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**TO:** Members of the State Board of Education

**FROM:** Nancy S. Grasmick *Nancy*

**DATE:** October 27, 2009

**SUBJECT:** COMAR 13A.03.02.04 (AMEND)  
Graduation Requirements  
**PERMISSION TO PUBLISH**

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**PURPOSE:**

To request permission to publish a revision to existing regulation .04 Credit Requirements under COMAR 13A.03 Graduation Requirements.

**BACKGROUND:**

In January, 2008, Executive Order 01.01.2008.06 established the Maryland Partnership for Children in Nature. The Partnership called for the development of a state Environmental Literacy Plan, including the goal of providing a course of study that leads all students to graduate as environmentally literate citizens. An “environmentally literate student” was defined as “one that possesses the knowledge, intellectual skills, attitudes, experiences and motivation to make and act upon responsible environmental decisions as individuals and as members of their community”.

Currently, students must earn three (3) science credits in order to graduate from a Maryland high school. The current language recognizes earth, life and physical sciences. Environmental science, a relatively new field that evolved after the establishment of these graduation requirements, is not recognized in the state regulation. This amendment updates the regulation to add environmental science to the list of science credits acceptable for graduation.

Basic environmental science concepts are addressed in Maryland’s State Curriculum as Goal 6 of the science curriculum in Grades 3-8. Most school systems offer environmental science and/or Advanced Placement Environmental Science as electives in high school. The addition of environmental science to the list of accepted courses of study aligns the high school graduation requirements with current practice.

**EXECUTIVE SUMMARY:**

The proposed amendment to COMAR regulations is designed to update current science graduation requirements to include environmental science as an option for a science credit.



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**ACTION:**

Request permission to publish the proposed amendment COMAR 13A.03.02.04 in the Maryland Register.

**Attachments:**

**Proposed change for Science Graduation Requirements: COMAR 13A.03.02.04  
Maryland Graduation Requirements**

## Proposed COMAR Change for Science Graduation Requirement

### GENERAL INSTRUCTIONAL PROGRAMS 13A.03.02.04

#### **.04 Credit Requirements.**

A. To be awarded a diploma, a student shall be enrolled in a Maryland public school system and shall have earned a minimum of 21 credits that include the following specified core credits:

(1) English—four credits of organized instruction in listening and speaking, reading and literature, and written composition and use of language, of which one credit shall be aligned with the Maryland High School Assessment for English;

(2) Fine arts—one credit in visual arts, music, theater, or dance, or a combination of these;

(3) Mathematics—three credits, including one with instruction in algebra aligned with the Maryland High School Assessment for algebra/data analysis or one or more credits in subsequent mathematics courses for which Algebra I is a prerequisite, and one with instruction in geometry aligned with the content standards for geometry;

(4) Physical education—one-half credit;

(5) Health education—one-half credit;

(6) Science—three credits of which one shall be in biology aligned with the Maryland High School Assessment for biology and two from the earth, life, environmental science; or physical sciences, or all of the above, in which laboratory experiences are an integral component;

(7) Social studies—three credits including one credit in United States history, one credit in world history, and one credit in local, State, and national government aligned with the Maryland High School Assessment for government;

(8) Technology education—one credit that includes the application of knowledge, tools, and skills to solve practical problems and extend human capabilities; and

(9) Earn one of the following:

(a) Two credits of foreign language or two credits of American Sign Language;

(b) Two credits of advanced technology education; or

(c) Successfully complete a State-approved career and technology program.

B. Elective programs and instruction shall be developed at the discretion of the local school system, open to enrollment for all students, and shall focus on in-depth study in required subject areas, exploration, or application and integration of what has been learned.



## MARYLAND HIGH SCHOOL GRADUATION REQUIREMENTS

To be awarded a diploma, a student shall be enrolled in a Maryland public school system and have earned a minimum of **21** credits that include the following:

Subject Area	Specific Credit Requirements	High School Assessments
English	<b>4 credits</b>	<p>Students who entered grade 9 in the 2005-06 school year and later are required to <u>take and pass</u> the Maryland High School Assessments.</p> <p>Students who entered grade 9 in the 2004-05 school year and earlier are required to take the assessments but are not required to pass them.</p>
Mathematics	<b>3 credits</b> <ul style="list-style-type: none"> <li>• 1 in algebra/data analysis</li> <li>• 1 in geometry</li> <li>• 1 other</li> </ul>	
Science	<b>3 credits</b> <ul style="list-style-type: none"> <li>• 1 in biology</li> <li>• 2 that must include laboratory experience in any or all of the following areas: earth science, life science, physical science, <b>environmental science</b></li> </ul>	
Social Studies	<b>3 credits</b> <ul style="list-style-type: none"> <li>• 1 in U.S. history</li> <li>• 1 in world history</li> <li>• 1 in local, state, national, government</li> </ul>	
Fine Arts	<b>1 credit</b>	
Physical Education	<b>½ credit</b>	
Health	<b>½ credit</b>	
Technology Education	<b>1 credit</b>	
Other	<b>2 credits</b> of foreign language <b>or</b> <b>2 credits</b> in American Sign Language* <b>or</b> <b>2 credits</b> of advanced technology ed. <b>and</b> <b>3 credits</b> in electives  <b>or</b> <b>4 credits</b> by successfully completing a State-approved career & technology program <b>and</b> <b>1 credit</b> in an elective  *American Sign Language is an option beginning with students who graduate in 2008 and beyond.	

**Students must also meet attendance, service-learning, and all local school system requirements.**

# IMPACT STATEMENTS

*Part A*  
(check one option)

## Estimate of Economic Impact

X The proposed action has no economic impact.

or

The proposed action has an economic impact. Complete the following form in its entirety.

### I. Summary of Economic Impact.

### II. Types of Economic Impacts.

Revenue (R+/R-)  
Expenditure (E+/E-) Magnitude

A. On issuing agency:

B. On other State agencies:

C. On local governments:

Benefit (+)  
Cost (-) Magnitude

D. On regulated industries or trade groups:

E. On other industries or trade groups:

F. Direct and indirect effects on public:

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

**Part B**  
(check one option)

**Economic Impact on Small Businesses**

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

or

The proposed action has a meaningful economic impact on small businesses. An analysis of this economic impact follows.

**Impact on Individuals with Disabilities**  
(Check one option)

The proposed action has no impact on individuals with disabilities.

or

The proposed action has an impact on individuals with disabilities as follows:

*Part C*

**(For legislative use only; not for publication.)**

- A. Fiscal Year in which regulations will become effective: FY 2010
- B. Does the budget for fiscal year in which regulations become effective contain funds to implement the regulations?
- Yes  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:
- N/A
- 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.

**Comparison to Federal Standards**  
(Check one option)

**X** There is no corresponding federal standard to this proposed regulation.

or

There is a corresponding federal standard to this proposed regulation, but the proposed regulation is not more restrictive or stringent.

or

In compliance with Executive Order 01.01.1996.03, this proposed regulation is more restrictive or stringent than corresponding federal standards as follows:

- (1) Regulation citation and manner in which it is more restrictive than the applicable federal standard:
  
- (2) Benefit to the public health, safety or welfare, or the environment:
  
- (3) Analysis of additional burden or cost on the regulated person:
  
- (4) Justification for the need for more restrictive standards: