

MARYLAND REGISTER

Proposed Action on Regulations

Transmittal Sheet PROPOSED OR REPROPOSED Actions on Regulations	Date Filed with AELR Committee	TO BE COMPLETED BY DSD
	09/05/2014	Date Filed with Division of State Documents
		Document Number
		Date of Publication in MD Register

1. Desired date of publication in Maryland Register: 10/17/2014

2. COMAR Codification

Title Subtitle Chapter Regulation

13A 04 09 01

3. Name of Promulgating Authority

Maryland State Department of Education

4. Name of Regulations Coordinator

Charlene L Necessary

Telephone Number

410-767-0467

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200 W. Baltimore Street

City State Zip Code
Baltimore MD 21201

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5. Name of Person to Call About this Document

Judy Jenkins

Telephone No.

410-767-0348

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judith.jenkins@maryland.gov

6. Check applicable items:

- New Regulations
- Amendments to Existing Regulations
 - Date when existing text was downloaded from COMAR online: 07/01/14.
- Repeal of Existing Regulations
- Recodification
- Incorporation by Reference of Documents Requiring DSD Approval
- Reproposal of Substantively Different Text:

: Md. R
 (vol.) (issue) (page nos) (date)

Under Maryland Register docket no.: --P.

7. Is there emergency text which is identical to this proposal:

- Yes No

8. Incorporation by Reference

Check if applicable: Incorporation by Reference (IBR) approval form(s) attached and 18 copies of documents proposed for incorporation submitted to DSD. (Submit 18 paper copies of IBR document to DSD and one copy to AELR.)

9. Public Body - Open Meeting

OPTIONAL - If promulgating authority is a public body, check to include a sentence in the Notice of Proposed Action that proposed action was considered at an open meeting held pursuant to State Government Article, §10-506(c), Annotated Code of Maryland.

OPTIONAL - If promulgating authority is a public body, check to include a paragraph that final action will be considered at an open meeting.

10. Children's Environmental Health and Protection

Check if the system should send a copy of the proposal to the Children's Environmental Health and Protection Advisory Council.

11. Certificate of Authorized Officer

I certify that the attached document is in compliance with the Administrative Procedure Act. I also certify that the attached text has been approved for legality by Elizabeth M. Kameen, Assistant Attorney General, (telephone #410-576-6465) on September 5, 2014. A written copy of the approval is on file at this agency.

Name of Authorized Officer

Charlene L. Necessary

Title

Regulations Coordinator

Telephone No.

410-767-0467

Date

September 5, 2014

Title 13A
A STATE BOARD OF EDUCATION

Subtitle 04 SPECIFIC SUBJECTS

13A.04.09 Program in Science

Authority: Education Article, §2-205(h), Annotated Code of Maryland

Notice of Proposed Action

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The Maryland State Board of Education proposes to amend Regulation .01 under COMAR 13A.04.09 Program in Science.

This action was considered at the Maryland State Board of Education meeting on August 26, 2014.

Statement of Purpose

The purpose of this action is to align regulations with the Maryland College- and Career-Ready Standards Next General Science Standards.

Comparison to Federal Standards

There is no corresponding federal standard to this proposed action.

Estimate of Economic Impact

I. Summary of Economic Impact.

Curriculum development and curriculum resources aligned to the new standards will need to be developed by local school systems and the Maryland State Department of Education. The curriculum team at the Maryland State Department of Education will incorporate this into their current work. New science assessments for grades 5, 8, and the High School Assessments will need to be developed when the science standards are fully implemented in 2017-2018.

II. Types of Economic Impact.	Revenue (R+/R-)	Magnitude
	Expenditure (E+/E-)	
A. On issuing agency:	(E+)	11.5 million
B. On other State agencies:	NONE	
C. On local governments:		
Local School Systems	NONE	NONE

Benefit (+) Cost (-)	Magnitude
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D. On regulated industries or trade groups: NONE

E. On other industries or trade groups: NONE

F. Direct and indirect effects on public: NONE

III. Assumptions. (Identified by Impact Letter and Number from Section II.)

A. Assessments:

\$4 million/year for MSA, grades 5 and 8

\$7.5 million/year for HSA Biology

C. Local school systems will update their curriculum documents and resources using the same procedures as they have used with other curriculum updates.

Economic Impact on Small Businesses

The proposed action has minimal or no economic impact on small businesses.

Impact on Individuals with Disabilities

The proposed action has no impact on individuals with disabilities.

Opportunity for Public Comment

Comments may be sent to Judy Jenkins, Director of Curriculum, Maryland State Department of Education, Division of Curriculum, Assessment and Accountability, 200 West Baltimore Street, Baltimore, Maryland 21201, or call 410-767-0348 TTY: 410-333-6442, or email to judith.jenkins@maryland.gov, or fax to 410-333-2369.

Comments will be accepted through November 17, 2014. A public hearing has not been scheduled.

Open Meeting

Final action on the proposal will be considered by the Maryland State Board of Education during a public meeting to be held on December 16, 2014, 9:00 a.m., at 200 West Baltimore Street, Baltimore, Maryland 21201.

Economic Impact Statement Part C

A. Fiscal Year in which regulations will become effective: FY 2016

B. Does the budget for the fiscal year in which regulations become effective contain funds to implement the regulations?

No

C. If 'yes', state whether general, special (exact name), or federal funds will be used:

D. If 'no', identify the source(s) of funds necessary for implementation of these regulations:

Local funds will be needed to support local curriculum development; state funds will be necessary to develop new assessments aligned to the new science standards. These will replace the current Maryland School Assessment (MSA) for science in grades 5 and 8, and the high school assessment for biology.

E. If these regulations have no economic impact under Part A, indicate reason briefly:

F. If these regulations have minimal or no economic impact on small businesses under Part B, indicate the reason and attach small business worksheet.

G. Small Business Worksheet:

Attached Document:

Title 13A STATE BOARD OF EDUCATION

Subtitle 04 SPECIFIC SUBJECTS

Chapter 09 Program in Science

Authority: Education Article, §2-205(h), Annotated Code of Maryland

.01 Science Instructional Programs for Grades Prekindergarten — 12.

A. Each local school system shall:

(1)—(2) (text unchanged)

B. Maryland Science Program. The comprehensive instructional program shall provide for the diversity of student needs, abilities, and interests at the early, middle, and high school learning years, and shall include the [Maryland Science Content Standards] *Maryland College- and Career-Ready Next Generation Science Standards (NGSS)* set forth in §§C—[H] G of this regulation.

C. [Skills and Processes.] *Science and Engineering Practices*. Students shall demonstrate [the thinking and acting inherent in the practice of science] *an understanding by engaging in scientific investigation that requires not only skill but also knowledge that is specific to each practice*.

D. Earth/Space Science. Students shall [use scientific skills and processes to explain the chemical and physical interactions, that is, natural forces and cycles and transfer of energy, of the environment, Earth, and the universe that occur over time] *demonstrate an understanding of the processes that operate on Earth and address its place in the solar system and galaxy*.

E. Life Science including *Biology and Environmental Science*. Students shall [use scientific skills and processes to explain the dynamic nature of living things, their interactions, and the results from the interactions that occur over time] *demonstrate an understanding of the key concepts that make sense of the life sciences which focus on patterns, processes, and relationships of living organisms*.

F. [Chemistry] *Physical Science*. Students shall [use scientific skills and processes to explain the composition, structure, and interactions of matter in order to support the predictability of structure and energy transformations] *demonstrate an understanding that there are mechanisms of cause and effect in all systems and processes that can be understood through a common set of physical and chemical principles*.

G. [Physics] *Engineering, Technology, and Applications of Science*. Students shall [use scientific skills and processes to explain the interactions of matter and energy and the energy transformations that occur] *demonstrate an*

understanding by engaging in solving complex problems that include issues of social and global significance with an emphasis on identifying the best solution to a problem, which often involves researching how others have solved it before in complex problems.

[H. Environmental Science. Students shall use scientific skills and processes to explain the interactions of environmental factors, living and nonliving, and analyze their impact from a local to a global perspective.]

[I.] *H. Curriculum Documents.* Consistent with Education Article, §4-110, Annotated Code of Maryland, each local system shall provide science curriculum documents for the elementary and secondary schools under its jurisdiction that:

(1) Include the [content standards] *Maryland College- and Career-Ready Next Generation Science Standards (NGSS)* set forth in §§C—[H] *G* of this regulation; and

(2) Are aligned with the [State Curriculum] *Maryland College- and Career-Ready Next Generation Science Standards (NGSS)*, as developed by the Maryland State Department of Education in collaboration with local school systems.

[J.] *I. Student Participation.* Each student shall [have the opportunity to] participate in the comprehensive science program required by this chapter.

LILLIAN M. LOWERY, Ed.D.
State Superintendent of Schools