

National Assessment Governing Board

Assessment Development Committee

March 1 - 2, 2017

AGENDA

Thursday, March 1

1:45 – 2:30 pm	Welcome and Introductions NAEP Civics, Geography, U.S. History, and Economics Assessments: Future Outreach (SV #5) <i>Shannon Garrison, ADC Chair</i> <i>Chasidy White, ADC Member</i>	Attachment A
2:30 – 3:00 pm	NAEP Science and Technology and Engineering Literacy Assessments: Future Outreach (SV #5) <i>Shannon Garrison, ADC Chair</i> <i>Cary Sneider, ADC Vice Chair</i>	Attachment B
3:00 – 3:45 pm	Closed Session Review of NAEP Reading Cognitive Items <i>Shannon Garrison, ADC Chair</i>	Secure material provided under separate cover

Friday, March 2

10:00 – 11:30 am	Panel Discussion: NAEP Assessment of Reading Comprehension (SV #5) <i>Francie Alexander, Chief Academic Officer, Houghton Mifflin Harcourt</i> <i>Doretha Allen, Teacher, Coach, and Meta-Coach, Dallas Independent School District</i> <i>Nell Duke, Professor, Combined Program in Education and Psychology, University of Michigan</i> <i>James Hoffman, Professor, College of Education, University of Texas at Austin</i> <i>Whitney Whealdon, Director of Academic Content, Louisiana Department of Education</i> <i>Moderator: Carol Jago, ADC Member</i>	Attachment C
11:30 am – 12:30 pm	ADC Activities in the Strategic Vision: Next Steps <i>Shannon Garrison</i>	Attachment D
Information Items	Quarterly Update: Review of Mathematics Standards Item Review Schedule	Attachment E Attachment F

NAEP CIVICS, GEOGRAPHY, U.S. HISTORY, AND ECONOMICS FRAMEWORKS: FUTURE OUTREACH

In discussions of priorities for the NAEP Assessment Schedule, the Board has suggested exploring potential efficiencies, noting there may be innovations to pursue in the Civics, Geography, and U.S. History assessments. Recommendations from the Assessment Development Committee (ADC) are needed to identify options. In this session, the ADC will consider how to engage the field and how to determine what should be assessed in areas related to Civics, Geography, U.S. History, and Economics. The Board has regularly conducted outreach to inform assessment areas, and each framework process also includes outreach to address different perspectives in the field. ADC member and resident distinguished social studies educator Chasidy White will review previous Board outreach and opportunities for future outreach in order for ADC to develop recommendations for Board action.

When options are determined that reflect potential innovations and efficiencies, the working plan of ADC activities (Attachment D) can be updated. Currently, each framework is scheduled to be updated individually.

Current Content of the Assessments

The NAEP [Civics](#) Framework has been in place since the 1998 assessment, while the NAEP [Geography](#) and [U.S. History](#) Frameworks have been in place since 1994. These three assessments are conducted every four years and have always been assessed concurrently. The NAEP Civics, Geography, and U.S. History Assessments were last assessed in 2014. The NAEP [Economics](#) Framework, which addresses grade 12 only, has been in place since its first assessment in 2006. The NAEP Economics Assessment has been conducted at different intervals. It was last administered in 2012. The next administration is scheduled for 2022. Sub-content areas for each of these four assessments are listed below. Sub-content domains in Civics are organized by “essential questions.”

SUB-AREAS OF EACH NAEP ASSESSMENT

Civics	Geography	U.S. History	Economics
What are civic life, politics, and government?	Space and Place	Themes in U.S. History	Market Economy
What are the foundations of the American political system?	Environment and Society	Periods of U.S. History	National Economy
How does the government established by the Constitution embody the purposes, values, and principles of American democracy?	Spatial Dynamics and Connections		International Economy
What is the relationship of the United States to other nations and to world affairs?			
What are the roles of citizens in American democracy?			

COGNITIVE PROCESSES OF EACH NAEP ASSESSMENT

Civics	Geography	U.S. History	Economics
Identifying and Describing	Knowing	Historical Knowledge and Perspective	Knowing
Explaining and Analyzing	Understanding	Historical Analysis and Interpretation	Applying
Evaluating, Taking, and Defending a Position	Applying		Reasoning

NAEP SCIENCE AND TECHNOLOGY AND ENGINEERING LITERACY (TEL) FRAMEWORKS: FUTURE OUTREACH

In this session, the ADC will consider how to engage the field and how to determine what should be assessed in areas related to Science and TEL. The ADC has noted the need for continued discussion about the NAEP Science and TEL Frameworks. Developed by a consortium of 26 states, Next Generation Science Standards (NGSS) were released in 2013 with a unified approach to the content currently represented in two different NAEP assessments, Science and TEL. The relationship between NGSS and the NAEP Science and TEL Frameworks has been detailed in a [2015 comparison study](#). The Board has regularly conducted outreach to inform assessment areas, and each framework process also includes outreach to address different perspectives in the field. ADC Vice Chair and resident science expert Cary Sneider will review previous Board outreach and opportunities for future outreach in order to develop recommendations for Board action.

When options are determined that reflect potential innovations and efficiencies, the working plan of ADC activities (Attachment D) can be updated. Currently, each framework is scheduled to be updated individually.

Current Content of the Assessments

The current [NAEP Science Framework](#) has been in place since the 2009 assessment. The assessment was last administered in early 2015 and is typically assessed every 4 years. The first-ever NAEP Technology and Engineering Literacy (TEL) assessment was administered in 2014. The [NAEP TEL Framework](#) addresses students' capacity to use, understand, and evaluate technology as well as to understand technological principles and strategies needed to develop solutions and achieve goals. The next TEL assessment is being administered in 2018.

SUB-AREAS OF EACH NAEP ASSESSMENT

Science	Technology and Engineering Literacy (TEL)
Physical Science	Technology and Society
Life Science	Design and Systems
Earth and Space Sciences	Information and Communication Technology

COGNITIVE PROCESSES OF EACH NAEP ASSESSMENT

Science	Technology and Engineering Literacy (TEL)
Identifying Science Principles	Understanding Technological Principles
Using Science Principles	Developing Solutions and Achieving Goals
Using Scientific Inquiry	Communicating and Collaborating
Using Technological Design	

NAEP ASSESSMENT OF READING COMPREHENSION

The Assessment Development Committee (ADC) welcomes distinguished reading experts for a panel discussion about the [NAEP Reading Framework](#). Their collective expertise represents teachers, scholars, state curriculum directors, literacy assessment in other countries, and supports for parents, schools, and districts. Each expert will summarize whether NAEP's assessment of reading comprehension as outlined in the NAEP Reading Framework should be changed, before inviting questions from the Committee. Board member and resident reading expert [Carol Jago](#) will moderate. Experts will submit post-session summary papers. Panelists' bios are below. Milestones in the Committee's deliberations for the NAEP Reading Framework follow.



Carol Jago
Moderator & ADC Member
Associate Director
California Reading and Literature
Project, UCLA



Francie Alexander
Chief Research Officer
Houghton Mifflin Harcourt



Doretha Allen *via video*
Teacher, Coach, and Meta-coach
Dallas Independent School District



Nell Duke *via video*
Professor
University of Michigan



James Hoffman *via video*
Professor
University of Texas at Austin



Whitney Whealdon *via video*
Director of Academic Content
Louisiana Department of Education

BIOGRAPHIES



Francie Alexander is the Chief Research Officer at Houghton Mifflin Harcourt (HMH). She is an industry leader in the fields of Early Childhood Education, Literacy and Intensive Intervention for struggling students, particularly when it comes to reading and math. Francie provides inspirational and informative leadership on topics from early and adolescent learning to brain development and its influence on childhood and teenage learning. She works closely with key school districts across the U.S. to listen and learn in order to lead HMH's efficacy efforts. Francie currently serves on the Board of Directors for Child 360. She has been a frequent guest on NBC's TODAY Show, has written columns for The New York Post, was "The Book Nanny" for Los Angeles Family Magazine, and has authored more than 50 books for children.

Francie is a former member of the National Assessment Governing Board. Prior to her time at HMH, Francie held key positions in both state and federal education agencies, including serving as Deputy Assistant Secretary for the U.S. Department of Education's research branch. Francie has taught students from kindergarten to college. She holds a California Life Teaching Credential from UCLA, a Master of Arts degree in Education, and a California Administrative Credential from California Lutheran University.



Doretha Allen has been a teacher, coach, and meta-coach in Dallas Independent School District for nearly twenty years. Doretha serves on the Board of Directors for Catch Up & Read and is a National Board Certified Teacher in Literacy – Reading and Language Arts: Early to Middle Childhood. Born and raised in Dallas, Texas, she is at home in some of the city's most challenging schools.

Doretha earned a Bachelor's degree from Wiley College, Masters degrees from University of Minnesota and University of North Texas, and is a doctoral candidate at Texas A&M University – Commerce. Her career goals include creating a teachers collegiate academy in Dallas ISD and overseeing the Education Department at her beloved alma mater, Wiley College. For years, Doretha's first love was education, however, now it is a close second behind her husband, Sheldon, and their two children, Davonna and David.



Nell Duke is a Professor in the [Combined Program in Education and Psychology](#) at the [University of Michigan](#). Nell's areas of expertise include the development of informational reading and writing in young children, comprehension development and instruction in early schooling, and issues of equity in literacy education. She has taught preservice, inservice, and doctoral courses, speaks and consults widely, and is an active member of several literacy-related organizations. Nell was named one of the most influential education scholars in [EdWeek](#) and was awarded the [P. David Pearson Scholarly Influence Award](#) from the [Literacy Research Association](#). She has also received research awards from the [American Educational Research Association](#), the [International Reading Association](#), and the [National Council of Teachers of English](#), among other organizations.

Nell has authored numerous journal articles and book chapters. Her most recent book is [Inside Information: Developing Powerful Readers and Writers of Informational Text through Project-based Instruction](#). She is also editor of [The Research-Informed Classroom](#) book series and co-editor of the [Not This, But That](#) book series. Nell serves as advisor for the Aspen Institute Urban Literacy Leadership Network, the NBC News Parent Toolkit, and the Public Broadcasting Service/Corporation for Public Broadcasting Ready to Learn initiative. Nell received her Bachelor's degree from [Swarthmore College](#) and her Masters and Doctoral degrees from [Harvard University](#).



James Hoffman is a Professor of Language and Literacy Studies at The University of Texas at Austin. He directs the undergraduate reading specialization program in the Department of Curriculum and Instruction. In addition, he teaches graduate courses focused on literacy research. Jim is a former editor of *The Reading Research Quarterly* and *The Yearbook of the National Reading Conference*. He has served as President of the National Reading Conference and as a member of the Board of Directors of the International Reading Association. Jim was an affiliated scholar with both the National Reading Research Center (NRRC) and the Center for the Improvement of Early Reading Achievement (CIERA). He was elected to the Reading Hall of Fame in 2002 and served as President of this organization from 2008-2010. Jim served as the chair for the International Reading Association's Commission and the "Prepared to Make a Difference" research project.

The primary focus for his research has been on teaching and teacher preparation. Jim has published over 150 articles, books and chapters on literacy related topics. He has been active in international literacy projects in Central America, Africa and Asia. He earned his doctoral degree from the University of Missouri at Kansas City.



Whitney Whealdon is the Director of Academic Content at the Louisiana Department of Education. In that role, she works with teacher leaders to create units, lessons, and tasks for the English Language Arts Guidebooks, a curriculum used in over 80% of districts in Louisiana and used in other states nationwide. She began work at the Department in 2008 as the English Language Arts Assessment Coordinator.

Prior to her work at the Department, Whitney was a middle school English language arts teacher for six years. As a teacher, Whitney participated in the Japan Fulbright Memorial Fund Program in October 2005, and was named the 2008 Louisiana Middle School Teacher of the Year. Whitney graduated from the Holmes Program at Louisiana State University.

NAEP READING FRAMEWORK MILESTONES: PAST & FUTURE

- **2003.** Panels were convened to update the NAEP Reading Framework. The convened panels recommended an entirely new framework replacing the previous framework.
- **2004.** Board adopted the current NAEP Reading Framework.
- **2006.** Board adopted modifications for the 12th grade to pave the way for NAEP reporting on academic preparedness for college and job training.
- **2009.** The first assessment based on the updated NAEP Reading Framework was administered. Empirical analysis allowed for continued reporting of NAEP student achievement trends in reading extending back to 1992 – the first assessment based on the previous framework.
- **August 2017.** ADC completed Framework Development Policy revision and initiated discussion of the NAEP Reading Framework.
- **November 2017.** ADC discussed strategies for upcoming framework update projects.
- **March 2018.** ADC invites reading experts to begin preparing a content recommendation to the Board regarding the NAEP Reading Framework.
- **April 2018.** Summary papers from the March 2018 reading experts are distributed.
- **August 2018 to Early 2019.** ADC deliberates next steps for the NAEP Reading Framework and develops a recommendation to the full Board regarding the scope of the framework update that shall be conducted.
- **May 2019.** The Board takes action on the Charge to the Visioning and Framework Development Panels that will be convened. The NAEP Reading Framework Update project launches with a Fall 2019 Visioning Panel Meeting.

