

**TESTIMONY PROVIDED TO:** House Education Committee

**FROM:** Dr. Amy Fowler, Deputy Agency of Education  
Ms. Pat Fitzsimmons, Proficiency-Based Learning Program Manager

**TOPIC:** Proficiency-Based Graduation Requirements

**DATE:** February 26, 2018

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### Overview

Under Act 77, the legislature required that schools in Vermont create “flexible pathways to graduation” that would enable students to earn “credit” for experiences that occurred in non-traditional learning environments. For example, a student spending a semester abroad in Brazil might earn Portuguese learning credit or a student interning in a medical lab running tests and communicating results might earn science and English/language arts learning credits. Proficiency based learning is the mechanism by which school systems recognize these anywhere-anytime learning experiences as contributing to requirements that lead to the conference of a diploma.

### Authority

In 16 V.S.A § 164, the legislature has conferred to the State Board of Education the authority to establish standards for the course of study (§ 906) and to set state-level graduation requirements if it is deemed advisable.

The Board of Education has determined through the [Vermont Education Quality Standards](#) (EQS) to establish a definition of state-level graduation requirements (2120.7) and to maintain the Vermont tradition of setting graduation requirements at the local level (2120.8). As a result, school systems differ in how they implement Act 77, EQS and proficiency-based graduation requirements.

Local school systems then develop curriculum and local graduation requirements that bring these policy decisions to life. Please see the appendix for examples.

### Agency Supports to Local School Systems

Upon adoption of Act 77 and EQS, the Agency has provided supports and technical assistance to school systems to support development of their proficiency-based graduation requirements.

1. **Professional Development**-In 2014-15, approximately 1/3 of all school systems participated in workshops to support planning for implementation. All discretionary professional development money has been used to support implementation of EQS and Act 77.
2. [Sample Graduation Proficiencies and Performance Indicators](#) The Agency crafted model Proficiency-Based Graduation Requirements (PBGRs) that school systems are free to adopt and

modify as needed. These sample graduation proficiencies are examples of a rigorous proficiency-based graduation framework that meets [Education Quality Standards requirements](#).

3. **Realignment of Agency Staff**- Utilizing existing positions and funding, the AOE re-organized so that EQS and Act 77 had dedicated staff to support implementation of these policy initiatives.
4. **[Proficiency-Based Graduation Requirements in Vermont High Schools](#)** AOE's Proficiency Based Learning team completed a report for the Board of Education to determine the status of proficiency-based graduation requirements (PBGRs) throughout Vermont high schools. This report provides data regarding where SUs/SDs are in the process of constructing PBGRs. Additionally, resources are included in the Appendices as evidence of work that is currently happening across Vermont.
5. **Proficiency-Based Grading Practices** (in development) –Over the last year, the AOE has been conferring with members of the field to identify and promulgate best practices in proficiency-based grading. This technical assistance document will be available in May 2018.

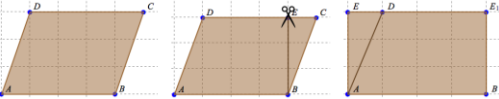
### **Typical Concerns Related to Proficiency-Based Learning**

The Agency regularly receives communication from school systems and constituents regarding concerns related to the implementation of proficiency-based learning.

1. **Insufficient Professional Development**- Members of the field are frequently seeking additional opportunities for training that exceed the time resources of school systems as well as the financial resources of the school systems and the Agency.
2. **Insufficient Communication with Stakeholders**- As school systems shift to proficiency-based learning, changes in assignments, learning experiences and grading occur. Local school systems find these transitions easier to manage with thorough communication and partnership with their communities.
3. **Disagreement with a School System's Approach**- In many cases, the constituent has received ample communication, but they disagree with their local Board's decision. It is unlikely that local Boards will make determinations that are universally praised. As with all locally determined decisions, this is a matter for citizens to raise through their elected Boards.
4. **Fears Regarding College Admission**- Parents and students worry that proficiency-based graduation will affect college admission. Much work has been done to assess this risk and the findings are that it is not an issue. Please see [White paper related to college admissions in a proficiency based system](#) and [New England Board of Higher Education position paper on proficiency based transcripts](#) for additional information.

