

What's **HOT** in STEAM??

STEAM Month Newsletter
CSDNB Elementary Schools

WINTER STEAM Activities

#1 ICE LANTERN

With an ice lantern, you can design and engineer a project that will light the entrance to your home. Experiment with different sizes and shapes for the lantern molds.

MATERIALS

- Medium plastic food storage container
- Small plastic cup
- Leaves, pine cone pieces, pieces of tree branches, beads, shiny pipe cleaners etc...(optional)
- Water
- Battery Operated Candle

DIRECTIONS

- 1. Place a small plastic cup filled with water into a larger plastic food storage container.
- 2. Fill the larger container with water.
- 3. Optional Step: Add shiny pipe cleaners, beads, tinsel pine cones to the water in the larger container. This will add holiday character to your ice lantern.
- 4. If it is cold enough you can place the container outside to freeze overnight. If not, place in the freezer until completely

Trimester Topics

K-1

Pushes & Pulls



Grades 2-3

Buildings



Grades 4-5

Wind Turbines



frozen.

- 5. Run warm water around the outside of the plastic container to unmold. The ice may crack or chip, but that will just add more texture to the lantern.
- 6. Remove the small plastic cup by adding a few drops of warm water around the edge of the cup and twisting out of the center.
- 7. Set outside and insert your battery operated candle.

WHAT HAPPENED?

Through engineering, creation and design you made a functional lantern that can be used to light the front porch of your home or the entrance to your school. Engineering rules!



taken from *What I Have Learned*

<https://www.whatihavelearnedteaching.com/must-try-winter-stem-activities/>

#2 PINE BRANCH HARDINESS TEST

- Real pine branches
- Mason jars (four at a time)
- Labels
 - Tap water (for a control)
 - Coffee
 - Vinegar

- Vegetable oil



Place one evergreen branch in a jar and pour about 1-2 inches of liquid in each jar. Place your jars in a sunny spot and leave them for 10 days.

QUESTIONS:

Which liquids keep the evergreen branches alive?

Which ones harm the branches?

adapted from *Lemon Lime Adventures*

<https://lemonlimeadventures.com/pine-branch-hardiness-stem-experiment/>

Coming Up in February: Building Perseverance and Resilience

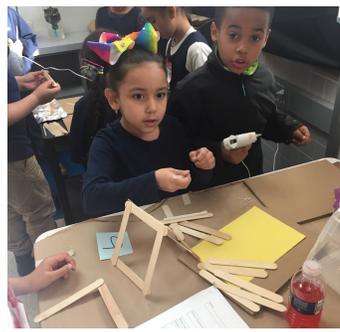
Chamberlain

FANS, AND RAMPS, AND ANEMOMETERS, OH MY! The theme in the early weeks of Chamberlain STEAM trimester 2 is preparation! We have so many fun experiments and challenges underway, and before the lessons can start they all involve a good amount of searching, measuring, cutting, and gluing of materials before the class even begins. The students love helping get ready for their next STEAM session and what could be more fun than a pre-lesson lesson? So the Chamberlain students, small and tall have been offering to get the materials ready to go. Students enjoy problem-solving ways to put the materials together correctly for their upcoming lessons, and are even more invested in the final lessons when they have a (literal) hand in the preparing of the lesson. Thanks to all of our Chamberlain helpers.



DiLoreto

New year! New challenges! Kindergarten is learning about push and pull forces. They scavenger hunted within DiLoreto to identify all the objects that they push, pull, or push and pull during a day. They are using a ramp and a skateboarding armadillo to learn about force, friction, and creating bar graphs. Second and third grades are building houses. The roof matrices they build underwent an extreme weather test when we left them outside for the weekend exposed to the snow and ice storm. Fourth and fifth grades are harnessing the wind by experiment with air pressure, building anemometers, and creating wind turbines that transform electrical energy in mechanical energy.



Holmes

Collaboration is a key part of STEAM! Since the start of the program, we have been providing opportunities for students to work collaboratively in a variety of ways. In the pictures below, students in third grade and kindergarten were placed in groups where they were asked to design a plan and execute it. This can be very challenging at times. However, we have seen a tremendous amount of growth in collaboration across the building.

Our kindergarteners and first graders will be working with partners to design a mini-golf course. Make sure to come and try it out during our March parent-teacher conferences. Second and third graders are designing houses. Lastly, our fourth and fifth graders will begin building wind turbines and testing a variety of variables. Great things are happening in STEAM!



New Britain Public Library

Look no further than the New Britain Public Library for winter STEAM activity ideas. We have books, DVDs, and programs to stimulate your imagination.

It's snowing! But where does snow come from? Find the answer in a book like It's Snowing! By Gail Gibbons, or The Snowflake: a Water Cycle Story by Neil Waldman.

Winter weather can be tricky to forecast. Think you can do better than the meteorologist? Try building a weather station, and making predictions with the help of The Kid's Book of Weather Forecasting, by Mark Breen and Kathleen Friestad.

Jefferson

The big question in kindergarten and first grade STEAM is, “Who is Ron?” Well, Ron is an armadillo who has his own skateboard and ramp. We are using Ron to teach the concept of simple machines.

Kindergarteners and first graders are also finding different ways to explore pushes and pulls through movement and exercise. Grades 2 and 3 students are building with blueprints. They will design and construct model homes. Our 4th and 5th graders are exploring the renewable energy source of wind. Students are putting their engineering skills to the test while designing, redesigning, and building a model wind turbine. Throughout all of these units, our Jefferson students are demonstrating perseverance.



Is February weather the same all over the world? Find out in the [February volume of Weather Watch: A Month-by-Month Guide to World Weather.](#)

Looking for some new indoor activities while it's too cold to play outside? Practice some kitchen science with a new recipe to make together. Learn how bread is made, starting with a tiny seed. Discover how we get maple syrup from a tree, or how to “grow your own” pizza.

Embrace the arts by doing some crafts, like a [Groundhog Pop-up Puppet](#) or [Icy Sun Catcher](#). There are detailed instructions in [Crafts to Make in the Winter](#) by Kathy Ross, and loads of other arts and crafts books available at the library.

On Saturday, February 2, the library will be celebrating [Take Your Child to the Library Day \(TYCLD\)](#) at our main branch at 20 High Street. Between 10 am and 4 pm, children and their families can drop in and do a craft, or a simple science

Northend

Trimester 2 is off to a great start! Kindergarten and First Grade students have been learning about pushes and pulls. (see pulley system below) Ask them about their flying superheroes! Second and Third Grade students are learning about how different environments change the type of shelter we live in. Fourth and Fifth grade students are studying Wind Power and where the best wind farms should be located. We built anemometers and have discussed renewable energy.



experiment together. Come for Fireside Stories at 2:00. Each time you visit the library through February 2, you can fill out an entry for our drawing for 6 tickets to the musical “Charlie and the Chocolate Factory’ at the Bushnell Theater on Feb. 19. For extra chances to win, check out one or more books from our special STEAM displays on TYCLD . The drawing will be held after story time on Feb. 2. For more information call us at 860-224-3155 x121 or visit our website www.nbpl.info.

Vance

Trimester 2 is going Full STEAM ahead! Kindergarten and First Grade students have been studying pulls, pushes, ramps and pulley systems! Second and Third Grade students have been studying the effectiveness of building materials for specific climates and students have been building structures and testing what materials withstand Connecticut weather. Fourth and Fifth Grade students have been studying Wind Power, renewable energy and non-renewable energy sources.

PLUS PRESS

Enrichment Newsletter

January 2019 - CSDNB Middle Schools

Winter STEAM Activities

1 *Build the Tallest Card Tower*

Who doesn't love to play a good game of cards on a snowy winter day?

Materials:

- deck of cards OR
- stack of index cards

Make the tallest freestanding card tower using as many cards as you can.

