**English Language Arts and Literacy**

**ELAQ1. Have the revisions addressed the misinterpretation of close reading as the only type of reading that students should do? Will there be a balance of types of reading represented in the standards? What clarification could be included to address this issue? Where will this clarification be placed to make it prominent in the framework?**

Close reading and text complexity

A section has been added to the Introduction, pages 2-5, that explains that close reading is one of two main approaches to reading represented in the framework, the other approach being comparative analysis. This section explains when close reading can be effective (e.g., for literary analysis of a short complex text such as a poem, or an excerpt of a longer complex text), and when it is less appropriate or misguided as an approach. Footnotes have been added to the Introduction that cite research on when close reading is and is not effective as a method to support reading comprehension.

The Introduction describes the function of the framework’s ten reading standards, which define what students should know and be able to do when reading either literary or informational texts. Standards 1-3 address identifying and analyzing themes for literary texts and main ideas for informational text. Standards 4-6 address how vocabulary, structure, and point of view are used in a text; these standards are relevant to the close reading approach. Standards 7-9 address comparisons between texts of various kinds (e.g., two texts by the same author, a play script and a performance of a play). These are relevant to the comparative analysis approach. Standard 10 addresses text complexity.

Balance of types of reading: literary and informational texts

The Introduction clarifies that elementary, middle, and high school teachers share the responsibility of providing students opportunities to read, discuss, and write about literary and informational texts. When students study English language arts, they will read primarily literature and literary nonfiction. When they study other subjects, they will read informational texts to build content knowledge. Footnotes have been added to the Introduction to cite research on teaching complex texts, developing academic and domain-specific vocabulary, and defining the role of content knowledge in reading comprehension.

**ELAQ2. The term “research project” used in the standards diminishes what is involved in writing a research paper. Please consider adding more to the standards on the characteristics of academic research, from identifying topic to narrowing research questions to finding and evaluating sources to synthesizing research into an argument or explanation.**

The term “research project” in the standards has been replaced with simply “research” in Writing Standards 7, 8, and 9 at all levels. These standards refer explicitly to using both print and digital sources and synthesizing information from multiple sources. Beginning in grade 6, these standards ask students to generate and narrow research questions; locate and assess the credibility and accuracy of sources; draw evidence from multiple texts to support written analysis or interpretation; quote from or paraphrase sources and avoid plagiarism; and cite sources using an established format. Writing Standards 1 and 2 set out in detail the components of a written argument or explanation. A section on research has been added to the Introduction.

**ELAQ3. How are the specific elements of grammar and usage addressed?**

Standard English conventions – grammar and usage – are addressed in Standard 1 of the Language Standards, and cross-referenced in the Writing and Speaking and Listening Standards. The revised set of PK-5 standards puts the emphasis on understanding sentence structure as the foundation for writing clearly. In grades 6-8, the emphasis is on understanding how to manipulate sentence structure, particularly phrases and clauses, to create variety and style in writing and to show logical relationships among ideas. In grades 9-12, the emphasis is on consolidating grammatical skills, developing cohesion through sentence and paragraph structure, and revising and editing to make text concise and precise. Developing control over standard English conventions is a progressive skill that deepens as students read and write increasingly complex texts. Therefore, a chart placed at the end of the PK-5 and grades 6-12 sections highlights certain key standards that students need to practice continually throughout the grades to become effective writers and articulate speakers.

**ELAQ4. Do the standards set expectations related to students reading at grade level?**

Standard 10 of the Reading Standards addresses text complexity and range of reading. It has been revised at each grade level to specify that students need to be able to “independently and proficiently read and comprehend texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade x” (underlined text represents the proposed revisions). This standard sets the expectation that students will be able to read texts at their grade level, and, for those who are ready, more challenging texts as well.

**ELAQ5. How should the process of developing media literacy and ability to collaborate in teams work in schools? How do we encourage schools to take advantage of these opportunities?**

In the framework’s Reading Standards, the term “text” is an umbrella term that includes texts in print and media in its various forms (digital media, film, video, audio, and different types of Web-based communication). Writing Standard 6 addresses the use of technology to collaborate in writing and publishing while Speaking and Listening Standards 3-6 address oral and media presentations. Speaking and Listening Standard 3 addresses listening to and evaluating both recorded and live presentations and performances. Speaking and Listening Standards 1 and 2 address norms of civil and productive discourse and the ability to collaborate. This draft has added numerous examples of how these standards might be used in the classroom.

**ELAQ6. How did the Frameworks Review Panel respond to claims that the expectations in kindergarten were not developmentally appropriate?**

The elementary teachers on the Review Panel, as well as early childhood experts on the Content Advisor team, reviewed the PK-3 standards and found them to be reasonable for children of those grades. Examples have been added to both frameworks to clarify the standards in these grades.

