



Recommendations with Documentation for Ending the Common Core/Florida Standards in Mathematics and English

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Introduction:

The following list of recommendations and accompanying documentation are offered to help fulfill Governor Ron DeSantis' bold and highly commendable executive order 19-32¹ to "eliminate Common Core and return to the basics of reading, writing, and arithmetic." They were compiled after extensive discussion with professors and standards and education policy experts in Florida and across the nation. Those participating respectfully, but strongly urge the consideration and implementation of these to avoid the damaging result of another rebrand of Common Core, which is what Florida has endured since 2014, as Commissioner Corcoran so correctly pointed out on January 31, 2019, with no relief for Florida students, teachers, and families.

Executive Summary

The recommendations common to both subjects are offered first, followed by those specific to math and then to English language arts (ELA). Discussion of each recommendation accompanied by references follows after the recommendations.

Recommendations Common to Mathematics and ELA:

1. The best solution would be for Florida to review and adopt one of the best pre-Common Core sets of standards for English Language Arts and math as discussed for the subject specific standards² This would fulfill Governor DeSantis' executive order, prevent another rebrand, and stop the academic decline seen in Florida, the other states, and for the U.S. in international comparisons.
2. To comply with the executive order, any statewide Florida standards review should reject efforts to "tweak" or "fix" the current Florida Standards/Common Core, but instead remove the entire set of these systemically inferior, deficient, and in some cases experimental standards and use the standards of one of the high performing states or countries listed in the subject-specific recommendations below as the basis for a review.
3. The premises of the Common Core are fundamentally defective. Having the public comment on individual standards implies that the standards need to be tweaked, or adjusted, at specific passages. It will thus likely lead to a repeat of the rebranding that occurred in 2014, and is an implicit rejection of the Governor's directive to "eliminate Common Core and return to the basics of reading, writing, and arithmetic." Public comment on individual standards will not fix the systemic sequential flaws of the current math standards nor address needed content that is not present in the standards for either subject. Intentionally or not, constraining comments in this manner limits the ability of parents and other citizens to make broader points about the standards and gives the impression that public input is not really welcome.

¹ Florida Governor Ron DeSantis, "Executive Order 19-32," Jan. 31, 2019 available at <https://www.flgov.com/wp->

² Theodor Rebarber and Neal McCluskey, "Common Core, School Choice & Rethinking Standards-Based Reform" Pioneer Institute (Sept. 2018) available at <http://www.flstopccoalition.org/files/314EEDFA-751C-4292-BFBF-F454491D280B--D1BC4ACE-9114-49AD-A2CA-4EEB76A31367/commoncoreschoolchoice-wp.pdf>, p. iii

4. Completely reject “social-emotional learning” or “21st Century” psychosocial skills in the standards, such as “grit/perseverance” or a “growth mindset.” Both the math and the ELA standards are supposed to be and have been portrayed as rigorous academic content standards, and should focus on subject-matter academic content.³ The research supporting such fuzzy standards is unreliable and some of it borders on fraudulent.
5. Prominently include, especially for review of the high school standards, content experts (*e.g.*, professors of mathematics, engineering, and physics as opposed to professors of mathematics education) in the subject matter standards for final review. Some of the experts reviewing the standards for younger students should have strong abilities in child development to make sure that new standards are developmentally appropriate, a glaring problem with Common Core.

Recommendations for the Mathematics Standards:

1. Standards that could be reviewed and offered include those of high performing states prior to Common Core - California (1997),⁴ Indiana (2006),⁵ Minnesota (2007),⁶ or Massachusetts (2000-2004)⁷ - or countries, such as Singapore and Japan. The Washington Exemplary Math Standards⁸ (WEMS), developed by a group of Washington math educators, parents, mathematicians, and science professionals, although not adopted by a state, could be offered as well, since they are a sterling example of high quality standards development after a consensus of the most important stakeholders in math education.
2. Math standards should promote the actual performance of math problems in a much higher percentage than understanding, thinking about, or communicating about mathematical concepts, especially in the earlier grades, as is done in high performing nations like Singapore and Japan and in high performing states prior to Common Core, such as Massachusetts and California.
3. To be of high quality, math standards must include necessary math content standards that Common Core fails to include, discussed below.
4. The basic math operations of addition, subtraction, multiplication and division should be taught as early as is developmentally appropriate using the standard algorithms, not delayed for up to two years, as is done in Common Core.⁹ Once children fall one or more years behind the optimal progression, it is very, very difficult for them to catch up.
5. There should be no requirement for specific instructional strategies, especially some of the experimental ones used in geometry, with the exception that the standard algorithms for the basic arithmetic operations in the early grades should be mastered by all students.

³ Karen Effrem and Jane Robbins, “Social-Emotional Learning: K-12 Education as New Age Nanny State,” Pioneer Institute (March, 2019), available at <http://www.flstopccoalition.org/files/314EEDFA-751C-4292-BFBF-F454491D280B--DDEE0172-9C3C-4B88-9E54-EFA7E8163FD3/sel-wp.pdf>.

⁴ The California math standards were approved in 1997. The latest framework based on them was in 2006. See http://www.lausd.net/Corona_EL/PLC_files/mathfrwkcomplete.pdf

⁵ See <http://web.archive.org/web/20090806121758/http://dc.doe.in.gov/Standards/AcademicStandards/PrintLibrary/index.shtml>, which are the last adopted Indiana pre-Common Core standards. This link also contains an excellent 2009 framework that was not adopted in the run-up to Common Core adoption.

⁶ Minnesota Department of Education, “Minnesota Academic Standards - Mathematics K-12 2007 version”, available at https://education.mn.gov/mdeprod/idcplg?IdcService=GET_FILE&dDocName=005247&RevisionSelectionMethod=latestRelease&Rendition=primary

⁷ The original 2000 Massachusetts standards were updated in May of 2004 to include standards for grades 3, 5, & 7.

⁸ See <https://app.box.com/s/aoj3bqshb2i8nsyxpi1qky8nysopp32h>.

⁹ James Milgram and Sandra Stotsky, “Fair to Middling: A National Standards Progress Report” (March 2010) available at https://www.edweek.org/media/fair_to_middling.pdf, p. 7

6. Ensure that new standards provide a reasonable progression of skill and knowledge attainment to the completion of a full Algebra 1 course by the end of 8th grade at the latest as is done in other high performing countries.¹⁰ One of the reasons other countries are able to accomplish this acceleration is that they focus more exclusively on arithmetic and other skills referred to as “number sense”, including problem solving as well as computation, at the elementary grades and less skipping from one unrelated topic to another. This allows high-performing countries to spend less time reviewing skills because they are not forgotten as easily. This acceleration should be universally available to allow all students that want to pursue a STEM degree, but not universally required for those that do not want this college focus or simply need a little more time to truly master the content.
7. All standards should be coherent because math is a sequential discipline and failure to teach the basics at the developmentally appropriate time will create confusion, frustration, inability to move on to higher levels of math, and loss of the love of learning.

Recommendations for the English Language Arts Standards:

1. Standards that could be reviewed and offered include those of high performing states prior to Common Core, including Massachusetts, Indiana, California and Texas as the basis for the review.¹¹ Dr. Sandra Stotsky, a national standards expert and member of the Common Core validation committee who refused to sign off on the final version of the standards, has made a version of the exemplary Massachusetts ELA standards available to states for free.
2. Require a full, intensive, systematic program of phonics in the early grades.
3. Craft standards that require a rich literature curriculum, with a heavy emphasis on the classics of Western civilization as the texts for the various ELA and literacy skills and knowledge in the standards, and ensure that the literary historical knowledge of students is assessed.
4. Ensure that students read texts that prepare them for the complexity of college readings.
5. Do not emphasize writing over reading.
6. Teach entire works of literature instead of just excerpts.
7. Ensure that the standards are developmentally appropriate.
8. Decouple ELA standards from literacy in science, social studies and technical subjects.

