High School Science Course Pathways

Implementation of the new Washington State Science Learning Standards has resulted in a shift in our high school science course offerings. ALL students in the graduating class of 2021 and beyond must pass the new Washington Comprehensive Assessment for Science in order to graduate from high school. Because the assessment measures student learning across multiple domains, careful planning is needed to ensure each student has a comprehensive high school science education.

All NTPS students are required to take a Biology, Physics, and Chemistry class during the first 3 years of high school. Most students will be encouraged to take the core courses of STEM Physics and Biology during their freshman and sophomore years (in either order), followed by a year of Chemistry. While some students will opt for more advanced coursework and others will choose alternatives to the core, **it is critical that each student takes a combination of a full sequence of recommended courses**. This document provides several examples of potential course pathways that students may consider as they plan for registration.

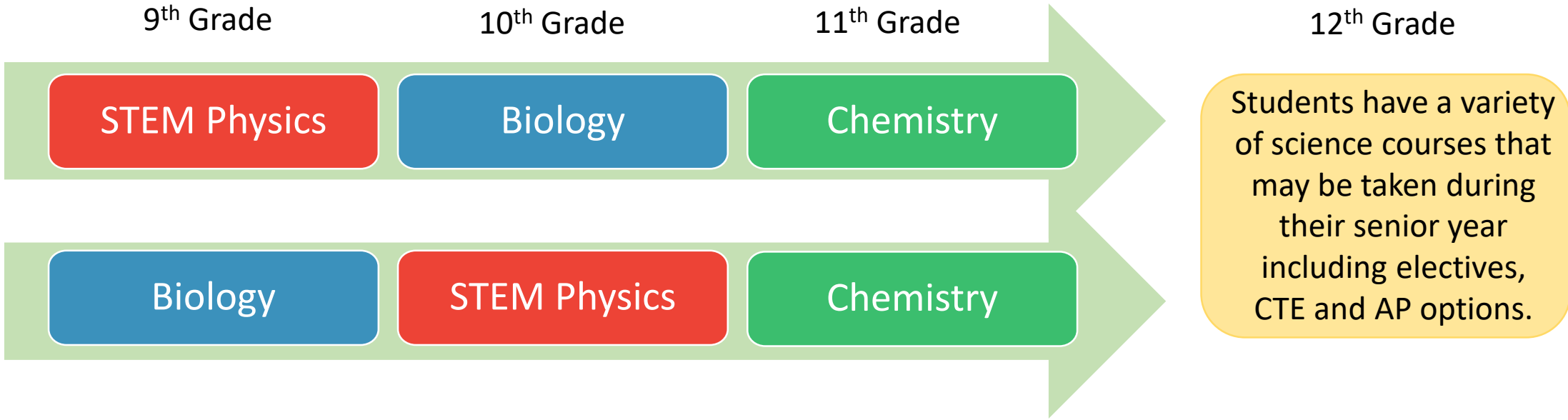
Core Course Pathway:

STEM Physics	Biology	Chemistry
9th and 10th Grade – In any order		11th Grade

Updated February 22, 2019 by Mackiewicz, Teaching & Learning

Example Pathways Appropriate for All Students

Standard Pathway: This is appropriate for all students interested in entering the career field out of high school or attending a community college, trade school, or a 4-year college after graduation.



