look for and make use of structure. | Solve problems using appropriate quantitative procedures and verify that the results are reasonable. | Independently research, select, organize and integrate mathematical information of different types in carrying out procedures, describing patterns, and/or measuring with appropriate tools, to solve the problem and to verify that the solution is reasonable. | | | |
| Look for and express regularity in repeated reasoning. | Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carryout a task that has a mathematical dimension. | | | | |

Table 2: Common Core Mathematics Standards for High School

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|---|--------------------------------------|--|
| Number and Quantity | | | | | |
| The Real Number System | | | | | |
| <p>Extend the properties of exponents to rational exponents</p> <p>1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. <i>For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5(1/3)^3$ to hold, so $(5^{1/3})^3$ must equal 5.</i></p> <p>2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.</p> <p>Use properties of rational and irrational numbers</p> <p>3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.</p> | | | | | <p>Integer exponents addressed in L6, but not rational exponents</p> <p>Rational numbers addressed in L6, but not irrational</p> |
| Quantities | | | | | |
| <p>Reason quantitatively and use units to solve problems</p> <p>1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> | | <p>Evaluate the degree of precision needed for the solution.</p> | <p>6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry</p> | | <p>Modeling is not explicitly addressed in T/L objectives; could begin this in L6</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|---|--------------------------------------|--|
| <p>2. Define appropriate quantities for the purpose of descriptive modeling.</p> <p>3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> | | | <p>6C2 Research, select, and apply sophisticated, multi-step mathematical concepts</p> <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> | | |
| The Complex Number System | | | | | |
| <p>Perform arithmetic operations with complex numbers</p> <p>1. Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.</p> <p>2. Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.</p> <p>3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.</p> <p>Represent complex numbers and their operations on the complex plane</p> <p>4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.</p> <p>5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. <i>For example, $(1 - \sqrt{3}i)^3 = 8$ because $(1 - \sqrt{3}i)$ has modulus 2 and argument 120°.</i></p> | | | | | <p>Complex numbers not addressed in L6</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--------------------------------|--------------------------------------|--|
| <p>6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.</p> <p>Use complex numbers in polynomial identities and equations</p> <p>7. Solve quadratic equations with real coefficients that have complex solutions.</p> <p>8. (+) Extend polynomial identities to the complex numbers. <i>For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.</i></p> <p>9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.</p> | | | | | Complex numbers not addressed in L6 |
| Vector and Matrix Quantities | | | | | |
| <p>Represent and model with vector quantities.</p> <p>1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., \mathbf{v}, \mathbf{v}, $\ \mathbf{v}\$, v).</p> <p>2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.</p> <p>3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.</p> | | | | | Vectors nor matrices addressed in Curriculum Framework |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--------------------------------|--------------------------------------|---|
| <p>Perform operations on vectors</p> <p>4. (+) Add and subtract vectors.</p> <p>a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.</p> <p>b. Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.</p> <p>c. Understand vector subtraction $\mathbf{v} - \mathbf{w}$ as $\mathbf{v} + (-\mathbf{w})$, where $-\mathbf{w}$ is the additive inverse of \mathbf{w}, with the same magnitude as \mathbf{w} and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.</p> <p>5. (+) Multiply a vector by a scalar.</p> <p>a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.</p> <p>b. Compute the magnitude of a scalar multiple $c\mathbf{v}$ using $\ c\mathbf{v}\ = c \mathbf{v}$. Compute the direction of $c\mathbf{v}$ knowing that when $c \neq 0$, the direction of $c\mathbf{v}$ is either along \mathbf{v} (for $c > 0$) or against \mathbf{v} (for $c < 0$).</p> | | | | | <p>Vectors nor matrices addressed in Curriculum Framework</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--------------------------------|--------------------------------------|---|
| <p>Perform operations on matrices and use matrices in applications.</p> <p>6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.</p> <p>7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.</p> <p>8. (+) Add, subtract, and multiply matrices of appropriate dimensions.</p> <p>9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.</p> <p>10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.</p> <p>11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.</p> <p>12. (+) Work with 2×2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.</p> | | | | | <p>Vectors nor matrices addressed in Curriculum Framework</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|--|---|-----------------------|
| Algebra | | | | | |
| Seeing Structure in Expressions | | | | | |
| <p>Interpret the structure of expressions</p> <p>1. Interpret expressions that represent a quantity in terms of its context.</p> <p>a. Interpret parts of an expression, such as terms, factors, and coefficients.</p> <p>b. Interpret complicated expressions by viewing one or more of their parts as a single entity. <i>For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.</i></p> <p>2. Use the structure of an expression to identify ways to rewrite it. <i>For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.</i></p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> <p>6B2 Read and interpret symbolic information</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> <p>b. Use polynomials and expressions with rational exponents</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> <p>b. Make connections between direct and inverse proportions and their graphs</p> <p>c. Describe general shape and qualities of linear and simple non-linear graphs</p> <p>d. Demonstrate that different representations can be used to illustrate a pattern, function, or relationship</p> <p>e. Solve two linear equations in two variables and display in graphic form</p> <p>f. Analyze situations involving cost (such as profit/ loss margin or earnings/deductions)</p> | |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--|---|---|
| <p>Write expressions in equivalent forms to solve problems</p> <p>3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.</p> <p>a. Factor a quadratic expression to reveal the zeros of the function it defines.</p> <p>b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.</p> <p>c. Use the properties of exponents to transform expressions for exponential functions. <i>For example the expression $1.15t$ can be rewritten as $(1.151/12)^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.</i></p> <p>4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. <i>For example, calculate mortgage payments.</i></p> | | | | <p>6B2</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> <p>b. Use polynomials and expressions with rational exponents</p> | |
| Arithmetic with polynomials and rational expressions | | | | | |
| <p>Perform arithmetic operations on polynomials</p> <p>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.</p> <p>Understand the relationship between zeros and factors of polynomials</p> <p>2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only</p> | | | <p>6B2 Read and interpret symbolic information</p> | <p>6B2</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> <p>b. Use polynomials and expressions with rational exponents</p> | <p>Polynomials and rational expressions minimally addressed in L6</p> |

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| <p>if $(x - a)$ is a factor of $p(x)$.</p> <p>3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.</p> <p>Use polynomial identities to solve problems</p> <p>4. Prove polynomial identities and use them to describe numerical relationships. <i>For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.</i></p> <p>5. (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.</p> <p>Rewrite rational expressions</p> <p>6. Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.</p> <p>7. (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.</p> | | | | | <p>Polynomials and rational expressions minimally addressed in L6</p> |

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| Creating Equations | | | | | |
| <p>Create equations that describe numbers or relationships</p> <p>1. Create equations and inequalities in one variable and use them to solve problems. <i>Include equations arising from linear and quadratic functions, and simple rational and exponential functions.</i></p> <p>2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</p> <p>3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. <i>For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.</i></p> <p>4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. <i>For example, rearrange Ohm's law $V = IR$ to highlight resistance R.</i></p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> <p>6B2 Read and interpret symbolic information</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> <p>e. Solve two linear equations in two variables and display in graphic form</p> <p>6B2</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> | <p>Modeling contexts not addressed in L6</p> |
| Reasoning with Equations and Inequalities | | | | | |
| <p>Understand solving equations as a process of reasoning and explain the reasoning</p> <p>1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.</p> <p>2. Solve simple rational and radical equations in</p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> <p>6B2 Read and interpret symbolic information</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> <p>c. Describe general shape and qualities of linear and simple</p> | <p>Radical equations nor systems of equations addressed in L6</p> |