Math Discussion

Math Background Notes

- Jason Zimba, chief author of the Common Core math standards, publicly admitted that the Common Core math standards would not be adequate for students wanting to study STEM (science, technology, engineering, and math) subjects in selective 4-year universities.¹²
- James Milgram, a Stanford *emeritus* university mathematician and the only one who was on the Common Core math validation committee, refused to sign off on the final product because the standards were so bad, confirmed the truth of what Zimba said.¹³

¹⁰ As also promised in *Benchmarking for Success* (p. 24), the Common Core foundational document, available at <http://www.corestandards.org/assets/0812BENCHMARKING.pdf>

¹¹ Sandra Stotsky, “Steps for States to Follow to Replace Common Core” Pioneer Institute (Dec. 28, 2014), available at <https://pioneerinstitute.org/education/steps-for-states-to-replace-common-core/> and Milgram and Stotsky, *supra* note 9, p. 1. The 2013 Massachusetts ELA framework by Dr. Stotsky based on the pre-Common Core ELA standards she helped to write for Massachusetts is available at http://www.uaedreform.org/wp-content/uploads/2000/01/Stotsky-Optional_ELA_standards.pdf

¹² Jason Zimba, 2010 Testimony Before the Massachusetts State Board of Education as quoted in Ze’ev Wurman “Wurman Testimony on Common Core in Ohio,” *Education Next* (11/25/13) available at <https://www.educationnext.org/wurman-testimony-on-common-core-in-ohio>

¹³ R.J. Milgram, S. Stotsky, “Lowering the Bar: How Common Core Math Fails to Prepare High School Students for STEM,” Pioneer Institute, (2013) available at <http://www.flstopccoalition.org/files/314EEDFA-751C-4292-BFBF-F454491D280B--E45A2615-9427-40F6-815C-AA80F9D2BC82/lowering-the-bar.pdf>.

- Research by Theodor Rebarber of AccountabilityWorks and Neal McCluskey of the Cato Institute found that “Core math standards emphasize increased communication *about* math...while somewhat de-emphasizing the *performance* of mathematical procedures.” States and nations with standards promoting practice and performance of actual math problems performed much better on national and international comparisons respectively. ¹⁴
- According to a 2018 paper by Williamson Evers, a senior fellow, and Ze’ev Wurman, a visiting scholar at Stanford’s Hoover Institution, “Adopting the Common Core math curriculum standards has proven to be a setback for California. When California had its own mathematics standards before Common Core, its students performed significantly better in math than they have after the Common Core was put into effect. The hardest hit by this change were the most vulnerable students. The state of California Education under Common Core is not good.”¹⁵
- Dr. Sandra Stotsky, former Massachusetts assistant commissioner of education, also noted the math declines for vulnerable students in that previously high performing state:¹⁶
 “Here are the percentages of African-American and Hispanic students who were at or above proficient on grade 8 National Assessment of Educational Progress tests for Math from 2011 to 2017 in Massachusetts”:

	African-Americans'	Hispanics'
	Grade 8	Grade 8
	Math Score	Math Score
2011	26	21
2013	28	28
2015	22	24
2017	22	24

- According to these tables derived from Florida’s 2017 NAEP scores,¹⁷ achievement gaps that were narrowing in math before Common Core implementation have started to widen again for fourth grade Hispanic students and for both Hispanic and African-American students in eighth grade.

4th Grade Math

YEAR	White-Black	White-Hispanic
2011	250-226 = 24	250-236 = 14
2013	251-228 = 23	251-228 = 13
2015	251-228 = 23	251-240 = 11
2017	255-233 = 22	255-242 = 13

¹⁴ Rebarber and McCluskey, *supra* note 2, pp. 10-11.

¹⁵ Williamson Evers and Ze’ev Wurman “California’s Common Core Mistake” (5/9/18) Hoover Institute *available at* <https://www.hoover.org/research/californias-common-core-mistake>

¹⁶ Sandra Stotsky, “Is Common Core Racist?” *New Boston Post* (5/9/18) *available at* <https://newbostonpost.com/2018/05/09/is-common-core-racist-check-out-the-results/>

¹⁷ See “Florida Student Groups and Gaps Data,” and similar derivations *available at* https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_GapComparisons&chort=2&sub=MAT&sj=FL&fs=Grade&st=MN&year=2013R3&sg=Race%2FEthnicity%3A+White+vs.+Black&sgv=Difference&ts=Single+Year&tss=2015R3-2013R3&sfj=NP

8th Grade Math

YEAR	White-Black	White-Hispanic
2011	287-258 = 29	287-274 = 13
2013	291-264 = 27	291-274 = 17
2015	285-258 = 27	285-272 = 13
2017	291-262 = 29	291-273 = 18

- Although different students, it is also important to note that Florida’s NAEP proficiency levels¹⁸ in math have not held as students progress in their education. There is a large drop in the percentages “at or above proficient” between 4th and 8th grades. This is another important piece of evidence that the current standards are not helping students progress in math understanding and achievement.

Grade/Subject	At or Above NAEP Proficient Level 2015	At or Above NAEP Proficient Level 2017
4 th Grade Math	42%	48%
8 th Grade Math	26%	29%

Discussion of Individual Math Recommendations:

Math standards should promote the actual performance of math problems in a much higher percentage than understanding, thinking about, or communicating about mathematical concepts, especially in the earlier grades, as is done in high performing nations like Singapore and in high performing states prior to Common Core, such as Massachusetts and California.

- The United States Coalition for World Class Math explained the problem with focusing on understanding in their 2010 review of the Common Core math standards this way:¹⁹
 An elementary school teacher reading these standards would likely ask “What is the standard the student must achieve?” How does a teacher ensure that the student “understands” the conceptual underpinning of fraction multiplication, which is what the standards call for? The usual way is through testing, but then how is such understanding tested? It is obvious that the objective of the understanding is to be able to calculate products of fractions (and quotients of unit fractions and nonzero whole numbers) and solve word problems involving these operations. Then this is how such standards should be stated: "Students will be able to multiply fractions and apply that understanding in solving word problems." Such proficiency is sufficient and represents “understanding”...that is, the student’s understanding allows him or her to carry out a mathematical procedure and apply it in solving a problem. The standards as written assume that such proficiency is not sufficient and that it, in fact, is the same as rote memorization and that students will be lacking in mathematical ability.
- Ted Rebarber and Neal McCluskey confirmed research showing that Common Core’s focus on understanding instead of procedural learning and fluency has resulted in achievement declines for the U.S. compared to other high performing countries like Singapore on international comparison assessments.²⁰

¹⁸ See “Florida NAEP Overview,” available at

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_OT&chort=1&sub=MAT&sj=FL&fs=Grade&st=MN&year=2017R3&sg=Gender%3A+Male+vs.+Female&sgv=Difference&ts=Single+Year&tss=2015R3-2017R3&sfj=NP

¹⁹ U. S. Coalition for World Class Math, “Comments on the Common Core Standards for Math,” (March, 2010) available at <https://usworldclassmath.webs.com/U.%20S.%20Coalition%20Comments%20on%20Common%20Core%20March%20Draft.pdf>

²⁰ Rebarber and McCluskey, *supra* note 2, at p. 11.

