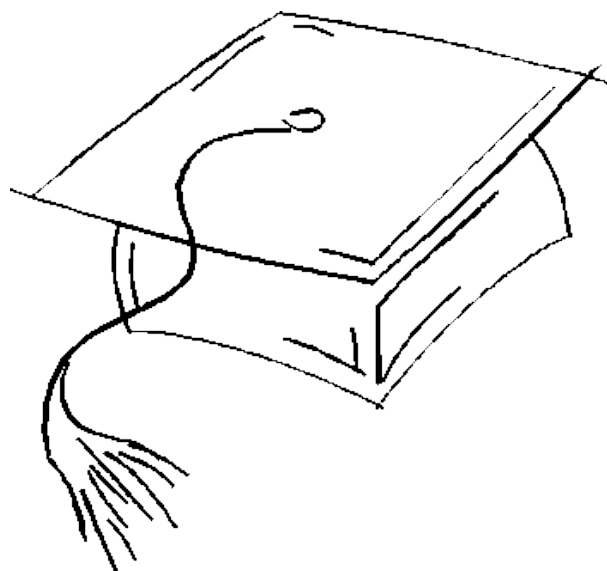


Educational Opportunities for Gifted Students at the High School Level



Developed by Members of the 2011–2013
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Introduction

Gifted learners at the high school level are a population with distinct educational needs. They have potential that requires differentiated and challenging educational services beyond those provided in the general education program. While the Virginia [*Regulations Governing Educational Services for Gifted Students*](#) require that identified students be served through twelfth grade, school divisions are challenged to provide special program options that meet the educational needs of gifted high school learners.

In September 2011, the Virginia Board of Education charged the Virginia Advisory Committee for the Education of the Gifted (VACEG) with researching quality programming options for high-ability learners at the high school level. Recognizing that every student is different, and that there is not one way to best serve all gifted learners, research-based best practices suggest that schools and school divisions must offer a continuum of services. The National Association for Gifted Children (NAGC) defines this continuum as [“a menu of educational options that are respectful of individual student differences and mindful of classroom and community resources.”](#)

This document is designed to help school divisions establish or improve programs for gifted high school students. It gives schools and school divisions critical information for the development of quality programs that may be helpful during the program planning and evaluation process. It identifies various service options that address the needs of gifted learners at the high school level and satisfy the requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*. These options are grouped into four categories: differentiated opportunities, accelerated content, specialty schools, and beyond the classroom. Within each category, there are numerous examples to consider. For each service option, the document addresses:

- The ways the option satisfies requirements for best practices in the Regulations;
- The support mechanisms associated with the option, such as differentiation, professional development, staffing, funding, space, face-to-face opportunities, virtual learning, and/or technology;
- The learner outcomes that specify what students should know, understand, and be able to do as a result of the learning experiences and student academic growth as well as the social/emotional benefits students receive from participating in the programs;
- The Virginia Department of Education (VDOE) priorities associated with the option, such as STEM, college and career readiness, 21st century skills, linking student growth to teacher/program evaluation, Early College Scholars, Virginia Plan for Dual Enrollment; and/or Virtual Virginia; and
- Selected examples of where the option is being implemented.

Throughout the research process, VACEG members compared the various components of each service option to the [*NAGC Pre-K-Grade 12 Gifted Programming Standards*](#). The standards provide a framework of seven student outcomes with accompanying evidence-based practices.

Please Note: This document is not meant to be a comprehensive review of all possible service options for gifted high school students. Rather it can serve as a foundation for creating and reviewing programs to extend and enrich the educational experiences of gifted learners throughout the Commonwealth of Virginia.

Differentiated Opportunities: Acceleration

Educational acceleration is the practice of presenting curricular content at a faster pace or at an earlier age than usual. Common examples of acceleration include, but are not limited to, advanced-level classes, completing curriculum in a shorter-than-normal period of time, acceleration in content areas, credit by examination, grade skipping, and early entrance into college. In all forms of acceleration, it is important that the content be differentiated to meet the needs of individual students. The choice of how to accelerate the curriculum for a particular student should be based on the individual needs of that student.

Other aspects of acceleration are discussed under the heading Accelerated Content, starting on page 9. These include Dual Enrollment, Advanced Placement, International Baccalaureate, and Early College Admission. There is specific information regarding each accelerated option.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Acceleration Satisfy This Requirement? |
|---|---|
| <p>8 VAC 20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction, (ii) original research or production, (iii) problem finding and solving, (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study. Such curriculum and instruction are offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at increasing levels of complexity that differ significantly from those of their age-level peers.</p> | <p>The placement and grouping of students based on their academic progress and intellectual needs, rather than strictly adhering to age or grade-level curricula, provides access to advanced learning opportunities.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms for acceleration include the professional staff’s in-depth understanding of the model, clear guidelines for implementation, professional development, and ongoing and appropriate monitoring and evaluation of the program.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with acceleration include:

- improved academic achievement and/or higher standardized test results;
- instruction that fits the academic needs of the accelerated student;
- access to more challenging options in the high school years; and
- reduction of the time needed for students to complete high school and college education.

Student benefits associated with acceleration include:

- better motivation toward schooling;
- increased student satisfaction and well-being;
- challenging academic experiences that help develop sound work ethics;
- meaningful interactions with intellectual peers; and
- preparation to begin contributing to society at an earlier age.

What Virginia Department of Education (VDOE) priorities are associated with this program/model?

[College and Career Readiness](#) – Through acceleration, students pursue interests at their cognitive ability level, which prepares them for appropriate postsecondary opportunities.

[Advanced Placement \(AP\) and International Baccalaureate \(IB\) Test Fee Payment Program](#) – A grant through the United States Department of Education (USED) provides the VDOE with funds to reimburse AP/IB test fees for low-income students. [Superintendent’s Memo # 102-13](#) provides information on the process for school divisions to receive this funding.

[Virtual Virginia](#) – The VDOE’s Virtual Virginia program offers pre-Advanced Placement, honors, and AP classes as well as academic electives and world languages. Eligible students enroll in Virtual Virginia through their local schools.

[Virginia Plan for Dual Enrollment](#) – The Virginia Plan for Dual Enrollment gives a statewide framework for dual enrollment arrangements between public schools and their service area community college. These arrangements allow students to receive college credit and high school credit for specific courses agreed upon by the institutions. Dual enrollment agreements received mandated support through [HB 1184](#) in 2012, allowing students to complete an associate degree or a one-year Uniform Certificate of General Studies from a community college concurrently with a high school diploma.

[Early College Scholars](#) – This VDOE initiative allows high school students to earn up to 15 hours of transferable college credit while completing the requirements for an Advanced Studies Diploma. Students must meet specific requirements in order to participate in the Early College Scholars program.

What are examples of where this program/model is being implemented?

Many school divisions across the Commonwealth offer a variety of acceleration opportunities such as AP course, IB course, Virtual Virginia, and dual enrollment options. Some schools provide options for middle school students to attend high school classes. Some high school students are able to attend college campuses for a course during the school day.

Differentiated Opportunities: Classroom Differentiation of Instruction

Differentiation of instruction in the heterogeneous classroom offers all students opportunities to learn at increasingly advanced levels, appropriate to their level of readiness. To meet the needs of identified gifted students who differ in achievement, ability, and interests from their age-level peers, teachers and administrators must plan sequential and systematic instruction supported by high-quality curricular materials (National Association for Gifted Children [NAGC], 1994). Tomlinson, Brimijoin and Narvaez (2008) characterize differentiation of instruction as “systematic attention to readiness, interest, and learning profiles” of students through the flexible use of classroom “space, time, materials, groupings and instruction.” They emphasize the critical importance of pre-assessment in order to ensure student advancement through targeted learning experiences.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Classroom Differentiation of Instruction Satisfy This Requirement? |
|---|--|
| <p>8 VAC 20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction, (ii) original research or production, (iii) problem finding and solving, (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study. Such curriculum and instruction are offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at increasing levels of complexity that differ significantly from those of their age-level peers.</p> | <p>Teachers select curricula and/or design instruction that allow students to proceed at the pace and depth that matches their readiness level. Strategies that support differentiation allow each student to be challenged by a variety of instructional practices suited to individual achievement levels, learning styles, and interests.</p> |
| <p>8 VAC-20-40-60A.11 The plan shall include a description of the school division’s program of differentiated curriculum and instruction demonstrating accelerated and advanced content.</p> | <p>When planning and implementing curricula, teachers utilize a range of instructional strategies and resources that support an advanced pace of learning, a complexity of learning, and in-depth learning experiences.</p> |

| Virginia Regulations | How Does Classroom Differentiation of Instruction Satisfy This Requirement? |
|--|--|
| <p>8VAC20-40-60A.10 Evidence that gifted education service options from kindergarten through twelfth grade are offered continuously and sequentially, with instructional time during the school day and week to (i) work with their age-level peers, (ii) work with their intellectual and academic peers, (iii) work independently; and (iv) foster intellectual and academic growth of gifted students. Parents and legal guardians shall receive assessment of each gifted student’s academic growth.</p> | <p>Teachers use flexible grouping patterns in order to provide students with opportunities to work independently as well as collaboratively with age-level and intellectual peers.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms for classroom differentiation of instruction include high-quality professional development, coaching and mentoring, instructional planning and assistance from gifted resource teachers, and procurement of instructional resources that support acceleration in specific content areas.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with classroom differentiation include:

- improved academic achievement and/or higher standardized test results;
- instruction that fits the skills and experience level of every student; and
- attainment of prerequisite skills and content needed for success in advanced courses.

Student benefits associated with classroom differentiation include:

- increased student satisfaction and well-being;
- opportunities to experience challenging learning with intellectual peers; and
- meaningful interactions with age-level peers.

What VDOE initiatives are associated with this program/model?

College and Career Readiness – Through classroom differentiation, students pursue interests at their cognitive ability level, which prepares them for appropriate postsecondary opportunities.

What are examples of where this program/model is being implemented?

Examples of classroom differentiation include:

- Arlington County Public Schools (ACPS) utilizes the following to provide opportunities for classroom differentiation.
 - Resource teachers for the gifted (RTG) employ the Collaborative Instructional Model (Slade, 2002; 2009; Tomlinson, 2003; 2004; 2008).
 - RTG plan collaboratively and implement advanced units of study for gifted students;
 - Staff uses a scope and sequence of critical and creative thinking skills, including Socratic Seminar/Paideia in Grades 9–10 and Ethical Thinking in grades 11–12.
 - Grade level themes integrate instruction and enrich differentiation options.

