The background of the slide is a photograph of a green chalkboard. Two pieces of pink chalk are lying on the board, one standing upright and one lying horizontally. There are several white chalk markings on the board, including a large 'A' shape and some curved lines. The text is overlaid on this image.

Enhancing Science Instruction to Meet the Needs of English Learners in Grades 6-12

NSTA Pre-Conference
San Antonio, TX
April 10, 2013

Okhee Lee
New York University



Conference Topics

1. National Initiatives

- *Next Generation Science Standards*
- *Understanding Language Initiative*

3. District and Classroom Implementation

- *District policies and PD*
- *Instructional practices*

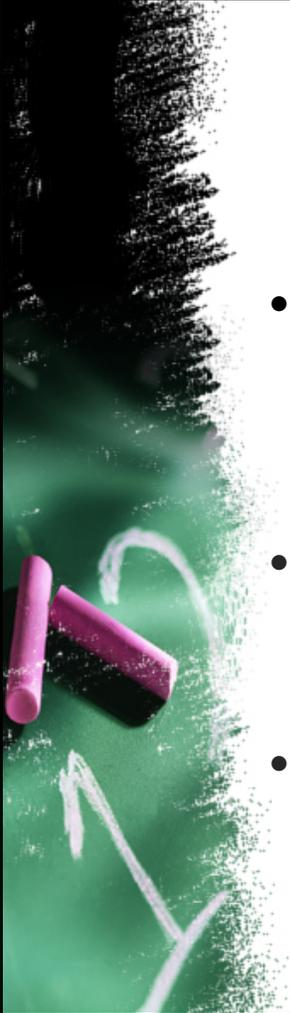
4. Funding

- National Science Foundation
- US Department of Education



National Context: Student Demographics

- 45% of the U.S. population under 19 years old are racial minorities (2010 U.S. Census)
- 22% of children live in poverty, the highest rate since the American Community Survey began in 2001 (2010 U.S. Census)
- 48% of students were eligible for free or reduced price lunch in 2010 (National Center for Education Statistics)



National Context: Educational Policies

- Common Core State Standards (CCSS) for English Language Arts and Math – 45 states and 3 territories including D.C. choosing common standards
- Comprehensive Assessment Consortia (PARCC and Smarter Balanced) to measure CCSS
- Next Generation Science Standards (NGSS)



Next Generation Science Standards (NGSS)

Understanding Language Initiative

- Engage in a healthy public dialogue around what the CCSS and NGSS imply for English language learners (ELLs)
- Develop exemplars of what CCSS and NGSS-aligned instruction looks like
- Develop a vibrant, inquisitive, engaging online community

<http://ell.stanford.edu>

Organization of Conference

Morning

- Stephen Pruitt – NGSS
- Helen Quinn – NGSS in Relation to ELLs

Lunch

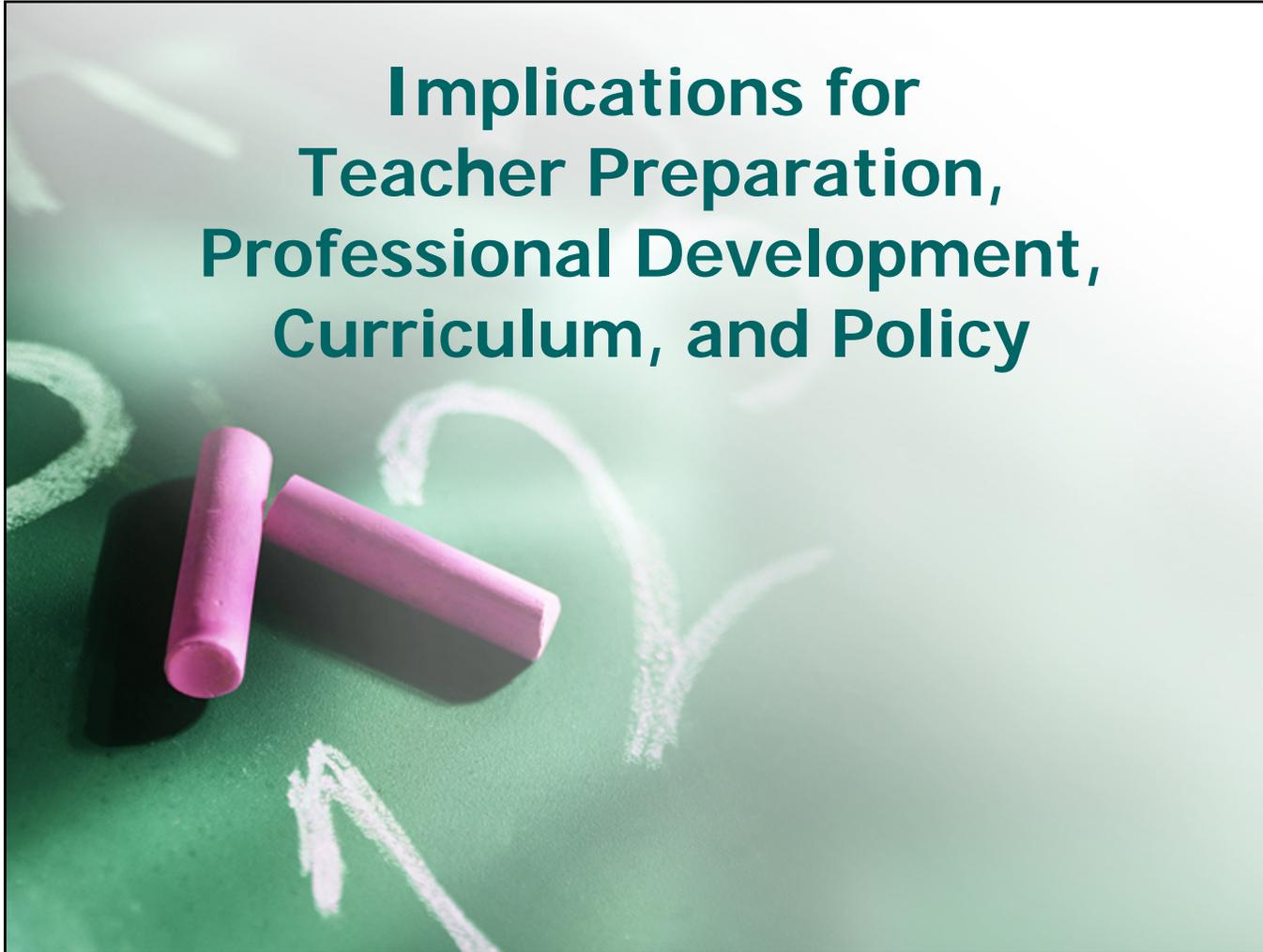
Afternoon

- Maria Santos – District Level Policies and PD
- Emily Miller – Instructional Practices
- Julio Lopez-Ferrao – NSF funding
- USDOE funding
- Okhee Lee – Implications and Q&A
- Joanne Urrutia – Closing

Enjoy the Conference!



**Implications for
Teacher Preparation,
Professional Development,
Curriculum, and Policy**



NGSS Diversity and Equity: “All Standards, All Students”

Task 1. Bias Reviews of Standards

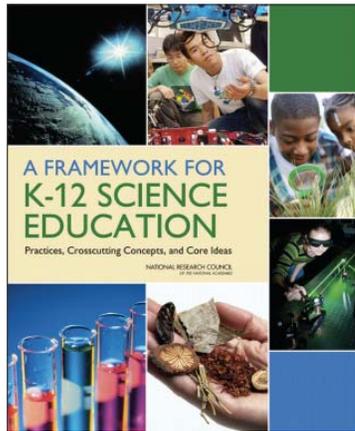
Task 2. Chapter (called “Appendix D)

Task 3. Seven Case Studies

Task 4. Diversity and Equity Theme in Appendices

NGSS: Work To Do

Completed



Completed



Work To Do

Assessment

Curricula

Instruction

Teacher Development

Policy

Understanding Language Initiative: Related Initiative through CCSSO



Framework for English Language Proficiency Development Standards corresponding to the Common Core State Standards and the Next Generation Science Standards

Developed by the Council of Chief State School Officers and the English Language Proficiency Development Framework Committee in collaboration with the Council of Great City Schools, the Understanding Language Initiative at Stanford University, and World-Class Instructional Design and Assessment I, with funding support from the Carnegie Corporation of New York.



Considerations for Next Steps

- **High academic standards, to be followed by resources and opportunities for all students**
- **NGSS Diversity and Equity**
 - State adoption
 - State implementation addressing diversity and equity
 - Implications for Common Core for ELA and math
- **Understanding Language Initiative**
 - English language proficiency/development standards aligned with CCSS and NGSS (e.g., ELPD Framework by CCSSO)
 - Implications for other diverse student groups
- **Collaboration among content and diversity educators**





Considerations for Next Steps

- Publisher's guidelines or criteria for curricular or instructional materials
- Teacher preparation and professional development
- Knowledge gained from the research literature (e.g., NRC documents including Science Framework)
- Funding (e.g., NSF, USDOE, private foundations such as Carnegie Foundation of New York and Gates Foundation)

Thank you!