It is useful to compare Common Core’s approach with that of nations whose students lead the world in math achievement. Apart from the mathematical content covered, Porter and his colleagues found that Common Core does not align well with **top-performing countries such as Singapore, Japan, and Finland, which place “... a much greater emphasis on ‘performing procedures’ than found in the U.S. Common Core standards. For each country, approximately 75 percent of the content involves ‘performing procedures,’ whereas in the Common Core standards, the percentage emphasis for procedure is just 38 percent,”** a vast difference. Porter found it “surprising [that]...High performing countries’ emphasis on ‘perform procedures’ runs *counter* to the widespread call in the United States for a greater emphasis on higher order cognitive demand.” While teachers in other leading nations may initially introduce a new skill through a discussion of the concept, afterward students devote extensive time to practicing. (Emphasis added)

*There should be no requirement for specific instructional strategies, especially some of the experimental ones used in geometry, with the exception of the standard algorithms for the basic operations in the early grades.*²¹

- The Common Core State Standards for Mathematics (CCSS-M) claims, “These Standards do not dictate curriculum or teaching methods” and that is a common talking point of Common Core proponents. However, a significant part of Common Core Math standards are “Instructional Strategies” that do in fact dictate how children should be taught.
- The Instructional Strategies dictate various ways for approaching a problem and Common Core dictates that children learn these before they learn the Standard Algorithm for a particular type of problem.
- In contrast, the Standard Algorithm is generally the most efficient (and universally practiced) ordered sequence of steps to solve a specific class of math problems.
- Common Core requires the learning of Instructional Strategies before children learn the standard algorithm. This slows down their progression (which is a major reason why the Common Core sequencing is two years behind high-expectations standards such as those used in top-performing countries). It uses valuable class-time that children could otherwise be spending on practicing the standard algorithms to proficiency.
 - Many well-to-do parents who put their children into courses like Kumon to alleviate the problems caused by Common Core. There, children learn according to the standard algorithm, which gives them an advantage over disadvantaged students who can’t afford it.²²
- If a curriculum is to be aligned with the CCSS, it must use these instructional approaches. For example, the K-3 standards require students to solve addition and subtraction using strategies based on place value, “making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); and by creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$.” These strategies are required before students are taught the standard algorithms in 4th grade. As Singapore or Massachusetts have demonstrated, this sequencing is not conducive to high achievement.
- Similar “strategies based on place value” are then required for multiplication, such as the partial products method (e.g., $324 \times 6 = (300 \times 6) + (20 \times 6) + (4 \times 6) = 1800 + 120 + 24 = 1944$), before expecting the standard algorithms in grade 5. The same methods hold for division in 5th grade, with the standard algorithm not expected until 6th grade.

²¹ E. Tuttle & J.R. Wilson, “Common Core Does Not Equal Excellent” American Principles Project Foundation (Jan. 2016) available at <https://appfdc.org/wp-content/uploads/2017/05/Common-Core-Math-Excellence.pdf>.

²² William Donovan and Ze’ev Wurman, “Axioms of Excellence: Kumon and the Russian School of Mathematics,” Pioneer Institute (Jan. 2019) available at <http://www.flstopccoalition.org/files/314EEDFA-751C-4292-BFBF-F454491D280B--880EF671-E8DB-4975-B3D7-772323953E29/afterschoolmath-wp.pdf>.

Ensure that new standards provide a reasonable progression of skill and knowledge attainment to the completion of a full Algebra 1 course by the end of 8th grade as is done in other high performing countries. This should be universally available to allow all students that want to pursue a STEM degree, but not universally required for those that do not want this college focus.

- This expectation is based on the standard of the high-achieving countries (and our international competitors). Indeed, this was promised by the Common Core advocates themselves when rallying to create Common Core.²³
- Common Core abandoned the expectation in high performing states that students complete a full Algebra I course by the end of grade 8.²⁴ As a practical matter, this means that the great majority of American students will not be able to reach calculus in high school. Furthermore, completion of a calculus course by the end of high school is necessary for STEM at the university level and, as to non-STEM majors, for entrance to many competitive universities.
- Common Core's placement of Algebra I in ninth grade necessitates an accelerated path to calculus in twelfth grade, increasing the need for private tutoring and summer school tuitions. As a practical matter,²⁵ this disproportionately benefits the well-to-do who can more readily afford such additional expenditures.

To be of high quality, math standards must include necessary math content standards that Common Core fails to include:

According to Dr. James Milgram, the only academic mathematician on the Common Core validation committee (and he refused to sign off on the final version of Common Core), prior to Common Core the math standards from high performing states like Minnesota, California, Indiana, and Massachusetts included these topics.²⁶ It should be noted that the Fordham Institute (an ardently pro-Common Core entity that received massive funding from the Gates Foundation to advance Common Core) rated Florida's pre-Common Core math standards higher than the Common Core.²⁷

Kindergarten – Grade 7²⁸

- CC does not require proficiency with addition and subtraction until Grade 4 (a grade behind our international competitors).
- CC does not require proficiency with multiplication using the standard algorithm (step-by-step procedure for calculations) until Grade 5 (a grade behind standard expectations).
- CC does not require proficiency with division using the standard algorithm until Grade 6 (two grades behind our international competitors).
- CC starts teaching decimals in Grade 4 (about two years behind the more rigorous states).
- CC fails to teach in K-7 key geometrical concepts (e.g., sum of angles in a triangle, isosceles and equilateral triangles, etc.).
- Excludes fluent conversion between different forms of fractions – regular fractions, decimals, and percents

²³ See "Benchmarking for Success," *supra* note 10.

²⁴ Milgram and Stotsky, *supra* note 13, pp. 7-8 and R. James Milgram, "Appendix B: Review of Final Draft Core Standards by R. James Milgram. Testimony to the California Academic Content Standards Commission," Pioneer Institute (July 7, 2010) available at https://truthinamericaneducation.com/wp-content/uploads/2012/03/common_core_standards.pdf, p. 12 of appendix

²⁵ See Bob Huff, *San Jose Mercury News*, http://www.mercurynews.com/opinion/ci_22599953/bob-huff-elimination-algebra-requirement-wrong-direction-california (2/17/2013); Brenda J. Buote, *Reading's New Math Curriculum Runs into Protests*, Boston Globe, (Aug. 15, 2013).

²⁶ See Milgram and Stotsky, *supra* note 13, p. 1; W. Stephen Wilson and Ze'Ev Wurman, "The Common Core Math Standards: Are they a step forward or backward?" (Summer 2012), available at: <https://www.educationnext.org/the-common-core-math-standards/>.

²⁷ The Thomas B. Fordham Institute, "The State of State Standards—and the Common Core—in 2010 – Florida Review" (July 21, 2010) available at http://edexcellencemedia.net/publications/2010/201007_state_education_standards_common_standards/Florida.pdf

²⁸ Many of these topics missing from Common Core for elementary math were listed as "Critical Foundations for Algebra" in the March, 2008 National Math Advisory Panel on which Dr. Milgram served, available at <https://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf>, Table 2, page 20.

- CC fails to teach prime factorization. Consequently, it does not include teaching about least common denominators or greatest common factors.
- Compound interest and the associated formula, $(x^{n+1} - 1)/(x-1) = 1 + x + x^2 + \dots + x^n$. This may be a seventh or eighth grade topic, and is essential if we are to avoid disasters like the 2008 mortgage crisis.

When reviewing the Florida Common Core Math standards in 2013,²⁹ Ze'ev Wurman, a visiting scholar at the Hoover Institution at Stanford University and former senior policy adviser at the U.S. Department of Education made the following comment about the Common Core high school math standards:

In summary, the full content of Common Core high school mathematics is insufficient to provide the equivalent of even a strong trigonometry and linear algebra course, let alone pre-calculus.

He then listed the following topics as particularly deficient in high school:

- Missing parametric equations and functions
- Missing mathematical induction
- Poor coverage of complex numbers and functions
- Poor coverage of polar coordinates and curves
- Poor coverage of trigonometric functions
- Limited content for statistics
- Limited content for linear algebra

These topics and the concerns of Dr. Milgram³⁰ are discussed below:

Algebra 1: Missing components needed for Algebra II and Calculus

- Division of monomials and polynomials (only addition/subtraction/multiplication are covered)
- Derivation and understanding of slopes of parallel and perpendicular lines
- Manipulation and simplification of rational expressions
- Multi-step problems with linear equations and inequalities
- Multi-step problems with four operations between polynomials
- Multi-step problems involving manipulation of rational expressions
- Solving two linear inequalities in two variables and sketching the solution sets
- Solve problems with equations and inequalities with absolute value (CA added this to its CC)
- Solve problems with quadratic expressions (CA added this to its CC)

Geometry: Some key topics missing

- Properties of triangles and circles: Students should know that:
 - Every triangle is circumscribed by a unique circle with center at the intersection point of the three perpendicular bisectors of the edges
 - All three DO intersect in a single point.

²⁹ Ze'ev Wurman, "General Comments on the Florida Common Core Mathematics Standards available at

<http://www.flstopccoalition.org/files/3B2497D3-41D5-4AD3-A4D5-53948BCAB7C1--A5E7A47D-5636-4FED-BA2C-3BA891684233/fl-math-complete.pdf?lc=10162013085509>;

³⁰ R. James Milgram, "Missing or Delayed in Common Core's Mathematics Standards" previously available at

<http://concernedpvpayers.org/2014/05/27/cc-math-dumbed-down-proof/>, now archived at <http://www.flstopccoalition.org/files/E0AB8B1E-5539-452A-88C4-CC7BE080FF20--22DA47DE-93A6-4C05-81D3-16336694629E/milgram-missinginccmath-extended-by-standard-content-in-high-achieving-281-29-3.pdf>

- Every right triangle has the center of the circumscribing circle on its hypotenuse.
 - Conversely, the angle subtended by an arc on the circle (the angle obtained by drawing the two lines from the center to the ends of the arc), is twice the angle subtended by the ends of the arc and any point in the complement of the arc.
- Standard geometric discussion of convergence instead of transformational geometry (as to high school curricula, an experimental approach that has not succeeded anywhere it has been tried). In this regard, as Fordham Institute notes, the Common Core geometry standards “represent a significant departure from traditional axiomatic Euclidean geometry and no replacement foundation is established.”³¹

Algebra II: Some key topics missing

- Writing quadratic polynomials in two or three variables as sums or differences of perfect squares. (KEY for the study of conic sections, which, in turn, underlies almost everything that is done in STEM areas.)
- Detailed study of surfaces of revolution coming from quadratic polynomials as described above. In particular, the focus here should be on parabolic mirrors and their applications.
- Introduction of the foci and the directorix for conics and their applications to parabolas and parabolic mirrors, and also for ellipses and elliptic surfaces with applications to things like whispering galleries and Kepler's laws.
- Definition and implications of the eccentricity for conic sections.
- Structure of logarithms to base 10, e, or general base, b. Conversion between bases, calculation of explicit values in simple cases.

Algebra II: Missing components needed for Calculus.

Although calculus standards were added by Florida in 2014, it is extremely unclear whether all of the gaps discussed above and here make it possible for Florida students to succeed in a high school calculus course.

- Composite functions
- Combinations and permutations
- Finite and infinite arithmetic and geometric sequences
- Mathematical induction
- Note: The above four topics above are quite “formal” in line with the overly formal treatment of algebra in Common Core’s Standards. They are much more “realistic” in terms of the actual needs of students wishing to major in any technical area in college.

Pre-calculus and/or Algebra II, trigonometry: Key Missing Topics

- Partial fraction decomposition of relatively simple rational functions and their graphs. Specifically, Understand that a function of the form $(ax + b)/((x-r)(x-s))$ can always be written as a sum $(l/(x-r)) + (m/(x-s))$, where, in this case $l + m = a$, and $rm + ls = -b$. Apply this to the determination of the graphs of such functions.
- Graph functions in polar coordinates. Key examples, circles ($r = 2\cos(t)$), Cardioids ($2 + 2\cos(t) = r$), Rose petal curves ($r = \sin 5t$), lemniscate ($r^2 = 4\sin(2t)$).

³¹ The Thomas B. Fordham Institute, “The State of State Standards—and the Common Core—in 2010 – Florida Review” (July 21, 2010) available at <https://fordhaminstitute.org/sites/default/files/publication/pdfs/sossandcc2010fullreportfinal8.pdf>, p. 28

All standards should be coherent and taught at the developmentally appropriate time, because math is a sequential discipline.

- Teaching developmentally inappropriate standards create frustration and the potential for lifelong math confusion. For example, the math anchor standard for grades kindergarten through grade 12 requires students to “reason abstractly and quantitatively.”³² Yet, the general consensus among psychologists is that children are not able to reason abstractly until 11 or 12 years of age.³³ Forcing younger children to do math that they aren’t developmentally able to understand creates a significant risk of stress-induced symptoms, which teachers, parents, psychologists, and pediatricians have reported, as well as a loss of aptitude for and enjoyment of mathematics. One New York survey found that six in ten school psychologists agreeing that “the Common Core learning standards, which includes state exams for students in third through eighth grades each April, has increased students’ anxiety.”³⁴
- In 2010, over 500 child psychologists, psychiatrists, and child cognitive scientists warned the owners and developers of the Common Core, before the standards were finalized, that the standards were age-inappropriate. But they refused to remedy these defects.³⁵ This blog article, written by Edward Miller and Nancy Carlsson-Paige, quoted Dr. Carla Horowitz of the Yale Child Study Center as stating, “The Core Standards will cause suffering, not learning, for many, many young children.”
- Here are a few examples of developmentally inappropriate math standards noted by Ze’ev Wurman from his 2013 standards comments for Florida:
 - MACC.K.CC.1.1 - Count to 100 by ones and by tens.
Comments: The counting to 100 is unwisely aggressive. As a consequence, in grade 1 it is only extended to 120. A more reasonable sequence would be to count to 20 in Kindergarten and to 100 in grade 1.
 - MACC.K.CC.1.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
Comments: Unwisely aggressive for numbers up to 100. A limit of 20 would be more appropriate.
 - MACC.K.G.1.3 Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) - Identify shapes as two-dimensional (lying in a plane, “flat”) or three- dimensional (“solid”).
Comments: Inappropriate. Children at this age can intuit the difference between 2D and 3D but many have difficult time to verbalize it and/or visualize it.
 - MACC.K.G.2.6 Analyze, compare, create, and compose shapes - Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”
Comments: Inappropriate and unnecessarily demanding. Grade 2 standard in Singapore.
 - MACC.K.MD.1.2 Describe and compare measurable attributes - Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
Comments: Inappropriate and unnecessarily demanding. Grade 2 standard in Singapore.

³² The Common Core State Standards Initiative, “Standards for Mathematical Practice” (June 2, 2010), *available at* <http://www.corestandards.org/Math/Practice/>, MP 2

³³ Megan Koschnick, “Are the Common Core Standards Developmentally Appropriate?” American Principles Project Conference (Sept. 18, 2013) *available at* <https://www.youtube.com/watch?v=vrQbjlmVJZo> at 3:54.

³⁴ See Joseph Spector, “Common Core tests giving kids anxiety, psychologists say” (Nov. 20, 2015), *available at* <https://www.lohud.com/story/news/education/2015/11/20/common-core-anxiety/76114566/>.

³⁵ See Joint Statement of Early Childhood Health and Education Professionals on the Common Core Standards Initiative (March 2, 2010), *available at* http://www.edweek.org/media/joint_statement_on_core_standards.pdf; *The Answer Sheet* blog, “A Tough Critique of Common Core on Early Childhood Education” *The Washington Post* (January 29, 2013), *available at* <http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/01/29/a-tough-critique-of-common-core-on-early-childhood-education/?print=1>.

Do not include standards relating to “grit” and other social emotional learning (SEL) parameters that have little or nothing to do with academic learning and have no place in what are supposed to be academic content standards.

- A draft report from the U.S. Department of Education Office of Technology admitted that the subjective SEL parameter of grit, termed perseverance, was part of Common Core:
In national policy, there is increasing attention on 21st-century competencies (which encompass a range of noncognitive [sic] factors, including grit), and persistence is now part of the Common Core State Standards for Mathematics.³⁶
The Common Core math anchor standard referenced in this quote requires K-12 students to “make sense of problems and persevere in solving them.”³⁷ One educator described this standard, based on CASEL criteria, as a psychosocial skill for “Responsible Decision Making” that “includes problem identification and problem solving; evaluation and reflection; personal, social, and ethical responsibility.”³⁸
- Children and teachers should not be evaluated on such standards in an academic standardized test. Even the nation’s leading proponent of teaching grit and other SEL traits, Dr. Angela Duckworth, says testing grit or any other SEL trait for accountability purposes is a very bad idea.³⁹
- A large meta-analysis by a team of 24 international researchers showed that it was math skills, not social-emotional parameters that were most important in predicting future academic performance: ***Across all 6 studies, the strongest predictors of later achievement are school-entry math, reading, and attention skills. A meta-analysis of the results shows that early math skills have the greatest predictive power, followed by reading and then attention skills. By contrast, measures of socioemotional behaviors, including internalizing and externalizing problems and social skills, were generally insignificant predictors of later academic performance, even among children with relatively high levels of problem behavior (emphasis added).***⁴⁰
- Research has also failed to confirm that teaching a “growth mindset” improves academic performance.⁴¹
- Moreover, such standards are fatally prone to subjectivity, unconsented data collection, use in less than well-validated computerized algorithms that can unnecessarily steer children toward academic and career paths not of their choosing, and data sharing with third parties that can have life-altering consequences.⁴²

³⁶ See U.S. Department of Education Office of Educational Technology, *Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century* (Feb. 2013), removed from <http://www.ed.gov/edblogs/technology/files/2013/02/OET-Draft-Grit-Report-2-17-13.pdf>, archived at http://www.flstopccoalition.org/files/F038A914-6B60-454B-9BA4-93824C875903--DD84DFEE-E1AC-449B-9E68-3F986DE43D34/-tenacity-and-perseverance-feb-2013-doe.pdf?lc=06022016015512_p.v.and

³⁷ The Common Core State Standards Initiative, “Standards for Mathematical Practice” (June 2, 2010), available at <http://www.corestandards.org/Math/Practice/>, MP 1.

³⁸ Jill Thompson, “Integrating Social Emotional Curricula and the Common Core,” *EduThompson Blog* (July 7, 2013), available at <https://insidetheclassroomoutsidethebox.wordpress.com/2013/07/07/integrating-social-emotional-curricula-and-the-common-core/>.

³⁹ Angela Duckworth, “Don’t Grade Schools on Grit,” *The New York Times* (March 26, 2016), available at https://www.nytimes.com/2016/03/27/opinion/sunday/dont-grade-schools-on-grit.html?_r=0.

⁴⁰ Greg Duncan, et al., “School Readiness and Later Achievement,” *Developmental Psychology* (2007, Volume 43, No. 6), available at <https://www.apa.org/pubs/journals/releases/dev-4361428.pdf>, p. 1428.

⁴¹ Victoria Sisk, Alexander Burgoyne, Jingze Sun, Jennifer Butler, & Brooke Macnamara, “To What Extent and Under Which Circumstances Are Growth Mind-Sets Important to Academic Achievement? Two Meta-Analyses,” *Psychological Science* (2018; 29 (4)), available at <https://journals.sagepub.com/doi/abs/10.1177/0956797617739704?journalCode=pssa&%3e=>, p. 549, as discussed in Jane Robbins, “Will Altering Growth Mindsets Improve Student Performance? Research Says No.” *Truth in American Education* (May 29, 2018), available at <https://truthinamericaneducation.com/education-reform/will-altering-growth-mindsets-improve-student-performance-research-says-no/>.

⁴² Effrem and Robbins, *supra* note 3.

Discussion of Individual ELA Recommendations

ELA Background Notes:

- David Coleman, the chief author of the English standards and now head of the College Board responsible for the SAT, AP, and GED tests; said of himself and his fellow standards writers, “One is we’re composed of that collection of unqualified people who were involved in developing the common standards... I probably spend a little more time on literacy because as weak as my qualifications are there, in math they’re even more desperate in their lacking.”⁴³
- Dr. Sandra Stotsky is a professor *emerita* of the University of Arkansas and was also on the Common Core validation committee for the English standards and refused to sign off on the final product, testifying in numerous states,⁴⁴ including Florida.⁴⁵ In 2018, she detailed the drop in NAEP ELA scores of minority students in Massachusetts after implementation of the Common Core when they had been increasing:

Year	African-Americans' Grade 8 Reading Score	Hispanics' Grade 8 Reading Score
2011	20	18
2013	24	20
2015	18	17
2017	18	17

She then wrote in that same 2018 article:

“Common Core-aligned standards and tests seem to have negatively affected the low-performing groups in Massachusetts. And that seems predictable, given the lower standards of Common Core.”⁴⁶

- Florida has also seen achievement gaps in NAEP scores that were narrowing for 4th grade African-American and Hispanic students before the implementation of Common Core that have widened again since the standards’ implementation. Even with Florida’s controversial 3rd grade retention policy⁴⁷ taking the challenged readers out of the 4th grade NAEP reading pool of potential test takers, 4th grade reading was the only area in which Florida did not improve in 2017 compared to 2015.⁴⁸ This seems to be more evidence that the teaching and curriculum associated with Common Core are inadequate to teach reading to younger students.

⁴³ Shane Vander Hart, “David Coleman 2 Years Ago: We Were a Collection of Unqualified People,” Truth in American Education (Dec. 13, 2013) available at <https://truthinamericaneducation.com/common-core-state-standards/david-coleman-2-years-ago-we-were-a-collection-of-unqualified-people/>

⁴⁴ Sandra Stotsky, “Invited Testimony on the Low Quality of the Common Core Standards,” (Dec. 6, 2012) available at http://www.uaedreform.org/wp-content/uploads/2000/01/Stotsky_Testimony_for_Colorado.pdf

⁴⁵ Sandra Stotsky, “Comments on the Florida Common Core English Language Arts Standards” (Oct 15, 2013) available at <http://www.flstopccoalition.org/files/3B2497D3-41D5-4AD3-A4D5-53948BCAB7C1--BF365081-6DE8-45DC-A6F5-B05E63383795/comments-on-florida-ela-standards-3.pdf?lc=10162013085507>

⁴⁶ Sandra Stotsky, “Is Common Core Racist?” (5/9/18) New Boston Post available at <https://newbostonpost.com/2018/05/09/is-common-core-racist-check-out-the-results/>

⁴⁷ One research compilation says, “Although individual studies can be cited to support any conclusion, overall the preponderance of evidence argues that students who repeat a grade are no better off, and are sometimes worse off, than if they had been promoted with their classmates.” See Jane David, “What Research Says About... / Grade Retention,” *Educational Leadership* (March, 2008), available at <http://www.ascd.org/publications/educational-leadership/mar08/vol65/num06/Grade-Retention.aspx>

⁴⁸ See https://www.nationsreportcard.gov/reading_math_2017_highlights/.

4th Grade Reading

NAEP YEAR	White-Black Gap ⁴⁹	White-Hispanic ⁵⁰ Gap
2011	235-209 = 26	235-220 = 15
2013	236-212 = 24	236-225 = 11
2015	235-213 = 22	235-224 = 11
2017	239-212 = 27	239-225 = 14

- There has been some slight improvement in the achievement gap for 8th grade reading on the NAEP, but it has not improved beyond the narrowing that occurred before implementation of the Common Core/Florida Standards for African-American students and the narrowing has stagnated between 2015 and 2017 for Hispanic students:

8th Grade Reading

YEAR	White-Black ⁵¹	White-Hispanic ⁵²
2011	270-228 = 22	270-259 = 11
2013	274-254 = 20	274-260 = 14
2015	272-251 = 21	272-260 = 12
2017	274-254 = 20	274-262 = 12

- Additionally, even though there is an increase in proficiency⁵³ for students within grades between 2015 and 2017, there is a very significant decline in the percentage of NAEP proficient students between 4th and 8th grades, especially in 2017, providing evidence that the Common Core/Florida standards and aligned curriculum and pedagogy that has developed for ELA has not served students well as they progress through their education:

Grade/Subject	At or Above NAEP Proficient 2015	At or Above NAEP Proficient 2017
4 th Grade Reading	39%	48%
8 th Grade Reading	30%	27%

⁴⁹ See

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_GapComparisons&chort=1&sub=RED&sj=FL&fs=Grade&st=MN&year=2011R3&sg=Race%2FEthnicity%3A+White+vs.+Black&sgv=Difference&ts=Cross-Year&tss=2017R3-2011R3&sfj=NP and similar derivations.

⁵⁰ See

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_GapComparisons&chort=1&sub=RED&sj=FL&fs=Grade&st=MN&year=2015R3&sg=Race%2FEthnicity%3A+White+vs.+Hispanic&sgv=Difference&ts=Cross-Year&tss=2017R3-2015R3&sfj=NP and similar derivations.