- Norfolk City Public Schools (NPS) utilizes the following to provide opportunities to support classroom differentiation.
 - Gifted resource teachers (GRTs) plan collaboratively, implement differentiated instructional units, assist with small group teaching and assessment, and evaluate lesson plans.
 - Staff participates in routine formative assessment with data reporting that highlights the needs of gifted learners.

Differentiated Opportunities: Cluster Grouping

Cluster grouping brings gifted students together in classrooms with teachers who have training in meeting the unique educational needs of advanced learners. In the high school setting, this model allows students to access fast paced, in-depth learning of curriculum content with time for students to go into greater depth and/or breadth on a given topic. Teachers consistently offer pre-assessment, curriculum compacting, and differentiated learning opportunities.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Grouping Models Satisfy This Requirement? |
|--|--|
| <p>8 VAC 20-40-60A.10 Evidence that gifted education service options from kindergarten through twelfth grade are offered continuously and sequentially, with instructional time during the school day and week to (i) work with their age-level peers, (ii) work with their intellectual and academic peers, (iii) work independently; and (iv) foster intellectual and academic growth of gifted students. Parents and legal guardians shall receive assessment of each gifted student’s academic growth.</p> | <p>Subject-related advanced courses that draw small numbers of students can be clustered together with one teacher.</p> <p>When gifted learners are cluster grouped in classrooms or courses, they are afforded opportunities to work with their age-level peers, their intellectual peers, and independently.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with cluster grouping include in-depth understanding and support of cluster grouping by building and division administrators. In addition, professional development in grouping methods and strategies as well as the social-emotional development of gifted learners is also critical to the success of this model. To take advantage of professional development, teachers may need release time, funding for continuing education, and substitute support. (See NAGC Pre-K-Grade 12 Gifted Programming Standards, Standard Six Professional Development, 2010 for further information.)

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with cluster grouping include:

- improved academic achievement and/or higher standardized test results; and
- opportunities for collaboration with colleagues and administrators.

Student benefits associated with cluster grouping include:

- access to greater numbers of advanced-level courses; and
- meeting the social-emotional needs of gifted learners.

What VDOE initiatives are associated with this program/model?

STEM: Cluster grouping based on readiness and interest in STEM classes prepares students for advanced STEM courses in postsecondary education.

College and Career Readiness: Through cluster grouping, students explore content with academic and intellectual peers.

21st Century Skills: Cluster grouping affords students greater opportunities to collaborate on content problems and issues, to explore creative processes and solutions, and to develop competency in online technology resources and tools.

What are examples of where this program/model is being implemented?

Examples of cluster grouping include:

- When enrollment warrants only one teacher, Charlottesville City Public Schools offers a high school art class where students receive credit for taking either AP Studio Art or AP Portfolio Art. The student can enroll in this class for two years, taking both options.
- Students are cluster grouped in Henrico County Public Schools to provide advanced educational opportunities when enrollment may limit a full class. For example, French IV and French AP are offered in the same class since each course had less than the required minimum student enrollment to be offered as a separate course.

Differentiated Opportunities: Distance Learning

Distance learning, which includes online and virtual education, allows gifted students to select courses that meet their readiness and interests levels, to proceed at their own pace, and to enroll in specific classes earlier than their age peers. Teachers can use technology tools such as wikis, weblogs, digital media, and podcasting to create free and open access to academic environments that support creativity and achievement. Students can participate in student-focused instruction with rich resources that have expert guidance readily available. Twice exceptional students, in particular, may benefit from online learning experiences due to the potential for accommodating individual learning strengths.

Researchers (Adams & Olszewski-Kubilius, 2007; Olthouse, J. M., 2012; Olszewski-Kubilius, 2009) report that few online programs are designed specifically for gifted students; however, higher-level courses can provide appropriate opportunities for advanced learning.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Distance Learning Satisfy This Requirement? |
|---|--|
| <p>8 VAC20-40-40A Each school division shall establish uniform procedures for screening, referring, identifying, and serving students in kindergarten through twelfth grade who are gifted in general intellectual or specific academic aptitude. If the school division elects to identify students in general intellectual aptitude, it shall provide service options from kindergarten through twelfth grade. Identification in a specific academic aptitude area may occur as assessment instruments exist to support identification. If the school division elects to identify students in one or more selected academic aptitude areas, it shall provide service options through twelfth grade.</p> | <p>Schools can use online resources to offer gifted service options that continue from one grade level and/or content area to the next.</p> <p>Students can select curricular options online in multiple academic areas.</p> |
| <p>8 VAC20-40-60A.10 Evidence that gifted education service options from kindergarten through twelfth grade are offered continuously and sequentially, with instructional time during the school day and week to (i) work with their age-level peers, (ii) work with their intellectual and academic peers, (iii) work independently; and (iv) foster intellectual and academic growth of gifted students. Parents and legal guardians shall receive assessment of each gifted student’s academic growth.</p> | <p>Distance learning offers students many opportunities to work with academic peers in order to foster intellectual growth.</p> <p>Assessment tools offered by online programs can be used to report academic growth.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with distance learning include enhanced access to online technology, differentiation for individual students’ needs, professional development through online toolkits, and the collaborative development of pedagogical and evaluative strategies and practices. Professional development should address both the intellectual and the social-emotional needs of gifted learners.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with distance learning include:

- increased student responsibility for self-paced learning; and

- success on course evaluations: Olszewski-Kubilius (2009) reports that 64% of gifted students who take online AP courses also take the AP test and 63% earn a 4 or 5.

Student benefits associated with distance learning include:

- access to challenging courses while students remain at home, in school, and with peers;
- access to courses not offered at the school; and
- ability to pursue advanced interests.

What VDOE initiatives are associated with this program/model?

College and Career Readiness – Through distance learning programs, high school students have access to online college-level courses.

21st Century Skills – Online courses include technology courses such as Information Technology Essentials and Applied Multimedia Technology.

Virtual Virginia – The VDOE’s Virtual Virginia program offers pre-Advanced Placement, honors, and AP classes as well as academic electives and world languages. Eligible students enroll in Virtual Virginia through their local schools.

What are examples of where this program/model is being implemented?

Examples of virtual education include but are not limited to:

- Virtual Virginia
 - Offers pre-Advanced Placement, honors, and AP classes as well as academic electives and world languages. Eligible students enroll in Virtual Virginia through their local schools.
- Blue Ridge Virtual Governor’s School
 - Serves as an Academic Year Governor’s School for high school students from Fluvanna, Goochland, Greene, Louisa, Madison, Nelson, and Orange counties;
 - Provides differentiated instruction through virtual advanced science, mathematics, and technology courses taken at their individual schools;
 - Has students meeting face-to-face through field trips several times a year; and
 - Allows students to pursue asynchronous problem solving, inquiry-based learning through collaborative online technologies.

Additional opportunities for distance learning include:

- MIT OpenCourseWare (OCW)
 - Is a learning program of secondary-level and college/university courses with materials, activities, educational videos/tutorials, and other online resources for students, parents, and educators; and
 - Has over 2,000 courses in 33 different disciplines.
- OCW Consortium
 - Provides interested participants access to the free materials/networks by registering with the consortium.

- [Talent Identification Program \(TIP\), Duke University](#)
 - Offers an E-studies program with eight Web-based courses for grades 8-12; and
 - Includes online discussions, real-time collaboration.
- [Education Program for Gifted Youth \(EPGY\), Stanford University](#)
 - Is a three-year online, independent high school; and
 - Offers a college style schedule that includes online AP and honors-level courses.
- [Center for Talent Development \(CTD\), Northwestern University](#)
 - Oversees [GiftedLearningLinks](#) courses for gifted students in grades 3-12;
 - Provides opportunities for students to earn credit;
 - Includes enrichment courses, AP courses, and online discussions; and
 - Allows communication with teachers via e-mail.
- [Center for Talented Youth, Johns Hopkins University](#)
 - Serves advanced K-12 learners worldwide;
 - Offers computer-based multimedia programs in mathematics and computer science, elementary through beginning college level; and
 - Allows students to earn high school credit and take AP courses.

Accelerated Content: Dual Enrollment

Dual enrollment allows qualified high school students to enroll in college coursework while still in high school. In March of 2008, the *Virginia Plan for Dual Enrollment between Virginia Public Schools and Community Colleges* was developed and agreed upon by the Virginia Secretary of Education, the Superintendent of Public Instruction and the Chancellor of the Virginia Community Colleges System (VCCS).

[House Bill 1184](#), signed by Governor Robert F. McDonnell in April 2012, created opportunities for students to complete an associate degree concurrently with a high school diploma. As stated in the *Code of Virginia* § [22.1-253.13:1](#), the bill “requires local school boards and community colleges to develop agreements allowing high school students to complete an associate’s degree or a one-year Uniform Certificate of General Studies from a community college concurrent with high school diploma.” Courses can be held on-site at either the high school or the local community college by full- or part-time faculty whose credentials satisfy the requirements of the VCCS. Students can take one or more dual enrollment courses during a school year. In some localities, such as Patrick County, Henrico County, and Suffolk City, students are already earning an associate degree while earning their high school diploma. Dual enrollment classes are usually limited to juniors or seniors who meet the requirement admissions of the local college and can include any course offered at the community college. In Virginia high schools, these courses are typically offered in the disciplines of mathematics, English, and career and technical education. The courses offered as dual enrollment follow a community college course outline, include the same content as campus-based courses, and use standard college textbooks. Credit for dual enrollment courses is generally accepted at all Virginia private and public colleges.

Dual enrollment courses provide high school students the opportunity to jump-start their college careers by enrolling in classes that allow them to earn college credit while completing high school credits. According to the U.S. Department of Education, college credits earned prior to high school graduation reduce the average time-to-degree and increase the likelihood of graduation.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Dual Enrollment Satisfy This Requirement? |
|---|---|
| <p>8 VAC 20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction...</p> | <p>Dual enrollment enriches the coursework of the local high school curriculum by providing college-level instruction to high school students in English, mathematics, and other courses from the local community college curriculum.</p> <p>Dual enrollment accelerates students’ college careers by allowing them the opportunity to earn college credits applicable to their degree program prior to high school graduation.</p> |
| <p>8 VAC-20-40-60A.11 A description of the school division’s program of differentiated curriculum and instruction demonstrating accelerated and advanced content.</p> | <p>Dual enrollment provides an opportunity for students to spend time with “intellectual and academic peers” who share their interest in specific academic areas.</p> |
| <p>8 VAC-20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence with their learning needs.</p> | <p>All enrolled students must meet the course requirements for placement into dual enrollment courses.</p> |

What support mechanisms are associated with the program/model?