Statute	State Board Rules- <a href="#">Vermont Education Quality Standards</a>
<p>16 V.S.A. § 906 Course of study</p> <p>(a) In public schools, approved and recognized independent schools, and in home study programs, learning experiences shall be provided for students in the minimum course of study.</p> <p>(b) For purposes of this title, the minimum course of study means learning experiences adapted to a student's age and ability in the fields of:</p> <p>(1) basic communication skills, including reading, writing, and the use of numbers;</p> <p>(2) citizenship, history, and government in Vermont and the United States;</p> <p>(3) physical education and comprehensive health education, including the effects of tobacco, alcoholic drinks, and drugs on the human system and on society;</p> <p>(4) English, American, and other literature;</p> <p>(5) the natural sciences; and</p> <p>(6) the fine arts.</p>	<p><b>2120.5. Curriculum Content.</b> Each supervisory union board shall ensure the written and delivered curriculum within their supervisory union is aligned with the standards approved by the State Board of Education. Each school shall enable students to engage annually in rigorous, relevant and comprehensive learning opportunities that allows them to demonstrate proficiency in</p> <ol style="list-style-type: none"> <li>a. literacy (including critical thinking, language, reading, speaking and listening, and writing);</li> <li>b. mathematical content and practices (including numbers, operations, and the concepts of algebra and geometry by the end of grade 10);</li> <li>c. scientific inquiry and content knowledge (including the concepts of life sciences, physical sciences, earth and space sciences and engineering design);</li> <li>d. global citizenship (including the concepts of civics, economics, geography, world language, cultural studies and history);</li> <li>e. physical education and health education as defined in 16 V.S.A. §131;</li> <li>f. artistic expression (including visual, media and performing arts); and</li> <li>g. transferable skills (including communication, collaboration, creativity, innovation, inquiry, problem solving and the use of technology).</li> </ol> <p>Each school shall provide students in grades K-8 with at least two physical education classes per week. Each school shall provide students in grades 9-12 with one and one-half years of physical education or the equivalent thereof. Each school shall offer options for students in grades K-12 to participate in at least 30 minutes of physical activity within or outside of the school day. Physical activity may include recess and movement built into the curriculum, but does not replace physical education classes.</p> <p>Each school shall provide appropriate learning opportunities to all students to support their attainment of the standards approved by the State Board of Education. As required in 16 V.S.A. §2902, each public school shall provide support for students who require additional assistance in order to succeed or be challenged in the general education environment.</p> <p>Each school shall provide comprehensive elementary and secondary health and physical education learning experiences, including the effects of tobacco, alcohol and drugs on the human system for all students in accordance with sections 16 V.S.A. §131 and §906(b)(3).</p> <p>Each school shall ensure students are able to access academic and experiential learning opportunities that reflect their emerging abilities, interests and aspirations, as outlined in the students' Personalized Learning Plans.</p>

Statute	State Board Rules- <a href="#">Vermont Education Quality Standards</a>
<p>16 V.S.A. § 164 State Board; general powers and duties</p> <p>The State Board shall evaluate education policy proposals, including timely evaluation of policies presented by the Governor and Secretary; engage local school board members and the broader education community; and establish and advance education policy for the State of Vermont. In addition to other specified duties, the Board shall:</p> <p>...</p> <p>(9) Implement and continually update standards for student performance in appropriate content areas and at appropriate intervals in the continuum from kindergarten to grade 12 and methods of assessment to determine attainment of the standards for student performance. The standards shall be rigorous, challenging, and designed to prepare students to participate in and contribute to the democratic process and to compete in the global marketplace. The standards shall include a standard for reading level proficiency for students completing grade three.</p> <p>...</p> <p>(11) If deemed advisable, determine educational standards for admission to and graduation from the public schools.</p> <p>...</p>	<p><b>2120.7.</b></p> <p><b>Graduation Requirements.</b> A student meets the requirements for graduation when the student demonstrates evidence of proficiency in the curriculum outlined in 2120.5, and completion of any other requirements specified by the local board of the school attended by the student,</p> <p><b>2120.8.</b> <b>Local Graduation Requirements.</b> Each secondary school board is responsible for setting graduation requirements in accordance with these rules.</p> <p>Local graduation policy must define proficiency-based graduation requirements based on standards adopted by the State Board of Education. As required in 16 V.S.A. §261a (a)(1), it is the responsibility of the supervisory union board to ensure alignment in expectations for all students within a supervisory union.</p> <p>Schools may or may not use credits for the purposes of demonstrating that a student has met the graduation requirements. When used, credits must specify the proficiencies demonstrated in order to attain a credit and shall not be based on time spent in learning. Further, students may receive credit for learning that takes place outside of the school, the school day, or the classroom. Any credits earned must occur under the supervision of an appropriately licensed educator.</p>

