

## **Update on the 2028 NAEP Science Assessment Framework Recommendations**

### *Background*

The current update of the 2028 NAEP Science Assessment Framework underway is the first conducted under the Board's revised policy for [Assessment Framework Development](#). During the May 2022 quarterly meeting, the Board unanimously adopted a [charge](#) to the Steering and Development Panels, describing key issues and initial guidance for the framework update.

The role of the Steering Panel is to formulate high-level guidance about the state of the field and how to implement the Board charge; the role of the Development Panel is to develop the content of the framework and specifications documents. The Development Panel engages in detailed deliberations about how issues outlined in the Board charge and Steering Panel discussions should be reflected in a recommended framework. Board policy specifies that the Steering Panel should include 30 members, of which 20 members continue as the Development Panel.

In accordance with the new policy, the Board conducted an open call for panelist nominations between June 13 - July 15 with support from Widmeyer/Finn Partners, the Board's Science Framework Strategic Communications contractor. Extensive and targeted outreach was conducted to hundreds of stakeholder groups and individuals representing education, policy, industry, assessment, research and other science-related areas. The recruitment resulted in 120 applications.

The Board policy charges the Assessment Development Committee (ADC) with recommending a slate of panelists for approval by the Executive Committee. The process and criteria for assembling a slate of Steering and Development Panel members that balanced and optimized many different factors was discussed during the August ADC meeting, and Board staff and contractors provided support to ADC to finalize their recommendation of panelists to put forward to the Executive Committee in late August. The Board evaluated applications with the goal of constructing a balanced panel of stakeholders with diverse perspectives on issues relevant to the Board charge.

The following factors were prioritized in constructing a balanced panel: individuals specifically nominated to represent a national organization, given the critical need to engage various constituencies; panelist role; experience and expertise overall and the specific sub-content areas covered by the framework; demographic characteristics, including race, gender, and geography; previous experience with and stance on the Next Generation Science Standards (NGSS), including both NGSS developers and critics, and practitioners in states that have adopted NGSS standards, NGSS-alike standards, and non-NGSS standards; and diverse perspectives on issues relevant to the Board charge. The Executive Committee met by webinar on August 29 and unanimously approved the proposed slate of panelists and alternates put forward by ADC. All 30 invited panelists agreed to participate on the Development and/or Steering Panels.

In July 2022, the Board awarded contract number 91995922C0001 to WestEd (as the result of a competitive bidding process) to carry out the process of recommending updates to the current NAEP Science Assessment Framework. The Project Management Team consists of Mark

Loveland, Taunya Nesin, Steve Schneider, Marianne Perie, and Megan Schneider. As project director, Mark Loveland provides day-to-day leadership, guidance, and liaising with the Governing Board. Project Director, Mark Loveland, and Science Content Lead, Taunya Nesin, have oversight for all programmatic activities. Steve Schneider serves as a senior advisor to project activities. A panel leadership team of four work with WestEd and Board staff to plan meetings, facilitate panel discussions, and represent the panel's work to the Governing Board. Together, they and Dr. Nesin are leading the Steering and Development Panel activities, and Dr. Nesin also coordinates the Educator Advisory Committee (EAC). Measurement Lead, Dr. Perie, coordinates the Technical Advisory Committee (TAC). Ms. Schneider serves as Project Manager, documenting all project activities. In addition to the project leaders, the broader project team includes additional science subject matter experts, members of the science measurement team, project coordinators, and research assistants. Additional information about the project team and participants in the framework update can be found at: [www.naepframeworkupdate.org](http://www.naepframeworkupdate.org).

The Board policy does not include any explicit guidance on the panel leadership structure, but previous NAEP framework panels have typically had a chair or two co-chairs. Board staff proposed, and ADC agreed, that the 2028 NAEP Science Framework Panels would not have a single individual designated as chair; instead 4 members of the Development Panel serve as a panel leadership team. The rationale for this change is to ensure that a variety of backgrounds and diverse views be represented in the panel leadership; achieving balance on multiple factors is much more difficult when a single individual is designated as the panel leader. Members of the panel leadership team will share responsibility for facilitating panel meetings, working towards panel consensus, and presenting to the Board. The four members of the panel leadership team are: Aneesha Badrinarayan, Jenny Christian, Nancy Hopkins-Evans, and Joseph Krajcik. They presented the initial Steering Panel recommendations to the Board during the November quarterly Board meeting.

#### *Development of Recommendations to Update the 2028 NAEP Science Assessment Framework*

On October 17-18, all 30 members of the Steering Panel met (in Washington, DC with a few panelists participating virtually via zoom) to begin the process of recommending updates to the framework. ADC Chair Patrick Kelly delivered the Board charge, and Assistant Director for Assessment Development Sharyn Rosenberg provided other parameters and guidance in accordance with Board policies and the NAEP legislation. National Center for Education Statistics (NCES) Item Development Lead Nadia McLaughlin presented information about the current NAEP science assessment. WestEd staff presented background information and facilitated the meeting, which included several opportunities for panelists to discuss substantive issues both in small groups and as a full group. Panelists generated several initial recommendations and identified areas for further discussion and resolution by the Development Panel. A summary of the initial recommendations was presented to the Board during the November quarterly meeting.