The following support mechanisms are associated with dual enrollment:

- Existing staff at the high schools can be utilized as faculty if they meet VCCS hiring criteria;
- High schools may provide classroom space and textbooks;
- VCCS may provide Placement Testing at no charge;
- VCCS has Dual Enrollment Coordinators to work with high schools to maintain the programs; and
- High schools may provide technology to support course requirements.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with dual enrollment include:

- college-level instruction during regular school hours;
- acceleration of a student’s college career and quality, affordable education close to home;

- enrichment opportunities for outstanding high school students both in academic coursework and in career and technical education;
- opportunities to enter college with credits applicable to a degree program;
- exposure to the rigor of college work as well as college faculty expectations; and
- access to college resources, facilities and services such as advising, career counseling and mentoring.

What VDOE initiatives are associated with this program/model?

College and Career Readiness: Dual enrollment courses provide high school students the opportunity to earn college credits, or in some cases an associate degree, while enrolled in high school.

Advanced Placement (AP) and International Baccalaureate (IB) Test Fee Payment Program – A grant through the United States Department of Education (USED) provides Virginia Department of Education (VDOE) with funds to reimburse AP/IB test fees for low-income students. [Superintendent’s Memo # 102-13](#) provides information on the process for school divisions to receive this funding.

Virtual Virginia – The VDOE’s Virtual Virginia program offers pre-Advanced Placement, honors, and AP classes as well as academic electives and world languages. Eligible students enroll in Virtual Virginia through their local schools.

Virginia Plan for Dual Enrollment – The Virginia Plan for Dual Enrollment gives a statewide framework for dual enrollment arrangements between public schools and their service area community college. These arrangements allow students to receive college credit and high school credit for specific courses agreed upon by the institutions. Dual enrollment agreements received legislative support through [HB 1184](#) in 2012, allowing students to complete an associate degree or a one-year Uniform Certificate of General Studies from a community college concurrently with a high school diploma.

Early College Scholars – This VDOE initiative allows high school students to earn up to 15 hours of transferable college credit while completing the requirements for an Advanced Studies Diploma. Students must meet specific requirements in order to participate in the Early College Scholars program.

What are examples of where this program/model is being implemented?

Each community college has a dual enrollment coordinator who works with area high schools served by that community college. These contacts are available on the [VCCS](#) Web site and can provide information as to which high schools provide dual enrollment courses. All Virginia high schools must have a dual enrollment agreement in accordance with the *Code of Virginia* § [22.1-253.13:1](#).

Accelerated Content: Advanced Placement

Advanced Placement (AP), a national program administered by the College Board, allows students to study subjects with curriculum designed to simulate first-year college courses in more than 30 different subjects. Students who earn a qualifying score on a standardized end-of-course exam evaluated by College Board graders may be able to earn college credit or be placed in a higher-level course once they are in college. In addition to providing an opportunity for students to begin accumulating college credit, AP courses have been credited with helping prepare students to succeed in college. According to the [2011 AP Report to the Nation](#), “research consistently shows that students who score a three or higher on AP Exams typically experience greater academic success in college and are more likely to graduate on time than otherwise comparable non-AP peers.”

While AP courses offer an opportunity for gifted students to have access to college-level content, they still require additional differentiation for the students in terms of critical thinking, problem-solving, higher-level thinking, pacing of instruction, and the opportunity for original research. As detailed on the [National Association for Gifted Children’s common myths](#) about gifted students, the AP program “is limited in its service to gifted and talented students in two major areas: First, AP is limited by the subjects offered, which in most districts is only a small handful. Second, it is limited in that, typically, it is offered only in high school and is generally available only for 11th and 12th-grade students. Coupled with the one-size-fits all approach of textbooks and extensive reading lists, the limitation of AP coursework means that divisions must offer additional curricular options in order to be considered as having gifted and talented services”.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does AP Satisfy This Requirement? |
|---|---|
| <p>8 VAC20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction, (ii) original research or production, (iii) problem finding and solving, (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study. Such curriculum and instruction are offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at</p> | <p>AP courses deliver “advanced, conceptually challenging, in-depth, distinctive, and complex content” similar to what is encountered in a college course. These courses allow students to accelerate in their areas of strength and foster the development of college-level skills such as writing essays or solving complex, free response mathematics and science questions.</p> |

| Virginia Regulations | How Does AP Satisfy This Requirement? |
|--|---|
| <p>increasing levels of complexity that differ significantly from those of their age-level peers.</p> | |
| <p>8 VAC20-40-40 Each school division shall establish uniform procedures for screening, referring, identifying, and serving students in kindergarten through twelfth grade who are gifted in general intellectual or specific academic aptitude. If the school division elects to identify students in general intellectual aptitude, it shall provide service options from kindergarten through twelfth grade. Identification in a specific academic aptitude area may occur as assessment instruments exist to support identification. If the school division elects to identify students in one or more selected academic aptitude areas, it shall provide service options through twelfth grade.</p> | <p>AP allows divisions to offer college-level courses in academic subjects, supporting the requirement that students identified as gifted in general intellectual or specific academic aptitude be served through twelfth grade.</p> |
| <p>8 VAC20-40-40E.2 Monitored and assessed student outcomes that are reported to the parents and legal guardians.</p> | <p>The end-of-course AP exam is a validated, off-level measure of student performance on college-level tasks that is clearly communicated to parents and students. It allows them to compare a student’s achievement to that of other high school students and to the college students on whom the test was normed.</p> |
| <p>8 VAC20-40-60A.10 Evidence that gifted education service options from kindergarten through twelfth grade are offered continuously and sequentially, with instructional time during the school day and week to (i) work with their age-level peers, (ii) work with their intellectual and academic peers, (iii) work independently; and (iv) foster intellectual and academic growth of gifted students. Parents and legal guardians shall receive assessment of each gifted student’s academic growth.</p> | <p>AP courses provide an opportunity for students to spend time with “intellectual and academic peers” who share their interest in specific academic areas.</p> |
| <p>8 VAC20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning needs.</p> | <p>The AP program provides flexibility for schools and students. Students can enroll in AP courses appropriate to their interests and abilities within the guidelines of the local school division.</p> |

What support mechanisms are associated with the program/model?

The Virginia Department of Education allows students to enroll in online AP courses not offered at their high school through [Virtual Virginia](#) and VDOE's [Multidivision Online Providers](#).

Live workshops that provide professional development for AP teachers are available through many institutions. Web-based seminars are also available. A list of available workshops and online seminars is available on the [College Board Web site](#).

What learner outcomes/student benefits occur with the program/model?

- college-level instruction during regular school hours;
- acceleration of a student's college career;
- enrichment opportunities for outstanding high school students in academic coursework;
- opportunities to enter college with credits applicable to a degree program; and
- exposure to the rigor of college work.

What VDOE initiatives are associated with this program/model?

STEM: In 2013, [The College Board's 9th Annual AP Report to the Nation](#) documented that the number of students taking AP mathematics and science exams nationally is increasing. Further, the report cites a study from the Harvard Education Press indicating that students who take AP mathematics and science exams are more likely to major in STEM fields. This finding was found to be true for minority students and women in a College Board study cited. Finally, a cited Boston College study involving the [Trends in International Mathematics and Science Study](#) (TIMSS) revealed that students who took AP mathematics and science courses, and in particular those who earned exam scores of at least three, performed better than students from most other countries on the international tests.

Virtual Virginia – The VDOE's Virtual Virginia program offers pre-Advanced Placement, honors, and AP classes as well as academic electives and world languages. Eligible students enroll in Virtual Virginia through their local schools.

College and Career Readiness: Advanced Placement courses play an important role in preparing students for college by exposing them to the advanced content and skills they will encounter in college.

What are examples of where this program/model is being implemented?

The AP program is implemented in high schools throughout Virginia. Unlike the International Baccalaureate Diploma Programme, which involves a complete course of study, AP courses are typically offered in an à la carte fashion that allows students to choose as many courses as they wish.

High schools vary with respect to the number of AP courses offered, depending on the availability of faculty who are willing and able to teach the advanced content. Each high school sets its own policy for admitting students into AP courses; some require an application and screening process, while others have an open-door policy. Similarly, high schools set individual policies regarding the grade at which students can begin taking AP courses. Through Virtual Virginia, AP courses are available to all Virginia students.

Accelerated Content: International Baccalaureate (IB) Diploma Programme

The [International Baccalaureate Programme](#) works with schools, governments, and international organizations to develop challenging programmes of international education and rigorous assessment. These programmes encourage students across the world to become active, lifelong learners who understand that other people, with their differences, may also have a perspective that should be valued and considered. While the IB Programme is accelerated in terms of content, similar to AP courses, an IB curriculum requires additional differentiation for the students in terms of critical thinking, problem-solving, higher-level thinking, pacing of instruction, and the opportunity for original research.

The International Baccalaureate Programme consists of the following elements:

1. Development of curriculum.
2. Assessment of students.
3. Training and professional development of teachers.
4. Authorization and evaluation of schools.

The International Baccalaureate Organization works with 3,290 schools in 141 countries to offer three IB programmes to approximately 969,000 students, aged 3 to 19. The programmes can be offered individually or as a continuum by IB World Schools.