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| <p>one variable, and give examples showing how extraneous solutions may arise.</p> <p>Solve equations and inequalities in one variable</p> <p>3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.</p> <p>4. Solve quadratic equations in one variable.</p> <p>a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.</p> <p>b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.</p> <p>Solve systems of equations</p> <p>5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.</p> <p>6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.</p> <p>7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. <i>For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.</i></p> | | | | <p>non-linear graphs</p> <p>d. Demonstrate that different representations can be used to illustrate a pattern, function, or relationship</p> <p>e. Solve two linear equations in two variables and display in graphic form</p> <p>6B2</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> <p>b. Use polynomials and expressions with rational exponents</p> | <p>Radical equations nor systems of equations addressed in L6</p> |

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| <p>8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.</p> <p>9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3×3 or greater).</p> <p>Represent and solve equations and inequalities graphically</p> <p>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).</p> <p>11. Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.</p> <p>12. Graph the solutions to a linear inequality in two variables as a halfplane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.</p> | | | | | <p>Radical equations nor systems of equations addressed in L6</p> |

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| Functions | | | | | |
| Interpreting Functions | | | | | |
| <p>Understand the concept of a function and use function notation</p> <p>1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.</p> <p>2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.</p> <p>3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. <i>For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1, f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.</i></p> <p>Interpret functions that arise in applications in terms of the context</p> <p>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. <i>Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i></p> <p>5. Relate the domain of a function to its graph and, where applicable, to the quantitative</p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> <p>6B2 Read and interpret symbolic information</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> <p>c. Describe general shape and qualities of linear and simple non-linear graphs</p> <p>d. Demonstrate that different representations can be used to illustrate a pattern, function, or relationship</p> <p>e. Solve two linear equations in two variables and display in graphic form</p> <p>6B2</p> <p>a. Solve a variety of equations and inequalities, including quadratic equations</p> <p>b. Use polynomials and expressions with rational exponents</p> | <p>Only linear and exponential functions addressed in L6, no references to other functions (e.g., logarithmic, rational, piecewise-defined, etc.)</p> |

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| <p>relationship it describes. <i>For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.</i></p> <p>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.</p> <p>Analyze functions using different representations</p> <p>7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.</p> <p>a. Graph linear and quadratic functions and show intercepts, maxima, and minima.</p> <p>b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.</p> <p>c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.</p> <p>d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.</p> <p>e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.</p> <p>8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.</p> | | | | | <p>Only linear and exponential functions addressed in L6, no references to other functions (e.g., logarithmic, rational, piecewise-defined, etc.)</p> |

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| <p>a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.</p> <p>b. Use the properties of exponents to interpret expressions for exponential functions. <i>For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)12^t$, $y = (1.2)^t/10$, and classify them as representing exponential growth or decay.</i></p> <p>9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). <i>For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.</i></p> | | | | | <p>Only linear and exponential functions addressed in L6, no references to other functions (e.g., logarithmic, rational, piecewise-defined, etc.)</p> |
| Building Functions | | | | | |
| <p>Build a function that models a relationship between two quantities</p> <p>1. Write a function that describes a relationship between two quantities.</p> <p>a. Determine an explicit expression, a recursive process, or steps for calculation from a context.</p> <p>b. Combine standard function types using arithmetic operations. <i>For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.</i></p> <p>c. (+) Compose functions. <i>For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the</i></p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> | <p>Only simple functions addressed in L6</p> |

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| <p><i>temperature at the location of the weather balloon as a function of time.</i></p> <p>2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.</p> <p>Build new functions from existing functions</p> <p>3. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. <i>Include recognizing even and odd functions from their graphs and algebraic expressions for them.</i></p> <p>4. Find inverse functions.</p> <p>a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. <i>For example, $f(x) = 2x^3$ for $x > 0$ or $f(x) = x+1/(x-1)$ for $x \neq 1$.</i></p> <p>b. (+) Verify by composition that one function is the inverse of another.</p> <p>c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.</p> <p>d. (+) Produce an invertible function from a non-invertible function by restricting the domain.</p> <p>5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.</p> | | | | | <p>Only simple functions addressed in L6</p> |

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| Linear, Quadratic, and Exponential Models | | | | | |
| <p>Construct and compare linear and exponential models and solve problems</p> <p>1. Distinguish between situations that can be modeled with linear functions and with exponential functions.</p> <p>a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.</p> <p>b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.</p> <p>c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.</p> <p>2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).</p> <p>3. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.</p> <p>4. For exponential models, express as a logarithm the solution to $abct = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.</p> | | | <p>6B1 Interpret and apply a wide variety of complex patterns, functions and relationships</p> <p>6A1 Read, write and interpret a wide variety of complex mathematical information and concepts and apply to real-life and theoretical problems</p> | <p>6B1</p> <p>a. Create and analyze a wide variety of relations, including linear and exponential functions</p> <p>6A1</p> <p>a. Evaluate expressions with positive and negative exponents to solve problems such as growth or decay over time</p> | <p>Constructing models minimally addressed in L6</p> |

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| <p>Interpret expressions for functions in terms of the situation they model</p> <p>5. Interpret the parameters in a linear or exponential function in terms of a context.</p> | | | | | Constructing models minimally addressed in L6 |
| Trigonometric Functions | | | | | |
| <p>Extend the domain of trigonometric functions using the unit circle</p> <p>1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.</p> <p>2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.</p> <p>3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for $\frac{\pi}{3}$ express the values of sine, cosine, and tangent for $\frac{\pi}{4}$, $\frac{\pi}{6}$, and $2\frac{\pi}{3}$ in terms of their values for x, where x is any real number.</p> <p>4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.</p> | | | 6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry | 6C1 a. Know vocabulary for trigonometric functions b. Read trig tables or use scientific calculator to find trig ratios | Modeling of periodic phenomena nor trig identities addressed in L6 |

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| <p>Model periodic phenomena with trigonometric functions</p> <p>5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.</p> <p>6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.</p> <p>7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.</p> <p>Prove and apply trigonometric identities</p> <p>8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to calculate trigonometric ratios.</p> <p>9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.</p> | | | | | Modeling of periodic phenomena nor trig identities addressed in L6 |
| Geometry | | | | | |
| Congruence | | | | | |
| <p>Experiment with transformations in the plane</p> <p>1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.</p> <p>2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other</p> | | | 6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry | 6C1 c. Use coordinates to describe rotations or changes of geometric figures | Proofs nor formal geometric constructions addressed in L6 |

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| <p>points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).</p> <p>3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.</p> <p>4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.</p> <p>5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.</p> <p>Understand congruence in terms of rigid motions</p> <p>6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.</p> <p>7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.</p> <p>8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.</p> | | | 6C2 Research, select, and apply sophisticated, multi-step mathematical concepts | 6C2 a. Solve problems involving perpendicularity and parallelism b. Solve problems involving congruence and similarity of geometric figures (including three-dimensional figures) | Proofs nor formal geometric constructions addressed in L6 |

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| <p>Prove geometric theorems</p> <p>9. Prove theorems about lines and angles. <i>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.</i></p> <p>10. Prove theorems about triangles. <i>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.</i></p> <p>11. Prove theorems about parallelograms. <i>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.</i></p> <p>Make geometric constructions</p> <p>12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). <i>Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.</i></p> <p>13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.</p> | | | | | <p>Proofs nor formal geometric constructions addressed in L6</p> |

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| Similarity, Right Triangles, and Trigonometry | | | | | |
| <p>Understand similarity in terms of similarity transformations</p> <p>1. Verify experimentally the properties of dilations given by a center and a scale factor:</p> <p>a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.</p> <p>b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.</p> <p>2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.</p> <p>3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.</p> <p>Prove theorems involving similarity</p> <p>4. Prove theorems about triangles. <i>Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.</i></p> <p>5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.</p> | | | | | <p>Similarity transformations, dilations, nor proofs with similarity addressed in L6</p> |

