National Assessment Governing Board

Assessment Development Committee

August 2 - 3, 2018

AGENDA

Thursday, August 2

9:00 – 9:15 am	Welcome and Introductions Remarks from Outgoing Board Members *Shannon Garrison, ADC Chair* *Frank Fernandes and Chasidy White, ADC Members*	
9:15 – 10:05 am	**Closed Session** Overview of NAEP Mathematics Item Pool (*SV #5*) *Gloria Dion, ETS* *Kim Gattis, AIR*	Attachment A
10:05 am – 12:05 pm	**Closed Session** Review of Cognitive Items: NAEP Mathematics, Reading, and Science Assessments *Shannon Garrison*	Secure material provided under separate cover
12:05 -12:30 pm	Goals for Revision of the Governing Board Item Development and Review Policy (*SV #5*) *Shannon Garrison*	Attachment B

Friday, August 3

9:30 – 10:40 am	**Closed Session** Review of Cognitive Items: NAEP Science and Writing Assessments *Shannon Garrison*	Secure material provided under separate cover
10:40 – 11:20 am	**Closed Session** NAEP Civics, Geography, and U.S. History Assessments: Overview (*SV #5*) *Andy Weiss, ETS*	Attachment C
11:20 am – 12:00 pm	ADC Activities in the Strategic Vision *Shannon Garrison*	Attachment D
Information Items	Long-Term Trend Content Descriptions: Next Steps	Attachment E
	NCES Content Comparison Studies: NAEP Reading & Mathematics	Attachment F
	Item Review Schedule	Attachment G

OVERVIEW OF THE NAEP MATHEMATICS ITEM POOL

The recent Framework Review for the NAEP Mathematics has resulted in an Assessment Development Committee (ADC) recommendation to update the NAEP Mathematics Framework. This recommendation is reflected in a Charge to the Visioning Panel to be convened for the framework update process, and represents comments raised in the May 2018 ADC and plenary sessions relating to the NAEP Mathematics Framework.

The recommendation articulates: the scope of anticipated framework updates; and the Board's priorities in pursuing this framework update. In June and July 2018, the ADC finalized the NAEP Mathematics Framework Recommendation. (See NAEP Mathematics Framework tab in Board materials.)

On Friday August 3, 2018, Chair Garrison will introduce the Committee's recommendation to the full Board and invite discussion. Board action on the Charge is slated for the Saturday session.

To inform the detailed Committee discussions regarding the NAEP Mathematics Framework in the coming months, NCES will provide an overview of item development for the NAEP Mathematics Assessment relative to the current NAEP Mathematics Framework. The presentation will begin with a summary of NCES's rigorous processes for developing NAEP items – a process that begins when the Board adopts a new or updated assessment framework. The briefing will center on how the item pool has evolved over time, noting the research and strategies NCES has conducted to address various aspects of the current framework, such as the framework's definition of mathematical complexity and the content overlap between the current and previous framework.

GOALS FOR REVISION OF THE GOVERNING BOARD ITEM DEVELOPMENT AND REVIEW POLICY

Before embarking on a revision of the Governing Board Policy for Item Development and Review (attached), the August 2018 Board meeting is opportune for considering the goals of this policy revision. For example, overarching questions include: What should be the emphasis of ADC item reviews? And to what extent can there be more connections between ADC item reviews and framework reviews?

Adopted: May 18, 2002

National Assessment Governing Board

Item Development and Review

Policy Statement

It is the policy of the National Assessment Governing Board to require the highest standards of fairness, accuracy, and technical quality in the design, construction, and final approval of all test questions and assessments developed and administered under the National Assessment of Educational Progress (NAEP). All NAEP test questions or items must be designed and constructed to reflect carefully the assessment objectives approved by the Governing Board. The final assessments shall adhere to the requirements outlined in the following Guiding Principles, Policies, and Procedures for NAEP Item Development and Review.

The Governing Board's Assessment Development Committee, with assistance from other Governing Board members as needed, shall be responsible for reviewing and approving NAEP test questions at several stages during the development cycle. In so doing, the Guiding Principles, Policies, and Procedures must be adhered to rigorously.