Questions:

- *What shapes are the strongest?*
- *Which structures need to be in place for the tower to be strong?*
- *Why is balance important in building this tower?*



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DiLoreto STEAM

The DiLoreto team students are in the middle the second trimester projects. Our 7th and 8th grades are working on the Volcano unit, which entails them building the volcano and the city that surrounds the volcano. They are going to have to also make an escape route just in case their volcano erupts. Our 6th graders are working on the Mars unit, which entails the building of their spacecraft and the community that surrounds their spacecraft on Mars. The teams are also creating an escape route to get off of Mars in a timely manner. In addition, students are continuing to work on a variety of project-based, team-building, problem-solving and engineering exercises. Our goal continues to have students engage in collaboration, communication, and cooperative skills to solve problems, while making connections to real-world applications.



HALS STEAM

HALS students started the Unit on Effective Cities, utilizing the Engineering Design Process and google earth data to plan, design, and build a sustainable city. They were very excited as they compiled research using credible sources and answered questions and look forward to the next session. They continue to use the engineering design process to problem solve and test various designs of catapults, parachutes etc. as they work in teams to communicate their

findings.



Pulaski STEAM

Pulaski students will continue to focus on the engineering design process with several hands on activities revolving around Zoology. Student engagement will be promoted utilizing the “LLC”(Learning and Life Competencies) for Student Success to build self awareness, self management, social efficacy and academics. Pulaski students use the Engineering Design process in each activity working in teams to problem solve and communicate their findings.

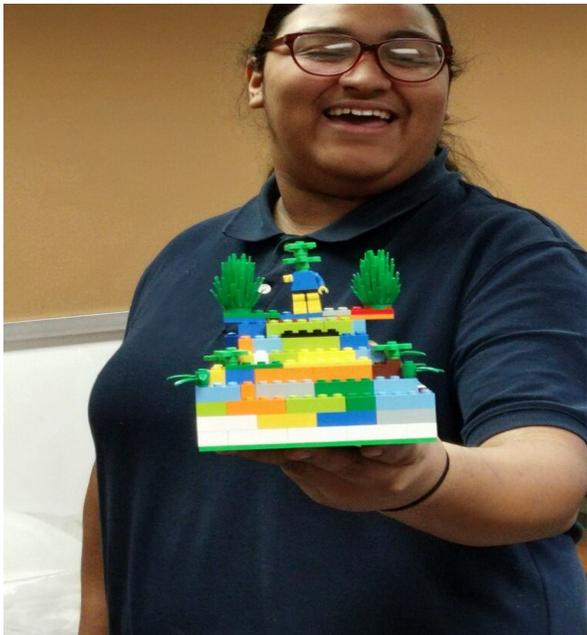
New Britain Public Library

**Teen Programs - Grades
6-12**

Adult Programs

Slade STEAM

The Slade Steam/Plus team students are in the middle the second trimester projects. Our 7th and 8th grades are working on the Volcano unit, which entails them building the volcano and the city that surrounds the volcano. They are going to have to also make an escape route just in case there volcano erupts. Our 6th graders are working on the Mars unit, which entails the building of their spacecraft and the community that surrounds their spacecraft on Mars. The teams are also creating an escape route to get off of Mars in a timely manner. In addition, students are continuing to work on a variety of project-based, team-building, problem-solving and engineering exercises. Our goal continues to have students engage in collaboration, communication, and cooperative skills to solve problems, while making connections to real-world applications.



Advisory

The advisory students across the school district will continue to address skills that are relevant to their lives. Eighth graders are researching specific information about careers of interest and creating slide shows that they will be presenting to their peers. Students in sixth and seventh grade are working on various skills to improve their learning such as: how to successfully follow directions, the value of context clues, and how to avoid drama throughout the school day. They are given opportunities to collaborate with peers several times throughout their activities.

Art Enrichment

Pulaski Middle School will finish Self Assessment Quiz /sheets as they wrapped up Mobile Projects last Steam visit. Folders can be sent home. Students will use last Visit for Clay Nature Vessels. They will be taking home their clay portion to display (air dry) or Re-Use with plastic bags. If there is time Clay technique of Pinch, Coil, and or slab method Video will be shown.

Slade Middle School finished their Mobiles. Students will use their last visit to learn about The Last Supper and Leonardo Da Vinci.



Culinary

Culinary Arts students are wrapping up their first Semester by learning about pathways of food. Students learn about where food ingredients begin, as well as where their food stops along it's way to your plate, including farms, factories, restaurants, grocery stores, and more!