

Join us at our NGSS Summer Institute for Grades K-12
Monday July 20 – Friday July 24, 2020 at RVC College (Branchburg, NJ)
Monday August 3 – Friday August 7, 2020 at Delran HS (Delran, NJ)

Is your classroom NGSS-aligned? As we begin our fourth year of implementation, many educators are ready to deepen their understanding of several foundational aspects of the NGSS:

- developing and using phenomena,
- developing instructional and assessment tasks that meaningfully integrate practices, crosscutting concepts, and core ideas,
- prompting student responses using crosscutting concepts,
- supporting students in using core ideas to construct explanations supported by arguments,
- supporting students in defining engineering problems and developing/optimizing solutions.

The Science Education Institute at Raritan Valley Community College offers a week-long Institute designed to support K-12 teachers and administrators with the implementation of the NGSS. This Institute follows the recommendations from the latest National Academies of Sciences Report (more on other side) and incorporates what we are learning about NGSS implementation through our work with thousands of teachers in New Jersey and across the nation.

The Summer Institute provides an immersive experience with the vision behind the NGSS and its three dimensions: the core ideas, the practices, and the crosscutting concepts. Participants engage in NGSS-aligned investigations to experience how practices, crosscutting concepts, and core ideas are meaningfully integrated in instruction and assessments in physical science, life science, earth science, and engineering. The institute includes K-12 sessions to illustrate how the NGSS develops across grades as well as breakout sessions for grades K-5 and 6-12. Every day there will be multiple opportunities for reflection and structured time to plan NGSS-aligned investigations.



The week-long Institute is held twice: on **July 20-24, 2020 at Raritan Valley Community College** in Branchburg, NJ and on **August 3-7, 2020 at Delran High School** in Delran, NJ.

Each day begins promptly at 9 am and ends at 3:30 pm. Light breakfast and lunch will be provided.

The Institute is led by Dr. Wil van der Veen, a nationally recognized expert on the NGSS and science education. Participants will work in small groups that are facilitated by experienced classroom teachers from our NGSS Teacher Leader Program.

The fee is \$300 for the Institute in July at RVCC College and \$350 for the Institute in August at Delran High School; Register early as our Summer Institute tends to fill up quickly!

For more information and to register online visit our website at www.raritanval.edu/ngss or contact Tina Gandarillas at tina.gandarillas@raritanval.edu or 908-526-1200 Ext 8942.

To develop a long-term NGSS professional development plan for your district, contact Dr. Wil van der Veen at wil.vanderveen@raritanval.edu.



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Professional development provided by RVCC's Science Education Institute follows the recommendations from "Science and Engineering for Grades 6-12: Investigation and Design at the Center", National Academy Press, pages 275-278 (www.nap.edu/25216)

RECOMMENDATION 1: Science investigation and engineering design should be the central approach for teaching and learning science and engineering.

- Teachers should arrange their instruction around interesting phenomena or design projects and use their students' curiosity to engage them in learning science and engineering.
- Administrators should support teachers in implementation of science investigation and engineering design. This may include providing teachers with appropriate instructional resources, opportunities to engage in sustained professional learning experiences and work collaboratively to design learning sequences, choose phenomena with contexts relevant to their students, and time to engage in and learn about inclusive pedagogies to promote equitable participation in science investigation and engineering design.

RECOMMENDATION 2: Instruction should provide multiple embedded opportunities for students to engage in three-dimensional science and engineering performances.

- Teachers should monitor student learning through ongoing, embedded, and post-instruction assessment as students make sense of phenomena and design solutions to challenges.
- Teachers should use formative assessment tasks and discourse strategies to encourage students to share their ideas, and to develop and revise their ideas with other students.
- Teachers should use evidence from formative assessment to guide instructional choices and guide students to reflect on their own learning.

RECOMMENDATION 4: High-quality, sustained, professional learning opportunities are needed to engage teachers as professionals with effective evidence-based instructional practices and models for instruction in science and engineering. Administrators should identify and encourage participation in sustained and meaningful professional learning opportunities for teachers to learn and develop successful approaches to effective science and engineering teaching and learning.

- Professional development leaders should provide teachers with the opportunity to learn in the manner in which they are expected to teach, by using *Framework*-aligned methods during professional learning experiences. Teachers should receive feedback from peers and other experts while working throughout their careers to improve their skills, knowledge, and dispositions with these instructional approaches.
- Professional development leaders should prepare and empower teachers to make informed and professional decisions about adapting lessons to their students and the local environment.
- Administrators and education leaders should provide opportunities for teachers to implement and reflect on the use of *Framework* aligned approaches to teaching and learning.