ADC ACTIVITIES IN THE STRATEGIC VISION

The Governing Board's Strategic Vision calls for ADC leadership to:

- update frameworks and improving related processes
- identify innovation opportunities based on assessments used in other countries
- increase meaningful insights available from contextual variables
- identify resources for educators

These areas are largely encompassed in ADC's core focus: determining what NAEP should assess and preparing content recommendations for Board deliberation and action. By engaging a wide array of stakeholders, each NAEP framework outlines these recommendations, describing what students should know and be able to do in a subject area and what will be tested on NAEP. Framework panels review assessment trends internationally to develop recommendations for ADC and Board deliberation. The panels also make recommendations for what should be included in NAEP questionnaires to provide context on student achievement.

Guiding Questions and Recent Committee Discussions

In November 2017, the ADC reviewed a draft plan listing Strategic Vision activities in the years ahead. The ADC raised several questions to consider as the Committee prepares content recommendations for Board deliberation and action:

- 1) What are the expected gains and losses for each possible path forward?
- 2) How will ADC determine what content is most important to assess?
- 3) Which types of streamlining should be pursued for which areas?
- 4) To what extent would framework consolidations require framework changes?
- 5) How can ideas for integrating assessments be incorporated early, to avoid updating frameworks that may then require further revision for consolidation?
- 6) To what extent are current frameworks flexible enough to adapt as needed?
- 7) What can be done to shorten timelines, considering that an update may be needed around the time the revised assessment is finally administered?
- 8) Should NAEP pursue additional assessment time or machine scoring?

Previous ADC deliberations also highlighted issues for continued discussion:

- How future NAEP items will be a resource for the field.
- How to establish and maintain partnerships that highlight actionable aspects of results, e.g., teacher access to released NAEP items and contextual information.
- How to incorporate how other countries think about changing what they assess.
- Whether to more deeply assess an existing content area or add new content areas.
- How to be intentional about content overlap between different assessments, while fulfilling statutory requirements, e.g., biennial reading and mathematics assessment.
- How ADC priorities should be reflected in upcoming framework updates.

Next Steps

At the March 2018 Board meeting, the ADC will have an opportunity to discuss next steps to support upcoming activities and policy decisions. Considering the above questions and the issues within and across frameworks, the criteria and information guiding the Committee's deliberations will be paramount.

The Strategic Vision Implementation Activities Report across all Board committees is presented in the Executive Committee tab. A working draft of ADC's plan for future work is presented below, including overarching projects for informing educators, updating policies, and exploring new approaches. More detailed timelines are presented for the NAEP Mathematics and Reading frameworks, the first two framework projects planned. A summary of common elements for each framework project follows.

In addition to the frameworks in the ADC's draft plan below, ADC recommendations will be needed for the Arts and Foreign Language frameworks. The Board-adopted NAEP Schedule of Assessments (see page 14) calls for Arts and Foreign Language each to be assessed under updated frameworks in 2024. Similarly, the NAEP Schedule of Assessments calls for Civics, Geography, and U.S. History to be assessed under updated frameworks in 2022, reflecting a delay from previous Board plans to update these frameworks. Framework projects have not begun for these assessments and cannot be completed in time for 2022. Hence, 2022 assessments may require reliance on the current NAEP frameworks for Civics, Geography, and U.S. History.

PLAN AND ESTIMATED TIMELINES: ALL ADC STRATEGIC VISION (SV) ACTIVITIES

WORKING DRAFT* - Activities Listed by Starting Month

ACTIVITY	START	FINISH	STATUS
Identify NAEP Resources & Information for Educators (SV #3 Expanding NAEP Resources and SV #6 Contextual Variables)	May 2017	Nov 2021	ADC discussed NAEP Questions Tool and contextual variables in 2017. Suggestions for new or refined NAEP resources can be shared with the Reporting and Dissemination Committee for Board outreach. To be determined: when/how to begin developing ADC recommendations.
Update Framework Development Policy	Jun 2017	Mar 2018	ADC began revising policy in Summer 2017. Board discussion continued in November 2017. Board action is slated for March 2018.
Review & Update Mathematics Framework for 2025 Assessment	Jun 2017	Mar 2025	State math standards review began in August 2017. Results will be available to inform May 2018 ADC Framework Review and Fall 2018 framework update project launch. Timeline includes administering the assessment.
Review & Update Reading Framework for 2025 Assessment	Oct 2017	Mar 2025	ADC Framework Review slated for March 2018 to inform development of recommendations for a Fall 2019 framework update project launch. Timeline includes administering the assessment.
Explore New Approaches to Framework Update Processes (also SV #8 International Assessments)	Nov 2017	Aug 2023	Through the Board's new Technical Services contract, there are opportunities for analyses to explore innovations in how NAEP assessment updates are implemented. Framework Update Projects will review other countries' assessment programs to inform frameworks, framework processes, contextual data, and reporting.
Update Item Development Policy	Aug 2018	Mar 2019	To begin in 2018.
Review & Update Civics, Geography, and U.S. History Frameworks (Depends on NAEP Schedule)	Mar 2018	May 2020	Discussion of outreach will begin in March 2018. Initial analysis of content issues will begin in 2019.
Review & Update Economics Framework (Depends on NAEP Schedule)	Mar 2020	Aug 2021	Depending on the ADC recommendations and upcoming Board Assessment Schedule decisions for Civics, Geography, and U.S. History Frameworks, Economics may or may not be a standalone project.
Review & Update Science and Technology & Engineering Literacy (TEL) Frameworks (Depends on NAEP Schedule)	Sep 2020	Nov 2022	Discussion of outreach will begin in March 2018. Initial analysis of content issues slated for 2020.
Review & Update Writing Framework (Depends on NAEP Schedule)	Mar 2022	Aug 2023	Initial discussion regarding the Writing Framework in conjunction with the Reading Framework slated for Summer/Fall 2018. ADC Framework Review tentatively slated for March 2022.

* This draft will be updated based on Board policy decisions. All activities address *Strategic Vision Priority #5 Updating Frameworks*, unless otherwise noted.

MATHEMATICS¹ FRAMEWORK: EXPECTED MILESTONES

Milestone	Status
Review Mathematics Standards ²	To be completed in May 2018.
ADC Discussion with External Experts in Mathematics	Scheduled for May 2018, allowing the ADC to simultaneously review the Mathematics Standards report and engage mathematics experts.
ADC Recommendation for Updating Assessment	Based on May 2018 ADC discussion, the ADC will prepare a recommendation on the type of framework update needed, including a draft charge for the Visioning and Development Panels that will be convened. The recommendation would be presented for Board action in August 2018.
Board Action on Charge	
Framework Contractor Selection	A contractor will be selected by Summer 2018 to begin preparing and compiling resources for the Visioning and Development Panel meetings.
Trend Scan & Resource Compilation	
Panel Meetings (3 to 6)	After Board action on the charge in 2018, the Visioning Panel will be convened to begin the series of Visioning and Framework Development Panel meetings to prepare a draft framework. ADC will receive ongoing updates. The full Board will review the draft when public comment is being collected. The Development Panel will use Board and public feedback to finalize the draft for Board action.
Full Board Review & Public Comment	
Framework Draft Finalized	
ADC Final Review of Framework	
Board Action	
	Summer/Fall 2019.
Assessment Administered	The Board-adopted framework will be provided to NCES by 2019. After item development, the newly updated assessment would be administered in 2025.

¹ The mathematics framework project will be implemented by the same contractor as the reading framework project, with some staggering in the schedule.

² See Attachment F for a project update.

READING³ FRAMEWORK: EXPECTED MILESTONES

Milestone	Status
ADC Discussion with External Experts in Reading	Scheduled for March 2018.
ADC Continues Outreach and Prepares Recommendation for Board Deliberation	Summer 2018 through Spring 2019.
Board/ADC Decision on Reading Framework Update	This includes anticipated Board adoption of a newly extended NAEP schedule of assessments, which is slated for Board action in March 2019.
ADC Recommendation for Updating Assessment	Based on ADC outreach and framework reviews, the ADC will prepare a recommendation on the type of framework update needed, including a draft charge for the Visioning and Development Panels that will be convened. Board action is slated for Spring 2019.
Board Action on Charge	
Framework Contractor Selection	A contractor will be selected by Summer 2018 to begin preparing and compiling resources for the Visioning and Development Panel meetings.
Trend Scan & Resource Compilation	
Panel Meetings (3 to 6)	After Board action on the charge, the Visioning Panel will be convened in Fall 2019 to begin the series of Visioning and Framework Development Panel meetings to prepare a draft framework. ADC will receive ongoing updates. The full Board will review the draft when public comment is being collected. The Development Panel will use Board and public feedback to finalize the draft for Board action.
Full Board Review & Public Comment	
Framework Draft Finalized	
ADC Final Review of Framework	
Board Action	Summer / Fall 2020.
Assessment Administered	The Board-adopted framework will be provided to NCES by 2020. After item development, the newly updated assessment would be administered in 2025.

Common Elements of Each Framework Update Project

Each framework update project will engage stakeholders and content experts to identify needed revisions, via subject-specific factors including:

- Evolution of discipline and implications for NAEP frameworks
- Relevance to students' postsecondary endeavors
- Student achievement trends in terms of contextual factors
- Digital-based assessment issues
- International content and measurement trends

³ The reading framework project will be implemented by the same contractor as the mathematics framework project, with some staggering in the schedule.