Introduction

The National Assessment of Educational Progress Authorization Act of 2002 (P.L. 107-279) contains a number of important provisions regarding item development and review for NAEP. The legislation requires that:

- "the purpose [of NAEP] is to provide…a fair and accurate measurement of student academic achievement;"
- "[NAEP shall]…use widely accepted professional testing standards, objectively measure academic achievement, knowledge, and skills, and ensure that any academic assessment authorized….be tests that do not evaluate or assess personal or family beliefs and attitudes or publicly disclose personally identifiable information;"

- "[NAEP shall]…only collect information that is directly related to the appraisal of academic achievement, and to the fair and accurate presentation of such information;"
- "the Governing Board shall develop assessment objectives consistent with the requirements of this section and test specifications that produce an assessment that is valid and reliable, and are based on relevant widely accepted professional standards;"
- "the Governing Board shall have final authority on the appropriateness of all assessment items;"
- "the Governing Board shall take steps to ensure that all items selected for use in NAEP are free from racial, cultural, gender, or regional bias and are secular, neutral, and non-ideological;" and
- "the Governing Board shall develop a process for review of the assessment which includes the active participation of teachers, curriculum specialists, local school administrators, parents, and concerned members of the public."

Given the importance of these mandates, it is incumbent upon the Governing Board to ensure that the highest standards of test fairness and technical quality are employed in the design, construction, and final approval of all test questions for NAEP. The validity of educational inferences made using NAEP data could be seriously impaired without high standards and rigorous procedures for test item development, review, and selection.

Test questions used in the NAEP must yield assessment data that are both valid and reliable in order to be appropriate. Consequently, technical acceptability is a necessary, but not a sufficient condition, for judging the appropriateness of items. In addition, the process for item development must be thorough and accurate, with sufficient reviews and checkpoints to ensure that accuracy. The Guiding Principles, Policies, and Procedures governing item development, if fully implemented throughout the development cycle, will result in items that are fair and of the highest technical quality, and which will yield valid and reliable assessment data.

Each of the following Guiding Principles is accompanied by Policies and Procedures. Full implementation of this policy will require supporting documentation from the National Center for Education Statistics (NCES) regarding all aspects of the Policies and Procedures for which they are responsible.

This policy complies with the documents listed below which express widely accepted technical and professional standards for item development and use. These standards reflect the current agreement of recognized experts in the field, as well as the policy positions of major professional and technical associations concerned with educational testing.

Standards for Educational and Psychological Testing. (1999). Washington, DC: American Educational Research Association (AERA), American Psychological Association (APA), and National Council on Measurement in Education (NCME).

Code of Fair Testing Practices in Education. (2004). Washington, DC: Joint Committee on Testing Practices.

National Center for Education Statistics (NCES) Statistical Standards, September 2002.

Guiding Principles – Item Development and Review

Principle 1

NAEP test questions selected for a given content area shall be representative of the content domain to which inferences will be made and shall match the NAEP assessment framework and specifications for a particular assessment.

Principle 2

The achievement level descriptions for basic, proficient, and advanced performance shall be an important consideration in all phases of NAEP development and review.

Principle 3

The Governing Board shall have final authority over all NAEP test questions. This authority includes, but is not limited to, the development of items, establishing the criteria for reviewing items, and the process for review.

Principle 4

The Governing Board shall review all test questions that are to be administered in conjunction with any pilot test, field test, operational assessment, or special study administered as part of NAEP.

Principle 5

NAEP test questions shall be accurate in their presentation and free from error. Scoring criteria shall be accurate, clear, and explicit.

Principle 6

All NAEP test questions shall be free from racial, cultural, gender, or regional bias, and shall be secular, neutral, and non-ideological. NAEP shall not evaluate or assess personal or family beliefs, feelings, and attitudes, nor publicly disclose personally identifiable information.

Policies and Procedures for Guiding Principles

Principle 1

NAEP test questions selected for a given content area shall be representative of the content domain to which inferences will be made and shall match the NAEP assessment framework and specifications for a particular assessment.

Policies and Procedures

1. Under the direction of the Governing Board, the framework for each assessment shall be developed in a manner that defines the content to be assessed, consistent with NAEP's purpose and the context of a large-scale assessment. The framework development process shall result in a rationale for each NAEP assessment that delineates the scope of the assessment relative to the content domain. The framework shall consist of a statement of purpose, assessment objectives, format requirements, and other guidelines for developing the assessment and items.

