



# Maryland and the NGSS Adoption & Implementation Strategies

**“A Goal Without A Plan Is Just A Wish”**

*Maryland State Department of Education*

Division of Instruction

Office of Science

# Set Targets and Trajectories



# Maryland and the NGSS: Where are We?

**FINAL VERSION OF NEW SCIENCE STANDARDS RELEASED TO PUBLIC**

***MARYLAND HAS BEEN A LEAD STATE IN DRAFTING STRONGER STANDARDS FOR SCIENCE EDUCATION***

**BALTIMORE, MD (April 9, 2013)** – The final version of the Next Generation Science Standards (NGSS) is being released today, a new set of voluntary, rigorous, and internationally benchmarked standards for K-12 science education.

The standards can be found here: <http://www.nextgenscience.org/>

Maryland is one of 26 states and their broad-based teams that have worked together for nearly two years on the standards, with a 41-member writing team and partners. The goal has been to develop standards identifying science and engineering practices and content that all K-12 students should master in order to be fully prepared for college, careers and citizenship.



## Defining our aspiration

### Maryland's implementation plan

- ❖ is a living document that will change over time;
- ❖ will be used to help structure and guide more detailed planning, especially as many areas are still under transition (e.g., science assessment, teacher evaluation, accountability).

# MEETING OF THE MARYLAND STATE BOARD OF EDUCATION

Tuesday, April 23, 2013

*Nancy S. Grasmick State Education Building  
200 West Baltimore Street - 7<sup>th</sup> Floor Board Room  
Baltimore, Maryland 21201-2595*

## Information & Discussion

9:45 a.m.

### Next Generation Science Standards

DR. HENRY JOHNSON

DR. STEPHEN PRUITT

MARY M. THURLOW

- How to Read NGSS
- Executive Summary
- Conceptual Shifts in NGSS
- PowerPoint Presentation

# Presenting the NGSS



Achieve's Dr. Stephen Pruitt (left) discusses the Next Generation Science Standards, while Board member Dr. S. James Gates (right) asks questions



“These standards are meant for every student,” Dr. Pruitt said, adding, “These are a floor, not a ceiling.”

<http://media.msde.state.md.us/2013/BOARD/04/APRIL.mov>  
<http://media.msde.state.md.us/2013/BOARD/04/APRIL.wmv>

“With the State of Maryland playing the role of one of the lead states in the adoption of the Next Generation Science Standards, we are poised to place the already considerable achievement of the state on a path toward excellence as measured on an international scale,” Dr. Gates said.

# Identify Goals, Strategies & Resources



- Designate a strategic leadership team
- Draft a Vision Statement
- Develop an preliminary timeline
- Develop appropriate resources
- Engage critical stakeholders

**A Metric and Target will be Developed for Each Goal**

# Maryland's Vision For Adoption and Implementation of NGSS

## *DRAFT Vision Statement :*

The ever-changing world of the 21<sup>st</sup> century demands increased proficiency in science, technology, engineering, and mathematics (STEM) for all. Maryland's vision is to continue to be an international leader in science literacy and STEM education and to produce a college- and career-ready citizenry. Implementation of the *Next Generation Science Standards* will ensure that all Maryland students have the essential knowledge and understanding of science and engineering necessary to engage in public discussions on science-related issues, to be critical consumers of scientific information related to their everyday lives, and to become lifelong learners and global leaders.



## *Maryland's Key Messages*

**Maryland's plan for the implementation of the NGSS will ensure that:**

- All students are science literate.
- All students are college- and career-ready.
- All students recognize that current scientific understanding of the world is the result of thousands of years of creative human endeavor.
- PreK -12 science instruction is rigorous and of the highest quality.
- Professional development focuses on improving student achievement and teacher pedagogical content knowledge.
- Instruction supports the Governor's initiatives and Maryland's goal of becoming an international leader in science literacy and STEM education.
- Partnerships are established among institutes of higher education, various agencies, and the business community.

# Determining the State's Role and Approach to Implementation



Preliminary Implementation Timeline

# Maryland's Preliminary Timeline for Implementation of NGSS

## Preliminary Timeline for NGSS Implementation Facilitated by MSDE

Critical Elements and Action Steps	Timeline				
	2013-14	2014-15	2015-16	2016-17	2017-18
Develop a PreK-12 scope and sequence/course guidelines that align and support implementation of NGSS	→				
Research appropriate high school science course sequences	→				
Provide instructional models consistent with NGSS Performance Expectations	→				
Provide technical assistance with implementation in the LEAs.	→				
Full PreK-12 Implementation <ul style="list-style-type: none"> <li>All NGSS scope and sequence in place in all school systems</li> <li>Local curricular documents aligned to state documents (and NGSS)</li> </ul>					→

# Maryland Stakeholders



**Develop a cadre of stakeholders and  
an engagement strategy**

# Critical Maryland Stakeholders

- ✓ **Students**
- ✓ Teachers, teachers unions, and professional associations of science teachers;
- ✓ Parents and parent associations; school counselors; school administrators and their professional associations
- ✓ LEA Superintendents, Assistant Superintendents, and curriculum staff
- ✓ Maryland State Board of Education members
- ✓ State legislators, particularly chairs of education committees and appropriators; and Governor, including education policy advisers
- ✓ State science supervisors; State leadership teams
- ✓ Public and private institutions of higher education, particularly schools of education
- ✓ Informal science education providers
- ✓ Civil rights organizations, philanthropic organizations and other third-party advocacy groups
- ✓ Business community (e.g., chambers of commerce, local STEM industry leaders); STEM organizations and networks
- ✓ Workforce development organizations and agencies
- ✓ Scientific community

# Maryland and the NGSS: Where are We Going?

Develop a qualitative rubric that asks rigorous questions about the stages of implementation to determine the likelihood of success of a given component:

- Determine the Biggest NGSS Shifts for Maryland
- Identify the ideal role for MSDE, revisit the kind of role the state has historically played vis-à-vis local education agencies
- Capacity-building
- Coordination
- Funding
- Monitoring