Subject	Sample Standards Adopted by Vermont State Board of Education	Possible Lessons to Meet Standards
Math	<p>6<sup>th</sup> Grade</p> <p>Solve real-world and mathematical problems involving area, surface area, and volume.  <u>CCSS.MATH.CONTENT.6.G.A.1</u></p> <p>Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>  <p><a href="#">3 Act Math</a> tasks offer real-world problems where students have to determine the mathematical information they need to solve the problem. “Mowing a Lawn” is a problem where students are asked to determine how long it will take to mow a lawn that is an irregular polygon. The students can identify that the lawn is a composite figure and that they can calculate the area by breaking the figure into rectangular and triangular sections in order to calculate the area.</p>
ELA/ Reading	<p>6<sup>th</sup> Grade</p> <p>Craft and Structure:  <u>CCSS.ELA-LITERACY.RI.6.4</u></p> <p>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.</p>	<p>Students skim a text, highlighting new vocabulary and vocabulary they identify as complex/advanced. Students then work in small groups to define and discuss the words they’ve identified. Next, they plan for the ‘charades’ activity. In this activity, students silently act out a given word. The rest of the class has to guess what word from the article matches each action. This can be competitive, with points given for correct guesses, or simply a game.</p> <p>In this arts-integrated activity, students are given a list of root words connected to the biology of trees. Students use a site like <a href="http://etymonline.com">etymonline.com</a> to determine the meaning of each root. Then, individually or in pairs, they go out to the woods, and take a photo that connects in some way to each root. Finally, students create a multi-media presentation (slides, website, Prezi, etc.) showing how a given image connects to each word.</p>

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Global Citizenship	<p>6-8<sup>th</sup> Grade</p> <p><b>D2.Civ.8.6-8.</b> Analyze ideas and principles contained in the founding documents of the United States, and explain how they influence the social and political system.</p>	<p>Compelling Question: Can our actions really bring about change? Through this inquiry, students learn about the success and failures of some of the most important examples of civil disobedience from history (Rosa Parks, Montgomery Bus Boycott, Women’s Suffrage, Vietnam War Protests) through the lens of Constitutional protections and restrictions, and compose their own argument for why a current movement of their choice is/is not effective.</p> <p>Compelling Question: Why do countries declare independence? Through this inquiry, students learn how the Enlightenment influenced the Declaration of Independence and whether independence ‘declared’ is independence ‘obtained’ as they utilize their understanding of natural rights, and violations thereof, to interpret evidence and hold an open forum to discuss current independence movements in the world.</p>
Science	<p>6-8<sup>th</sup> Grade</p> <p><b>MS-PS1-2.</b> Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.</p> <p>[Clarification Statement: Examples of reactions could include burning sugar or steel wool, fat reacting with sodium hydroxide, and mixing zinc with hydrogen chloride.]</p> <p>[Assessment boundary: Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.]</p>	<p>Students test a variety of different materials in a lab setting, making and recording observations of each: melting an ice cube in jar; grinding sugar cube with a mortar and pestle; heating sugar in a test tube over burner; mixing water and vinegar; and mixing baking soda and vinegar. Students can identify physical and chemical properties by analyzing and interpreting the data from their experiments- both prior to and after interaction.</p> <p>Students visit a local graveyard with notebooks and micrometer sticks. Students make observations regarding condition of graves (excellent, good, fair, poor, or bad), the inscription depth with inch micrometers, and location. Observations can also include legibility (legible, satisfactory, and illegible) and mosses growing on tombs. After compiling observations, data is brought back to the lab to compile information into tables and graphs. Students then develop experiments to model tombs and test different types of changes, physical and chemical. Students analyze and interpret data and compare the information to what was compiled in field to determine if tomb decomposition was a result of a physical change or a chemical change.</p>

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Physical Education	Identifies the rules and etiquette for physical activities, games and dance activities. (S4.M6.6)	<p>Students review the square dance moves and sequence of moves to perform the Virginia Reel square dance. Students practice and perform the dance. A Personal Responsibility Checklist is used to assess student participation in this class activity.</p> <p>Students participate in a bicycling unit. Students leave the school grounds to ride on the town’s bike path. Students review safety rules of bicycling as well as school rules considering personal responsibility when leaving campus. Students are assessed using a Personal Responsibility Checklist considering following the rules of the road and riding as a group on the town’s bike path.</p>
The Arts	<b>Performance standard VA: Cr1.2.6a:</b> Formulate an artistic investigation of personally relevant content for creating art.	<p>Title: 3 Views Triptych Description: After selecting an object or idea that has personal meaning or significance, students will create a wide variety of thumbnail sketches to be used as planning for a triptych. Then, three of the thumbnail sketches will be refined and used as the “three views” of their chosen object or idea.</p> <p>Title: Lego Exhibit at BMAC Description: Brian is an avid Lego architect and decides to enter the <a href="#">Lego Contest and Exhibit at the Brattleboro Art Center and Museum</a>. He decides to design a new school for his community that will be both sustainable and inspiring learning environment. He makes a series of sketches to plan and organize his idea. Then, he draws the school from all sides, including an aerial view, on graph paper before he begins to build with Legos.</p>