- The Primary Years Programme (PYP) for students aged 3 to 11 started in 1997 and is offered by 845 IB World Schools.
- The Middle Years Programme (MYP) for students aged 12 to 16 started in 1994 and is offered by 916 IB World Schools.
- The Diploma Programme for students aged 16 to 19 started in 1968 with first examinations in 1970 and is offered by 2,292 IB World Schools.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does IB Programme Satisfy This Requirement? |
|--|---|
| <p>8 VAC 20-40-60A.10 Evidence that gifted education service options from kindergarten through twelfth grade are offered continuously and sequentially, with instructional time during the school day and week to (i) work with their age-level peers, (ii) work with their intellectual and academic peers, (iii) work independently; and (iv) foster intellectual and academic growth of gifted students. Parents and legal guardians shall receive assessment of each gifted student’s academic growth.</p> | <p>The learner profile traits are addressed throughout the curriculum. The course of Theory of Knowledge explores the ways of knowing across the disciplines.</p> <p>The requirement to complete the Creativity, Action, and Service (CAS) component provides the students with continued opportunities to be reflective.</p> <p>The entire curriculum and instructional strategies of IB are research-based with the aim of challenging all learners.</p> <p>Students are assessed in a variety of manners. Each of the subjects requires internal and external assessments. These include essay writing, investigating topics, oral presentations, laboratory work, and the presentation of research projects.</p> <p>The end-of-course examinations measure acquired knowledge of the subject and the ability to use their knowledge to make informed observations. Critical thinking and analyzing are encouraged. Findings are reported to parents or guardians.</p> |

What support mechanisms are associated with the program/model?

The IB Programme offers continuous training workshops on three levels for instructors ranging from novice to experienced. Workshops are also available for administrators, counselors, coordinators, CAS supervisors, and extended essay supervisors. Regional organizations meet to offer collaboration sessions. The IB has several Web sites which can be used to collaborate with colleagues throughout the world. One Web site ([Online Curriculum Centre](#)) has complete information about the courses, program policies, and program standards. If school divisions cannot financially afford to send faculty to the workshops, they are able to collaborate online. There is also a service, IB Answers, which is available 24-7 to address any questions/concerns.

While it is not a requirement of the IB, schools are encouraged to develop intervention programs to assist students who may experience difficulty adjusting socially or academically in the IB Programme.

What learner outcomes/student benefits occur with the program/model?

The IB Programme:

- offers a continuum of education, consisting of three programmes for students ages three to 19;
- encourages international-mindedness in IB students (students must first develop an understanding of their own cultural and national identity);
- encourages a positive attitude to learning by encouraging students to ask challenging questions, to critically reflect, to develop research skills, to learn how to learn, and to participate in community service; and
- ensures that programmes are accessible to students in a wide variety of schools – national, international, public, and private – through a unique relationship with IB World Schools worldwide.

The IB learner profile is the IB mission statement translated into a set of learning outcomes for the 21st century. The learner profile provides a long-term vision of education. It is a set of ideals that can inspire, motivate, and focus the work of schools and teachers, uniting them in a common purpose.

Learning outcomes are differentiated from assessment objectives because they are not rated on a scale. There should be evidence that students have:

- increased their awareness of their own strengths and areas for growth;
- undertaken new challenges;
- planned and initiated activities;
- worked collaboratively with others;
- shown perseverance and commitment in their activities;
- engaged with issues of global importance;
- considered the ethical implications of their actions; and
- developed new skills.

What VDOE initiatives are associated with this program/model?

21st Century Skills: The ability to think, learn, work, solve problems, communicate, collaborate, and contribute effectively are naturally incorporated through the learner profile traits which are emphasized throughout the curriculum.

STEM: The International Baccalaureate Programme offers a liberal arts education that includes college-level courses in mathematics and sciences.

College and Career Readiness: Generally, 100 percent of the students enrolled in an IB program are college bound. This fact dictates the schools' implementation of workshops to assist the student with the quest for college admission. The rigorous courses are written to meet college standards and students often can receive college credit or advanced placement for their work. Research done to track the IB student in college has found that the student is well-prepared for the college challenge, does well academically, and exhibits higher-level thinking skills. Because of the emphasis on global understanding, students have a wider view of issues and the ability to express their thoughts effectively. Their writing and analytical skills are strong. The liberal arts

education gives them a view of several subjects and they are able to compete for college, scholarships, and careers successfully.

What are examples of where this program/model is being implemented?

The [Commonwealth of Virginia has 35 Diploma Programmes](#) (DP). Each program has established specific criteria for enrollment of students in their program. While the DP program is implemented in grades 11 and 12, many schools incorporate a preparatory course of instruction in grades 9 and 10 or have an affiliation with the Middle Years Program (MYP). All IB programs follow a model of requiring the students to study six subjects across the disciplines along with an interdisciplinary course of Theory of Knowledge. They must also participate in a community service component called CAS, and complete a research paper called the Extended Essay. Student achievement in all of these components leads to an International Baccalaureate Diploma which comes in addition to the advanced diploma earned by IB students. Some high schools may also offer individual IB courses in which students can earn certificates.

Accelerated Content: The Cambridge Program

The [Cambridge Program](#) offers students the opportunity to tailor their individual interests, abilities, and future plans within an international curriculum framework.

The Cambridge Advanced International Certificate of Education (AICE) Diploma emphasizes the value of broad and balanced study for academically able students. The AICE is an advanced academic preuniversity curriculum with standardized examinations that can lead to a diploma. The AICE is designed to prepare students for study at selective universities. The AICE courses and exams are typically offered during grades 11 and 12 in schools approved as Cambridge International Examination Centers. To be considered for an AICE Diploma, a candidate must earn the equivalent of six credits by passing a combination of examinations at either the full AS Level or double A Level with at least one course coming from each of the three curriculum areas. The three subject areas in AICE are Mathematics and Science, Languages (Foreign and First), and Arts and Humanities.

The AICE is awarded at three levels: Distinction, Merit, and Pass. The AICE Diploma with Distinction requires a score of 320 points or above. The AICE Diploma with Merit requires a range of 220-315 points. The AICE Diploma at Pass Level requires a range of 120-215 points. It demands knowledge of a variety of subjects from three subject groups and allows individual research projects to contribute towards the diploma.

The Cambridge International General Certificate of Education Advanced/Advanced Subsidiary Level (A/AS Level) is a group award. The AS Level examinations may be taken at the midpoint of the A Level program. Students can opt to take the full battery of Cambridge International A Level examinations at the end of the second year of study or follow a staged assessment route by taking the Cambridge International AS Level examinations at the end of the first year of study and completing the final A Level examinations the following year, or take the Cambridge International AS Level examinations.

The Cambridge International General Certificate of Secondary Education (IGCSE) is a two-year curriculum program for 14 to 16 year olds. IGCSE provides a foundation for higher-level courses for the Cambridge AICE Diploma, the Cambridge Pre-U, the College Board Advancement Placement Test, and the International Baccalaureate Diploma. The Cambridge IGCSE is considered comparable in rigor to honors level courses and A/AS Levels are comparable in rigor to Advanced Placement Level courses. This diploma provides a high-quality English medium qualification which prepares students for honors degree programs. The IGCSE is available for grades 9 and 10. These courses provide knowledge and prerequisite skills for participation in the AICE Diploma.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does the Cambridge Program Satisfy this Requirement? |
|--|---|
| <p>8VAC20-40-40E.2 Monitored and assessed student outcomes that are reported to the parents and legal guardians.</p> | <p>Students must pass subject examinations worth a total of six credits, to include at least one from Mathematics and Sciences, Languages, and Arts and Humanities.</p> <p>Full one-credit examinations are given after one year of study. Examinations are external and discriminate through several pass grades. Examinations are evaluated with rubrics. Examinations are taken in June and November of each year.</p> <p>The AICE Diploma is awarded at three levels: Distinction, Merit, and Pass. Students receive the AICE Diploma Certificate in addition to results certificates. Result certificates for each student are sent to the high school in March for November session examinations and in October for June session examinations.</p> <p>AICE examination grades are assigned points which correspond to the UK University and College Admission System.</p> |

| Virginia Regulations | How Does the Cambridge Program Satisfy this Requirement? |
|--|--|
| <p>8 VAC 20-40-40E Identified gifted students shall be offered placement in an instructional setting that provides: appropriately differentiated curriculum and instruction provided by professional instructional personnel trained to work with gifted students.</p> | <p>Before teachers begin to instruct on a Cambridge International AS or A Level Course, they obtain the relevant syllabus booklet. They also study past papers and the reports that are produced by examiners. Students have opportunity for Independent Study: The Cambridge Pre-U Global Perspective examination encourages students to explore real world challenges. Students select a research question and write an independent research report up to 5,000 words in the form of a dissertation. The research project offers the opportunity for students to demonstrate skills of independent study and pursue areas of particular interest in-depth.</p> |

What support mechanisms are associated with the program/model?

Before teachers begin to instruct on a Cambridge International AS or A Level course, they obtain the relevant syllabus booklet and they study past papers and reports that are produced by examiners. The June and November papers and reports from the previous two years are available for teachers on the Teacher Support Web site. This site provides past question papers, mark schemes, examiners reports, schemes of work, and an online community. Single copies of support materials and other useful documents are normally available to schools.

Teachers are offered “high-quality” curriculum support materials and the above-mentioned resources to help teach courses leading to Cambridge examinations and to help students achieve good results. Hard copies of examination materials are also available from the Cambridge Publications Catalogue.

The Cambridge Program recommends teachers buy the International Practical Science Guide which is produced in partnership with the Association for Science Education. It offers advice and activities for the primary and secondary science classroom. Other titles like, the *Professional Development for Teachers Series*, give teachers guidance on teaching and assessing skills in a range of core subjects for the Cambridge IGCSE.

What learner outcomes/student benefits occur with the program/model?

Students must pass subject examinations worth a total of six credits, to include at least one from Mathematics and Sciences, Languages, and Arts and Humanities, when earning an AICE Diploma. Courses are based on the investigative approach to learning with students using initiative and creativity in solving problems.

Full one-credit examinations are given after one year of study. Two-credit exams are available after two years of study. Examinations are external and are evaluated with rubrics.

The AICE Diploma is awarded at three levels: Distinction, Merit, and Pass. Students receive an AICE Diploma Certificate in addition to Result Certificates. Result Certificates for each student are sent to the high school.

Certifying Statements of Results of U.S. candidates can be sent to U.S. universities from the Cambridge U.S. office at the written request of the student. In March 2011, Governor Robert F. McDonnell signed the Cambridge Bill (HB1910) which requires institutions of higher learning to grant course credit for A and AS Level Cambridge Program examinations.

What VDOE initiatives are associated with this program/model?

STEM: The AICE Diploma offers instruction in Mathematics and Sciences. Courses include Applied ICT, Biology, Chemistry, Computing, Design and Technology, Environmental Management, Further Mathematics, Marine Science, Physics, and Psychology.