Based on the recent refinements discussed for the Governing Board Framework Development Policy, there are several milestones involved in launching and shepherding projects to create or update NAEP assessment frameworks.

MILESTONES: ALL FRAMEWORK PROJECTS

ADC Discussion with External Experts in the Subject Area(s)
ADC Recommendation for Updating Assessment
Board Action on Charge
Framework Contractor Selection
Trend Scan & Resource Compilation
Panel Meetings (3 to 6)
Full Board Review & Public Comment
Framework Draft Finalized
ADC Final Review of Framework
Board Action
Assessment Administered

The first step is the ADC's framework review, where content experts are invited to a Committee session to provide reflections on the state of the discipline and the extent to which the relevant NAEP framework should be updated. Based on this discussion, the ADC will prepare a recommendation to the full Board about next steps for the framework, including a draft charge for stakeholders who will serve on the Visioning and Framework Development panels convened to draft content recommendations for the ADC's consideration. After Board discussion of the recommendation, the Board will take action on the charge. Staff will work concurrently to procure a contractor to execute the framework development and update process resulting in a draft framework for the ADC's consideration.

The framework contractor will launch the project by compiling resources to support stakeholder meetings. The first meeting of stakeholders will be for the Visioning Panel to discuss the major issues to be addressed in the framework. A subset of the Visioning Panel will continue on to develop a draft updated framework as the Development Panel.

The ADC will closely monitor the framework contractor's work via regular project updates. A draft of the panels' recommended framework will be shared for full Board review and public comment. This feedback will allow the Development Panel to address concerns and finalize the draft recommended framework for the ADC's final review and Board action. The adopted framework is given to NCES to begin assessment development, piloting, and finally administration of the operational assessment based on the new framework.



National Assessment of Educational Progress

Schedule of Assessments

Approved November 21, 2015

The *National Assessment of Educational Progress (NAEP) Authorization Act* established the National Assessment Governing Board to set policy for NAEP, including determining the schedule of assessments. (P.L. 107-279)

Year	Subject	National Grades Assessed	State Grades Assessed	TUDA Grades Assessed
2014	U.S. History* Civics* Geography* TECHNOLOGY AND ENGINEERING LITERACY	8 8 8 8		
2015	Reading* Mathematics* Science**	4, 8, 12 4, 8, 12 4, 8, 12	4, 8 4, 8 4, 8	4, 8 4, 8
2016	Arts*	8		
2017	Reading Mathematics Writing	4, 8 4, 8 4, 8	4, 8 4, 8	4, 8 4, 8
2018	U.S. History Civics Geography Technology and Engineering Literacy	8 8 8 8		
2019	Reading Mathematics Science High School Transcript Study	4, 8, 12 4, 8, 12 4, 8, 12	4, 8 4, 8	4, 8 4, 8
2020				
2021	Reading Mathematics Writing	4, 8 4, 8 4, 8, 12	4, 8 4, 8 8	4, 8 4, 8
2022	U.S. HISTORY CIVICS GEOGRAPHY Economics Technology and Engineering Literacy	8, 12 8, 12 8, 12 12 8, 12		
2023	Reading Mathematics Science High School Transcript Study	4, 8, 12 4, 8, 12 4, 8, 12	4, 8 4, 8 4, 8	4, 8 4, 8 4, 8
2024	ARTS FOREIGN LANGUAGE Long-term Trend	8 12 ~		

NOTES:

*Assessments not administered by computer. Beginning in 2017 all operational assessments will be digitally based.

**Science in 2015 consisted of paper-and-pencil and digital-based components.

~Long-term Trend (LTT) assessments sample students at ages 9, 13, and 17 and are conducted in reading and mathematics. Subjects in **BOLD ALL CAPS** indicate the year in which a new framework is implemented or assessment year for which the Governing Board will decide whether a new or updated framework is needed.

Review of State Curricular Standards in Mathematics: Progress Update

PROJECT OVERVIEW

In August 2017, the Governing Board awarded a contract to the American Institutes for Research (AIR) to conduct a Review of State Curricular Standards in Mathematics. The goal of the project is to develop a descriptive and detailed picture of how mathematics curricular content across states relates to what NAEP assesses in mathematics. This will be accomplished by collecting the mathematics content standards for grades K through 8 across states, the District of Columbia, and the Department of Defense Education Activity (DoDEA), and comparing them to the assessment objectives in the 2017 NAEP Mathematics Framework for grades 4 and 8.

