

Standards for science out to prepare kids

Recently outlined at Coventry SC meeting

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COVENTRY — The Next Generation Science Standards (NGSS) to establish learning goals that will give all students the skills and knowledge the need to be informed citizens, college ready and prepared for careers are here.

Teresa Medeiros, formerly a science teacher and now an education quality coordinator, explained in a presentation before the school committee that the framework for science education for grades kindergarten through 12 breaks down into three dimensions: science and engineering practices, crosscutting concept and disciplinary core ideas.

Medeiros explained that for science, it's mainly about asking questions and for engineering, it's about defining problems.

"It also deals with developing and using models, planning and carrying out investigations and analyzing and interpreting data, among other things," she said.

The second dimension, crosscutting concepts, focuses on patterns, cause and effect mechanisms, structure and function and energy and matter while the third dimension is about life science, physical science, earth and space science and engineering and technology.

"Kindergarten through 12 science education should reflect the interconnected nature of science as it is practiced and experienced in the real world," she said. "The NGSS are student performance expectations — not curriculum."

Medeiros explained that this is a four-year process that will focus on the student developing a deeper understanding of content as well as the application of content.

"The great thing about the NGSS and the Common Core Standards is that they align," she said.



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Science: new rules?

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"You're using your English skills to write your findings, using math skills to quantify and communication to present it all."

The first of the three dimensions began this year and a task force consisting of teachers at different levels has been formed, to evaluate where students are per step.

She represents the elementary level, Abby Paon represents the sixth through eighth and Kathleen Sullivan represents the ninth through 12.

Administrative supports include Kathryn Tandrelle for the elementary. Jen Roy at the middle school and Joseph Lucian at the high school.

For the first year, plenty of teachers' workshops have been planned then the second, third and fourth years will focus on application.

"This new way of thinking is going to shift how we have to instruct," she said. "Students can explore the best engineering and arrive at their own conclusions."