College and Career Readiness: The Cambridge curriculum aims to encourage the skills of independent research and investigation which is needed for achievement. The program is designed to prepare students for university level courses by providing advanced learning opportunities at high school level based on national and international standards. In March 2011, Governor Robert F. McDonnell signed the Cambridge Bill which requires institutions of higher learning to grant course credit for A and AS Level Cambridge Program Examinations.

21st Century Skills: There is a correlation of the offerings and the skills developed in the Cambridge AICE Diploma Program. Training in the mathematics and science track will assist in the preparation of a future work force. Students utilize life and career skills of initiative and self direction through the selection of coursework based on their interests and intellectual strengths.

What are examples of where this program/model is being implemented?

In Prince William County, the Potomac Senior High School hosts the Cambridge Program for Mathematics and Physical Sciences. Enrollment of identified gifted students in the Advanced International Certificate of Education courses provides advanced learning for the high school level students.

Accelerated Content: Early College Academies

An early college academy is designed to provide gifted students the opportunity to embark on a residential college curriculum early in order to meet their intellectual needs. Students may begin this process while still in high school, without completing the diploma. Such programs exist throughout the nation. An example of an early college academy in Virginia is Mary Baldwin College's Program for the Exceptionally Gifted (PEG), which has served girls as young as 13 since 1985. PEG is an acceleration program that allows young girls to advance into college and live within a community of their intellectual age peers. Students, 16 and 17 years old, complete their high school diploma requirements in tandem with college courses. Students may bypass all or some of their high school grades to pursue an undergraduate degree. Students develop an academic plan and select courses with the assistance of an academic advisor. In the Early College Academy, students reside together in a freshmen residence hall.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Do Early College Academies Satisfy this Requirement? |
|--|---|
| <p>8 VAC 20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students' needs for (i) advanced content and pacing of instruction....Such curriculum and instruction are offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at increasing levels of complexity that differ significantly from those of their age-level peers.</p> | <p>Early College Academies, such as the Program for the Exceptionally Gifted at MBC, offer an opportunity for bright and accomplished students to bypass all or some of their high school grades to pursue an undergraduate degree. Students are able to enroll in college-level courses at a residential college before they are expected to finish high school and receive accelerated instruction.</p> |

What support mechanisms are associated with the program/model?

All PEG freshmen live in a residence hall that was built specifically for the program in 2003. It is designed to meet students’ academic and social needs through its design. Student rooms are arranged in clusters, each supervised by a live-in resident staff member. Fully wired for Internet, phone, and cable services, the center provides an opportunity for students to attend extracurricular events in the evenings and on weekends, and find a staff member for assistance or support.

The PEG staff provides supervision, programming, and emotional support 24 hours a day, seven days a week. They have six live-in staff members who are on duty during nights and weekends and trained in meeting the academic, social, and emotional needs of gifted girls.

What learner outcomes/student benefits occur with the program/model?

Students can earn undergraduate degrees in more than 50 majors and minors: Bachelor of Arts (BA), Bachelor of Science (BS), and Bachelor of Social Work (BSW).

What VDOE initiatives are associated with this program/model?

College and Career Readiness: The opportunity to enroll in college early enables students to begin their college career while in high school or enables them to earn multiple degrees.

Depending on the course of study, it might also expose students to STEM disciplines or enhance their 21st Century Skills.

What are examples of where this program/model is being implemented?

An example of an early college academy in Virginia is Mary Baldwin College’s Program for the Exceptionally Gifted.

Specialty Schools: Academic-Year Governor’s Schools

Academic-Year Governor’s Schools (AYGS) provide students with acceleration and exploration in areas ranging from the visual and performing arts to government and international studies to mathematics, science, and technology. Each school creates a program tailored to the needs of its students, varying both in programmatic format and course offerings. While three schools are full-day programs, fulfilling all requirements students need to graduate, most are part-time programs. Students in these schools spend a portion of their day at the Governor's Schools but rely on their home high schools to provide other courses required for graduation. Students use computers, robotics, and other current technology in laboratory activities. They conduct in-depth research, work with other students to develop special projects and performances, and gain experience alongside mentors in business, industry, government, and universities to enhance their understanding of the content as well as contemporary career options. Academic-Year Governor's Schools are established as "joint schools" by Virginia school law. As such, they are typically managed by a regional governing board of representatives from the school boards of each participating division.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does AYGS Satisfy this Requirement? |
|--|--|
| <p>8 VAC20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning.</p> | <p>Students have access to a community of learners and to an enriched, accelerated, advanced curriculum designed to extend and deepen learning opportunities within and outside of the school setting.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with AYGS programs include: professional development provided for staff members, differentiated instruction, face-to-face opportunities, and individualized instruction.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with AYGS programs include:

- an understanding of the importance of free expression, intellectual curiosity, individual responsibilities, and maturity/respect for others;
- formation of relationships characterized by commitment to scholarship and discovery, openness to ideas, and trust;
- creation of products in an environment that is intellectually safe and challenging;
- participation in unique classes that use both traditional and contemporary instructional techniques;

- development of both individual and group talents;
- plans and objectives for a prescribed education that take into account the physical, social, emotional and academic development of each student;
- a variety of academic experiences in the humanities, arts, sciences, and technology;
- development of individual learning potential in an academically and intellectually challenging and nurturing environment;
- skills of rational thinking, integration of mind and body, self-actualization, intuitive development, and self-evaluation;
- opportunities for creative expression in all of its aspects of thinking, feeling, intuiting, and expressing talent through products;
- a sense of social awareness and commitment to humanity and to their environment, and a respect for the worth and dignity of others; and
- a hands-on approach to learning in the field and classroom.

What VDOE initiatives are associated with this program/model?

STEM: Many AYGS support mathematics, science, engineering, and computer technology instruction as the focus of the program.

College and Career Readiness: Initiatives, such as internships, research, additional precollege preparation in a specific content area, accelerated courses, and mentorships, are associated with AYGS support of future college and career opportunities.

21st Century Skills: Initiatives associated with AYGS support the development of individual and collaborative, as well as critical and creative, thinking skills. The direct application of advanced content and thinking skill in real-world experiences provides a solid foundation for future problem solving.

What are examples of where this program/model is being implemented?

As of 2012-2013, AYGS programs/models included:

| NAME (Fiscal Agent) | GRADES | FOCUS | ACTUAL ENROLLMENT 2012-2013 | PARTICIPATING DIVISIONS IN 2012-2013 |
|---|---------|---|-----------------------------------|--|
| A. Linwood Holton Governor’s School (Washington County) | 11 – 12 | Core Academics And Engineering | 418 | The cities of Bristol, Galax, Norton, and the counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe |
| Appomattox Regional Governor’s School (Chesterfield County) | 9 – 12 | Visual and Performing Arts and Technology | 400 | The cities of Colonial Heights, Franklin, Hopewell, Petersburg, Richmond, and the counties of Amelia, Charles City, Chesterfield, Dinwiddie, Powhatan, Prince George, Southampton, Surry, and Sussex |
| Blue Ridge Governor’s School (Fluvanna County) | 11 – 12 | Science, Mathematics, and Technology | 400 | Counties of Fluvanna, Goochland, Greene, Louisa, Madison, Nelson, and Orange |
| Central Virginia Governor’s School (Lynchburg City) | 11 – 12 | Science, Mathematics, and Technology | 121 | The city of Lynchburg, and the counties of Amherst, Appomattox, Bedford, and Campbell |
| Chesapeake Bay Governor’s School (Middlesex County) | 10 – 12 | Marine and Environmental Science | 271 | The town of Colonial Beach and the counties of Caroline, Essex, Gloucester, King George, King & Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Richmond, and Westmoreland |

| NAME (Fiscal Agent) | GRADES | FOCUS | ACTUAL ENROLLMENT 2012-2013 | PARTICIPATING DIVISIONS IN 2012-2013 |
|---|-------------------|--|-----------------------------------|--|
| Commonwealth Governor's School (Spotsylvania County) | 9 – 12 | Core Academics | 570 | Counties of Caroline, King George, Spotsylvania, and Stafford |
| Governor's School for the Arts (Norfolk City) | 9 – 12 | Visual and Performing Arts | 361 | The cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk, Virginia Beach, and the counties of Isle of Wight and Southampton |
| Governor's School of Southside Virginia (Charlotte County) | 11 – 12 | Humanities or Science, Technology, Engineering, and Mathematics | 193 | Counties of Amelia, Brunswick, Buckingham, Charlotte, Cumberland, Greensville, Lunenburg, Mecklenburg, Nottoway, and Prince Edward |
| Governor's School at Innovation Park (Prince William County) | 11 – 12 | Science, Technology, Engineering, and Mathematics | 81 | The cities of Manassas, Manassas Park, and Prince William County |
| Jackson River Governor's School (Alleghany County) | 11 – 12 | Science, Mathematics, and Technology | 47 | The cities of Buena Vista, Covington, Lexington, and the counties of Alleghany, Bath, Botetourt, and Rockbridge |
| Maggie L. Walker Governor's School for Government and International Studies (Richmond City) | 9 – 12 | Government and International Studies | 718 | The cities of Petersburg, Richmond, and the counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, King & Queen, New Kent, Powhatan, Prince George, and the Township of West Point |
| Massanutten Governor's School for Integrated Environmental Science and Technology (Shenandoah County) | 11 – 12 | Environmental Studies and Integrated Technology | 76 | The city of Harrisonburg and the counties of Page, Rockingham, and Shenandoah |
| Mountain Vista Governor's School (Fauquier County) | 11 – 12 | Science, Mathematics, and Technology | 131 | The city of Winchester and the counties of Culpeper, Fauquier, Frederick, Rappahannock, and Warren |
| New Horizons Governor's School (Hampton City) | 11 – 12 | Science, Technology, Engineering, and Mathematics | 156 | The cities of Hampton, Newport News, Poquoson, James City County/Williamsburg and the counties of Gloucester, Isle of Wight, and York |
| Piedmont Governor's School (Henry County) | 11 – 12 | Science, Mathematics, and Technology | 146 | The cities of Danville, Martinsville, and the counties of Henry and Pittsylvania |
| Roanoke Valley Governor's School (Roanoke City) | 9 – 12 | Science, Mathematics, and Technology | 272 | The cities of Roanoke, Salem, and the counties of Bedford, Botetourt, Craig, Franklin, and Roanoke |
| Shenandoah Valley Governor's School (Augusta County) | 11 – 12 | Arts and Humanities or Science, Technology, Engineering, and Mathematics | 220 | The cities of Staunton, Waynesboro, and Augusta County |
| Southwest Virginia Governor's School (Pulaski County) | 11 – 12 | Science, Mathematics, and Technology | 126 | The cities of Galax, Radford, and the counties of Carroll, Giles, Montgomery, Pulaski, Smyth, and Wythe |
| Thomas Jefferson High School for Science and Technology (Fairfax County) | 9 – 12 | Science, Mathematics, and Technology | 1844 | The city of Falls Church and the counties of Arlington, Fairfax, Loudoun, and Prince William |
| Total | 19 schools | | 6,551 students | |

Specialty Schools: Summer Residential Governor's Schools

[Summer Residential Governor's Schools](#) (SRGS) provide gifted high school rising juniors and seniors with intensive educational experiences in visual and performing arts; humanities; mathematics, science, and technology; life science and medicine; or mentorships in marine

science or engineering. Each SRGS program focuses on one special area of interest. Students live on a college or university campus for up to four weeks each summer. During this time, students are involved in classroom and laboratory work, field studies, research, individual and group projects and performances, and seminars with noted scholars, visiting artists, and other professionals. In the mentorships programs, students are selected to work side-by-side with research scientists, marine biologists, doctors, and a variety of other professionals.