⁵¹ See

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_GapComparisons&chort=2&sub=RED&sj=FL&fs=Grade&st=MN&year=2015R3&sg=Race%2FEthnicity%3A+White+vs.+Black&sgv=Difference&ts=Cross-Year&tss=2017R3-2015R3&sfj=NP and similar derivations.

⁵² See

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_GapComparisons&chort=2&sub=RED&sj=FL&fs=Grade&st=MN&year=2015R3&sg=Race%2FEthnicity%3A+White+vs.+Hispanic&sgv=Difference&ts=Cross-Year&tss=2017R3-2015R3&sfj=NP and similar derivations.

⁵³ See "Florida NAEP Overview" available at

https://www.nationsreportcard.gov/profiles/stateprofile/overview/FL?cti=PgTab_OT&chort=1&sub=MAT&sj=FL&fs=Grade&st=MN&year=2017R3&sg=Gender%3A+Male+vs.+Female&sgv=Difference&ts=Single+Year&tss=2015R3-2017R3&sfj=NP

Discussion of Individual ELA Recommendations

Push strong and intensive systematic phonics in the early grades

- According to an extensive review of over 100,000 studies on reading done by the congressionally mandated National Reading Panel in 2000 and summarized by the National Institute for Literacy, the following five elements are critical for properly learning reading:⁵⁴
 - Phonemic awareness
 - Phonics
 - Fluency
 - Vocabulary
 - Text comprehension
- According to Dr. Louisa Moats, a national literacy expert, a “key problem is forcing children to memorize “sight words,” which are mandated under Common Core in Kindergarten...Despite contributing to it, Dr. Moats realized that the early literacy standards would cause major problems. ‘I wasn’t pleased with the final Common Core document, she added. “There’s language in Common Core that’s not based in reality, that doesn’t reflect how children learn to read. We have decades of data on what it takes for kids to acquire fluency.”⁵⁵
- Dr. Moats also said that educators must “Focus on acquisition of foundational reading and writing skills in the primary grades. Use assessments that are instructionally meaningful — that measure phoneme awareness, phonics and word recognition, fluency, vocabulary, alphabet knowledge, letter formation, sentence writing fluency, and verbal expressive skills such as retelling and summarizing. Allow for individual differences in rate and manner of learning, while expecting continuous progress in students of varying abilities. Most importantly, expect teachers to demonstrate an understanding and use of data relevant to the major components of instruction and the developmental processes of reading acquisition. *Stop the punitive uses of CCSS-related assessments!*” (Emphasis added.)⁵⁶

Support standards that promote a rich literature curriculum where classic works can be used to teach the literacy and ELA skills required in the standards.

- One example of such curriculum would be Open Court of the mid-1990s that teaches both phonics and literature very well. In high school, the pre-Common Core emphasis on literature in high school English classes should be restored. This will provide cultural literacy and analytical/critical thinking necessary for authentic college work, but was destroyed by Common Core as outlined in former Hillsdale College Professor Terrence Moore’s book, *The Story Killers*.⁵⁷ And as discussed in a Pioneer Institute white paper by Dr. Stotsky and Dr. Mark Bauerlein (English professor at Emory University), “How Common Core’s ELA Standards Place College Readiness at Risk:”
 - “A literature-heavy English curriculum, properly constructed, yields college-readiness in reading better than an information-heavy English curriculum. And we know of no research showing otherwise.”⁵⁸
- Dr. Bauerlein, who also served on the Common Core English Language Arts “Feedback Committee” for the Council of Chief State School Officers, wrote in a related op-ed:

⁵⁴ Bonnie B. Armbruster, Fran Lehr, Jean Osborn, C. Ralph Adler, Lisa T. Noonis, “The Research Building Blocks for Teaching Children to Read: Put Reading First” (Third Edition), National Institute for Literacy – The Partnership for Reading *available at* <https://lincs.ed.gov/publications/pdf/PRFbooklet.pdf>

⁵⁵ Alex Newman, “Common Core Contributor Blows Whistle on Common Core ‘Reading’” Freedom Project Media (April 1, 2019), *available at* <https://freedomproject.com/the-newman-report/1056-common-core-contributor-blows-whistle-on-common-core-reading>

⁵⁶ IMSE Journal, “Q&A With Dr. Louisa Moats” (Nov. 12, 2015) *available at* <https://journal.orton-gillingham.com/qa-with-dr-louisa-moats/>

⁵⁷ Terrence O. Moore, *The Story-Killers: A Common-Sense Case Against the Common Core*, (Terrence Moore: 2013)

⁵⁸ Mark Bauerlein and Sandra Stotsky, “How Common Core’s ELA Standards Place College Readiness at Risk,” Pioneer Institute (Sept. 2012), *available at* <http://www.flstopccoalition.org/files/314EEDFA-751C-4292-BFBF-F454491D280B--D786A3BD-1733-48D7-B01A-B24A9ACB7932/commoncoreelastandards.pdf>, p. 10.

“The push for informational texts was not supposed to displace outstanding literary texts. Rather, it answered the call for more general background knowledge, more broad familiarity with history, science, art and ideas — all of which would, among other things, enhance literary study.”

In fact, the Common Core standards explicitly set a high bar of literary history, stating that students will “demonstrate knowledge of eighteenth-, nineteenth-, and early-twentieth-century foundational works of American literature.”

... [Yet] According to the units rolled out so far by the [New York] city's Education Department, that standard doesn't even exist.

Curriculum designers at the agency are interpreting the new English standards in exactly the direction critics warned of last year. With the exception of the “Romeo and Juliet” unit, they apparently envision English as a social studies class, not a language and literature class. And the Common Core itself does not contain enough machinery to restrain them... Literature is not a second-class subject. It ought to be at the very center of a high-quality public education.⁵⁹

Despite that standard promoting foundational works of American literature and other promises in 2009-10 described above by Dr. Bauerlein, *The Revised Publishers’ Criteria for the Common Core State Standards in English Language Arts and Literacy, Grades 3–12*,⁶⁰ authored in 2012 by Common Core ELA architects David Coleman and Susan Pimentel clearly states Common Core’s intention to require a decrease in classic literature:

- “Most ELA programs and materials designed for them will need to increase substantially the amount of literary nonfiction they include.”

Another similar document by Student Achievement Partners explicitly called the change to more informational text a “non-negotiable”

- “In grades 3-5, literacy programs shift the balance of texts and instructional time to 50% literature / 50% informational high-quality text. In grades 6-12, ELA programs shift the balance of texts and instructional time towards reading substantially more literary nonfiction.”⁶¹

Do not emphasize writing over reading.

There is no research basis to do so and skills cannot be taught without an adequate base of content knowledge.

“The national standards cut classic literature and poetry by 60 percent and inverted 100 years of reading research by emphasizing writing standards over reading ones. As standards expert Sandra Stotsky explains: ‘Reading precedes writing; good writers are always good readers first.’”⁶²

⁵⁹ Mark Bauerlein, “Common Core vs. great literature,” *New York Daily News* (July 1, 2013) available at <https://www.nydailynews.com/opinion/common-core-great-literature-article-1.1394249>.

⁶⁰ David Coleman and Susan Pimentel, “The Revised Publishers’ Criteria for the Common Core State Standards in English Language Arts and Literacy, Grades 3–12,” National Governors’ Association, Council of Chief State School Officers, Achieve, Council of Great City Schools, National Association of State Boards of Education available at <https://achievethecore.org/page/227/revised-publishers-criteria-for-ela-literacy>

⁶¹ Student Achievement Partners “Instructional Materials Evaluation Tool for CCSS Alignment in ELA Grades 3 -12 (IMET)” (June 19, 2013) available at <https://www.fwps.org/cms/lib/WA01919399/Centricity/Domain/787/Instructional-Materials-Evaluation-Tool-ELA-3-12.pdf>, p. 2

⁶² “How Common Core’s ELA Standards Place College Readiness at Risk,” *supra* note 48, at p. 7.

Standards should promote the teaching of entire works of literature, instead of just excerpts, in an increasingly complex sequence

- In her 2012 book *The Death and Resurrection of a Coherent English Curriculum: What Secondary English Teachers Can Do*,⁶³ Dr. Stotsky wrote:

“The overarching goal of our public schools was to prepare each new generation for informed, responsible, and active participation in the activities of self-government. Thus, the often explicit goal of the K-12 English curriculum was to develop the ability to read write and speak in ways that promoted this overarching goal.”