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| <p>Define trigonometric ratios and solve problems involving right triangles</p> <p>6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.</p> <p>7. Explain and use the relationship between the sine and cosine of complementary angles.</p> <p>8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.</p> <p>Apply trigonometry to general triangles</p> <p>9. (+) Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.</p> <p>10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.</p> <p>11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).</p> | | | | | <p>Similarity transformations, dilations, nor proofs with similarity addressed in L6</p> |
| Circles | | | | | |
| <p>Understand and apply theorems about circles</p> <p>1. Prove that all circles are similar.</p> <p>2. Identify and describe relationships among inscribed angles, radii, and chords. <i>Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.</i></p> | | | | | <p>Proofs not covered in L6</p> |

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| <p>3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.</p> <p>4. (+) Construct a tangent line from a point outside a given circle to the circle.</p> <p>Find arc lengths and areas of sectors of circles</p> <p>5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.</p> | | | | | Proofs not covered in L6 |
| Expressing Geometric Properties with Equations | | | | | |
| <p>Translate between the geometric description and the equation for a conic section</p> <p>1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.</p> <p>2. Derive the equation of a parabola given a focus and directrix.</p> <p>3. (+) Derive the equations of ellipses and hyperbolas given foci and directrices.</p> <p>Use coordinates to prove simple geometric theorems algebraically</p> <p>4. Use coordinates to prove simple geometric theorems algebraically. <i>For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.</i></p> | | | 6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry | | Proofs not covered in L6 |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|--|--------------------------------------|--|
| <p>5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).</p> <p>6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.</p> <p>7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.</p> | | | | | Proofs not covered in L6 |
| Geometric Measurement and Dimension | | | | | |
| <p>Explain volume formulas and use them to solve problems</p> <p>1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. <i>Use dissection arguments, Cavalieri's principle, and informal limit arguments.</i></p> <p>2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.</p> <p>3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.</p> <p>Visualize relationships between two-dimensional and three-dimensional objects</p> <p>4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.</p> | | | <p>6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry</p> <p>6C2 Research, select, and apply sophisticated, multi-step mathematical concepts</p> | | Arguments (proofs) not addressed in L6 |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|---|---|---|
| Modeling with Geometry | | | | | |
| <p>Apply geometric concepts in modeling situations</p> <p>1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).</p> <p>2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).</p> <p>3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).</p> | | | <p>6C1 Read, write, interpret, and apply a wide variety of (often) complex mathematical information related to measurement and geometry</p> <p>6C2 Research, select, and apply sophisticated, multi-step mathematical concepts</p> | | <p>Modeling not explicitly addressed in geometry strand in L6</p> |
| Statistics and Probability | | | | | |
| Interpreting Categorical and Quantitative Data | | | | | |
| <p>Summarize, represent, and interpret data on a single count or measurement variable</p> <p>1. Represent data with plots on the real number line (dot plots, histograms, and box plots).</p> <p>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.</p> <p>3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).</p> <p>4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is</p> | | | <p>6D1 Read and interpret data and statistical information</p> <p>a. Predict potential consequences from interpretations of data</p> <p>b. Describe the effect of changes in the data set on the mean and median and discuss which is more representative the data</p> <p>6D2 Collect, organize, and represent data</p> | <p>6D1 Read and interpret data and statistical information</p> <p>a. Predict potential consequences from interpretations of data</p> <p>b. Describe the effect of changes in the data set on the mean and median and discuss which is more representative the data</p> <p>6D2</p> <p>a. Develop a research question, then collect</p> | |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--------------------------------|---|-----------------------|
| <p>not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.</p> <p>Summarize, represent, and interpret data on two categorical and quantitative variables</p> <p>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 conditional relative frequencies). Recognize possible associations and trends in the data.</p> <p>6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.</p> <p>a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. <i>Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.</i></p> <p>b. Informally assess the fit of a function by plotting and analyzing residuals.</p> <p>c. Fit a linear function for a scatter plot that suggests a linear association.</p> <p>Interpret linear models</p> <p>7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.</p> <p>8. Compute (using technology) and interpret the correlation coefficient of a linear fit.</p> <p>9. Distinguish between correlation and causation.</p> | | | | <p>and organize data to answer question, choosing appropriate representations to display data collected</p> <p>b. Create scatterplots to compare two variables and informally estimate lines of best fit to test hypotheses</p> | |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|---|--|---|
| Making Inferences and Justifying Conclusions | | | | | |
| <p>Understand and evaluate random processes underlying statistical experiments</p> <p>1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.</p> <p>2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. <i>For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?</i></p> <p>Make inferences and justify conclusions from sample surveys, experiments, and observational studies</p> <p>3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.</p> <p>4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.</p> <p>5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.</p> <p>6. Evaluate reports based on data.</p> | | | <p>6D1 Read and interpret data and statistical information</p> <p>6D2 Collect, organize, and represent data</p> | <p>6D1</p> <p>a. Predict potential consequences from interpretations of data</p> <p>b. Describe the effect of changes in the data set on the mean and median and discuss which is more representative the data</p> <p>6D2</p> <p>a. Develop a research question, then collect and organize data to answer question, choosing appropriate representations to display data collected</p> <p>b. Create scatterplots to compare two variables and informally estimate lines of best fit to test hypotheses</p> | <p>Statistical experiments not explicitly addressed in L6</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|--|------------------------|--|--|--------------------------------------|---|
| Conditional Probability and the Rules of Probability | | | | | |
| <p>Understand independence and conditional probability and use them to interpret data</p> <p>1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).</p> <p>2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.</p> <p>3. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.</p> <p>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. <i>For example, collect data from a random sample of students in your school on their favorite subject among math, 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.</i></p> | | | <p>6D3 Recall and use basic probability concepts to find the probability of independent and dependent events and explain how dependence influences the probability</p> | | <p>Two-way frequency tables not addressed in L6</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|--------------------------------|--------------------------------------|--|
| <p>5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. <i>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.</i></p> <p>Use the rules of probability to compute probabilities of compound events in a uniform probability model</p> <p>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.</p> <p>7. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.</p> <p>8. (+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B A) = P(B)P(A B)$, and interpret the answer in terms of the model.</p> <p>9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.</p> | | | | | Two-way frequency tables not addressed in L6 |
| Using Probability to Make Decisions | | | | | |
| <p>Calculate expected values and use them to solve problems</p> <p>1. (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.</p> | | | | | Expected values and probability distribution not addressed in L6 |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|--------------------------------|--------------------------------------|---|
| <p>2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.</p> <p>3. (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. <i>For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.</i></p> <p>4. (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. <i>For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?</i></p> <p>Use probability to evaluate outcomes of decisions</p> <p>5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.</p> <p>a. Find the expected payoff for a game of chance. <i>For example, find the expected winnings from a state lottery ticket or a game at a fast food restaurant.</i></p> | | | | | <p>Expected values and probability distribution not addressed in L6</p> |

| Common Core Mathematics Standards for High School | Components of Standard | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | Other (Content Examples, e.g., etc.) | Notes/Recommendations |
|---|------------------------|--|--------------------------------|--------------------------------------|-----------------------|
| <p>b. Evaluate and compare strategies on the basis of expected values. <i>For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.</i></p> <p>6. (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).</p> <p>7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).</p> | | | | | |

Analysis for EFF Standard

Convey Ideas in Writing

EFF Curriculum Framework / Common Core State Standards Correspondences
Skill Area: CONVEY IDEAS IN WRITING

Common Core Document used for Analysis: *(Final) Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science and Technical Subjects*, p. 7 (“Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language”) and p. 18 (*College and Career Readiness Anchor Standards for Writing*). Accessed 6.7.10.

NOTES AND REFLECTIONS

Part 1: Students who are College and Career Ready in Writing (“The descriptions that follow are not standards themselves but instead offer a portrait of students who meet the standards set out in this document. As students advance through the grades and master the standards in reading, writing, speaking, listening, and language, they are able to exhibit with increasing fullness and regularity these capacities of the literate individual.”)

1. It is possible to identify regular correspondences between the 2 documents at this level of broad definition of college and career readiness – some stronger than others!
2. To accurately describe correspondences, we will need to draw attention to EFF’s conception of “4 Dimensions of Performance”:
 - **RE: independence** – there is no explicit reference to independence in the CIW CF Performance Indicators, yet there is explicit reference in the analogous CIW PC Level indicators. I think we ought to point out the 4 dimensions of performance on which the CIW level/performance indicators are built, and draw special attention to our conception of “independence” as a key criterion in development of writing expertise
 - **RE: content knowledge** – again, we certainly can/should point out the 4 dimensions of performance on which the CIW level/performance indicators are built, and draw special attention to our conception of “knowledge base” as a key criterion in development of writing expertise
3. Correspondences are quite explicit/strong in the area of writing appropriate to audience/purpose/task
4. Items in the Common Core where the correspondences are more problematic are those where there seems to be a “blurring” of writing with other skills – where the item seems to be as much about how ideas are taken in and processed (through reading? Listening? Observing?) as about how ideas are communicated through writing. Items in the Common Core that refer to “comprehending”, “valuing evidence”, and “coming to understand other perspectives and

cultures” are 3 examples. It may be important to point out that this kind of skill “blurring” could have consequences for how teachers plan to gather and evaluate evidence of WRITING performance, that is, implications for assessment.

5. The explicit integration of technology use into the Common Core description of college/career ready writing is not evident in the EFF document; however, it is possible to consider technology use as one of a range of strategies for generating and organizing ideas in the pre-writing stage of the writing process described in the EFF Curriculum Framework

Part 2: College and Career Readiness Anchor Standards for Writing

A. Text Types and Purposes

1. The standards in this section of the Common Core document are squarely focused on the ability to produce good examples of specific rhetorical forms of writing – persuasion, exposition, and narration. It can be argued that the whole of the EFF CF framework corresponds to each one since the CCSS describe finished writing products and the EFF CF describes the integrated writing process used to produce them.
2. The EFF CF emphasizes persuasive and expository writing much more than narrative. Nevertheless, its overall approach to writing proficiency seems broad enough to account for narrative as well as informative/explanatory writing.

B. Production and Distribution of Writing

3. Strong, consistent correspondences in matters of 1) relating writing to specific purposes/audiences/contexts, and 2) using strategies for planning and revision. This is where “the full writing process” seems to get most attention on the CCSS side
4. It is challenging to find correspondences between the EFF and CCSS documents related to explicit inclusion of technology use, but on the EFF side technology use can be considered among the range of strategies available, and the internet both as an avenue of communication and as a source of writing tools/resources (especially in the areas of planning and revising).

C. Research to Build Knowledge

5. With the decision to explicitly include research as a category of CC writing standards, lines seem to “blur” among reading, writing, technology and research skills needed to accomplish the kinds of writing being described (some examples: “perform research”, “demonstrating understanding of material”, “Gather relevant information”, “assess the credibility and accuracy of each source”, “drawing evidence from the text”. It was challenging to separate actual writing out for the 3 standards in this section. **NOTE: The final version of the CCSS seems to make this issue even more pressing – especially with Anchor Standard #9, which has been reworded to put the focus even**

more explicitly on the ability to “draw evidence from...texts”. Moreover, in the ELA Grades 11-12 standards, #9 explicitly says “Apply grades 11-12 reading standards...”

D. Range of Writing

6. The CC standard in this section is so broad that it could easily subsume the entire list of EFF TLOs and examples. Its reference to routine writing over long and short periods of time sounds like the overall performance description that EFF draws from the 4 dimensions of performance (especially range, but also fluency). **NOTE: In the final version, the final Anchor Writing Standard is followed by a statement about range and content of student READING. This may have been an oversight on the editor’s part, but the (convincing) argument that wide reading can build students’ content knowledge and awareness of various text structures certainly has consequences for writing competence, too.**

A NOTE ABOUT THE FINAL VERSION OF THE COMMON CORE STATE STANDARDS:

The final Common Core document does deal in its introduction with the “skill blurring” that I’ve mentioned several times in my analysis. It does so, for instance, by talking about the processes of communication being “closely connected”, by describing the “shared responsibility” for students’ literacy development, and by urging teachers to consider planning rich learning tasks that address multiple standards. While helpful to know, this provides limited guidance to teachers in managing explicit instruction and assessment of writing skills (as distinct from other skills involved). But then, the authors also are very clear that they do not intend to tell teachers how to teach!

Table 1 -- Students Who are College and Career Ready in Writing

| Students Who are College and Career Ready in Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|--|--|--|--|---|---|
| <i>They demonstrate independence</i> | | From Level Indicators in original PC (see NOTE): (Adults performing at level 6) can independently accomplish ... | | | (NOTE that there is no explicit reference to independence in the CF Performance Indicators, yet there is explicit reference in the analogous PC Level indicators) |
| <i>They build strong content knowledge.</i> | Organize and present information to serve the purpose. Pay attention to conventions of English language usage... | ... Reproduce, synthesize, and draw sound conclusions from complex or extensive ideas;... Appropriately use extensive everyday and specialized vocabulary (including idioms, colloquialisms, and cultural references as appropriate)... | 6B1: evaluate, choose and apply relevant prior knowledge about... particular topic areas 6C1: evaluate, choose and apply relevant prior knowledge of English language structure and usage... | | Shared emphasis on “knowledge base” as a key criterion in development of writing expertise |
| <i>They respond to the varying demands of audience, task, purpose, and discipline.</i> | Determine the purpose for communicating. Organize and present information to serve the purpose. Seek feedback and revise to enhance the effectiveness of the communication | Determine the purpose and audience for communicating in writing; Appropriately use extensive everyday and specialized vocabulary (including idiom, colloquialisms and cultural references as appropriate) and a variety of sentence structures... with appropriate voice, tone, rhetorical forms, and style and in modes of organization suitable for a variety of audiences; | 6A4: Identify and organize ideas to support a single writing purpose 6D1: Perform multiple re-readings of written text and make content revisions during writing process for clarity, a sense of voice, and consideration of audience | 6A2c: Determine appropriate word choice, organizational structure, length, and format to address intended audience 6A2d: Determine appropriate tone, level of formality, and style to suit purpose, context, and audience 6D2c: Change voice/tone as needed to better address needs of audience | |

| Students Who are College and Career Ready in Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|--|--|---|--|---|---|
| | | ...Effectively seek out, describe, and work through more global problems posed by the writing task (such as the need to re-sequence text for clarity, to add more details to make a logical argument, or to change the tone or style to accommodate the audience) | | 6D3c: Choose more appropriate words to fit audience and context, as needed | |
| <i>They comprehend as well as critique.</i> | Organize and present information to serve the purpose. | ... Reproduce, synthesize, and draw sound conclusions from complex or extensive ideas;... | 6A4 Identify and organize ideas to support a single writing purpose | 6A4b: Restate and summarize complex ideas/information 6A4c: Categorize a range of ideas/information by themes or “strands” based on goals and sub-goals for writing 6A4d: Compare/contrast, synthesize, make judgments about, and draw sound conclusions from complex ideas and information | This item seems more related to application of reading, observing and/or listening skills than to writing - though writing might be used to generate evidence of comprehension. |
| <i>They value evidence.</i> | | Effectively seek out, describe, and work through more global problems posed by the writing task (such as the need to re-sequence text for clarity, to add more details to make a logical argument,...) | 6B6: Construct lengthy expository paragraphs, each of which uses explicit or implicit main ideas and extensive supporting detail to thoroughly cover the topic area and make reasoned explanations, rationales, and arguments. | 6A2a: Determine relevant content for addressing writing purpose 6D2d: Add detail needed to support logical argument | |

| Students Who are College and Career Ready in Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|------------|--|--|---|---|
| <i>They use technology and digital media strategically and capably.</i> | | | | 6A3d: Choose from a range of other prewriting strategies (such as outlining, writing notecards, conducting Internet search) to generate ideas | The EFF CF makes few explicit references to technology/digital media , but many references to strategies and tool usage that might be supported by technology |
| <i>They come to understand other perspectives and cultures.</i> | | | <p>6A2: Evaluate, choose, and apply relevant prior knowledge about everyday life, personal experience and interests, cultural understandings... to support planning for written communication</p> <p>6B1: Evaluate, choose, and apply relevant prior knowledge about everyday life, personal experience and interests, cultural understandings, and particular topic areas to convey ideas in written text</p> <p>6C2: Correctly spell common and specialized words and abbreviations, including those used in idioms, colloquialisms, and cultural references</p> | | |

Table 2 – College and Career Readiness Anchor Standards for Writing

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|--|--|--|---|---|------------------------|
| <i>Text Types and Purposes</i> | | | | | |
| <p>1. <i>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence</i></p> | <ul style="list-style-type: none"> • Determine the purpose for communicating. • Organize and present information to serve the purpose. | <ul style="list-style-type: none"> • Determine the purpose and audience for communicating in writing • Select from and use a wide range of tools and strategies for overall planning and organization; reproduce, synthesize and draw sound conclusions from complex or extensive ideas; and produce a legible and comprehensible draft • ...can convey ideas in writing using ...medium-length, detailed text and in a variety of rhetorical forms ...in structured or unstructured complex writing activities...to accomplish a wide variety of goals | <p>6A2: Evaluate, choose, and apply relevant prior knowledge about...a wide range of specialized content and vocabulary...to support planning for written communication</p> <p>6A4: Identify and organize ideas to support a single writing purpose</p> <p>6B7: Logically link multiple expository paragraphs in medium-length essay format in order to provide a clear and effective description of the topic in the beginning, demonstrate coherence throughout the text, and summarize the key points in the conclusion.</p> | <p>6A2a: Determine relevant content for addressing writing purpose</p> <p>6A2c: Determine appropriate word choice, organizational structure, length and format to address intended audience</p> <p>6A2d: Determine appropriate tone, level of formality, and style to suit purpose, context, and audience</p> <p>6A4b: Restate and summarize complex ideas/information</p> <p>6A4c: Categorize a range of ideas or information by themes or strands based on goals and sub-goals for writing</p> <p>6A4d: Compare/contrast, synthesize, make judgments about, and draw sound conclusions from complex ideas and information</p> | |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|---|---|--|---|------------------------|
| <p>2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content</p> | <ul style="list-style-type: none"> Organize and present information to serve the purpose | <ul style="list-style-type: none"> Select from and use a wide range of tools and strategies for overall planning and organization; reproduce, synthesize, and draw sound conclusions from complex or extensive ideas; and produce a legible and comprehensible draft | <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B6 Construct lengthy expository paragraphs, each of which uses explicit or implicit main ideas and extensive supporting detail to thoroughly cover the topic area and make reasoned explanations, rationales, and arguments</p> <p>6B7 Logically link multiple expository paragraphs in medium-length essay format in order to provide a clear and effective description of the topic in the beginning, demonstrate coherence throughout the text, and summarize the key points in the conclusion</p> | <p>6A2b: Examine varied genres of writing to determine appropriate rhetorical form for addressing purpose (e.g., narrative, persuasive essay, compare/contrast essay, report)</p> <p>6A4b: Restate and summarize complex ideas/information</p> <p>6A4d: Compare/contrast, synthesize, make judgments about, and draw sound conclusions from complex ideas and information</p> | |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|---|--|--|---|--|
| <p>3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p> | <ul style="list-style-type: none"> Organize and present information to serve the purpose | | <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B5 Use appropriate text structure to write medium-length examples of a variety of narrative and expressive literary forms (stories, poetry, drama), and include attention to dialogue, story structure, characterization, plot, and point of view</p> | <p>6A2b: Examine varied genres of writing to determine appropriate rhetorical form for addressing purpose (e.g., narrative, persuasive essay, compare/contrast essay, report)</p> | <p>The EFF CF seems to emphasize expository writing much more than narrative. Nevertheless, EFF's overall approach to writing proficiency seems broad enough to account for narrative as well as informative/explanatory writing</p> |
| Production and Distribution of Writing | | | | | |
| <p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> | <ul style="list-style-type: none"> Determine the purpose for communicating. Organize and present information to serve the purpose | <ul style="list-style-type: none"> Determine the purpose and audience for communicating in writing Select from and use a wide range of tools and strategies for overall planning and organization; reproduce, synthesize, and draw sound conclusions from complex or extensive ideas; and produce a legible and comprehensible draft | <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B1 Evaluate, choose, and apply relevant prior knowledge about everyday life, personal experience and interests, cultural understandings, and particular topic areas to convey ideas in written text</p> | <p>6A1a: Determine general purposes (e.g., to inform, entertain, persuade) and specific purposes (e.g., topic to be addressed, task to be accomplished) for writing</p> <p>6A2c: Determine appropriate word choice, organizational structure, length, and format to address intended audience</p> <p>6A2d: Determine appropriate tone, level of formality, and style to suit purpose, context, and audience</p> | |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|--|--|---|--|--|------------------------|
| | | <ul style="list-style-type: none"> Appropriately use extensive everyday and specialized vocabulary ... and a variety of sentence structures...in medium-length, well-sequenced, and detailed text with appropriate voice, tone, rhetorical forms, and style and in modes of organization suitable for a variety of audiences | 6B9 Produce a legible, comprehensible, and reader-based draft to convey ideas or information | | |
| <p><i>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</i></p> | <ul style="list-style-type: none"> Pay attention to conventions of English language usage, including grammar, spelling, and sentence structure, to minimize barriers to the reader’s comprehension. Seek feedback and revise to enhance the effectiveness of the communication | <ul style="list-style-type: none"> Select from and use a wide range of tools and strategies for overall planning and organization Choose from a variety of strategies to make multiple simple and global revisions during the writing process; effectively seek out, describe, and work through more global problems posed by the writing task (such as the need to re-sequence text for clarity, to add more details to make a logical argument, or to change the tone or style to accommodate the audience) | <p>6A2 Evaluate, choose, and apply relevant prior knowledge about everyday life, personal experience and interests, cultural understandings, a wide range of specialized content and vocabulary, and English grammar/ writing conventions to support planning for written communication</p> <p>6A4 Identify and organize ideas to support a single writing purpose</p> | <p>6A2a: Determine relevant content for addressing writing purpose</p> <p>6A4f: Develop a detailed writing plan</p> <p>6D1a: Review ideas and organizers generated during planning phase</p> <p>6D1b: Use specific tools such as content rubrics or questions</p> <p>6D1c: Make more global revisions to improve the precision, reasoning, thoroughness, fluency, and overall quality and effectiveness of the writing</p> <p>6D2a: Choose from a wide repertoire of strategies to give and receive feedback related to revision, including the use of a variety of revision rubrics appropriate for the genre</p> | |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|------------|---|---|---|------------------------|
| | | <ul style="list-style-type: none"> Undertake multiple re-readings of text in order to make comprehensive edits for grammar, spelling, sentence structure, language usage, and text structure; use appropriate editing tools as necessary | <p>6D1 Perform multiple re-readings of written text and make content revisions during writing process for clarity, a sense of voice, and consideration of audience</p> <p>6D2 Understand and apply feedback from an external reader/ reviewer to make revisions to a first draft</p> <p>6D3 Make comprehensive proofreading changes, using application of rules and tools as needed</p> | <p>6D2b: Make content changes</p> <p>6D2c: Change voice/tone as needed to better address needs of audience</p> <p>6D2d: Add detail needed to support logical argument</p> <p>6D2e: Delete unnecessary information</p> <p>6D2f: Combine and/or rearrange sentences as needed to add coherence</p> <p>6D2g: Re-sequence larger blocks of text to aid overall organization and clarity</p> <p>6D3a: Correct misspellings</p> <p>6D3b: Correct sentence structure and word order</p> <p>6D3c: Choose more appropriate words to fit audience and context, as needed</p> <p>6D3d: Correct verb forms</p> <p>6D3e: Correct capitalization</p> <p>6D3f: Correct punctuation</p> | |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|---|---|--|--|--|