2. In addition to the framework, the Governing Board shall develop assessment and item specifications to define the: a) content and process dimensions for the assessment; b) distribution of items across content and process dimensions at each grade level; c) stimulus and response attributes (or what the test question provides to students and the format for answering the item); d) types of scoring procedures; e) test administration conditions; and f) other specifications pertaining to the particular subject area assessment.

3. The Governing Board will forward the framework and specifications to NCES, in accordance with an appropriate timeline, so that NCES may carry out its responsibilities for assessment development and administration.

4. In order to ensure that valid inferences can be made from the assessment, the pool of test questions shall measure the construct as defined in the framework. Demonstrating that the items selected for the assessment are representative of the subject matter to which inferences will be made is a major type of validity evidence needed to establish the appropriateness of items.

5. A second type of validity evidence is needed to ensure that NAEP test items match the specific objectives of a given assessment. The items shall reflect the objectives, and the item pool shall match the percentage distribution for the content and cognitive dimensions at each grade level, as stated in the framework. Minor deviations, if any, from the content domain as defined by the framework shall be explained in supporting materials.

6. Supporting material submitted with the NAEP items shall provide a description of procedures followed by item writers during development of NAEP test questions. This description shall include the expertise, training, and demographic characteristics of the groups. This supporting material must show that all item writing and review groups have

the required expertise and training in the subject matter, bias and fairness reviews, and assessment development.

7. In submitting items for review by the Governing Board, NCES shall provide information on the relationship of the specifications and the content/process elements of the pool of NAEP items. This shall include procedures used in classifying each item.

8. The item types used in an assessment shall match the content requirements as stated in the framework and specifications, to the extent possible. The match between an objective and the item format shall be informed by specifications pertaining to the content, knowledge, or skill to be measured; cognitive complexity; overall appropriateness; and efficiency of the item type. NAEP assessments shall use a variety of item types as best fit the requirements stated in the framework and specifications.

9. In order to ensure consistency between the framework and specifications documents and the item pools, NCES shall ensure that the development contractor engages a minimum of 20 percent of the membership of the framework project committees in each subject area to serve on the item writing and review groups as the NAEP test questions are being developed. This overlap between the framework development committees and the item developers will provide stability throughout the NAEP development process, and ensure that the framework and specifications approved by the Governing Board have been faithfully executed in developing NAEP test questions.

Principle 2

The achievement level descriptions for basic, proficient, and advanced performance shall be an important consideration in all phases of NAEP development and review.

Policies and Procedures

1. During the framework development process, the project committees shall draft preliminary descriptions of the achievement levels for each grade to be assessed. These preliminary descriptions shall define what students should know and be able to do at each grade, in terms of the content and process dimensions of the framework at the basic, proficient, and advanced levels. Subsequent to Governing Board adoption, the final achievement level descriptions shall be an important consideration in all future test item development for a given subject area framework.

2. The achievement level descriptions shall be used to ensure a match between the descriptions and the resulting NAEP items. The achievement level descriptions shall be examined, and appropriate instruction provided to item writers to ensure that the items represent the stated descriptions, while adhering to the content and process requirements of the framework and specifications. The descriptions shall be used to evaluate the test questions to make certain that the pool of questions encompasses the range of content and

process demands specified in the achievement level descriptions, including items within each achievement level interval, and items that scale below basic.

3. As the NAEP item pool is being constructed, additional questions may need to be written for certain content/skill areas if there appear to be any gaps in the pool, relative to the achievement level descriptions.

4. Supporting materials shall show the relationship between the achievement levels descriptions and the pool of NAEP test questions.

Principle 3

The Governing Board shall have final authority over all NAEP test questions. This authority includes, but is not limited to, the development of items, establishing the criteria for reviewing items, and the process for review.

Policies and Procedures

1. Under the guiding statute, a primary duty of the Governing Board pertains to "All Cognitive and Noncognitive Assessment Items." Specifically, the statute states that, "The Governing Board shall have final authority on the appropriateness of all assessment items." Under the law, the Governing Board is therefore responsible for all NAEP test questions as well as all NAEP background questions administered as part of the assessment.

