Monroe Educator Insider

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Vision Statement

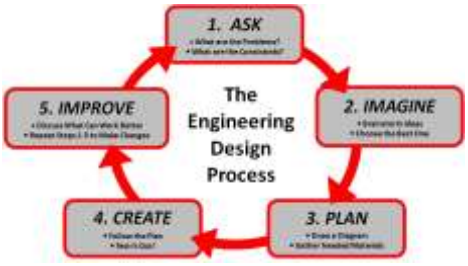
The Monroe Township Board of Education commits itself to all children by preparing them to reach their full potential and to function in a global society through a preeminent education.

Mission Statement

The Monroe Public Schools in

Welcome to the winter edition of our professional development/best practices newsletter!

There is so much happening that I find it hard to narrow my focus of this article. This next summer, we will be offering a STEM Summer Camp Academy to our elementary students. STEM is happening all around the district, but what does it really mean and what does it include? STEM stands for Science, Technology, Engineering, and Mathematics. The main focus of STEM is the Design Process. The image below shows the basic process but other steps can be included too. It all begins with a problem. Students then imagine and plan a solution to the problem. Once they create their solution, it is time to test it and gather results. But the real challenge for students then is to improve on their design. This is where the higher level thinking happens. Think Marzano and Design Question 4: Helping students generate and test hypotheses. This isn't just for science anymore. There are great projects happening all around our district right now.



National Education Association (NEA) gathered a list of the 10 best STEM resources. You can find them at this link: http://www.nea.org/tools/lessons/stem-resources.html. Happy planning!

Written by: Dr. Dori Alvich, Assistant Superintendent of Schools

collaboration with the members of the community shall ensure that all children receive an exemplary education by well-trained committed staff in a safe and orderly environment.

We would like to acknowledge all of the hard work that went into this publication and all that contributed to our publication:

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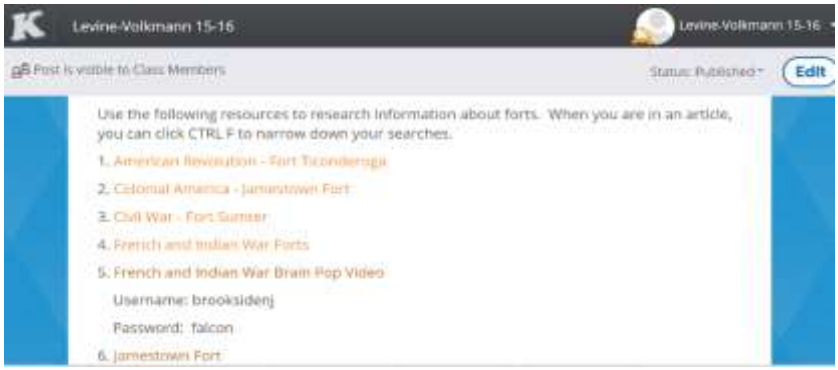
Brookside School PD Committee:

Brookside School Shows Off their STEAM!

Written by: Sarah Levine, Jenna Volkmann



In our 4th grade classroom, students have just completed a unit on colonial life and are moving on to explore the French and Indian war. Students began this topic by gaining some background knowledge and an understanding about why forts are constructed during war and challenges that soldiers living in forts may face. As a way to introduce this unit, students began sharing their schema and experiences with forts and were intrigued when peers spoke about their visits to castles. Additionally, students shared how Minecraft is a perfect example of how forts are built digitally and is a great text to media connection to our unit. This sparked our project-based learning task: Using a design process to build a fort.

The first steps in this STEAM project involved asking thought-provoking questions about forts and using different references to answer those questions, as well as considering possible problems that the structure of a fort might encounter. Together, we researched forts during colonial times – the Jamestown fort, and considered why the specific shape of this fort was important as well as the location of the fort. The information gathered would later help students collect necessary materials to build a strong structure that would withstand any problems they may foresee. Books from the library were gathered thanks to our media specialist Chien-Ju and student friendly websites which included videos and articles were listed on our classroom Kid Blog site for students to have quick access for research purposes. Not only did students collect information about the importance of forts or where forts are built, but they extended their knowledge of building and designing by researching mechanisms like pulleys, levers, springs, and ramps.