It was also common sense that the curriculum-the sequence of topics, concepts, and texts to be taught-should be progressively more complex in every subject taught, moving students from concrete, experience-based, and emotion-laden thinking to more abstract and rational thinking, with an increasing fund of information and ideas in their heads to think with.”

Ensure that students read texts that prepare them for the complexity of college readings.

Citing the 2006 ACT College Readiness Report⁶⁴, the authors of the Common Core standards correctly noted in Appendix A of the ELA standards that text complexity is closely tied to success in credit-bearing college classes:

“Instead, the clearest differentiator was students’ ability to answer [ACT] questions associated with complex texts. Students scoring below benchmark performed no better than chance (25 percent correct) on four-option multiple-choice questions pertaining to passages rated as “complex” on a three-point qualitative rubric described in the report. These findings held for male and female students, students from all racial/ethnic groups, and students from families with widely varying incomes. The most important implication of this study was that a pedagogy focused only on “higher-order” or “critical” thinking was insufficient to ensure that students were ready for college and careers: what students could read, in terms of its complexity, was at least as important as what they could do with what they read.”⁶⁵

While Common Core’s assessment of the problem was correct, their solution has been an academic disaster as evidenced by the data provided above. What needs to happen, as both Dr. Stotsky and Dr. Bauerlein have pointed out in their writing and in the points immediately above is that this text complexity needs to be provided by great literature and seminal historical documents after a strong phonics base is taught in the early grades, as discussed by the National Reading Panel and Dr. Moats.

Unfortunately, Common Core draws the wrong conclusion from ACT's study. It claims that the importance of text complexity argues for fewer literary texts in the K-12 curriculum. Logically, however, it should argue for more complex literary texts in the English curriculum or a greater number of complex literary texts, not more informational texts. ACT's delineation of the features of complex texts on page 7 of the report demonstrates why.

Complexity is laden with literary features. According to ACT, it involves "characters," "literary devices," "tone," "ambiguity," "elaborate" structure, "intricate language," and unclear intentions. Where is language more "intricate" than in Modernist poems? Where is structure more "elaborate" than in *The Divine Comedy* and *Ulysses*? Where are interactions "among ideas and characters" more "involved" than in a novel by George Eliot or Fyodor Dostoevsky? If complexity contains so much literariness, why reduce literary reading? The case of Massachusetts actually argues for elevating literary readings well above the 50 percent threshold-at least to 60 percent and perhaps to 70 percent...

⁶³ Sandra Stotsky, *The Death and Resurrection of a Coherent English Curriculum: What Secondary English Teachers Can Do* (Lanham, MD: Rowman and Littlefield Publishers, 2012), p. xiii.

⁶⁴ ACT, Inc. *Reading between the lines: What the ACT reveals about college readiness in reading*. Iowa City, IA (2006)

⁶⁵ Common Core Standards for English Language Arts & Literacy in History/Social Studies,

Science, and Technical Subjects, “Appendix A” (2010) available at http://www.corestandards.org/assets/Appendix_A.pdf, p. 2

... The theoretical problem lies in assuming that studying literary texts will not help students in their comprehension of non-literary texts. In fact, given the high degree of "literariness" in complex texts (according to ACT) and the high college readiness of Massachusetts students, we assume the opposite. One likely reason that strong literary reading supports general college-readiness in reading is that classic literary texts pose strong challenges in vocabulary, structure, style, ambiguity, point of view, figurative language, and irony. In so doing, they build skills that can address a variety of non-literary complex texts.⁶⁶

*Write clear, developmentally appropriate standards.*⁶⁷

Here are examples of developmentally inappropriate Florida standards that are identical or nearly identical to the corresponding Common Core standards:

- CCSS.ELA-Literacy.L.K.4b (Very similar to LAFS.K.L.3.4) Use the most frequently occurring inflections and affixes (e.g., -ed, -s, re-, un-, pre-, -ful, -less) as a clue to the meaning of an unknown word.
Comment: Dr. Stotsky rightly pointed out in her Florida comments that kindergarten students especially would not be able to achieve this benchmark because they are not reading yet and because they do not learn word meaning from affixes, but rather by context.
- CCSS.ELA-Literacy.L.K.1 (Identical to part of LAFS.K.L.1.1) [When speaking] Produce and expand complete sentences in shared language activities.
Comment by Dr. Joanna Yatvin, a long-time teacher and principal, who wrote in *The Phi Delta Kappan*:⁶⁸ "Most of the kindergartners I know have no idea what the term 'complete sentence' means. Children and adults commonly speak short phrases and single words to each other. I can't imagine any kindergarten teacher insisting during a group language activity that children speak in "complete sentences" or that they 'expand' their sentences. Those directions would in all likelihood end the activity quickly as most children fell silent."
- CCSS.ELA-Literacy.SL.K.1 (identical to LAFS.K.SL.1.1) Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
Comment by Dr. Karen Effrem: This standard asking children this young to behave like little adult corporate board members is completely inappropriate, especially when many adults have not mastered these non-cognitive workforce based competencies.

*Do not include "social-emotional learning" or "21st Century" psychosocial skills in the standards.*⁶⁹

- As also discussed for the math standards, the Common Core standards were described and promised by the developers and proponents to be clear, rigorous academic content standards. Yet, the federal government and numerous national stakeholder groups have clearly shown the link between Common Core and subjective, non-academic social-emotional learning (SEL), also called 21st century skills for English. Here are some examples:

⁶⁶ See Bauerlein and Stotsky, *supra* note 51, pp. 6-7

⁶⁷ Karen Effrem, "Comments on the Psychological and Developmental Aspects of Florida's Common Core Standards," The Florida Stop Common Core Coalition (Oct. 31, 2013), available at <http://www.flstopccoalition.org/files/17118850-7282-444A-9A03-98E0B18082A2--885F5547-B1F3-4967-A304-4974D5D0994C/written--standards-testimony.pdf>.

⁶⁸ Diana Yatvin, "Warning: The Common Core standards may be harmful to children" *Phi Delta Kappan* (March, 2013) available at <http://www.kappanmagazine.org/content/94/6/42.full> and <http://www.educationviews.org/warning-the-common-core-standards-may-be-harmful-to-children/>.

⁶⁹ Karen Effrem, "Psychosocial Manipulation in the Common Core Standards and Aligned Tests and Curriculum," The Florida Stop Common Core Coalition (Feb. 12, 2015) available at <http://www.flstopccoalition.org/files/45ACDEA5-46D6-408B-9934-4D8BE4B74449--8035CC3C-673E-49B4-8293-E43078236473/psychosocial-manipulation-in-the-common-core-standards-and-aligned-tests-and-curriculum.pdf>.

- “National model standards often contain elements of social and emotional learning. For example, 42 states and two territories are in the process of adopting the Common Core Standards in Math and English Language Arts, which contain standards on communication (especially speaking and listening), cooperation skills, and problem solving.”⁷⁰
- “Various elements of SEL can be found in nearly every state’s K–12 standards framework and in the Common Core State Standards for the English Language Arts.”⁷¹
- A significant number of Common Core standards contain the type of SEL elements referenced in these quotes. The following example comes from the English Language Arts (ELA) standards in writing for second-grade students:

“Write narratives, in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.”⁷²

This standard expects second-graders to understand their own thoughts and feelings as well as those of others around them and to understand and demonstrate the sophisticated psychological concept of “closure”—while they are still learning to read. Nancy Orme of the Anchorage School District cited this standard as corresponding to socioemotional learning standards for “Self-Awareness” that require students to “demonstrate awareness of their emotions”; “recognize and label emotions/feelings”; and “describe their emotions and feelings and the situations that cause them (triggers).”⁷³ Apparently second-graders are expected to demonstrate social-emotional skills that elude many adults.⁷⁴

- Parents do not send their children to school to have their personalities molded by government or corporate entities to the desires of corporations for their ideal of workers. Yet, this is happening via competency-based education (personalized learning) and the various types of embedded assessments, educational gaming, and affective computing.
 - “Mindsets & behaviors align with specific standards from the Common Core State Standards through connections at the competency level.”⁷⁵
 - “McGonigal touted the benefits of immersing students in virtual reality (VR) so that they begin to behave in their real lives the same way they behave in the game. For example, she cited a game called A World Without Oil, in which players adapt their actions to the absence of fossil fuels. The longer they play this game, she claims, the more they’ll start to model the same behavior in real life. This is how gaming can “nudge” players toward what is deemed to be desirable behavior and mindsets.”⁷⁶

⁷⁰ Linda Dusenbury, Jessy Zadrazil, Amy Mart, & Roger Weissberg, “State Learning Standards to Advance Social and Emotional Learning: The State Scan of Social and Emotional Learning Standards, Preschool through High School,” CASEL (April 2011), available at <https://www.casel.org/wp-content/uploads/2016/01/state-learning-standards-to-advance-social-and-emotional-learning.pdf>, p. 7.