PROJECT TEAM

The project leaders include a project director, responsible for providing day-to-day leadership and guidance and liaising with the Governing Board, and two task leaders responsible for organizing and conducting the comparisons. The project director is Maria Stephens, who has over 15 years of experience in leading content comparison studies and reports, with a focus on NAEP and international assessments. Task leaders Tad Johnston and Beth Ratway provide additional leadership and expertise in mathematics content. Mr. Johnston has over 20 years of experience as a mathematics educator across all levels of education and has served as a content expert on numerous studies related to national and state mathematics standards. Ms. Ratway's experience focuses on standards analysis, development, and implementation, and she has been involved in comparative reviews of mathematics standards in three states and DoDEA, as well as in activities to connect financial literacy standards to mathematics standards in 11 states. In addition to the project leaders, the project team includes additional mathematics specialists, senior-level quality assurance reviewers, and research assistants.

PROJECT APPROACH

The work to compare state mathematics standards with NAEP is being conducted using a combination of external experts and mathematics specialists within AIR. To reduce the workload—from what would otherwise be 52 individual comparisons—AIR is using the Common Core State Standards in Mathematics (CCSS-M) as a proxy for the standards of the states that have fully adopted the CCSS-M. For the remaining states, AIR is using either their comprehensive list of standards (for non-adopters of CCSS-M) or a partial list of standards encompassing those that are distinct from CCSS-M (for partial adopters or supplementers of CCSS-M).

The project approach involves AIR specialists conducting extensive preparatory work to identify preliminary groupings of NAEP objectives and state standards with overlapping content, which

are then reviewed and rated for content alignment by a Content Review Committee (CRC) consisting of 15 external experts. A sampling plan assigns reviewers to subsets of states to focus their work and allow for the production of performance metrics for quality assurance. An in-person meeting of the CRC then allows the experts to come to consensus on aggregate ratings. A five-member Technical Advisory Committee provides input on the project at key stages, including during the planning stage and the stage of reviewing preliminary results.

Together, these activities will allow AIR specialists to identify:

- (1) content in state standards that is not covered in NAEP,
- (2) content in NAEP that is not covered by state standards, and
- (3) a state-by-state picture of the coverage of NAEP objectives.

CONTENT CLASSIFICATIONS

The key research question that the CRC is being asked is: What is the degree of content alignment between grouped NAEP objectives and state standard(s)? Put another way, they are being asked if, based on the state standards that were grouped with the NAEP objective, would students have had the opportunity to learn what is being assessed? For each grouping of a NAEP objective with one or more state standards, the CRC provided one of the following ratings:

- ***Partial***, meaning students would have had the opportunity to learn part of what NAEP is assessing but something is missing from the state standard that is covered in NAEP (although there may also be extra content in the state standard)
- ***Complete***, meaning students would have had the opportunity to learn all of what NAEP is assessing
- ***Extended***, meaning students would have had the opportunity to learn all of what NAEP is assessing as well as extra content not found elsewhere in NAEP
- ***Not aligned***, meaning students would *not* have had the opportunity to learn what NAEP is assessing

In addition to the ratings, the process is capturing ***Missing Content***, which is the content that NAEP objectives cover that the grouped state standard(s) do not cover, and ***Extra Content***, which is the content that state standards include that NAEP objectives do not include. Some of this content is being identified from the comments collected alongside the ratings, while some of this content is being identified from the state standards that cannot be grouped at all with NAEP.

For state standards that cannot be grouped with any NAEP objective, CRC members determine whether NAEP would not assess that standard at the relevant grade because (1) it is foundational knowledge reflected in other objectives but not directly assessed; (2) it would be assessed at another grade; or (3) it is simply not covered in NAEP.

PROJECT PROGRESS

To date, the project team has accomplished the following:

- Drafted a data analysis and reporting plan.
- Convened a Technical Advisory Committee (TAC) to review the draft analysis and reporting plan and finalized that plan.
- Obtained and verified mathematics standards.
- Recruited and trained (via a half-day webinar) the 15-member CRC, many of whom are current and former state supervisors of mathematics.
- Prepared initial comparison documents (i.e., data collection instruments), which include the AIR specialists' initial groupings of NAEP objectives with any state standard(s) that overlaps at least part of the NAEP objective as well as a list of NAEP objectives that cannot be grouped with a state standard (i.e., are not aligned) and any state standards that cannot be grouped with a NAEP objective (i.e., are unique).¹
- Facilitated the CRC's independent reviews of subsets of 6-7 states according to a sampling plan.
- Aggregated the CRC members' individual ratings and compiled them for discussion.
- Convened the CRC for a three-day in-person meeting in Washington, D.C. to come to consensus on a final set of ratings.