Rhonna Griffin, Kristen Brown, Donna Colossi

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MTMS PD Committee: Dawn Graziano, Rochelle Kapel, Billy Jacoutot, Patricia Smith

MTHS PD Committee: Dale Harris, Christine Duane, Sharon DeMarco, Jackie Puleio, Dr. Kevin HIggins

S.T.E.A.M. Education at Applegarth School

Written by: Tanya D'Agostino, Nancy Poland, Jessica Boll

During American Education Week, Applegarth Elementary School invited parents in to help facilitate learning through S.T.E.A.M. Education. The teachers hosted a S.T.E.A.M. Carousel, which allowed each classroom to focus on a Disciplinary Core Idea from the Next Generation Science Standards. Students and parents had the opportunity to visit all of the 4th and 5th grade classrooms to participate in S.T.E.A.M. Challenges. This unique day provided parents, teachers and students to collaborate and work together.

Science S.T.E.A.M. Challenges focused on Energy, Earth and Human Activity, and Waves and their Applications in Technologies for Information Transfer. In the power of one day students were able to preview a year's worth of curriculum concepts.

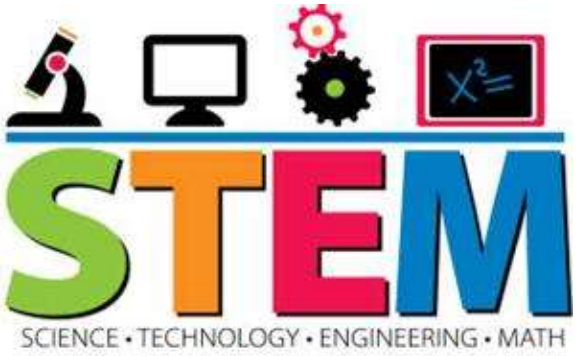
Technology was incorporated in all activities and challenges via the application of iMovies, Google Classroom, Coding and Programing, Nearpod and Plickers. During the challenges technology was used for assessments, modeling, design creations, and collaboration of student efforts.

Engineering design cycles allowed students to brainstorm, design solutions, build ideas, evaluate, and make modifications. The challenges provided students with hands on experiences, proving that science is never ending. The design cycle, removed the stigma of failure for students and was an important part of problem solving.

Art was a vehicle for diverse learners, and creative minds to run free. Students were able to understand how things come to life, was just as important as the creation itself.

Math held an important role to show students how concepts are used in the real world.

The collection and analyzing data, integrates mathematical concepts with science practices in unconventional ways.



Technology Rocks @ #MTHS!

Written by: Sharon DeMarco, Christine Duane, Dale Harris, Jackie Puleio

Monroe Township High School is continually working to find more and better ways to use professional development to integrate technology into our classrooms. This year, three of our teachers are helping other teachers incorporate new ways to integrate technology into student activities and assignments.

In its fifth year of the 1:1 iPad initiative, MTHS teachers are working hard to keep up with the evolving applications available for the iPad. The full-year in-service class Applying Apps/Using Tablets taught by Sharon DeMarco provides high school content area teachers with guided practice in both web-based and application-based programs.

Kahoot-It is a web-based quiz and survey game that turns assessments into FUN. A free membership can be started by logging into https://getkahoot.com/. Teachers create quizzes and surveys based on their existing content, or they can take advantage of over five million publically shared quizzes and surveys on thousands of topics. Further tailoring of public Kahoot-Its is possible as well. Used as a pre-assessment tool, students can be introduced to the characters and setting of a novel in Language Arts or key mathematical terms for an upcoming unit in Algebra. Teachers can also use Kahoot-It to check for progress on essential concepts during a unit by running a Kahoot-It review game before a major test. Catchy music and the ability to embed videos and graphics make this online tool an engaging way to integrate technology into informal assessments and add friendly controversy.

Web-based tools such as Educreations, ShowMe, and EdPuzzle are taking education to the next level. Using ShowMe or Educreation's default whiteboard or images imported from the iPad's Camera Roll, students and teachers can narrate and draw over documents, maps, flow charts, worksheets or even photos to communicate in a video format. Students can share their creations with others through their free online accounts or the embed code. Teachers can flip their classroom by creating demonstration lessons, such as how to solve a math problem, and sharing that lesson through the Educreations link on a wiki. EdPuzzle is a free, web-based tool that allows teachers to utlize pre-existing videos and conduct formative assessment within the tutorial, gauging student learning while they are learning the lesson.Through this electronic modeling software available at www.educreations.com/, www.showme.com, and www.Edpuzzle.com, students obtain practice in identifying critical information and elaborating on complex processes.

While these online student games and modeling apps engage students and deepen the learning experience, Google Classroom, one of the Google Apps for Education (GAFE), allows for the seamless communicating of assignments and sharing of student products while in the online Google Classroom environment. For example, three teachers collaborated on this article by sharing it with each other as a Google Doc on Google Drive, MTHS's file sharing and collaborating space. In addition to Google Docs, Google Slides, compatible with Keynote and Powerpoint, and Google Sheets, compatible with Numbers and Excel, provide the foundational tools that drive collaborative student work. GAFE products work best when shared through the Google Classroom space.

