



Region 14 Schools

Inspiring Excellence

The Region 14 community is dedicated to ensuring an engaging and positive learning environment where every student becomes a respected contributing member of society who graduates prepared to meet the challenges of a rapidly changing world.

Math in Region 14

**Kevin Mahoney &
Thomas Nobili**

“How would you invite a child to become an artist?” Dr. Cathy Fosnot, a leader in mathematics education, asks during a podcast. “You invite the child to do a creative piece and then mentor, offering ideas along the way. You don’t simply teach with the hope that eventually they will become an artist. You give them an opportunity to do art.”

This is the same model applied to teaching and learning mathematics in Region 14 Schools.

“Professional mathematicians work on problems they are intrigued with,” Fosnot explains. As mathematicians in the classroom, Region 14 students are investigating problems connected to a context that they find interesting and meaningful. For example, grade 4 students worked on a series of investigations about ‘Muffles’ Truffles,’ where they were tasked with helping Muffles package the chocolates he sells at his shop into different sized boxes.

Students engaged in the modeling of various multiplication situations and developed efficient computation strategies.

The region has moved towards employing an inquiry-based approach that inspires children’s natural curiosity and develops their ability to think critically about mathematics while also ensuring a solid foundation in the basics. The curriculum from PK-8 is built on a progression of developing math sense.

In high school, Region 14 Schools seeks to fully develop the mathematical abilities of our students.

(Continued next page)

“Building a home that will stand the test of time requires both a solid foundation and a sound design plan. It is not an either/or proposition. The same holds true for curriculum and instruction” (Mooney & Mausbach, 2008). Here in Region 14, we have spent our time building this strong foundation for teaching and learning. Why is curriculum important?

Curriculum identifies the learning tasks, experiences and outcomes expected at each grade level and content area. Curriculum is often touted as the backbone of learning - without the “what” in education, it is difficult to define the best approach to “how”.

While Region 14’s curriculum is aligned

to the Common Core State Standards (which are tied to Connecticut state testing), it is developed by Region 14 administrators and staff and specifically related to the learning needs of our students.

We have developed a seven-year revision cycle for each curriculum area. Important parts of the cycle include: research/review, curriculum writing, development of implementation guides and aligned assessments. In 2014, Region 14 Schools had no Board of Education approved curriculum.

By June 2019, we will have 80% of all curriculum written and approved by the Board of Education. That is no small feat!

Dr. Anna & Michael Rafferty

Region 14 Science is Phenomenal!

**Thomas Nobili &
Michael Rafferty**

We are excited for the launch of the new science curriculum, which is rigorous, engaging, and fully aligned to state standards.

The curriculum, which is built on the Next Generation Science Standards (NGSS) helps students see the connections between science and their world. For example, first graders might use the question, “How are shadows made?” as an anchoring phenomenon in a unit about light and solar patterns.

Middle school students might apply Newton’s Third Law to design a solution to a problem involving the motion of two colliding objects and high school students might conduct an experiment to extract DNA from strawberries.

An emphasis is placed on investigating scientific phenomenon through a multi-discipline approach, which combines the learning of critical concepts from life, earth and space, and physical science in order to aid in the answering of student generated scientific questions. A great focus is also placed upon



Young scientists at work in Region 14

engineering practices through their scientific applications and connection to technology.

The curriculum includes opportunities for students to investigate local scientific phenomena through assured experiences with community partners. Science learning in the district is multi-faceted in that there is not only a focus on scientific content, but also on engaging in scientific processes and practices.

Finally, the curriculum is aligned with the new math units in order to provide Region 14 students additional opportunities to engage with the skills and concepts they are learning in mathematics as well as to see their applications and connection to other disciplines.

Math Concepts in Region 14

Kevin Mahoney & Thomas Nobili

(Continued from previous page)

The ultimate goal of the program is to graduate individuals who are quantitatively literate and who are ready to successfully handle quantitative aspects in the real-world.

Every course in the Mathematics Department is designed to increase reasoning skills, strengthen problem-solving abilities, and promote an understanding of the power of mathematics. They are also designed to develop inquiry skills and the habits of planning and perseverance.

In all math courses, students are expected to clearly explain and justify their problem-solving strategies. Technology, in the form of calculators (handheld TI-83 or TI-84) graphing calculators and computers are integrated into the curriculum to aid in the discovery of important concepts and for

problem solving.

Classrooms around the district are filled with young mathematicians engaged in learning mathematics in order to make sense of their worlds and develop critical thinking skills.

Teachers have done a wonderful job in implementing our new research based instructional model.

“Our students have embraced the challenge provided by the new curriculum’s rigor and mathematical depth,” said Thomas Nobili, Instructional Leader for Mathematics at Bethlehem.

Throughout the region, teachers are making every effort to ensure that our students achieve success in mathematics.



Pre Algebra students exploring circles

There is a strong emphasis on conceptual development to build student understanding.