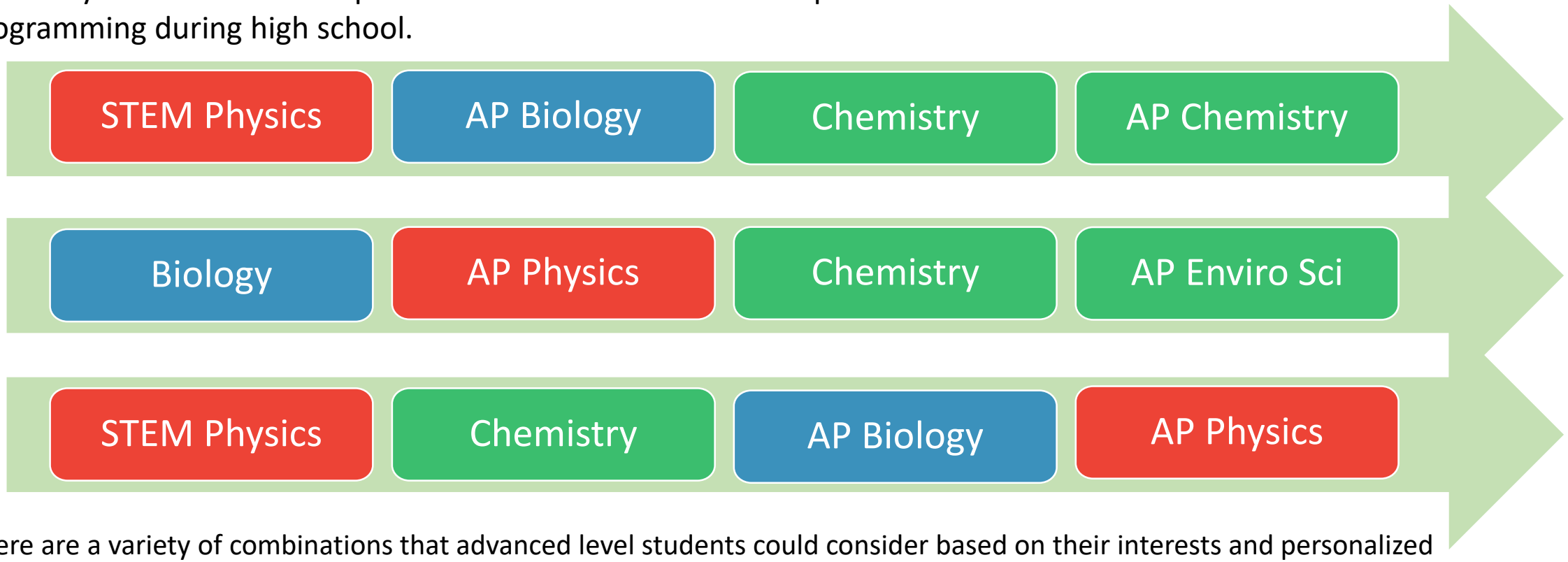
Which should a student take first… STEM Physics or Biology?

It is recommended that students choose between STEM Physics and Biology in 9th grade based on their strengths and interests coming out of middle school. If a student was particularly successful and enjoyed the life science content in their middle school science class, then Biology may be recommended first…and if physical science was a strength, then consider starting with STEM Physics.

Enter HS from a position of strength!

Example of Pathways for Advanced Level students

Advanced Academic Pathway: This is highly recommended for students interested in attending a 4-year college or university where entrance is prioritized for students who have pursued some form of honors or advanced programming during high school.