2. To meet this statutory requirement, the Governing Board's Policy on NAEP Item Development and Review shall be adhered to during all phases of NAEP item writing, reviewing, editing, and assessment construction. The National Center for Education Statistics (NCES), which oversees the operational aspects of NAEP, shall ensure that all internal and external groups involved in NAEP item development activities follow the Guiding Principles, Policies, and Procedures as set forth in this Governing Board policy.

3. Final review of all NAEP test questions for bias and appropriateness shall be performed by the Governing Board, after all other review procedures have been completed, and prior to administration of the items to students.

Principle 4

The Governing Board shall review all NAEP test questions that are to be administered in conjunction with any pilot test, field test, operational assessment, or special study administered as part of NAEP.

Policies and Procedures

1. To fulfill its statutory responsibility for NAEP item review, the Governing Board shall receive, in a timely manner and with appropriate documentation, all test

questions that will be administered to students under the auspices of NAEP. These items include those slated for pilot testing, field testing, and operational administration.

2. The Governing Board shall review all test items developed for special studies, where the purpose of the special study is to investigate alternate item formats or new technologies for possible future inclusion as part of main NAEP, or as part of a special study to augment main NAEP data collection.

3. The Governing Board shall not review items being administered as part of test development activities, such as small-scale, informal tryouts with limited groups of students designed to refine items prior to large-scale pilot, field, or operational assessment.

4. NCES shall submit NAEP items to the Governing Board for review in accordance with a mutually agreeable timeline. Items shall be accompanied by appropriate documentation as required in this policy. Such information shall consist of procedures and personnel involved in item development and review, the match between the item pool and the framework content and process dimensions, and other related information.

5. For its first review, the Governing Board shall examine all items prior to the special study, pilot test, or field test stage. In the case of the NAEP reading assessment, all reading passages shall be reviewed by the Governing Board prior to item development. For each reading passage, NCES shall provide the source, author, publication date, passage length, rationale for minor editing to the passage (if any), and notation of such editing applied to the original passage. NCES shall provide information and explanatory material on passages deleted in its fairness review procedures.

6. For its second review, the Governing Board shall examine items following pilot or field testing. The items shall be accompanied by statistics obtained during the pilot test or field test stage. These statistics shall be provided in a clear format, with definitions for each item analysis statistic collected. Such statistics shall include, but shall not be limited to: p-values for multiple-choice items, number and percentage of students selecting each option for a multiple-choice item, number and percentage not reaching or omitting the item (for multiple-choice and open-ended), number and percentage of students receiving various score points for open-ended questions, mean score point value for open-ended items, appropriate biserial statistics, and other relevant data.

7. At a third stage, for some assessments, the Governing Board shall receive a report from the calibration field test stage, which occurs prior to the operational administration. This “exceptions report” shall contain information pertaining to any items that were dropped due to differential item functioning (DIF) analysis for bias, other items to be deleted from the operational assessment and the rationale for this decision, and the final match between the framework distribution and the item pool. If the technology becomes available to perform statistically sound item-level substitutions at this point in

the cycle (from the initial field test pool), the Governing Board shall be informed of this process as well.

8. All NAEP test items shall be reviewed by the Governing Board in a secure manner via in-person meetings, teleconference or videoconference settings, or online via a password-protected Internet site. The Governing Board's Assessment Development Committee shall have primary responsibility for item review and approval. However, the Assessment Development Committee, in consultation with the Governing Board Chair, may involve other Governing Board members in the item review process on an *ad hoc* basis. The Governing Board may also submit items to external experts, identified by the Governing Board for their subject area expertise, to assist in various duties related to item review. Such experts shall follow strict procedures to maintain item security, including signing a Nondisclosure Agreement.

9. Items that are edited between assessments by NCES and/or its item review committees, for potential use in a subsequent assessment, shall be re-examined by the Governing Board prior to a second round of pilot or field testing.

10. Documentation of the Governing Board's final written decision on editing and deleting NAEP items shall be provided to NCES within 10 business days following completion of Governing Board review at each stage in the process.

Principle 5

NAEP test questions shall be accurate in their presentation, and free from error. Scoring criteria shall be accurate, clear, and explicit.

Policies and Procedures

1. NCES, through its subject area content experts, trained item writers, and item review panels, shall examine each item carefully to ensure its accuracy. All materials taken from published sources shall be carefully documented by the item writer. Graphics that accompany test items shall be clear, correctly labeled, and include the data source where appropriate. Items shall be clear, grammatically correct, succinct, and unambiguous, using language appropriate to the grade level being assessed. Item writers shall adhere to the specifications document regarding appropriate and inappropriate stimulus materials, terminology, answer choices or distractors, and other requirements for a given subject area. Items shall not contain extraneous or irrelevant information that may differentially distract or disadvantage various subgroups of students from the main task of the item.

2. Scoring criteria shall accompany each constructed-response item. Such criteria shall be clear, accurate, and explicit. Carefully constructed scoring criteria will ensure valid and reliable use of those criteria to evaluate student responses to maximize the accuracy and efficiency of scoring.

3. Constructed-response scoring criteria shall be developed initially by the item writers, refined during item review, and finalized during pilot or field test scoring. During pilot or field test scoring, the scoring guides shall be expanded to include examples of actual student responses to illustrate each score point. Actual student responses shall be used as well, to inform scorers of unacceptable answers.

4. Procedures used to train scorers and to conduct scoring of constructed-response items shall be provided to the Governing Board, along with information regarding the reliability and validity of such scoring. If the technology becomes available to score student responses electronically, the Governing Board shall be informed of the reliability and validity of such scoring protocol, as compared to human scoring.

Principle 6

All NAEP test questions shall be free from racial, cultural, gender, or regional bias, and shall be secular, neutral, and non-ideological. NAEP shall not evaluate or assess personal or family beliefs, feelings, and attitudes, nor publicly disclose personally identifiable information.

Policies and Procedures

1. An item is considered biased if it unfairly disadvantages a particular subgroup of students by requiring knowledge of obscure information unrelated to the construct being assessed. A test question or passage is biased if it contains material derisive or derogatory toward a particular group. For example, a geometry item requiring prior knowledge of the specific dimensions of a basketball court could result in lower scores for students unfamiliar with that sport, even if those students know the geometric concept being measured. Use of a regional term for a soft drink in an item context may provide an unfair advantage to students from that area of the country. Also, an item that refers to any individual or group in a demeaning manner would be unacceptable.

2. In conducting bias reviews, steps shall be taken to rid the item pool of questions that, because of their content or format, either appear biased on their face, or yield biased estimates of performance for certain subpopulations based on gender, race, ethnicity, or regional culture. A statistical finding of differential item functioning (DIF) will result in a review aimed at identifying possible explanations for the finding. However, such an item will not automatically be deleted if it is deemed valid for measuring what was intended, based on the NAEP assessment framework. Items in which clear bias is found will be eliminated. This policy acknowledges that there may be real and substantial differences in performance among subgroups of students. Learning about such differences, so that performance may be improved, is part of the value of the NAEP.

3. Items shall be secular, neutral, and non-ideological. Neither NAEP nor its questions shall advocate a particular religious belief or political stance. Where appropriate, NAEP questions may deal with religious and political issues in a fair and objective way.

The following definitions shall apply to the review of all NAEP test questions, reading passages, and supplementary materials used in the assessment of various subject areas:

- Secular – NAEP questions shall not contain language that advocates or opposes any particular religious views or beliefs, nor shall items compare one religion unfavorably to another. However, items may contain references to religions, religious symbolism, or members of religious groups where appropriate.

  Examples: The following phrases would be acceptable: "shaped like a Christmas tree," "religious tolerance is one of the key aspects of a free society," "Dr. Martin Luther King, Jr. was a Baptist minister," or "Hinduism is the predominant religion in India."

- Neutral and Non-ideological - Items shall not advocate for a particular political party or partisan issue, for any specific legislative or electoral result, or for a single perspective on a controversial issue. An item may ask students to explain both sides of a debate, or it may ask them to analyze an issue, or to explain the arguments of proponents or opponents, without requiring students to endorse personally the position they are describing. Item writers should have the flexibility to develop questions that measure important knowledge and skills without requiring both pro and con responses to every item.

Examples: Students may be asked to—

- compare and contrast positions on states' rights, based on excerpts from speeches by X and Y;
- analyze the themes of Franklin D. Roosevelt's first and second inaugural addresses;
- identify the purpose of the Monroe Doctrine;
- select a position on the issue of suburban growth and cite evidence to support this position;
- provide arguments either for or against Woodrow Wilson's decision to enter World War I;
- summarize the dissenting opinion in a landmark Supreme Court case.