| <p>6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> | | <ul style="list-style-type: none"> Select from and use a wide range of tools and strategies for overall planning and organization; Choose from a variety of strategies to make multiple simple and global revisions during the writing process; Use appropriate editing tools as necessary | <p>6D2 Understand and apply feedback from an external reader/ reviewer to make revisions to a first draft</p> | <p>6A3a: Through reflection and/or discussion prior to writing, pose and answer questions that require a high level of critical thinking</p> <p>6A4a: Anticipate and use templates for complex business, legal, and community documents, e.g., extensive applications (such as for financial aid), forms (such as for taxes or insurance), guides, business letters</p> <p>6A4e: Use a variety of graphic organizers (extended outlines, text maps, timelines)</p> <p>6D2a: Choose from a wide repertoire of strategies to give and receive feedback related to revision, including the use of a variety of revision rubrics appropriate for the genre</p> | <p>Technology use may be considered among the range of strategies available, and the internet both as an avenue of communication and as a source of writing tools/resources</p> |
| <p><i>Research to Build and Present Knowledge</i></p> | | | | | |
| <p>7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p> | <ul style="list-style-type: none"> Determine the purpose for communicating. Organize and present information to serve the purpose | <ul style="list-style-type: none"> Select from and use a wide range of tools and strategies for overall planning and organization... and produce a legible and comprehensible draft | <p>6B1 Evaluate, choose, and apply relevant prior knowledge about ...particular topic areas to convey ideas in written text</p> <p>6B7 Logically link multiple expository paragraphs in medium-length essay format in order to provide a clear and effective</p> | <p>6A4g: Develop a hypothesis or thesis to explore during writing</p> <p>6D1c: Make more global revisions to improve the precision, reasoning, thoroughness, fluency, and overall quality and effectiveness of the writing</p> | <p>With the inclusion of research as a category of the CC writing anchor standards, lines seem to blur among reading, writing and research skills being described. I tried to separate actual writing out here and in the 2 following standards. But it seems to me this has some pretty</p> |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|---|---|--|--|---|
| | | | <p>description of the topic in the beginning, demonstrate coherence throughout the text, and summarize the key points in the conclusion</p> <p>6B9 Produce a legible, comprehensible, and reader-based draft to convey ideas or information</p> | | interesting implications for assessment if not for instruction! |
| <p><i>8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism</i></p> | <ul style="list-style-type: none"> Organize and present information to serve the purpose | <ul style="list-style-type: none"> ...reproduce, synthesize, and draw sound conclusions from complex or extensive ideas... | <p>6A2 Evaluate, choose, and apply relevant prior knowledge about... a wide range of specialized content and vocabulary...to support planning for written communication</p> <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B8 Use a wide range of rhetorical strategies and signal words to clarify transitions and relationships among ideas from sentence to sentence and paragraph to</p> | <p>6A2a: Determine relevant content for addressing writing purpose</p> <p>6A3c: Write extensive notes while listening to complex oral communication</p> <p>6A3d: Choose from a range of other prewriting strategies (such as outlining, writing notecards, conducting Internet search) to generate ideas</p> <p>6A3e: Take written notes from extended reading and sustained observations</p> <p>6A4b: Restate and summarize complex ideas/information</p> <p>6A4c: Categorize a range of ideas/information by themes or “strands” based on goals and sub-</p> | see above |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|--|---|--|---|--|------------------------|
| | | | <p>paragraph (“whereas,” “while,” “on the one hand,” “therefore”) in multiple paragraphs that are well organized to serve a writing purpose</p> <p>6C6 Correctly use conventions related to research writing and source citation (e.g., italics, quotes, footnote markers when appropriate)</p> | <p>goals for writing</p> <p>6A4d: Compare/contrast, synthesize, make judgments about, and draw sound conclusions from complex ideas and information</p> | |
| <p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research</p> | <ul style="list-style-type: none"> Determine the purpose for communicating. Organize and present information to serve the purpose | <ul style="list-style-type: none"> ...reproduce, synthesize and draw sound conclusions from complex or extensive ideas; and produce a legible and comprehensible draft; ... | <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B9 Produce a legible, comprehensible, and reader-based draft to convey ideas or information</p> | <p>6A2a: Determine relevant content for addressing writing purpose</p> <p>6A3d: Choose from a range of other prewriting strategies (such as outlining, writing notecards, conducting Internet search) to generate ideas</p> <p>6A3e: Take written notes from extended reading and sustained observations</p> <p>6A4b: Restate and summarize complex ideas/information</p> <p>6A4c: Categorize a range of ideas/information by themes or “strands” based on goals and sub-goals for writing</p> | <p>see above</p> |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|------------|---|---|--|---|
| | | | | 6A4d: Compare/contrast, synthesize, make judgments about, and draw sound conclusions from complex ideas and information | |
| <i>Range of Writing</i> | | | | | |
| <p><i>Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</i></p> | | <p>(Adults performing at level 6) can convey ideas in writing using a variety of sentences in medium-length, detailed text and in a variety of rhetorical forms, in structured or unstructured complex writing activities for varied audiences to accomplish a wide variety of goals,...</p> <p>(can produce) medium-length, well-sequenced, and detailed text with appropriate voice, tone, rhetorical forms, and style and in modes of organization suitable for a variety of audiences</p> | <p>6A1 Convey ideas in writing for real-life purposes</p> <p>6A4 Identify and organize ideas to support a single writing purpose</p> <p>6B1 Evaluate, choose, and apply relevant prior knowledge about everyday life, personal experience and interests, cultural understandings, and particular topic areas to convey ideas in written text</p> <p>6B9 Produce a legible, comprehensible, and reader-based draft to convey ideas or information</p> <p>6D1 Perform multiple re-readings of written text and make content revisions during writing process for clarity, a sense of voice, and</p> | <p>6A1a: Determine general purposes (e.g., to inform, entertain, persuade) and specific purposes (e.g., topic to be addressed, task to be accomplished) for writing</p> <p>6A1d: Identify how the needs of the intended audience relate to own purpose for writing</p> <p>6A2a: Determine relevant content for addressing writing purpose</p> <p>6A2b: ...determine appropriate rhetorical form for addressing purpose ...</p> <p>6A2c: Determine appropriate word choice, organizational structure, length, and format to address intended audience</p> <p>6A2d: Determine appropriate tone, level of formality, and style to suit purpose, context, and audience</p> <p>6D1c: Make more global revisions to improve the precision, reasoning, thoroughness, fluency, and overall quality and effectiveness of the writing</p> <p>6D2c: Change voice/tone as needed</p> | <p>This anchor standard is so broad that it could easily subsume the entire list of EFF TLOs and examples. I tried to stick to explicit references to writing activities for a range of purposes, audiences and tasks</p> |