All 20 members of the Development Panel met in person in Washington, DC on December 12-13, and January 26-27. In addition, several webinars are scheduled to take place between November 2022 and March 2023. Panel members worked in small groups between meetings to generate content for feedback from the full panel, to be discussed and deliberated by the larger group. Members of the Technical Advisory Committee and Educator Advisory Committee take turns attending panel meetings and listening and contributing to the discussions. Key takeaways from the TAC and EAC meetings are communicated back to the panel.

One important change from previous framework updates is that the panelists are tasked with focusing primarily on developing a substantive outline of the framework (what is to be assessed and how). Project staff/consultants will take the lead on writing the background and rationale for the assessment framework recommendations, which is then reviewed and edited by panel members. In previous framework updates, panelists spent considerable time drafting and revising the narrative copy. The substantive outline will serve as the basis for public comment. Conducting public comment earlier in the process is intended to make it easier to incorporate feedback, compared to waiting until there is a near final document of narrative text.

Panelists are working to finalize recommendations to put forth during the formal public comment period, which is scheduled to take place from March 13 – April 17. Board and WestEd staff continue to work with strategic communications contractor Widmeyer/FINN Partners to identify opportunities for ongoing engagement with individuals and organizations not represented on the panels, including but not limited to the official public comment period.

### *Next Steps*

During the plenary session on March 3, two members of the Panel Leadership Team, Aneesha Badrinarayan and Nancy Hopkins-Evans, along with Development Panel member Tiffany Neill, will brief the Board on the panel recommendations to be put forward for public comment (their biographies are included in this attachment). ADC Vice Chair Christine Cunningham will provide some brief background on the framework process and plans for conducting the public comment.

Initial feedback from public comment will be discussed with the Board at the May 2023 quarterly meeting, and revisions (along with the development of additional narrative text) will be produced for discussion at the August 2023 quarterly meeting. The goal is for the Board to take action on the final framework at the November 2023 quarterly meeting.

## Speaker Biographies



**Aneesha**

### **Aneesha Badrinarayan, Panel Leadership Team Director of State Performance Assessment Initiatives Learning Policy Institute**

Aneesha Badrinarayan leads projects related to state performance assessments. For the last decade, her work has focused on supporting states, districts, and educators to develop and implement student-centered systems of assessment that support all learners.

Her passion for coherent and balanced systems of assessment stems from a commitment to high-quality teaching and learning for all and a deep interest in helping practitioners and leaders navigate their systems to achieve that vision. Prior to LPI, she was the Director for Special Initiatives at Achieve, a museum professional, and a neuroscientist. Her portfolio includes leading several multi-state teams of leaders and experts to redefine "alignment" in the era of new state standards; developing criteria for innovative large-scale and classroom assessments; providing professional learning and strategic guidance for state leaders; and conducting analyses of state, local, and expert efforts to design and implement performance assessments and systems of assessment in science.

Badrinarayan earned a M.S. in Neuroscience at the University of Michigan, where she served as a research fellow for the National Institute of Mental Health, and a B.A. in biology from Cornell University.



**Nancy**

### **Dr. Nancy Hopkins-Evans, Panel Leadership Team Associate Director for Program Impact BSCS Science Learning**

Nancy Hopkins-Evans is the Associate Director for Program Impact at BSCS Science Learning. As a former college chemistry professor, she understands and cares deeply about students having exceptional learning experiences in science that leverage their communities and cultures while building conceptual understanding as they figure out science ideas instead of learning about science through memorization of facts and theories. She has worked in large and small school systems developing and implementing curriculum, professional learning and assessment aligned to state standards, the common core state standards, and the Next Generation Science Standards. She presents at conferences and leads professional learning for teachers, principals, directors, and superintendents focused on experiences and activities that support effective teaching and learning for ALL students particularly those from under-served and under-estimated communities. She recently served on a National Academies of Sciences, Engineering and Medicine committee to develop the consensus study report entitled, Call to Action for Science Education, Building Opportunity for the Future. She holds degrees in chemistry from Chestnut Hill College and Villanova University and earned a Ph.D. in biological chemistry from the University of Michigan.

## Speaker Biographies



**Tiffany**

**Dr. Tiffany Neill, Development Panel Member  
Deputy Superintendent of Curriculum and Instruction  
Oklahoma State Department of Education**

Tiffany Neill is the Deputy Superintendent of Curriculum and Instruction for the Oklahoma State Board of Education and the past president for the Council of State Science Supervisors. She is a member of the National Science Foundation STEM Advisory Panel. She also served as co-principal investigator for Advancing Coherent and Equitable Systems of Science for 7 years. Prior to her current role, Neill served as the executive director of curriculum and instruction for 3 years and as the director of science and engineering education for 5 years at the Oklahoma State Department of Education. She began her career in education as a middle and high school science teacher. She has served on National Academies of Sciences, Engineering, and Medicine committees authoring the reports: Changing Expectations for the K–12 Teacher Workforce: Policies, Preservice Education, Professional Development, and the Workplace (2020), Science and Engineering in Preschool Through Elementary Grades: The Brilliance of Children and Strengths of Educators (2022) and Call to Action for Science Education: Building Opportunity for the Future (2022). Neill recently completed a Ph.D. in instructional leadership and academic curriculum in science education at the University of Oklahoma.