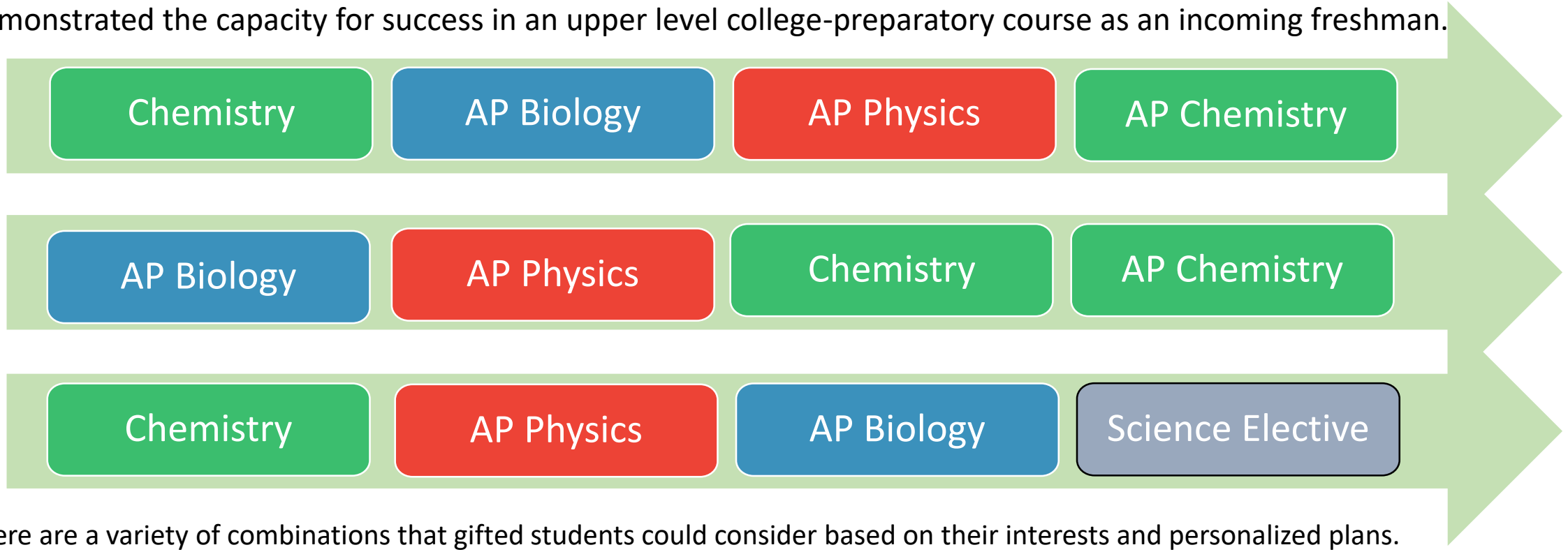


There are a variety of combinations that advanced level students could consider based on their interests and personalized plans. Students must take one of each domain (one red, one blue, one green) by the end of their junior year.

AP courses: AP Biology and AP Physics can be taken in place of Biology and STEM Physics. Note: The AP Board recommends that AP Chemistry be taken after a student completes Chemistry; exceptions may be considered, with permission, for advanced and highly motivated students. AP courses are not generally recommended freshman year.

Example of Pathways for Identified Gifted Students

Gifted Program Pathway: This pathway requires approval of current middle school teacher, instructing high school teacher, high school counselor and parents. Students opting for this accelerated pathway need to have demonstrated the capacity for success in an upper level college-preparatory course as an incoming freshman.



There are a variety of combinations that gifted students could consider based on their interests and personalized plans. Students must take one of each domain (one red, one blue, one green) by the end of their junior year.

AP courses: AP Biology and AP Physics can be taken in place of Biology and STEM Physics. Note: The AP Board recommends that AP Chemistry be taken after a student completes Chemistry; exceptions may be considered, with permission, for advanced and highly motivated students. AP Biology could be taken freshman year with teacher and parent approval.

Alternative Courses

The core science course pathway is a guide for students to consider as they design their high school plan. It is possible though that for some students, considering alternative courses to the core offerings may align more closely with their interests and/or their instructional needs. Alternatives have been designed for each of the core classes. These alternatives still instruct most of the new science standards but some may be more project-based or vocational in their approach and others may be more advanced or college-preparatory (such as AP courses and College in the HS). Many of these alternatives are also eligible for CTE credit.

STEM Physics	Biology	Chemistry
Intro to Engineering (CTE) NTHS, RRHS, THS	Animal Science (CTE) NTHS	Environmental Chemistry (CTE) NTHS, RRHS, THS
AP Physics NTHS, RRHS, THS	Biology Through Horticulture(CTE) RRHS	AP Chemistry NTHS, RRHS, THS
College in the HS Physics NTHS, THS	Environmental Science (CTE) THS	College in the HS Chemistry RRHS
	AP Biology NTHS, RRHS, THS	AP Environmental Science NTHS, THS

School teams may have some additional courses that are currently Science and/or CTE electives that may be considered in highly unique situations. Consultation with a district level instructional specialist and/or building science teacher is required.