The criteria of neutral and non-ideological also pertain to decisions about the pool of test questions in a subject area, taken as a whole. The Governing Board shall review the entire item pool for a subject area to ensure that it is balanced in terms of the perspectives and issues presented.

4. The Governing Board shall review both stimulus materials and test items to ensure adherence to the NAEP statute and the policies in this statement. Stimulus materials include reading passages, articles, documents, graphs, maps, photographs, quotations, and all other information provided to students in a NAEP test question.

5. NAEP questions shall not ask a student to reveal personal or family beliefs, feelings, or attitudes, or publicly disclose personally identifiable information.

NAEP CIVICS, GEOGRAPHY, AND U.S. HISTORY ASSESSMENTS: OVERVIEW

In March 2018, the ADC discussed that the current NAEP Assessment Schedule indicates that new frameworks may be needed for the NAEP Civics, Geography, and U.S. History assessments to be conducted in 2022. The Committee acknowledged that updated frameworks cannot be completed in time for the 2022 administration and planned to review the assessments more closely to inform determinations about when new frameworks are needed.

The Committee noted that NAEP frameworks should retain emphasis on applications and practices, such as historical thinking and interpretation, especially given that this is a contemporary emphasis in U.S. classrooms. The Committee also expressed interest in additional information on:

- How historical thinking and interpretation is reflected in items;
- How the contemporary period articulated in the current NAEP U.S. History Framework is reflected in NAEP U.S. History Assessment items;
- How items in the NAEP Civics, Geography, and U.S. History assessments address contemporary contexts more broadly, relative to the current frameworks;
- How new developments, such as geographic information systems (GIS), have been addressed relative to the current frameworks; and
- How the digital based assessment platform has been used to make the assessments more engaging to students.

Andy Weiss of ETS will brief the Committee on these issues, while showcasing several items from the most recent assessment as exemplars. After the briefing, additional exemplar items will be posted for ADC secure review to inform follow-up discussion.

NEXT STEPS FOR ADC FRAMEWORK ACTIVITIES

The ADC develops recommendations for what NAEP should assess and preparing content recommendations for Board deliberation and action. By engaging a wide array of stakeholders, each NAEP framework details 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.

Recent ADC discussions have raised several issues for ongoing discussion as the Committee prepares content recommendations for Board deliberation and action:

- Expected gains and losses for each path forward.
- Extent to which current frameworks are flexible enough to adapt as needed.
- The optimal role of NAEP for each content area.
- The level of specificity most useful to policymakers, researchers, and educators.
- 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 develop viable options for new configurations of NAEP assessment content in ways that balance expertise, outreach, research, and trends in curricular standards.
- 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.
- Whether streamlining of NAEP frameworks is an appropriate goal.
- How to be intentional about content overlap between different assessments, while fulfilling statutory requirements, e.g., biennial reading and mathematics assessment.
- How Board and Committee priorities should be reflected in upcoming framework updates.

A Strategic Vision Progress Report across all Board committees is presented in the Executive Committee tab. A working draft of ADC's project plans is attached, reflecting 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.

At the August 2018 Board meeting, the ADC will have an opportunity to take stock and discuss next steps.

WORKING DRAFT* PLAN: ALL ADC STRATEGIC VISION (SV) ACTIVITIES

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 R&D for Board outreach. To be determined: when/how to develop ADC recommendations.
Update Framework Development Policy	Jun 2017	Mar 2018	ADC began revising policy in Summer 2017. Board discussion continued in November 2017. Board adopted the revised policy in March 2018.
Review & Update **Mathematics** Framework for 2025 Assessment	Jun 2017	Mar 2025[1]	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.
Review & Update **Reading** Framework for 2025 Assessment	Oct 2017	Mar 2025[1]	ADC Framework Review slated for March 2018 to inform development of recommendations for a Fall 2019 framework update project launch.
Explore New Approaches to Framework Update Processes (also *SV #8 International Assessments*)	Nov 2017	Aug 2023	The Board's Technical Services contractor is an opportunity for analyses exploring 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 began in March 2018, with suggestions to develop options for the ADC to consider. Review of current NAEP item pools will also inform ADC recommendations.
Review & Update **Economics** Framework (Depends on NAEP Schedule)	Mar 2020	Aug 2021	Depending on ADC recommendations and Board Assessment Schedule decisions, 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 began in March 2018, Tentative next steps: learn more about standards in NGSS non-adopter states and learn whether stakeholders view that some or all of the TEL subarea on Technology & Society addresses student achievement goals in Civics, Geography, U.S. History, or Economics.
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.
Develop Content Descriptions for the Long-Term Trend Mathematics and Reading Assessments (*SV #7Long-Term Trend*)	TBD	TBD	March 2018 discussion called for content outlines to be useful for LTT deliberations and efforts to describe the knowledge and skills of lower performing students. Staff is preparing an implementation plan regarding how content outlines can be developed.