“We are seeing positive results in the way students view themselves as mathematicians,” said Kevin Mahoney, Instructional Leader for Mathematics at Mitchell.

Literacy Lives in Region 14 English Classes

Sarah Mazzei, Sharon Heady-Labansky, Beth Mauro, Rita Cole

Spring is in the air and our elementary classrooms are buzzing with literacy learning! Throughout the year, classroom teachers in Grades K-8 have been implementing many new units of study built upon the work of *The Teachers College Reading and Writing Project*. These units incorporate the study of literature, poetry, and informational texts.

Students in kindergarten through second grade have been learning various decoding and comprehension strategies to help them grow into avid readers. Through their reading instruction, Kindergartners discovered how to use reading superpowers and first graders became word detectives. Second graders learned to apply all that they know to their reading of longer chapter books. All students have grown their abilities to choose a “just-right” book, to apply word-reading strategies independently, and to develop their understanding of books by reading closely and reacting to texts.

Additionally, these students are flourishing authors! Our young writers have completed units in composing stories, writing nonfiction books, expressing

their opinions, and poetry writing. Third through fifth grade students have been working hard to strengthen and extend their literacy expertise. Their work in reading has included developing ideas about characters and exploring themes in fictional stories.

Students reflected upon and expanded these ideas through literary essay writing. This character and theme work has helped them strengthen their own story writing, as well. In addition, these upper-grade students have improved their research skills using a variety of informational texts. In their nonfiction writing units, the students have presented this research in multiple ways. For these students, the process for learning to read and write has been an important part of their lessons.

Woven throughout the literacy lessons at every grade level has been an opportunity for students to work and think together. They have shared ideas with partners and in small groups, reflected together on their work, and offered each other feedback. This work has helped them grow, not only as readers and writ-

ers, but also as learners.

In the middle school, students dive deep into historical fiction, nonfiction and character study. Readers grapple with complex characters and plots as well as understand and work with social issues highlighted throughout their reading. As writers, they continue their quest to be effective communicators in the genres of opinion/argument, opinion and narrative writing.

Students in grades 9-12 have the opportunity to read in a variety of genres and forms. They are given exposure to classic and modern texts with the emphasis on connecting across time and texts to understand the human condition. They are provided with opportunities to write in a variety of formats and genres in order to develop the skills to be able research a variety of sources, cite, and produce a piece of writing that can respond to the varying demands of audience, task, purpose, and discipline.

Emphasis is given to be able to write and edit work so it conforms to the guidelines in a style.

Region 14 Information Literacy & Technology

Abbe Waldron

The PreK-12 Information Literacy and Technology Curriculum is currently being developed for implementation this Fall.

It is aligned with nationally recognized standards and frameworks which reflect skills that our students will need for college and careers of the future.

This curriculum will be integrated through instructional partnerships between school library media specialists and classroom teachers.

Units are designed based on the core strands of critical thinking, creativity, communication and collabora-

tion. Technology skills are integrated throughout the curriculum to align to learning outcomes.



Skype session with Nepris in AP Language at NHS

Building a community of readers and fostering a love of reading are also essential parts of this curriculum.

Units including Knowledge Construction, Empowered Learning, Digital Citizenship, Creative Communication and Global Collaboration will give students the opportunity to build transferable skills for lifelong learning.

Region 14 Social Studies is Alive!

Marisa Christoff & Michael Rafferty

The recently approved Social Studies curriculum is based on the Connecticut Elementary and Secondary Social Studies Frameworks. At the heart of this guide is the inquiry process. According to the frameworks, this process is "critical for effective student understanding of history, geography, civil and economics and this idea is emphasized through the frameworks" as well as the Region 14 Curriculum maps.

This means at the center of our teaching of Social Studies is the concept of asking and answering compelling questions about the subject matter. Additionally, the frameworks are based on the work of the National Council of Social Studies.

The Council recommends some guiding principles for learning Social Studies. These include these important understandings:

- 1. Social Studies prepares the nation's young people for success in college and career as well as informed, engaged participation in civic life.*
- 2. Inquiry is at the heart of social studies participation.*
- 3. Social studies education is related to the Common Core State Standards for English/language arts and literacy in history/social studies.*

Through an inquiry lens and partnering with local historical societies, students in the earlier grades learn about the "why" in the local community in a deep way. From here they move on to better understand their state and the New England region. Through middle school, students move on to knowing our country, and finally our world.

In high school, the teachers collaborate to create and write curriculum that follows a new chrono-thematic approach for all of our courses.

For example, the Revolutions theme in World History will allow students to study various revolutions around the world, including the French Revolution, the Industrial Revolution and the Russian Revolution, with the goal of uncovering parallels and differences between them.

In United States History, students will study the Progressive Movement, the Civil Rights Movement, and the Women's Movement under the overarching theme of "Social Upheavals."

The Social Studies curriculum brings the world to Region 14.



Engaging thinkers in freshman history class at NHS