| College and Career Readiness Anchor Standards for Writing | Components | Performance Indicators (including Examples of Performance) | Teaching & Learning Objectives | OTHER (Content Examples, e.g., etc.) | Notes/ Recommendations |
|---|------------|--|--|--|------------------------|
| | | | <p>consideration of audience</p> <p>6D2 Understand and apply feedback from an external reader/reviewer to make revisions to a first draft</p> <p>6D3 Make comprehensive proofreading changes, using application of rules and tools as needed</p> | <p>to better address needs of audience</p> <p>6D3c: Choose more appropriate words to fit audience and context, as needed</p> | |

Analysis for EFF Standards

Speak So Others Can Understand and Listen Actively

EFF Standards / College and Career Readiness Standards Correspondences
Skill Area: Speaking and Listening

Document used for Analysis: *(Final) Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science and Technical Subjects, p. 7 (“Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language”) and p. 22 (College and Career Readiness Anchor Standards for Speaking and Listening).*

NOTES AND REFLECTIONS ON EFF/CCR STANDARDS CORRESPONDENCE ANALYSIS

Part 1: Students who are College and Career Ready in Speaking and Listening

1. They demonstrate independence.

EFF’s treatment of independence is somewhat implicit. An introductory statement about the four dimensions could take care of this.

2. They build strong content knowledge.

The Common Core definition of content knowledge is about subject knowledge, not skill process knowledge, so the two documents use the term quite differently. And since they are thinking about a K-12 population, these subjects are K-12 subjects, not adult life subjects. So there is some mismatch here.

3. They respond to the varying demands of audience, task, purpose, and discipline.

This is a strong match, as the EFF Standards are all about contextualized application of skills. In fact, it’s this element of transferable skill use, beyond a prescribed list of situations, that makes EFF Standards unique.

4. They comprehend as well as critique.

This, I believe, is strong in both Listening and Reading, although Listening doesn’t use the word “critique” specifically. We do analyze, evaluate, compare to prior knowledge, consider what’s not said as well as what is said, etc. And we do cover basic comprehension on both the word and message levels.

5. They value evidence.

In Listening and Speaking, there is reference to looking for, presenting, and evaluating evidence.

6. They use technology strategically and capably.

This is, by comparison, underemphasized in EFF documents, as it appears as a sub-benchmark under the Communication/Comprehension Strategies Benchmark. I think that facility with technology is now deeply intertwined with effective communication and is part of functioning in the communicative contexts of daily life, so I’ve added this to the EFF Frameworks.

7. They come to understand other perspectives and cultures.

In the sense that they are drawing on multi-cultural prior knowledge, using that knowledge to better understand/interpret communication norms and the messages they hear, and also using it to make decisions about how they want to interact with others, I see a strong match. However, culture is not addressed as a content area of study.

Part 2: College and Career Readiness Anchor Standards for Speaking and Listening

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

The EFF Frameworks attend strongly to preparation and participation in a wide range of interactions. In addition, there is attention to the idea of listening fully to others, to thinking/comparing with others, and to contributing constructively to conversations. However, there is less attention to the idea of "collaboration," which seems intended to build the ability to work together. This is where the Common Core standards stretch a bit beyond strong speaking and listening.

2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Use of media is mentioned in both Listening and Speaking documents, but it does not play as prominent a role as being called out in one the Common Core Standards would suggest.

3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Yes, particularly at the highest (transitional) levels where language is more sophisticated and rhetorical styles more diverse.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

EFF Frameworks are very strong in linking communication strategies to task, purpose and audience. This is reinforced at every level of the documents. At the higher levels, which focus on more complex tasks that involve clear, persuasive communication, these specific skills are addressed.

5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

As mentioned above, these strategies are included among many communication strategies.

6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Adaptation to context is strongly highlighted in the EFF Frameworks, and register (level of formality) is addressed as part of the socio-cultural knowledge drawn upon as adults consider how to participate in each situation.

Overall Conclusions

- The strongest correspondence seems to be in the focus on preparing to function effectively in diverse contexts, although the Common Core's emphasis on well-reasoned, informed argument suggests that its primary interest is in academic purposes (whereas EFF's scope extends to broader adult purposes).
- The Common Core document focuses on outcomes, whereas the EFF documents address the skill process to produce the outcomes. EFF's attention to process prepares learners for the Common Core outcomes and others.
- Two of the Common Cores' six Standards for Listening and Speaking address the ability to use media effectively. This suggests a very strong emphasis on an interdisciplinary skill set, as synthesizing information through media involves listening, observing, reading, and math (at least). It seems this could better be served by a media literacy Standard.

The Common Core document shows concern for dealing with difference constructively (collaboration, understanding other perspectives and cultures). This should be a natural outcome of preparing learners to communicate in varied situations (through practice of diverse communication tasks), and is encouraged directly in EFF through examination of cross-cultural communication norms and expectations.

Document used for Analysis: (Final) Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science and Technical Subjects, p. 7 (“Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language”) and p. 22 (College and Career Readiness Anchor Standards for Speaking and Listening).

Table 1 – Students who are College and Career Ready in Speaking and Listening

| Students who are College and Career Ready in Speaking and Listening | Components | Performance Indicators (including Examples of Performance) EFF has only up through L6 | Teaching & Learning Objectives | Content Examples | Notes/ Recommendations |
|---|----------------|---|---|---|------------------------|
| They demonstrate independence. | | This is not explicitly stated in the EFF continuum, but is in OR’s | | | |
| They build strong content knowledge. | | | All benchmarks | All sub-benchmarks | |
| They respond to the varying demands of audience, task, purpose, and discipline. | Whole standard | | <p>S8P1 Determine own purpose for speaking as well as the purpose of the listener(s) in a particular situation.</p> <p>L8P1 Determine own purpose for listening as well as the purpose of the speaker(s) in a particular situation.</p> <p>S8P2 Draw on prior knowledge about language, culture, and context to anticipate and prepare for interactions.</p> <p>S8P3 Choose among a</p> | <p>a. Reflect on and use prior knowledge about the social, cultural, and institutional context to inform the tone, content, and formality of the communication (<i>e.g., discussing a poor grade with an instructor</i>)</p> <p>b. Determine relevant content for addressing speaking purpose (include sufficient specific and relevant facts, valid reasons, concrete details, and examples to support a relatively complicated thesis).</p> <p>f. Anticipate questions or concerns that listener(s) may have.</p> | |

| Students who are College and Career Ready in Speaking and Listening | Components | Performance Indicators (including Examples of Performance) EFF has only up through L6 | Teaching & Learning Objectives | Content Examples | Notes/ Recommendations |
|---|--|---|--|--|------------------------|
| | | | <p>variety of planning strategies to generate and organize content of message.</p> <p>S8M1 Use knowledge of history, culture, and context to select and communicate information effectively.</p> | <p>g. Determine style and level of formality appropriate for the situation.</p> <p>a. Select from a wide range of conversation strategies to participate actively (<i>e.g., taking into account the interests of others; getting to the point directly; predicting likely questions and responses</i>)</p> <p>d. Make intentional communicate choices based on an understanding of cultural, professional, and academic expectations</p> | |
| They comprehend as well as critique. | [according to CC, appropriate for readers and listeners, not speakers and writers] | | L8M2 Draw from a wide range of strategies to understand complex information and ideas and explicit and implied meanings. | All (a-h) (See standards #2 in the chart below). | |
| They value evidence. | | | | <p>L8A1 c. Synthesize, analyze and evaluate information from a variety of sources.</p> <p>L6M2 h. Critically evaluate ideas and evidence presented, and language used to persuade or convince</p> <p>S8M2 b. Include abstract and theoretical ideas, valid arguments, substantive and relevant details, and sound evidence to support complex points.</p> | |

| Students who are College and Career Ready in Speaking and Listening | Components | Performance Indicators (including Examples of Performance) EFF has only up through L6 | Teaching & Learning Objectives | Content Examples | Notes/ Recommendations |
|---|------------|---|--|--|------------------------|
| They use technology strategically and capably. | | | | S8M2 d. Use varied forms of audio-visual media to enhance communication. | |
| They come to understand other perspectives and cultures. | | | L8P2/S8P2 Draw on prior knowledge about language, culture, and context to anticipate and prepare for interactions. | <p>L8M1 c. Use broad socio-cultural and contextual knowledge to make inferences and to understand the explicit and implicit meaning of the speaker.</p> <p>L8P3 g. Draw on knowledge of background and perspective of speaker, which may influence information presented or way it is presented.</p> <p>S8M1 d. Make intentional communicative choices based on an understanding of cultural, professional, and academic expectations.</p> | |