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

[1] Timeline includes administering the assessment.

MATHEMATICS[2] FRAMEWORK: EXPECTED MILESTONES

Milestone	Status
Review Mathematics Standards[3]	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.

[2] The mathematics framework project will be implemented by the same contractor as the reading framework project, with some staggering in the schedule.
[3] See Attachment F for a project update.

READING[4] 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

Based on the revised Framework Development Policy, several milestones address all NAEP assessment framework projects. Framework update projects 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

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

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

As a first step, the ADC conducts a 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. Studies and additional outreach is pursued, as needed, to inform the ADC's recommendation about the type of framework update that is required. Next, the ADC brings its recommendation to the full Board for approval. In the case of an anticipated framework update, the recommendation includes a charge to stakeholders who will serve on the panels convened to draft recommendations for the ADC's consideration.

After Board discussion of the ADC recommendation, the Board will take action on the charge. Concurrently, Board staff will identify a contractor to execute the framework update process.

The framework contractor will launch the project by identifying individuals to serve on the framework panels and by compiling and developing resources to support the meetings of these stakeholders. A subset of these resources will include the Governing Board's charge to the framework panels as well as documents used to inform the Board's development of the charge. 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 as the *Development Panel* to develop an updated framework. This panel will also develop the recommended updates to the Test and Item Specifications, as well as the Contextual Variables.

The ADC monitors 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, as well as review by the Board's Committee on Standards, Design and Methodology. This feedback will allow the Development Panel to address concerns and finalize the draft framework, specifications, and contextual variables for the ADC's final review and Board action. The adopted framework, specifications, and contextual variables are given to NCES to begin assessment development, piloting, and finally administration of the operational assessment based on the new framework.

LONG-TERM TREND CONTENT DESCRIPTIONS: NEXT STEPS

March 2018 Executive Committee deliberations on the NAEP Long Term Trend (LTT) assessment called on ADC to lead development of content descriptions of the LTT assessments. These descriptions will support LTT item development, as well as updates to the Governing Board LTT policy and improved explanations of LTT assessment goals.

In March, the ADC also discussed initial ideas for this work, and expressed interest in making this prospective documentation as useful as possible for LTT deliberations and other efforts to provide more information about the knowledge and skills demonstrated by lower performing students on NAEP. The ADC requested updates from staff, regarding recommended plans to develop these content descriptions.

Since March 2018, Governing Board staff has obtained a resource from NCES capturing previous research to list measurement objectives of the LTT assessment in mathematics. This resource can serve as the foundation for a comprehensive description of LTT Mathematics. It is yet to be determined whether a similar resource exists for LTT Reading. After confirming these baseline documents, Board staff will work with the Human Resources Research Organization (HumRRO), as the Board's current contractor for Technical Support Services. In partnering with HumRRO for this effort, experts can be engaged to ensure consistency in terminology used for measurement objectives over time, for example. This would be part of the process to formalize the content descriptions for Board deliberations and eventual publication.

NCES Sponsored NAEP Mathematics and Reading Comparisons Studies

NAEP and the Common Core State Standards - Mathematics

The NAEP Validity Studies Panel is conducting a series of three studies comparing the content of the NAEP Mathematics Assessment and the Common Core State Standards – Mathematics (CCSS-M). The first study compares the NAEP mathematics framework and the CCSS-M. The second study compares the items in the 2015 NAEP item pool and the CCSS-M. The third study compares 2017 NAEP items with items in assessments built specifically to align with the CCSS-M. Two studies have been completed and the final study reports can be found at the links provided below. The third study is in process with an expected completion target of Spring 2019.