⁷¹ National Association of State Boards of Education, “Social- Emotional Learning — From Practice to Policy” (Oct. 2013), available at <http://www.nasbe.org/wp-content/uploads/FPP-Social-Emotional-Learning.pdf>, p. 6.

⁷² See LAFS.2.W.1.3 for Florida available at <http://www.cpalms.org/Public/PreviewStandard/Preview/5818>, which is identical to Common Core standard Literacy.W.2.3, available at http://www.corestandards.org/wp-content/uploads/ELA_Standards1.pdf, p. 19.

⁷³ Pamela Orme, “Social Emotional Learning in Common Core State Standards” (Nov. 15, 2012), available at <http://www.youtube.com/watch?v=ZZMhn-9SRoA>, starting at 1:23.

⁷⁴ See “Social-Emotional Learning: K–12 Education as New Age Nanny State,” *supra* note 3.

⁷⁵ Eric Sparks, “Changing Behavior by Changing Mindsets,” American School Counselors’ Association (Nov. 1, 2014) available at <https://www.schoolcounselor.org/magazine/blogs/november-december-2014/change-behaviors-by-changing-mindsets>.

⁷⁶ See “Social-Emotional Learning: K–12 Education as New Age Nanny State,” *supra* note 3.

- “New technologies using educational data mining and “affective computing” (the study and development of systems and devices that can recognize, interpret, process, and simulate aspects of human affect) are beginning to focus on “micro-level” moment-by-moment data within digital and blended-learning environments to provide feedback to adapt learning tasks to personalized needs.”⁷⁷

Decouple ELA standards from literacy in science, social studies and technical subjects.

- This will allow Governor DeSantis’ order to “identify opportunities to equip high school graduates with sufficient knowledge of America’s civics, particularly the principles reflected in the United States Constitution, so as to be capable of discharging the responsibilities associated with American citizenship”⁷⁸ to proceed without impediment by the inferior Common Core standards.
- This will allow English teachers to teach the subject matter for which they are trained.
 - “... English teachers could not possibly teach students how to read textbooks in other disciplines. This criticism was supported by the common sense argument that teachers can’t teach students to read texts in a subject they don’t understand themselves, as well as by the total lack of evidence that English teachers can effectively teach reading strategies appropriate to other disciplines and thereby improve students’ knowledge in that discipline.”⁷⁹
- It will also prevent the Common Core literacy standards to be used as a basis to change the science and social studies standards in unhealthy ways as happened in Minnesota as described by attorney and researcher Jane Robbins:
 - “Nor will this effect on curriculum be limited to the English language arts and mathematics curricula. CCSSI’s ELA standards include a raft of standards labeled ‘literacy in history/social studies, science, and technical subjects.’ Through these ‘literacy’ standards, CCSSI will control or at least influence the curricula in other subject areas. Thus, the original transgression of imposing national standards and, ultimately, a national curriculum in ELA, is compounded by the ELA standards’ effect on these other areas.”⁸⁰

⁷⁷ U.S. Department of Education Office of Educational Technology, *Promoting Grit, Tenacity, and Perseverance: Critical Factors for Success in the 21st Century* (Feb. 2013), removed from <http://www.ed.gov/edblogs/technology/files/2013/02/OET-Draft-Grit-Report-2-17-13.pdf>, archived at <http://www.flstopccoalition.org/files/F038A914-6B60-454B-9BA4-93824C875903--DD84DFEE-E1AC-449B-9E68-3F986DE43D34/-tenacity-and-perseverance-feb-2013-doe.pdf?lc=06022016015512>.

⁷⁸ See “Executive Order 19-32,” *supra* note 1.

⁷⁹ Sandra Stotsky, “How to Honor the English Curriculum and the Study of U.S. History: A Response to Concerns Expressed by Teachers at a California Conference,” (2017) available at <https://nonpartisaneducation.org/Review/Resources/StotskyCALA2017.pdf>, p. 2.

⁸⁰ Jane Robbins, “Written comment submitted by American Principles in Action regarding the Minnesota Department of Education’s Proposed Permanent Rules for Social Studies Standards” (Dec. 20, 2012) available at <http://edlibertywatch.org/2012/12/written-testimony-of-the-american-principles-project/>.

- This same linkage exists between Common Core ELA standards, including literacy standards in history/social studies, and the Advanced Placement U.S. History (APUSH) course and test. The College Board, which develops the AP frameworks and tests, is led by self-admitted “unqualified” Common Core ELA architect, David Coleman:

“But will the College Board genuinely abandon its attempt to transform history instruction along more “internationalist” lines? And even if it did, is the problem limited to APUSH? The evidence suggests that a broader ideological agenda is in play here, and that the College Board is active in the effort to centralize education with a more “progressive” perspective. Indeed, the AP courses are strongly linked to the Common Core scheme⁸¹ to nationalize American education — and there is no reason to think a superficial “fix” to one of those courses will cripple the scheme as a whole... The College Board’s description of its goals in revising these other humanities courses is almost exactly the same as its explanation of the (now discredited) APUSH revision. The new courses will develop “reasoning and communicating skills” rather than just academic knowledge of history. “A hallmark of the new AP curricula,” the College Board says, “is the pairing of key concepts with skills,” resulting in “learning objective[s]” that are grouped into “overarching themes and concepts.” All of this will be delivered through “[d]etailed curriculum frameworks” that “emphasize conceptual understanding.” In other words, the AP history courses still to come will be cut from the same pattern as APUSH.”⁸²
- Florida Statute 1003.42 already contains the bedrock elements necessary for civics standards that will fulfill Governor DeSantis’ executive order “equip high school graduates with sufficient knowledge of America’s civics, particularly the principles reflected in the United States Constitution, so as to be capable of discharging the responsibilities associated with American citizenship”⁸³ and merely need to be incorporated into civics/social studies standards themselves:
 - (2) Members of the instructional staff of the public schools, subject to the rules of the State Board of Education and the district school board, shall teach efficiently and faithfully...the following:
 - (a) The history and content of the Declaration of Independence, including national sovereignty, natural law, self-evident truth, equality of all persons, limited government, popular sovereignty, and inalienable rights of life, liberty, and property, and how they form the philosophical foundation of our government.
 - (b) The history, meaning, significance, and effect of the provisions of the Constitution of the United States and amendments thereto, with emphasis on each of the 10 amendments that make up the Bill of Rights and how the constitution provides the structure of our government.
 - (c) The arguments in support of adopting our republican form of government, as they are embodied in the most important of the Federalist Papers.⁸⁴

⁸¹ See <https://www.washingtontimes.com/topics/common-core/> from quoted statement, *ibid*.

⁸² Emmett McGroarty and Jane Robbins, “The ‘fix’ is in for AP courses - The College Board’s revisions resemble Common Core politicization,” *The Washington Times* (April 26, 2015) available at <https://www.washingtontimes.com/news/2015/apr/26/emmett-mcgroarty-jane-robbins-the-fix-is-in-for-ap/>.

⁸³ See “Executive Order 19-32,” *supra* note 1.

⁸⁴ Florida Statutes 1003.42, (2)(a-c), available at <https://tinyurl.com/y3y2z845>