Table 2 – College and Career Readiness Anchor Standards for Listen/Speak

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|---|--|---|---|
| Comprehension and Collaboration | | | | |
| <p>1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively.</p> | <p>Whole Standard: <u>Listen and Speak</u></p> <p>Range builds across the PC</p> | <p>This is addressed across the curriculum framework. See especially the Planning strands and:</p> <p>L7A1 Comprehend and respond to a variety of extended, complex communication tasks.</p> <p>L8A1 Comprehend and respond to extended presentations of information and complex, multi-party conversations in a variety of complex communication tasks.</p> | <p>a. Follow multi-task or complex communications to perform a specific role, answer difficult questions or solve challenging problems</p> <p>b. Given a specific situation, listen actively, negotiate options, and reach resolution (e.g., lectures or debates, multi-party conversations, or explanations)</p> <p>c. Follow and contribute to discussions that require some synthesis, analysis, or evaluation of ideas</p> | <p>This very general standard is addressed at length and with much detail in our standards.</p> |
| <p>2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p> | <p><u>Listen:</u></p> <p>Clarify purpose for listening and use listening strategies appropriate to that purpose.</p> <p>Integrate information from listening with prior knowledge to address listening purposes</p> | <p>L7M2/L8M2 Draw from a wide range of strategies to understand complex information and ideas, and explicit and implied meanings.</p> | <p>L7M2</p> <p>a. Synthesize and interpret what was stated, considering how it fits with prior knowledge</p> <p>b. Use knowledge of the context to aid comprehension</p> <p>c. Identify the relationships between key ideas</p> <p>d. Evaluate usefulness and relevance of ideas or information to the listening purpose</p> <p>e. Identify the thesis of a speech in which the main idea may be explicitly or implicitly stated</p> <p>f. Paraphrase complex ideas and information</p> <p>g. Evaluate the perspective of the speaker and</p> | <p>Source and context addressed in level descriptions</p> <p>Add more about the media and formats</p> |

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|--|------------|---|------------------------|
| | | | <p>accuracy of information presented (e.g., by analyzing word choice, what has not been said)</p> <p>h. Take detailed notes to aid comprehension and recall</p> <p>i. Summarize presented information in which main ideas may be explicit or implicit]</p> <p>L8M2</p> <p>a. Evaluate what was stated, considering how it fits with what is already known</p> <p>b. Draw conclusions and make inferences based on context and intent of speaker (e.g., to inform, persuade, accuse)</p> <p>c. Concisely summarize presented information, including the purposes, major ideas, and supporting ideas</p> <p>d. Identify the thesis of a speech in which the ideas may be abstract, theoretical, and philosophical and in which the organization is not necessarily linear</p> <p>f. Distinguish between more and less important details.</p> <p>g. Accurately paraphrase multiple, challenging ideas and information</p> <p>h. Analyze and evaluate the effectiveness of the style, structure, and rhetorical devices of a speech.</p> <p>i. Evaluate the bias of the speaker</p> | |

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|--|--|--|------------------------|
| | | | <p>j. Determine relevant interpretation of language that may have multiple meanings</p> <p>S7A1</p> <p>c. Synthesize, analyze, and evaluate information from more than one source</p> | |
| <p>3. Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric.</p> | <p><u>Listen:</u></p> <p>Clarify purpose for listening and use listening strategies appropriate to that purpose.</p> | <p>L7P1 Clarify purposes and needs of the listener and speaker(s) in a particular situation.</p> <p>L8P3 Choose among a wide variety of strategies to plan for listening.</p> <p>L8M1 Use knowledge of U.S. history, culture and context to understand and interpret message.</p> <p>L7M2 Draw from a wide range of strategies to understand complex information and ideas, and explicit and implied meanings.</p> | <p>e. Draw on knowledge of background and perspective of speaker, which may influence information presented or way it is presented</p> <p>a. Synthesize and interpret what was stated, considering how it fits with prior knowledge.</p> <p>c. Evaluate usefulness and relevance of ideas or information to the listening purpose.</p> <p>d. Evaluate the perspective of the speaker and accuracy of information presented (e.g., by analyzing word choice, what has not been said]</p> <p>f. Analyze the way the style, structure, and rhetorical devices of a speech support or confound its meaning or purpose.</p> | |

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|--|---|--|---|
| Presentation of Knowledge and Ideas | | | | |
| <p>4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.</p> | <p><u>Speak:</u> Organize and relay information to effectively serve the purpose, context and listener</p> | <p>S7P2 Draw on prior knowledge about language, culture, and context to anticipate and prepare for interactions.</p> <p>S7P3/S8P3 Choose among a variety of planning strategies to generate and organize content of message.</p> <p>S7M2/S8M2 Organize and present ideas effectively.</p> | <p>a. Reflect on and use prior knowledge about the social, cultural, and situational context to inform the tone, content, and formality of the communication (i.e., reporting a crime to the police).</p> <p>b. Make intentional communicative choices based on an understanding of cultural and academic expectations]</p> <p>S7P3</p> <p>b. Determine relevant content for addressing speaking purpose (e.g., include sufficient specific and relevant facts, valid reasons, concrete details and examples to support a thesis)</p> <p>c. Consider alternative perspectives and information</p> <p>g. Determine style and level of formality appropriate for the situation]</p> <p>S8P3</p> <p>b. Determine relevant content for addressing speaking purpose (e.g., include sufficient specific and relevant facts, valid reasons, concrete details and examples to support a relatively complicated thesis)</p> <p>S7M2</p> <p>a. Organize oral presentations to emphasize the purpose, cite concrete examples or arguments before the more abstract;</p> <p>b. Use an organizational pattern that enhances the appeal to the audience and is appropriate to the purpose. (e.g., delivering a critique, persuasive, cause-effect)</p> | <p>Addressed throughout the Convey Meaning Strand</p> |

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|--|---|---|---|
| | | | <p>d. Use varied forms of audio-visual media to enhance communication</p> <p>e. Provide an effective introduction and conclusion that reinforces the focus of an academic presentation</p> <p>S8M2</p> <p>b. Include abstract and theoretical ideas, valid arguments, substantive and relevant details, and sound evidence to support complex points.</p> | |
| 5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. | <u>Speak:</u> Organize and relay information to effectively serve the purpose, context and listener | S8M2 Organize and present ideas effectively. | d. Use varied forms of audio-visual media to enhance communication | Use of technology could be inserted more in Listening |
| 6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate. | <u>Speak:</u> Whole standard Range builds across the PC | S7E1 Apply knowledge of complex grammar and common/uncommon/formal usage. | <p>S7E1</p> <p>a. Use complex grammar structures (<i>e.g., perfect continuous tense, passive constructions, embedded questions, relative clauses</i>) and make grammar choices appropriate to purpose and formality of the task</p> <p>b. Use a variety of sentence types (including compound and complex sentences, embedded questions, relative clauses, direct and indirect questions, etc.).</p> <p>c. Make grammar choices that reflect nuances or shades of meaning</p> <p>d. Use appropriate standard or colloquial grammar in a variety of contexts</p> | Context and tasks addressed in level descriptions. |

| College and Career Readiness Anchor Standards for Listening and Speaking | Components of Standard and Performance Continuum | Benchmarks | Sub-Benchmarks | Notes/ Recommendations |
|--|--|--|--|------------------------|
| | | S7E2 Use strategies to build and apply vocabulary that includes some words needed for specialized, abstract, and/or academic topics. | <p>S7E2</p> <p>a. Select and use vocabulary to convey precise thoughts and express shades of meaning (<i>e.g., imply vs. infer</i>)</p> <p>c. Use slang, idioms and colloquialisms appropriately (<i>e.g., cut to the chase, go out on a limb</i>)</p> <p>d. Use vocabulary learned through reading, lectures, or media.</p> <p>e. Incorporate vocabulary learned from the Academic Word List (AWL)</p> <p>S8E3</p> <p>c. Avoid reductions and linkages for formal speaking contexts</p> <p>S7M1</p> <p>c. Select register, pace, and tone appropriate to the formality or seriousness of the situation, and the relationship between speakers</p> | |