In another year-long PD course, MTHS teachers are learning how to benefit from the district's licensed technology platforms: Study Island and Learn 360. Study Island hosts practice lessons for language arts and math for all grades. Students earn badges based on their completion score. Teachers monitor student work through the teacher portal. This allows the teacher to provide small group instruction to support weaker students and provide rigorous extensions for students who are advancing through the skill sets. Use and bookmark this link to our webpage, Using Currently Licensed Technology, where you have access to the growing technology supports that have been built to help MTHS

and district staff learn and grow together. (It is updated as needed. If you want/have an idea to add to this page, please reach out to christine.duane@monroe.k12.nj.us.)

Content Providers for Learn360

Learn 360 hosts video, worksheets, and presentation content from premier sources to be used to support digital integration into our classrooms. In order to make this material more accessible, our first session took the teachers through the logistics of using the sites. Our second session will teach the teachers how to use Nearpod (for PPT) and Educanon (for videos). These applications' free version allows the teacher to incorporate formative/interactive components into their presentation pieces, whether they are downloaded from the internet or teacher-made. The sites can also provide access to a library of materials that can be adapted/tweaked to individual preferences. Each of these applications is designed to promote individual student engagement through their student iPad while the teacher monitors their engagement and their responses on her computer screen. Since monitoring student engagement is a core element of the Marzano Evaluation Model, using these applications will help the teachers be a more responsive teacher by monitoring student engagement, which should increase student achievement. Use of these applications also support the Flipped Classroom environment, formative questions can be embedded into the 'do-at-home" piece or while giving a lecture in class.

At MTHS we are continually developing our professional capacity by creating new and inspiring ways for students to learn. By embedding these simple aspects of technology into lessons students learn in an environment that is larger than the confines of the classroom, and are able to breach into a global classroom. For more great insights into what is going on in our classrooms follow us on Twitter @MonroeTwonHS. It's a #GreatDayToBeAFalcon.

Mill Lake is Great at Reciprocal Teaching: Four Strategies to Grow Students' Reading Comprehension First Grade to Twelfth Grade

Written by: Bethanne Augsbach

Mill Lake students are engaging in Reciprocal Teaching experiences to grow as strong, independent readers. The goal of Reciprocal Teaching is to give students a structure to grow out of…one that will enable them to have a conversation with themselves or others about any piece of text they encounter (Rita Reimbold). Reciprocal teaching refers to an instructional activity in which students become the teacher in small group reading sessions. Teachers

model, then guide students to learn how to lead group discussions using four strategies: predicting, clarifying, question generating, and summarizing. Once students have learned the strategies, they take turns assuming the role of teacher in leading a discussion about what has been read.

Our teachers are working collaboratively to implement these strategies in Mill Lake Mini-Workshops, in PLCs, and by visiting each other's classrooms for embedded professional learning experiences, such as peer coaching. Teachers are modeling, scaffolding, and facilitating the four strategies, while modifying the research-based application to best meet the needs of their students; making it their own. Reciprocal teaching is being integrated into our literacy program through book clubs, guided reading groups, and small strategy groups. Reciprocal Teaching is a great way to teach students how to determine, note, and record important ideas from a reading while discussing vocabulary, developing ideas and questions, and summarizing information. It can be used across several content areas and works particularly well with textbooks and non-fiction texts.

Research supports that struggling readers, engaged in reciprocal teaching, will grow 1-2 years in 3 to 6 months (Cooper, Boschken, McWillaims, & Pistochini, 2000). And that, Reciprocal Teaching yields the best results when students participate in the strategies at least twice per week (Oczkus 2010). According to Bruer (1993), Reciprocal Teaching helps novice readers learn and internalize the strategies excellent readers employ. When engaging in Reciprocal Teaching strategies, the novices are practicing and developing the skills required to comprehend and learn.

Why use Reciprocal Teaching? First and foremost, to create a culture of collaborative learning that will inspire all student readers to think about their own thinking while reading, as they are actively engaged in monitoring their own reading comprehension. To ask and answer questions about varied texts leading to debate, text evidence, and ultimately the understanding of other students' thought processes. Finally, to lay the foundation for future academic success and a life-long love of reading.

Resources:

PowToon: Reciprocal Teaching - An Introduction for Students
https://www.youtube.com/watch?v=vsfzZKMickI

Go Animate: Reciprocal Teaching Meet the Fab Four!
https://www.youtube.com/watch?v=P5XocqPJKWg