**ELAQ7. Is writing by hand given greater prominence in the revised elementary standards?**

Review Panelists believed that it was important to have a coherent progression in skills of writing legibly by hand from grades K to 5. They recommended adding standards on this topic for each grade in Language Standard 2. They cited research indicating that writing by hand has positive cognitive effects on learning. It is important to note that the framework standards specify cursive handwriting (as opposed to handwritten printing) only for the practical purpose of writing a signature at grades 4 and 5. Teachers must use their professional judgment whether to devote class time to developing legible cursive handwriting for a variety of other purposes.

**Mathematics**

**MQ1. Why is there guidance about course pathways in the Framework? How does this guidance relate to the standards?**

The course-taking pathways in the Framework offer options for ways in which the standards can be compressed or enhanced in order to offer choices and alternative pathways to prepare students to be successful in various college pursuits and careers. Presenting a variety of pathway options encourages students to persist in their mathematical studies and make course-taking decisions that best support their interests and career and college goals. Including guidance and multiple example course-taking pathways in the Framework will support decision making at the district level. This guidance includes sample pathways that allow students to complete the Model Algebra I course in grade 8 and others that result in students completing advanced math courses, including Calculus, in grade 12.

The grades 9–12 high school mathematics standards presented by conceptual categories provide guidance on what students are expected to learn in order to be prepared for college and careers. When presented by conceptual categories, these standards do not indicate a sequence of high school courses. In the Framework, the high school standards (9-12) are reorganized into model high school courses and represent a smooth transition from the grades pre-k–8 standards.

**MQ2. What does “Enhanced Algebra” mean?**

In 2011, ESE staff developed a working paper titled "Enhanced High School Pathway to Calculus." This paper is located on the Department's website at[: http://www.doe.mass.edu/candi/standards/EnhancedPathway.pdf](http://www.doe.mass.edu/stem/math/) and is now included in the Framework. The Enhanced Pathway allows students to complete four years of course work in three years, thus completing the necessary course work to take Calculus in grade 12. These students would begin with Enhanced Algebra I in grade 9, move on to Enhanced Geometry in grade 10, Enhanced Algebra II (which includes some Pre-Calculus standards) in grade 11, and Calculus in grade 12.

**MQ3: How can the standards be configured in order for students to complete the Model High School Algebra I course in grade 8?**

One possible pathway compresses grades 6, 7, and part of grade 8 standards and places them in grades 6 and 7. Then in grade 8, students learn the grade 8 standards related to algebra *and* the Algebra I Model High School Course standards.

**MQ4. Are there any trade-offs in the recommended pathways that make it possible for students to take advanced high school courses?**

There are two key considerations for student course-taking decisions. First, we want students to be successful and this requires a careful assessment of which course sequence is the best for each student. All students are expected to advance each year in high school at an appropriate pace so as to stay on track for graduation and be prepared for college entry-level math courses. Second, pathways such as doubling up (taking two math courses in a year), for example, are options that accelerate students in math, but may impact students’ ability to take courses in other subject areas.

**MQ5. Regarding options for course taking, is the new Dana Center New MathWays Project, at the University of Texas, led by Uri Treisman, going to address options for course sequences? Are there options for students who do not intend to pursue STEM careers?**

Texas has taken the lead to change developmental math education, and the [New MathWays Project](http://www.utdanacenter.org/higher-education/new-mathways-project/) is that state’s long-term commitment to make students and Texas more successful in math. The Dana Center is building curricular materials for three mathematics pathways that support—not limit—college students’ career goals and aspirations. These courses, with relevant and challenging math content, include the possibility of a “transition” course that can be taken in the first year of college or community college or in grade 12 to prepare for further credit-bearing college courses. These courses are aligned to specific and varied fields of study.

**General**

**GQ1. How will the standards address the needs of students not on grade level?**

Recognizing that some students may need support, the Frameworks include two appendices, one that addresses the needs of English learners, and one that addresses the needs of students with disabilities.

The issue of addressing remediation is a pedagogical one, thus it goes beyond the scope of a standards document. The Department is planning implementation support that will address topics related to this question, including guidance documents and professional development for educators.

The philosophy underlying the standards is stated in the Introduction to each framework: “No set of grade-level standards can reflect the great variety of abilities, needs, learning rates, and achievement levels in any given classroom. The standards define neither the support materials some students may need, nor the advanced materials others should have. It is also beyond the scope of the standards to define the full range of supports appropriate for English learners and for students with special needs. Still, all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills that will be necessary in their post-high-school lives.”

**GQ2. How could the frameworks, especially in math, better offer a layman’s explanation of why the standards are the way they are especially in elementary grades?**

The Department has prepared two-page “Quick Reference Guides” – one for mathematics and one for ELA/Literacy – to introduce the highlights of the proposed changes in the Public Comment Drafts. While teachers and administrators are seen as the primary audience for these documents, school personnel can also use the Quick Reference Guides to inform parents, school committee members, and after-school program providers about overall changes proposed for the frameworks. As part of the implementation support, the Department will produce documents for parents/families and community members that orient them to the standards and make the distinction between standards and curricula—decisions that are locally-driven