One of the most important aspects of SRGS is the opportunity participants have to live, study, and get to know other students with similar interests and abilities from across Virginia. Both co-curricular and extracurricular activities are designed to encourage students' interests and abilities.

In keeping with providing intensive educational experiences that address students' areas of interest, the VDOE sponsors five [Summer Residential Governor's Foreign Language Academies](#). Three Academies are offered annually as full immersion – French, German and Spanish. Two partial immersion Academies are offered – Japanese and Latin. These opportunities are available for the most motivated and talented foreign language rising juniors and seniors, but not necessarily identified gifted students.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does SRGS Programs Satisfy this Requirement? |
|--|--|
| <p>8 VAC20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning.</p> | <p>Students have access to a community of learners and to an enriched, accelerated, advanced curriculum designed to extend and deepen learning opportunities within and outside of the school setting.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with SRGS programs include: professional development provided for staff members, differentiated instruction, and individualized instruction.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with SRGS include:

- an understanding of the importance of free expression, intellectual curiosity, individual responsibilities, and maturity/respect for others;
- relationship formation characterized by commitment to scholarship and discovery, openness to ideas, and trust;
- creation of products in an environment that is intellectually safe and challenging;
- participation in unique classes that use both traditional and contemporary instructional techniques;
- development of both individual and group talents;
- development of plans and objectives that take into account the physical, social, emotional, and academic development of each student;
- a variety of academic experiences in the humanities, arts, science, and technology;

- the development of individual learning potential in an academically and intellectually challenging and nurturing environment;
- development of the skills of rational thinking, integration of mind and body, self-actualization, intuitive development, and self-evaluation;
- creative expression in all of its aspects of thinking, feeling, intuiting, and expressing talent through products;
- a sense of social awareness and commitment to humanity and to their environment, and a respect for the worth and dignity of others; and
- an appreciation for a hands-on approach in the field and/or classroom.

What VDOE initiatives are associated with this program/model?

STEM: Initiatives support mathematics, science, and computer technology instruction.

College and Career Readiness: Initiatives associated with Academic-Year Governor’s Schools support future career opportunities, additional precollege preparation in a specific area, and accelerated classes to advance to higher-level courses at an earlier age.

21st Century Skills: Initiatives associated with special schools support individual and collaborative critical and creative thinking, the direct application of learning in real-world experiences, and development of collaborative skills.

What are examples of where this program/model is being implemented?

These programs are generally held on college campuses in Virginia.

| Academic SRGS Programs | Visual and Performing Arts SRGS Programs | Mentorship SRGS Programs |
|---|--|---|
| <ul style="list-style-type: none"> ▪ Agriculture ▪ Humanities ▪ Mathematics, Science, and Technology | <ul style="list-style-type: none"> ▪ Dance ▪ Instrumental Music ▪ Theater ▪ Visual Arts ▪ Vocal Music | <ul style="list-style-type: none"> ▪ Engineering ▪ Life Sciences and Medicine ▪ Marine Science |

Specialty Schools: Summer Regional Governor’s Schools

While twenty [Summer Regional Governor's Schools](#) (SRgGS) are available throughout the state, only eleven provide services throughout a portion of a student’s high school years. These schools exist in a variety of formats. School divisions design these programs to meet some of the needs of their local gifted elementary, middle, and high school students. These schools provide exciting opportunities in the arts, sciences, and humanities.

SRgGS typically are housed at a public school or on the campus of a college, community college, or university. The lengths of programs vary, with some lasting a week or less while others may last four or more weeks. Most students return to their homes at the end of each day's activities; however, the University of Virginia's College at Wise, Southside, and Valley/Ridge Summer Regional Governor's Schools are residential. Gifted students may apply for the regional

summer school in their area. The SRgGS director and the planning committee, with representatives from the participating school divisions at each regional site, establish nomination and selection procedures. Program topics and grade levels vary among the sites and change from year to year in response to annual local evaluations and changing concerns in the localities sponsoring the SRgGS.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does SRgGS Programs Satisfy this Requirement |
|--|--|
| <p>8 VAC20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning.</p> | <p>Students have access to a community of learners and to an enriched, accelerated, advanced curriculum designed to extend and deepen learning opportunities within and outside of the school setting.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with SRgGS include: professional development provided for staff members, differentiated instruction, and individualized instruction.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with SRgGS include:

- an understanding of the importance of free expression, intellectual curiosity, individual responsibilities, and maturity/respect for others;
- formulation of relationships characterized by commitment to scholarship and discovery, openness to ideas, and trust;
- product creation in an environment that is intellectually safe and challenging;
- participation in unique classes that use both traditional and contemporary instructional techniques;
- development of both individual and group talents;
- goals, plans, and objectives that take into account the physical, social, emotional, and academic development of each student;
- a variety of academic experiences in the humanities, arts, sciences, and technology;
- opportunity to reach their individual learning potential in an academically and intellectually challenging and nurturing environment;
- skills of rational thinking, integration of mind and body, self-actualization, intuitive development, and self-evaluation;
- creative expression in all of its aspects of thinking, feeling, intuiting, and expressing talent through products;
- a sense of social awareness and commitment to humanity and to their environment, and a respect for the worth and dignity of others; and,
- a hands-on approach to learning in the field and/or classroom.

What VDOE initiatives are associated with this program/model?

STEM: Initiatives support mathematics, science, and computer technology instruction.

College and Career Readiness: Initiatives associated with SRgGS programs support future career opportunities, additional precollege preparation in a specific area, and accelerated classes to advance to higher-level courses at an earlier age.

21st Century Skills: Initiatives associated with special schools support individual and collaborative critical and creative thinking, the direct application of learning in real-world experiences, and development of collaborative skills.

What are examples of where this program/model is being implemented?

As of 2012-2013, the 10 SRgGS programs that address high school students included:

| Program Name | Focus Area(s) |
|--|---|
| Appalachian Summer Regional Governor’s School | Art, science, and technology. Grades 9-12 |
| Field Ecology Summer Regional Governor’s School | Field ecology. Grades 8-9 |
| Fredericksburg Summer Regional Governor’s School | Technology and science. Grades 6-11 |
| Mountain Empire Community College Summer Regional Governor’s School | Book art, printing, creative writing, and publishing, Web design, fundamentals of law, and rocketry. Grades 10-12 |
| Performing and Visual Arts Northwest (PAVAN) Summer Regional Governor’s School | Dance, theatre, vocal music, guitar, and visual art. Grades 8-11 |
| Southside Summer Regional Governor’s School | Environmental responsibility through science, art, and literature. Grades 8-10 |
| Southwest Virginia Community College Summer Regional Governor’s School | Engineering and science. Grades 10-11 |
| UVA College at Wise Summer Regional Governor’s School in Theater Arts | Experiential, production-based exploration of a Shakespearean text through study, design, and performance. Grades 11-12 |
| Valley Ridge Summer Regional Governor’s School | Integrated ecological study of the Chesapeake Bay watershed. Grades 9-11 |
| Virginia Highlands Summer Regional Governor’s School | Mathematical modeling, play analysis and production. Grades 9-12 |

Specialty Schools: Magnet Schools and Specialty Centers

Magnet Schools are public schools that focus on a particular area of study, such as performing arts or science and technology but also offer regular school subjects. The school usually has a special offering not found at the school the student regularly would attend, making it an attractive choice for many parents and students.

Specialty centers host optional academic programs for students who have specific interests and educational goals in a certain focus area. Many specialty centers are housed within regular high

schools in the school divisions yet require an application and testing as part of the admissions process.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Magnet Schools and Specialty Centers Satisfy this Requirement |
|--|--|
| <p>8 VAC20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning.</p> | <p>Students have access to a community of learners and to an enriched, accelerated, advanced curriculum designed to extend and deepen learning opportunities within and outside of the school setting.</p> |

What support mechanisms are associated with the program/model?

Support mechanisms associated with magnet/specialty centers include: professional development provided for staff members, differentiated instruction, and individualized instruction.

What learner outcomes/student benefits occur with the program/model?

Learner outcomes associated with magnet/specialty schools include:

- understanding the importance of free expression, intellectual curiosity, individual responsibilities, and maturity/respect for others;
- forming relationships characterized by commitment to scholarship and discovery, openness to ideas, and trust;
- creating products in an environment that is intellectually safe and challenging;
- participating in unique classes that use both traditional and contemporary instructional techniques;
- developing both individual and group talents;
- allowing for plans and objectives to be developed, taking into account the physical, social, emotional, and academic development of each student;
- experiencing a variety of academic experiences in the humanities, arts, sciences, and technology;
- reaching their individual learning potential in an academically and intellectually challenging and nurturing environment;
- learning the skills of rational thinking, integration of mind and body, self-actualization, intuitive development, and self-evaluation;
- encouraging creative expression in all of its aspects of thinking, feeling, intuiting, and expressing talent through products;
- developing a sense of social awareness and commitment to humanity and to their environment, and a respect for the worth and dignity of others; and
- learning using a hands-on approach and/or in the field and classroom.