The Alignment Between the NAEP Mathematics Framework and the CCSS for Mathematics

Study of the Alignment of the 2015 NAEP Mathematics Items at Grades 4 and 8 to the Common Core State Standards (CCSS) for Mathematics

NAEP and the Common Core State Standards - English Language Arts

The NAEP Validity Studies Panel is conducting a pair of studies comparing the content of the NAEP Reading and Writing Assessments and the Common Core State Standards – English Language Arts (CCSS-ELA). The first study compares the NAEP Reading and Writing Frameworks and the CCSS-ELA. The second study compares the NAEP reading items and writing tasks with the items in assessments built specifically to align with the CCSS-ELA. The first study has been completed and the final report can be found at the link provided below. The second study is in process with an expected completion target of Spring 2019.

A Study of NAEP Reading and Writing Frameworks and Assessments in Relation to the Common Core State Standards in English Language Arts

NAEP and International Comparisons Studies - Mathematics

A Comparison Study of the Program for International Student Assessment (PISA) 2012 and the National Assessment of Educational Progress (NAEP) 2013

This study compares the mathematics frameworks and item pools used in the National Assessment of Educational Progress (NAEP) with the Program for International Student Assessment (PISA) and vice versa. Differences in item features between the two assessments are also described. The working paper is available here.

A Comparison of the 2011 Grade 8 NAEP and TIMSS Mathematics and Science Frameworks

This study compares the similarities and differences in the content and cognitive dimensions of the 2011 NAEP Mathematics and the 2011 TIMSS Mathematics frameworks at grade 8. The study was conducted as one of the activities associated with the 2011 NAEP TIMSS Linking Study. The full report is available here.

A Comparison of the 2011 Trends in International Mathematics and Science Study (TIMSS) and the 2011 National Assessment of Educational Progress (NAEP Framework)

This paper reports the results of two expert panels that examined the similarities and differences between the Trends in International Mathematics and Science Study (TIMSS) and the National Assessment of Educational Progress (NAEP) by classifying TIMSS 2011 grade 4 and 8 mathematics and science items to the NAEP 2011 Mathematics and Science Frameworks. The full report is available here.

NAEP and International Comparison Study - Reading

Comparison of the PISA 2009 and NAEP 2009 Reading Assessment

This paper provides a summary of the similarities and differences between PISA 2009 and the NAEP 2009 Reading Assessment including a high-level comparison of the frameworks and assessment features. The paper is available here.

NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

Assessment Development Committee
Item Review Schedule
April 2018 – December 2018
Updated June 26, 2018

Review Package to Board	Board Comments to NCES	Survey/ Cognitive	Review Task	Approx. Number Items	Status
6/6/2018	6/27/2018	Survey	2022 Civics, Geography, U.S. History (8, 12) and Economics (12) Existing Pool Review	165	
6/13/2018	7/2/2018	Cognitive	2021 Reading (4, 8) Pilot (DI)	120	
7/12/2018	7/31/2018	Cognitive	2021 Reading (4, 8) Pilot (SBT)	4 tasks	
7/18/2018	8/10/18	Cognitive	2019 Mathematics (12) Operational (DI)	5-10	
7/18/2018	8/10/18	Cognitive	2019 Reading (12) Operational (DI)	22	
7/18/2018	8/10/18	Cognitive	2019 Reading (12) Operational (SBT)	1 task	
7/18/2018	8/10/2018	Survey	2021 Writing (4, 8, 12) Pilot	70-90	
7/19/2018	8/10/2018	Cognitive	2021 Writing (4, 8) Pilot (DI)	18	
7/25/2018	8/10/18	Cognitive	2019 Science (4, 8, 12) Operational (DI)	10	
7/25/2018	8/10/18	Cognitive	2019 Science (4, 8, 12) Operational (ICTs and hHOTs)	5 ICTs 2 hHOTs	
8/10/2018	8/31/2018	Survey	2022 TEL (8) Existing Pool Review*	129	
TBD Fall 2018	TBD Fall 2018	Cognitive	2022 TEL (8 & 12) Pilot Concept Sketches	TBD	

NOTE: "SBT" indicates Scenario-Based Task
"DI" indicates Discrete Item.