Next Generation Science Standards

Responses to Questions from Parent Forum #1

Tamalpais Union High School District - Science Task Force

1 December 2016

The need for high-quality science education—beginning at the very earliest grades—is more essential now than ever before. Students need the kind of preparation that not only supports their learning now, but also gives them the tools and skills necessary to succeed in a rapidly and continuously changing world. The Next Generation Science Standards (NGSS) are a key component toward advancing high-quality teaching and learning in science (nextgenscience.org).

The following questions were generated from parent meetings at Redwood, Drake, and Tamalpais High Schools in October of 2016 about the Next Generation Science Standards (NGSS).

About the Standards:

- *When will NGSS be implemented in classrooms? Which students will be impacted?*
    - The state of California is requiring all districts to teach these adopted state standards to all students.
    - Teachers are currently implementing NGSS standards in existing courses.
    - We anticipate our first new course to be rolled out to 9th graders in the fall of 2018. This will impact current 7th grade students and grade levels below.
    - Upon full-scale implementation, NGSS will span all grades, Kindergarten-12th.
- *Will mathematical practices be incorporated?*
    - Yes. These standards call for a deeper understanding of mathematical concepts. The NGSS is aligned to Common Core.

About Courses:

- *What will courses look like upon full-scale implementation?*
    - We don't know yet, and we are currently exploring options. In order to ensure all students learn all standards, there will likely be a proposed 3-year sequence of

new courses that include more physical sciences and engineering practices than we currently teach. We will build upon the quality teaching we already do.

- *If three years are required instead of two, will there be opportunity for choice? Will this be limiting?*
    - We don't know yet. We are required by the state to ensure all students learn all standards, and we are listening to our community's input on this topic. Student engagement is a top priority for the district science department.
- *How will electives and AP courses be impacted?*
    - We love our electives and Advanced Placement options, and plan to offer them as long as there is adequate student interest. We are currently examining data to help us better predict the impact of NGSS on our elective programs.
- *Will this change be good for advanced students?*
    - Yes. This change will be good for all students! We are exploring options for students who may want to accelerate.
- *Will the courses be "watered down" if all students have to take them?*
    - No. The standards are very rigorous and relevant, and <u>all</u> students will be provided rich learning opportunities anchored around local scientific phenomena.
- *Is the district taking a systematic approach to implementation of new courses and standards? Will changes occur across all schools?*
    - Yes. The Science Task Force (STF) is leading the charge on this, and is comprised of teacher representatives from all three comprehensive schools, along with district and site-level administrators. The STF will present a comprehensive proposal.
- *What does the University of California say?*
    - In order to be eligible for admissions, the UC system expects students to pass at least 2 years (recommended 3) of "UC-D" laboratory science classes. We will submit all courses for approval of "D" status. Our current Integrated Science courses earn 1 year of "D" status in two years, so if approved, future students will be able to earn lab "D" credit at a faster pace.

About the Assessment:

- *What will the new state assessments look like? Who will be tested?*

- Districts choose to implement the new assessment in the 10th, 11th OR 12th grade. Assessments will be computer-based and adaptive, meaning the difficulty level of the questions will adjust based on student responses. Exams are packaged in three segments to include short answer, selected response, and complex problem sets in discipline specific contexts. Individual and "group" scores will be reported. Assessments will measure all aspects of the NGSS standards.

- *What are the assessment timelines?*
  - Pilot Test - Spring 2017; Field Test - Spring 2018; Operational Test - Spring 2019

About our Staff:

- *What does staff think about the new standards?*
  - We are very excited about them! We see this as an opportunity for more critical thinking and application of science and engineering practices, and connections across the more traditional scientific disciplines.
- *What concerns/challenges to staff have/see?*
  - We are not concerned, we are passionate and excited! Current endeavors include decisions around optimal course offerings, curriculum development aligned to the new standards, approaches to classroom instruction, professional development, and equipment and facilities.
- *Is staff receiving professional development?*
  - Yes. This is a work in progress, and we are all engaged in the learning process.

About Community Support and Engagement:

- *How can the community and foundations support you?*
  - We know we need your support, we just don't know what that will look like yet. Please continue engaging in conversations with us around the best approach to science education at TUHSD. We will have more forums in the future. Thank you!

About Learning More

- *How can I learn more?*
  - www.nextgenscience.org
  - www.tamdistrict.org