What VDOE initiatives are associated with this program/model?

STEM: Initiatives support mathematics, science, and computer technology instruction.

College and Career Readiness: Initiatives associated with Academic-Year Governor’s Schools support future career opportunities, additional precollege preparation in a specific area, and accelerated classes to advance to higher-level courses at an earlier age.

21st Century Skills: Initiatives associated with special schools support individual and collaborative critical and creative thinking, the direct application of learning in real-world experiences, and development of collaborative skills.

What are examples of where this program/model is being implemented?

Examples of Magnet Schools/Specialty Centers include:

- [Thomas Dale High School – Specialty Center for the Arts](#), Chesterfield County, VA
 - The Specialty Center for the Arts provides highly interested and talented students in music, theatre, dance, or visual arts an opportunity to explore and expand their creative potential in an arts community within a fully comprehensive high school.
- [Galileo Magnet High School](#), Danville, VA
 - As an International Baccalaureate school, Galileo is part of a worldwide academically challenging program whose rigorous courses provide aspiring students with avenues to pursue a more in-depth education that is recognized across the world. A thematic-based curriculum offers three strands of study, Advanced Communications and Networking Technology, Air and Space Technology, and Biotechnology, from which students can choose.
- [Tucker High School – Specialty Center-Center for World Languages](#), Henrico County, VA
 - Students attend a two-week summer jump start program to transition into the immersion high school at 9th grade. Students are immersed in the language for two or three classes a day.
- [Loudoun Academy of Science](#), Sterling, VA
 - The purpose of the Academy is to provide advanced mathematics and science courses for gifted students in science and technology. These courses include Advanced Placement courses, as well as classes devoted to scientific research.

Beyond the Classroom: Travel Abroad

Travel abroad programs are an invaluable supplement to educational programs for gifted students. High school travel abroad programs provide gifted students an opportunity to gain a global perspective and become citizens of a global society as they complete their high school education. Travel abroad may take several forms, from authentic language immersion to attending a university study abroad program to a field experience that includes travel to several countries. These opportunities provide learning experiences that promote a deeper understanding of other countries’ histories, cultures, and traditions as well as a greater appreciation for and understanding of diverse global perspectives. Language acquisition may be achieved through practical immersion. High school students can choose to spend a summer, a semester, or even a year living and studying abroad.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Travel Abroad Satisfies this Requirement |
|---|---|
| <p>8 VAC20-40-20 “Appropriately differentiated curriculum and instruction” means curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction; (ii) original research or production; (iii) problem finding and solving; (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study.</p> | <p>A travel abroad program allows gifted students to study other countries and cultures in-depth, to research issues from diverse perspectives, and to focus on interdisciplinary themes across multiple areas of study. Students become independent investigators who develop an understanding of their own language and heritage and learn to value those of others, enhancing oral, written, and artistic forms of communication within a given cultural context. Students who travel abroad have the opportunity to explore, develop, and research their areas of gifts, talents, and interests through a multicultural lens.</p> |

What support mechanisms are associated with the program/model?

The myriad opportunities available for travel abroad offer a broad range of experiences that provide differentiation based on student interest. Funding is often available through fund raisers, scholarships, and part-time jobs. Costs include, but are not limited to, tuition and fees, room and board, medical insurance, passport and visa fees, and transportation costs. Tour companies that offer travel abroad programs provide accommodations, teachers, chaperones, and assist in all aspects of the travel abroad experience. Technology allows students to research and plan ahead as well as to continue connecting with international friends once they return home.

What learner outcomes occur with the program/model?

The [Institute for the International Education of Students](#) (IES) surveyed alumni from all IES study abroad programs from 1950 to 1999. Regardless of where students studied and for how long, the data from the more than 3,400 respondents (a 23 percent response rate) show that studying abroad is usually a defining moment in a young person's life and continues to impact the participant’s life for years after the experience. Some of the benefits that students reported included increased self-confidence, a lasting impact on worldview, enhanced interest in academic study, commitment to foreign language study, a better understanding of cultural views and biases, and new career paths and opportunities.

In accordance with NAGC Standards, students who travel abroad become independent investigators, gain greater understanding of their own and others’ language, heritage, and circumstance, and develop competence in interpersonal and technical communication skills.

What VDOE initiatives are associated with this program/model?

College and Career Readiness: Travel experiences widen a student's worldview as they engage in other cultures. This also prepares students to live and work in a diverse community.

21st Century Skills: Some study abroad programs now focus on issues that are of a global concern (such as alternative energy sources) and students have opportunities to employ critical and creative thinking as they explore and learn how other countries are addressing global problems and issues.

What are examples of where this program/model is being implemented?

Study abroad summer or academic year programs can help students acquire firsthand knowledge of another culture and increase facility with a foreign language. Programs vary on dimensions such as living arrangements, costs, degree of structure, required classes, and opportunities to travel. More than 200 programs are accredited by the [Council on Standards for International Educational Travel's](#) advisory list of International Educational Travel and Exchange Programs.

Beyond the Classroom: Summer Enrichment

Summer educational experiences provide students with enrichment and acceleration opportunities that offer an environment that strengthens and develops their potential. High expectations, continuous challenge, and novel learning experiences are important components that support the academic success of gifted students.

Within the United States, most states and many school divisions have developed specialized summer programs that bring together academically talented students and offer an educational experience geared to their high abilities. Moreover, summer programs foster independence and good work habits in an intellectually challenging environment that also develops important 21st century skills to include critical thinking and creativity.

Summer programs designed to meet the needs of high-ability learners include governor's schools, various options developed by local school divisions as part of their gifted and talented programming, and precollegiate programs sponsored by colleges and universities on their campuses or at satellite sites. When funding is available, foundations, such as the National Science Foundation, have sponsored such programs through grants to various institutions.

Programs can be residential or day programs, and they span the arts, humanities, mathematics, and sciences. While most are offered in a course format, many programs are devoted to internships, research experiences, or specialized mentorships. The majority of the residential programs, however, are limited to the secondary grades.

Many programs are intended to provide enrichment and acceleration in order to build motivation in students who are underrepresented in traditional programs. Admission to summer enrichment programs can be highly competitive and selective. While a variety of criteria is utilized in selecting students (e.g., grades, recommendations, nominations), high ability as measured by achievement or aptitude tests is a critical component of many selection systems.

Summer enrichment programs provide supplemental educational opportunities for academically talented students to ensure that they are challenged and that their passions and love for learning are kept alive. They also provide an appropriate social experience for students to interact with intellectual peers of other cultures, regions, and countries.

The Study of Mathematically Precocious Youth (SMPY) is conducting a fifty-year longitudinal study that began in 1971 at Johns Hopkins University. This work involves studying, throughout their lives, more than 5,000 mathematically and verbally precocious students. This longitudinal study provides data not only to evaluate but also to refine programs. It also provides information about the development, needs, and characteristics of precocious youth.

The data collected during SMPY's first three decades have shown that, while most SMPY students do achieve their potential for high academic success in high school, college, and even graduate school, intellectually talented students will not necessarily achieve to their full potential unless provided with appropriate educational opportunities. Some of the most satisfying experiences are the summer enrichment programs.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Summer Enrichment Satisfy this Requirement? |
|--|---|
| <p>8 VAC20-40-20 “Instruction. . . to accommodate the accelerated learning aptitudes of identified students in their areas of strength . . . accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction, (ii) original research or production, (iii) problem finding and solving, (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study”</p> | <p>These programs provide opportunities for students with gifts and talents to explore, develop, and research their areas of interest, talents, and/or potential career paths. Summer enrichment provides opportunities for self-exploration, pursuit of interests, and development of personal identity.</p> |
| <p>8 VAC20-40-60A “. . .gifted service options. . . are offered . . . (i) to work with their age-level peers, (ii) to work with their intellectual and academic peers, (iii) to work independently, and (iv) to foster intellectual and academic growth of gifted students.”</p> | <p>Summer enrichment options extend and deepen learning opportunities outside of the school setting.</p> |

What support mechanisms are associated with the program/model?

Middle and high school personnel must disseminate information about summer enrichment opportunities to parents and community members in a timely manner. Middle and high school counselors must remain up-to-date on summer opportunities that are available to their students. Personnel at the schools should be available to assist students in completing forms and applications and in finding community resources to reduce or eliminate the financial barriers to summer enrichment opportunities.

What learner outcomes occur with the program/model?

In accordance with NAGC PreK-Grade 12 Gifted Programming Standards many positive outcomes are apparent. Students have the opportunity to interact with same-age peers, mentors, or experts with similar interests, abilities, and/or experiences. They become independent investigators and demonstrate growth in personal competence such as self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking. In residential summer enrichment, for example, students learn to live and interact with a wide range of peers and learn to value the language, heritage, and circumstance of others. At the same time, students develop competence in interpersonal and technical communication skills. Summer enrichment provides opportunities to identify future career goals and to develop the pathways to reach those goals. Summer enrichment programs provide environments in which gifted learners, in all their diversity, understand and accept themselves and are understood, valued, nurtured, and supported. Many of the friendships made during these summer experiences are sustained throughout college and beyond.

What VDOE initiatives are associated with this program/model?

STEM: The summer enrichment programs in Virginia related to mathematics, technology, science, and engineering have objectives in common with STEM. The majority of programs are linked to Career and College Readiness as well as 21st Century Skills (see descriptions below).

College and Career Readiness: Summer enrichment programs support the exploration of future career interests through exposure to a wide range of topics not traditionally addressed within the classroom. Since many of these programs are housed on college campuses, students become comfortable navigating the campus environment.

21st Century Skills: Summer enrichment programs support individual and collaborative critical and creative thinking and problem-solving strategies, the direct application of learning in real-world experiences, and development of collaborative skills.

What are examples of where this program/model is being implemented?

