

## **Recommendations from the 2028 NAEP Science Assessment Framework Steering Panel**

### *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 and engage 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 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 Steve Schneider, Mark Loveland, Taunya Nesin, Marianne Perie, and Megan Schneider. As project director, Steve Schneider provides day-to-day leadership, guidance, and liaising with the

Governing Board. Project co-director, Mark Loveland, and Science Content Lead, Taunya Nesin, have oversight for all programmatic activities. A panel leadership team of four will 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 will lead the Steering and Development Panel activities, and Dr. Nesin will also coordinate the Educator Advisory Committee (EAC). Measurement Lead, Dr. Perie, will coordinate the Technical Advisory Committee (TAC). Ms. Schneider will serve 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 frameworks have typically had a chair or two co-chairs of the panels. Board staff proposed and ADC agreed that the 2028 NAEP Science Framework Panels would not have a single individual designated as chair; instead 3-5 members of the Development Panel would 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. Their biographies are included at the end of this attachment.

### *Science Assessment Framework Steering Panel Meeting*

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 additional 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. Written documentation of the Steering Panel meeting is still under development, but key takeaways will be shared in a presentation to the Board during the November 18 plenary session.

### *Next Steps*

One important change from previous framework updates is that the panelists will focus primarily on developing a substantive outline of the framework (what is to be assessed and how), and project staff will take the lead on writing the background and rationale for the assessment framework recommendations (to be reviewed and edited by panel members). In previous framework updates, panelists spent considerable time drafting and revising the narrative copy.

The Development Panel is meeting via webinar on November 7 to begin working towards the substantive outline; additional work over the next several months will take place during in-person meetings in mid-December 2022 and late January 2023, and via webinars. The plan is to present draft recommendations to the Board during the March 2023 quarterly meeting. 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.

The primary public comment period will take place on the substantive outline, earlier in the process from previous framework updates, from late March through April 2023. 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 long narrative text. Feedback from public comment would be discussed with the Board at the May 2023 quarterly meeting, and revisions (along with the development of narrative text) would 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.

## 2028 NAEP Science Assessment Framework Panel Leadership Team



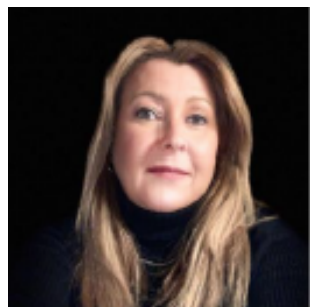
**Aneesha**

### **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.



**Jenny**

### **Ms. Jenny Christian, Panel Leadership Team STEM Director of Science and Wellness Council of the Great City Schools District Representative Dallas Independent School District**

Jenny Christian is the STEM Director of Science & Wellness in Dallas Independent School District. Dallas ISD comprises 384 square miles and encompasses 16 cities, including Dallas. The district is the second-largest public school district in the state, and the 14th-largest district in the nation. The school district serves approximately 160,000 students in pre-kindergarten through the 12th grade, in 227 schools, employing nearly 20,000 dedicated professionals.

Raised on the border of Mexico, Jenny has served in multiple teacher and administrative roles in seven school districts, over the past 27 years. She has her master's degree in Aerospace Studies from the Odegard School of Aerospace Sciences. She has served as a Space Science Consultant at Brooks City-Base in San Antonio, and as a Flight Director for the Challenger Space Center. She has also contributed as an active panel member on STEM education advisory councils for NASA's Network of States, the Girl Scouts, and the National Urban Wellness Coalition Steering Committee.

## 2028 NAEP Science Assessment Framework Update Panel Leadership Team



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.



Joe

### **Prof. Joseph Krajcik, Panel Leadership Team Lappan-Phillips Professor of Science Education Michigan State University College of Education**

Joseph Krajcik serves as director of the CREATE for STEM Institute and is the Lappan-Phillips Professor of Science Education and a University Distinguished Professor at Michigan State University. Throughout his career, Joe has collaborated with colleagues and science teachers to design and test project-based learning environments to improve teaching practices and to research student learning and engagement. Joe has also investigated the design of formative assessment to promote student learning and recently, he has explored the use of machine scoring to assess open-ended assessment tasks. Joe served as president NARST from which he received the Distinguished Contributions to Science Education Through Research Award in 2010. He served as lead writer for developing Physical Science Standards for the NGSS and the lead writer for the Physical Science Design team for the Framework for K-12 Science Education. In 2020, Joe was elected to the National Academy of Education and received the prestigious McGraw Prize for Innovation in Pre-K-12 Education and in 2021, the International Society for Design and Development in Education Prize for Excellence in Educational Design. He has published over 100 peer reviewed manuscripts and his book on Project-based Learning is in its fifth edition.