NEXT STEPS

The final step of the mathematics comparisons, undertaken by AIR specialists, will be to aggregate the content into one listing of unique mathematics state standards that have been identified as **Extra Content** not covered by NAEP. This will eliminate duplication across states. Alongside this work in mathematics, the project team will also be working to determine if **Missing Content** (content excluded in state standards, but included in NAEP) is present in mathematics-related state standards in other subjects. The project team will start with science standards and expand as needed to a review of social studies standards and other required K-8 standards that might be related to the **Missing Content**. The focus will be on identifying for each state if there is NAEP mathematics content that, while perhaps not covered in the mathematics curriculum, is covered in the curriculum of other core subjects.

¹ Generally speaking, state standards for Grades K–4 were reviewed for possible groupings with NAEP grade 4, and state standards for Grades 5–8 were reviewed for possible groupings with NAEP grade 8—though the AIR specialists documented whether any of the state standards at grades K–4 that were deemed unique from NAEP grade 4 have content overlap with NAEP grade 8 (and vice versa). Comparisons focus on the conceptual match in mathematics content between the NAEP objectives and state standards, excluding consideration of the level of cognitive complexity represented in the content.

Data analysis will include both quantitative and qualitative analyses of the ratings and comments collected from reviewers and will achieve the following major outcomes: (1) a comprehensive summary of the extent to which the NAEP objectives are covered across the 52 states in mathematics standards; (2) a set of consolidated state mathematics content standards that are *not* reflected in the NAEP framework and the extent to which these are covered across states; and (3) the extent to which NAEP content not covered in state mathematics standards may be covered in the curricula of other core subjects. Preliminary results will be reviewed with the TAC.

MILESTONES

The major milestones of the project are summarized below.

Milestone	Estimated Timing
Obtain and verify mathematics standards	8/25/17 – 11/1/17
Convene TAC	10/5/17
Draft and finalize analysis and reporting plan	8/25/17 – 10/31/17
Prepare initial comparison documents	10/13/17 – 12/31/17
Train the CRC	12/6/17
Independent rating/review by CRC	12/7/17 – 1/15/18
Aggregate and compile ratings	1/8/18 – 1/31/18
In-person consensus meeting	2/6/18 – 2/8/18
Consolidate state standards and identify “missing” content	2/9/18 – 2/19/18
Obtain other subjects’ standards and search for “missing” content	1/20/18 – 3/5/18
Analyze data	2/9/18 – 3/5/18
Convene TAC	Mid-March 2018
Prepare report of findings <i>Present findings at quarterly Board meeting</i>	3/19/18 – 5/30/18 5/18/18



**Assessment Development Committee
Item Review Schedule
October 2017 – May 2018
Updated February 2, 2018**

Review Package to Board	Board Comments to NCES	Survey/ Cognitive	Review Task	Approx. Number Items	Status
10/10/2017	11/2/2017	Cognitive	2021 Reading (4, 8) Pilot (DI) Passages	24 passages	✓
12/6/2017	12/20/2017	Cognitive	2021 Reading (4, 8) Pilot (SBT) Draft Build	4 tasks	✓
2/15/2018	3/9/2018	Cognitive	2019 Reading (4, 8) Operational (DI)	35-40 items	
3/19/2018	4/2/2018	Survey	2019 Reading (4, 8) Operational	50-60	
3/19/2018	4/2/2018	Survey	2019 Mathematics (4, 8) Operational	60-70	
5/2/2018	5/25/2018	Survey	2019 Science (4, 8, 12) Operational	70-90	
5/2/2018	5/25/2018	Survey	2019 Reading (12) Operational	60-70	
5/2/2018	5/25/2018	Survey	2019 Mathematics (12) Operational	60-70	
5/2/2018	5/25/2018	Survey	2021 Reading (4, 8) Pilot	70-90	
5/2/2018	5/25/2018	Survey	2021 Mathematics (4, 8) Pilot	70-90	
5/2/2018	5/25/2018	Survey	2021 Writing (4, 8, 12) Pilot	70-90	
5/4/2018	5/25/2018	Cognitive	2021 Writing (4, 8) Pilot (DI)	18	

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5/4/2018	5/25/2018	Cognitive	2021 Mathematics (4, 8) Pilot (DI)	300	
5/4/2018	5/25/2018	Cognitive	2019 Reading (4, 8) Operational (SBT)	TBD	
5/4/2018	5/25/2018	Cognitive	2019 Mathematics (4, 8) Operational (DI)	TBD	
TBD Summer/Fall	TBD	Cognitive	2022 TEL (8, 12) Pilot (SBT) Concept Sketches	20-40 sketches	

NOTE: "SBT" indicates Scenario-Based Task

"DI" indicates Discrete Item

"IIC" indicates Interactive Item Components