



DUBLIN HIGH SCHOOL

"*THE GAEL FORCE*"
A California Distinguished School

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Dear Parents:

Effective for the class graduating in 2021, Dublin High School science courses will meet the expectations of the Next Generation Science Standards (NGSS). We know there will be questions about this new requirement and the transition to the NGSS and we want to address them here:

Why the NGSS? Students are facing a changing world that demands the application of science, technology, engineering and mathematics (STEM) skills. Jobs requiring significant STEM skills are growing three times faster than non-STEM jobs (Langdon et al., 2011). We need to prepare our next generation of innovators, scientists, artists, engineers, entrepreneurs, doctors, explorers, and leaders. NGSS will prepare students with 21st Century Skills required to compete and lead in a changing world.

What are the NGSS? NGSS encourages students to learn about science processes in a deep, meaningful way through first-hand investigative processes rather than memorization of facts. You'll see engaging activities with students asking more questions, exploring and discussing possible solutions, investigating science concepts, using argumentation, and being fully active in the learning process. Class activities will emphasize data analysis and constructing models to explain scientific phenomena. The NGSS focus includes four subject areas: *earth science*, *biology*, *physical science (chemistry and physics)*, *engineering*. The engineering component exposes students to using science to solve design problems.

How do the NGSS compare to the Common Core State Standards (CCSS)? NGSS standards were developed independently of Common Core State Standards for mathematics and language arts. The NGSS align closely with the CCSS to ensure the science standards connect to the mathematics content and make important literacy connections.

How do the NGSS affect the courses my student might take? DHS has modified its current three-course graduation requirement in science so that it now focuses instruction for every student on the four required NGSS subject areas. DHS students will still have options within the new requirements. Students will be able to take four years of science (or possibly more if space permits), including courses outside the foundational courses, and will still be able to pursue Advanced Placement (AP) coursework.

Will this change graduation requirements or college admissions requirements?

DHS will continue to offer the three-tiered diploma options. See below for required coursework. All DHS students will continue to meet CSU/UC admissions standards. Valley High School graduation requirements remain unchanged, though courses will be modified to support the NGSS.

3-Tiered Diploma NGSS-Aligned Course Sequences

For the class of 2021, new graduation requirements have been designed to support students' access to a broad foundation in the sciences:

Diploma	Diploma with Distinction	Advanced Scholar Diploma
30 units of science: Must include Biology and any Physics course. Must also include Chemistry or Earth Science.	30 units of science: Must include Biology, Chemistry and any Physics course.	40 units of science: Must include Biology, Chemistry and any Physics course, plus one more lab science course.

These requirements **do not** impact students graduating in the classes of 2018-2020. However, it is recommended that all students consider coursework that ensures they have a strong foundation in biology, chemistry, and physics as part of their preparation for college.

Where is Dublin Unified in the transition to the NGSS? In the 2015-2016 school year, Dublin Unified began implementing a multi-year K-12 plan to support transition to the NGSS. Dublin continues to work with state experts and early implementers to support our teachers. Teachers have begun redesigning both the curriculum and the classroom environment.

How are DHS teachers preparing for this implementation?

DHS teachers are transitioning to a three-course model which will integrate the Earth and Space Science Standards and Engineering Standards into the biology, chemistry, and physics foundational courses. Students will experience applications of the scientific and engineering practices that meet the new performance expectations in the NGSS.

Will students be assessed on these new standards? Yes. These assessments will be similar in structure to the Smarter Balance assessments in mathematics and language arts. Like the Smarter Balance tests, these tests **do not** impact student grades.

What is the timeline for NGSS assessments? See testing dates below for the California Science Test (CAST).

Spring 2017	Pilot Test	No results released
Spring 2018	Field Test	
Spring 2019	First Operational Test	Individual and school-specific scores released.

If you have additional questions, please contact your students' counselors in the DHS counseling department.

Sincerely,

Dr. Lisa Gonzales
Assistant Superintendent, Educational Services