- [George Mason University](#) offers both day and residential enrichment camps for high school students that apply to many different interests and levels. Some of the camp topics include public speaking, writing, drama, dance, jazz, music composition, science and technology, computer game design, film and video production, and robotics.
- The University of Virginia (UVA) offers the following summer opportunities:
 - The Curry School of Education has offered its residential [Summer Enrichment Program](#) for over thirty years to gifted and/or high-ability students enrolled in grades

- 4-10. Students are engaged in learning activities that foster critical thinking, creative thinking, and inquiry processes.
- UVA has a week-long residential leadership program, [Leadership on the Lawn](#), for high school sophomores and juniors.
 - Another week-long summer program is [Introduction to Engineering](#) for rising high school juniors and seniors interested in pursuing engineering as a career.
 - The [High School Leaders Program](#) at UVA is a two-week program for rising juniors and seniors.
 - The [Young Writers Workshop](#) is a two- and three-week program for high school 9th-12th graders who are interested in the craft of writing.
 - The [Summer Language Institute](#) accepts advanced high school students for its intensive eight-week language immersion program.
- UVA's College at Wise hosts the popular [SPIRIT](#) camp, the Summer Program in Robotics and Intelligent Technology. SPIRIT is a one-week long summer day camp held on campus. The program is available for high school juniors and seniors who are interested in science and technology. There is no cost associated with the program, but enrollment is competitive.
 - The College of William and Mary offers summer camps for high-ability students both on campus and at various locations in Richmond. Students explore specialized areas of science, mathematics, and the arts and humanities.
 - The [ID Tech Computer Camp](#) offers programs in video game design, programming, Web site design, and video editing.
 - Other [computer camps](#) are offered for interested students in technology/STEM skills.
 - Students interested in [Shakespeare](#) can participate in William and Mary's week-long day camp to learn about the production of Shakespeare's plays.
 - Another series of summer opportunities offered at William and Mary for high school students is the [Pre-College Program](#) in partnership with Johns Hopkins' Center for Talented Youth.
 - At Virginia Tech, Virginia's top journalism camp, [JCAMP](#), offers training in more than ten journalism specialties including newspaper and feature writing, editorial leadership, and photojournalism. Students work shoulder-to-shoulder with other high school journalists to perfect writing and editorial skills.
 - Old Dominion University's College of Engineering and Technology offers an [Engineering and Science Preparatory](#) (ESP) nonresidential summer program for rising 11th- and 12th-graders who show interest and promise in mathematics, science, and engineering.

Beyond the Classroom: Seminars, Guest Speakers, and Field Trips

Other opportunities for students beyond the classroom include seminars, guest speakers, and field trips. School divisions may offer such opportunities as a means of interacting with

community, experts/practicing professionals. These opportunities are most often local in nature and occur as a result of school-community contacts.

In much the same way that Governor’s Schools provide regular enrichment opportunities for gifted students, schools can offer occasional enrichment experiences to students to enhance their classes and projects.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Does Seminars, Guest Speakers, and Field Trips Satisfy this Requirement? |
|---|--|
| <p>8 VAC20-40-20 “Instruction. . . to accommodate the accelerated learning aptitudes of identified students in their areas of strength . . . accelerated and enrichment opportunities that recognize gifted students’ needs for (i) advanced content and pacing of instruction, (ii) original research or production, (iii) problem finding and solving, (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study. . . .”</p> | <p>Seminars, speakers, and field trips offer hands-on enrichment opportunities that expose students to a wider range of experiences than the typical classroom curriculum can provide.</p> |

What support mechanisms are associated with the program/model?

Program/speaker identification sources for gifted resource personnel are limitless, to include local, regional, and national resources. These sources may be a combination of on-site and virtual contacts. Funding may be needed for transportation, speaker honoraria, and materials.

What learner outcomes occur with the program/model?

Students identified as gifted and talented are able to develop knowledge and gain from experiences that provide skills for living in a diverse global society. These experiences introduce students to the needs as well as resources of their community. There is the potential for deeper, hands-on individual investment within a student’s vocational interest. It provides a student with an opportunity to learn the knowledge, skills, understandings, and tools of experts in the field.

What VDOE initiatives are associated with this program/model?

These enrichment programs can be designed to meet any/all of the previously listed VDOE initiatives, as determined by a local assessment of needs.

What are examples of where this program/model is being implemented?

Seminars, speakers, and field trips are a common element of gifted programs throughout the Commonwealth. One well implemented example comes from Rockingham County Public Schools, where high school gifted education personnel provide monthly seminars (a different grade level served each month) during the school day for gifted students. Topics are wide-ranging and students

are invited to participate based upon their interest and availability. Speakers and multimedia events are selected by the gifted resource staff member at the high school.

Another opportunity provided to high school students sponsored by the VDOE is the [Russian International Space Olympics](#) in Korolev, Russia. Students present their research projects and participate in a variety of cultural interactions and competitions with students from Russia and other countries.

Beyond the Classroom: Independent Study

Independent study is used to describe those educational experiences where students pursue a topic of interest at greater depth and detail than is possible in the traditional classroom. Some schools define these experiences as internships or mentorships as these explorations often take place under the guidance of a mentor who is a practitioner or expert in the field of study and/or a supervising teacher who help(s) the student establish and remain accountable to appropriate, pre-established goals and outcomes. In their independent investigations, students employ and hone research skills, practice communication skills, and develop professional habits of mind. They prepare and present research findings as they gain firsthand knowledge of real-world applications.

How does the program/model satisfy requirements for best practices in the *Regulations Governing Educational Services for Gifted Students*?

| Virginia Regulations | How Independent Study Satisfy this Requirement |
|--|--|
| <p>8 VAC20-40-20 "Appropriately differentiated curriculum and instruction" is defined as "curriculum and instruction adapted or modified to accommodate the accelerated learning aptitudes of identified students in their areas of strength. Such curriculum and instructional strategies provide accelerated and enrichment opportunities that recognize gifted students' needs for (i) advanced content and pacing of instruction; (ii) original research or production; (iii) problem finding and solving; (iv) higher-level thinking that leads to the generation of products; and (v) a focus on issues, themes, and ideas within and across areas of study. Such curriculum and instruction are offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at increasing levels of complexity that differ significantly from those of their age-level peers."</p> | <p>Independent study incorporates all facets of this definition and is highly individualized based on the needs, interests, and aptitudes of each student.</p> <p>Independent study provides students with opportunities to interact with professionals/role models from the community, to increase their connections to resources outside of the school walls, and to improve their skills as they conduct independent research resulting in original products.</p> |

| Virginia Regulations | How Independent Study Satisfy this Requirement |
|--|--|
| <p>8VAC 20-40-60A.12 Policies and procedures that allow access to programs of study and advanced courses at a pace and sequence commensurate with their learning needs.</p> | <p>This beyond-the-classroom experience fosters intellectual and academic growth and ensures that individual learning needs are being accommodated since the student works on self-selected content and at a self-determined pace.</p> |

What support mechanisms are associated with the program/model?

While they should encourage as much self-choice and independent exploration as possible, independent study programs should be governed by locally-established guidelines appropriate to the individual divisions/school/gifted program. An independent study handbook is a helpful tool for outlining procedures.

In order to offer credit for independent study, schools need to consider the scheduling needs of students and a supervising teacher. This teacher provides accountability for students, access to resources, and logistical support for the execution and presentation of projects. Management of independent study requires significant time and attention. Beyond these considerations, funding for independent study need not be significant, if necessary at all.

Access to technology and other means of research is important for students as well as access to potential mentors. A statewide network of potential/interested mentors would facilitate the mentor-matching process.

What learner outcomes occur with the program/model?

Learner outcomes can largely be determined based on individual study plans; however, some common benefits are as follows:

- Students grow in self-understanding with respect to social-emotional development and in intellectual, academic, creative, leadership, and artistic domains;
- Students develop an understanding of how they learn and grow and recognize the influences of their beliefs, traditions, and values on their learning and behavior;
- Students learn how to access resources from the community to support cognitive and affective needs based on their unique characteristics and interests;
- Students, through independent study, become independent investigators and may identify future career goals that match their talents and abilities; and
- Students develop competence in interpersonal and technical communication skills.

What VDOE initiatives are associated with this program/model?

21st Century Skills: Independent study addresses critical and creative thinking skills and problem solving as students determine a topic of study, conduct research and apply their new knowledge in practical or even real-life situations. Though their study is independent, students develop skills in collaboration as they work under the supervision of a teacher or mentor.

College and Career Readiness: Certainly such endeavors prepare students for the increased personal responsibility they must take for their learning in a collegiate environment. If their focus is on a potential career path, they begin developing habits of mind appropriate to that field.

STEM: Initiatives are relevant to those students who pursue a study in a science, mathematics, or engineering field or who work with professionals in these fields.

Virtual Learning: This could be useful to students who are unable to connect with a local mentor in their field of study or who have limited access to local resources.

What are examples of where this program/model is being implemented?

Various program models exist for independent study across the Commonwealth and the nation. Some examples include:

- Prince George County Public Schools in Prince George, VA, offer Independent Study to secondary identified gifted students as a yearlong course. The gifted resource teacher serves as the supervising teacher for the student and helps him or her establish goals based on set guidelines for the course that require a first semester research paper and a second semester research project done in coordination with a mentor who has expertise in the field of study. Final presentations of the students' work are given before audiences that include professionals in the students' fields, teachers and other adults, as well as gifted peers. Guidelines for the study are outlined in an Independent Study Handbook that is revised each year.
- Frederick County Public Schools in Winchester, Virginia offer an Independent Study course where identified gifted juniors and seniors are provided "opportunities to assess career choices through mentorship experiences, self-assessment exercises, and career exploration activities." Students participate in classroom seminars that cover topics relevant to helping them select potential careers and self-assess their personal strengths and aptitudes; they also work with community professionals who provide them with exposure to the chosen career field.
- In the [Clear Creek Independent School District near Houston, Texas, Independent Study](#) is an integral part of the gifted program. Its Web site explains that "high schools pair students who participate in Independent Study Mentorship (ISM) with community mentors for a semester or a year and complete projects based on an area of career interest. By using community partners and resources, the program provides experiences for students beyond the traditional curriculum in many subject areas."
- The [El Paso \(TX\) Independent School District](#) encourages gifted students at some of its high schools to "complete an advanced-level independent study project. Students explore areas of interest through an in-depth investigation and development of a product that reflects professional quality work. Independent study projects are guided by the classroom teacher and a mentor who is an expert in the field of study. The research product is presented to a panel of judges according to the performance standards. Students who successfully meet the standards earn a Distinguished Achievement Program advanced measure."

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