

Response to Review of *California Elevate Science*

It is our belief that the review of *California Elevate Science* by EdReports represents a narrow interpretation of the goals stated in both the original National Research Council's *Framework for K-12 Science Education* and the *2016 California Science Framework*. Those goals call for a new vision of science learning, built on the premise that learning is a developmental progression, where students engage in scientific investigation and argumentation around a few core ideas, and involves the integration of knowledge and practice. How that learning could be designed was left undeveloped in the *Framework* report in order to allow for the greatest variety of instructional models to be created to meet the myriad of individual district needs. The narrow application of the EdReports evaluation rubric to the current collection of reviewed science programs highlights a tremendous disconnect between the vision and its interpretation into classroom practice. The EdReports review completely misses the fully comprehensive student learning journey found throughout each topic in the *California Elevate Science* program. The many inclusive, multi-leveled activities found in all of the topic's lessons work together to prepare students to successfully demonstrate the expected performance outcomes desired by the conclusion of each topic.

The *California Elevate Science* program represents the type of phenomena-driven, three-dimensional learning shifts outlined in the California Next Generation Science Standards. As described in the CA NGSS, students "build towards science mastery through repeated opportunities for meaningful, engaging and successful learning experiences." Each *California Elevate Science* grade level segment presents the learning progression as a series of relevant, engaging, community-themed student experiences where children investigate key science concepts as they seek to make sense of an introductory phenomenon. The segment organization of *California Elevate Science* allows for the introduction of localized storylines to initiate student engagement. Each topic is developed as a series of scaffolded, hands-on investigations, utilizing various digital activities, and engaging visuals that promote active student sense-making and incorporate various combinations of the three-dimensions. Savvas Learning Company's Science development team, which includes authors and reviewers of the original *Framework for K-12 Science Education*, firmly believe that we achieved the vision as described in the California Next Generation Science Standards.

In the development of the *2016 California Science Framework* adopted by the California State Board of Education, the authors were clear that there would be many ways for students to participate in their science learning. If students were to achieve understanding of the core ideas, develop proficiency with the practices associated with scientists and engineers, and to see that the 'big ideas of science' are related across several key concepts, their learning experiences should be structured along a progression, where they continually build on and revise their knowledge and abilities. This structure is what forms the foundation of all of the learning experiences in *California Elevate Science*.

The EdReports review protocol erroneously argues that the student learning experiences must all be three-dimensional in nature. There is little, if any, research foundation supporting the premise that in the elementary science classroom students benefit from every learning experience being completely three-dimensional in scope. The framework writers noted “that the Standards should include performance expectations that integrate the scientific and engineering practices, with the crosscutting concepts and disciplinary core ideas.” These ‘performance expectations’ were meant to be the culmination of many student learning experiences. They **did not** suggest that every student activity or learning investigation include all three-dimensions, but rather that it is the ‘end goal’ of the learning progression that should enable students to demonstrate their proficiency and understanding.

In the *California Elevate Science* series, the end goal of every topic includes a performance-based investigation requiring students to demonstrate their understanding by applying their learnings from the topic. Their success is the cumulative effect of the multiple experiences they have engaged in across the topic, building their content knowledge, making sense of the introductory phenomena, adding to their proficiency with the SEPs, and drawing connections across different domains.

We believe that if EdReports wishes to provide a rating service for districts, then they should undertake a process to actually evaluate the program’s effectiveness. They should conduct independent, longitudinal studies on the efficacy of the various materials submitted. This would provide a more accurate, fair, and comparative report utilizing the scientific processes highlighted in the *2016 California Science Framework* by collecting actual student performance data. Until then, their evaluation tool falls short of providing a research-based analysis of a program’s effectiveness in meeting the goals of the NGSS.