

Communities In Schools

Summer 2020 Report

Elementary Enrichment Activity Kits

STEM

Literacy

Arts



When school districts temporarily closed their doors in March, many children lost a quarter of the school year in classroom time. The spread of COVID-19 has disrupted many things in today's society, one of the most important aspects being our children's education in Aurora. As the end of the school year arrived and COVID-19 cases were on the rise in Aurora, the decision was made by school districts that facilities would not be available for summer enrichment camps. With limited use of adequate safe space,

the City of Aurora, in partnership with Communities In Schools, elected to provide activity kits to enhance summer learning opportunities to 1000 elementary students weekly in first to fifth grade across Aurora for five weeks.

Communities In Schools is an independent youth-serving organization that provides year-round out of school time programming for children, youth, and families across Aurora with diverse funding from private and public sectors.

Summer programming provides unique experiences for children and youth, representing diverse populations. CIS assists in improving the accessibility and availability of programs and summer activities by reducing barriers to equitable participation to provide quality summer experiences while having access to summer nutrition programs. Summer is a time of greater food insecurity for low-income children and youth who rely on free or reduced meals during the school year. By teaming up with each school district's summer meal distribution locations, we were able to get activities directly into student's hands. Youth need a balance of both structured and unstructured activities for optimal development. With that in mind, many of the activities provided were intentional to allow students to work and play independently or with the assistance of a parent, sibling, or relative each week.

Kits were distributed weekly at five locations in West Aurora School District 129 (Hill, McCleery, Washington, and West High School), four locations in East Aurora School District 131 (Allen, Benavides, Cowherd, and East Aurora High School), one location in Indian Prairie School District 204 (Georgetown), and one location in Oswego School District 308. These locations were summer meal distribution locations made available by each school district, with the exception of Oswego since their only meal distribution location was at Oswego East High School. We offered kits instead to students from Wolfs Crossing, Homestead, and The Wheatlands, at Wolfs Crossing each week. Any students attending an elementary school in Aurora could attend any of our weekly locations.

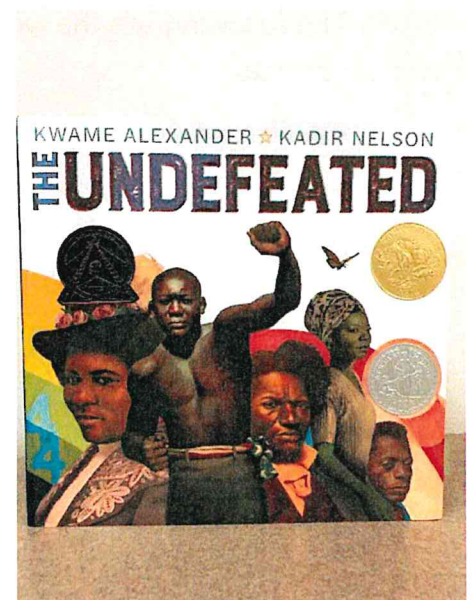
Kids are eager to learn and to engage with the people around them. Having hands-on activities to be creative, explore, experiment, and read books gives them this opportunity to have fun while learning with a parent or relative and explore new words, concepts, and ideas.

Week one – SciTech Museum provided students with kits with experiments and activities that included physics, biology, flight, chemistry, and entomology. Students could dissect an owl pellet, build and fly an airplane by the force of a rubber band, combine ingredients to make giant bubbles, and many other activities. The goals of this summer kits was to better understand a variety of sciences through hands-on, inquiry based learning, which offers them an additional opportunity to build math and literacy skills during the summer and increase young people’s interest in STEM-related subjects and increase the chance that they will pursue STEM-related careers.



Week two – Aurora Public Arts provided students with kits that had both engineering and art activities. Students could build a structure made out of one-inch blocks to recreate a house designed by Frank Lloyd Wright. Students learned to repeat lines and patterns in a wave using a color wheel. Students were able to explore African folklore by making their own Water Spirit mask out of construction paper and making colorful paper Mache by using various design elements of different shapes, colors, and textures using a balloon, tissue paper, glitter glue, and stickers. The goal was to target individual artistic expression, fine motor skills, engineering skills, and a variety of tools and techniques.

Week three – Aurora Public Library provided students with an awarding winning book “The Undeclared”, by Kwame Alexander and illustrated by Kadir Nelson with the distinction of both the Caldecott winning and Newberry Honor for books. This book allowed students to exam how both art and the written word help us bear witness to what is happening in our community and world. It brought light to activism along with political or social changes. Students were provided watercolors to create their own colorful illustrations. This kit's goal was for participants to understand the meaning of social justice and activism and increase their knowledge of black history and key figures in that history.



Week four – SciTech Museum provided students with kits with experiments and activities that included physics, chemistry, robotics, geology, and geometry. Participants polished stones, built rockets using various ingredients to determine the best chemical reaction such as water, vinegar, baking soda, aka seltzer tablets, increased math knowledge by measuring ingredients, and used tangrams to build shapes, a notepad to document their hypothesis and results. The goal of this kit was to gain a better understanding of a variety of sciences through hands-on activities.

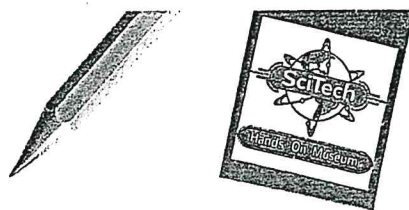


Week Five – Aurora Public Library provided students with a journal with prompts to write about and challenged students to draw various items such as a chicken crossing the road or an imaginary friend. The library provided a list of other books to inspire students on the journaling journey. This kit's goal was for participants to gain knowledge about the different uses of journals to record ideas and thoughts and increase their understanding of journal-like novels.

Each week the community partner provided a live or pre-recorded demonstration for all activities included in the activity kit on either Facebook or YouTube for students and families to follow along. All written instructions were provided in English and Spanish in each kit as well.

The following are the weekly activity kit instructions provided by each community partners.

Week One



Facebook Live!

Instructional Video with
Mr. Ian

Join us on Wednesday,
July 15th, 2020 @
11:00AM

On SciTech's Facebook
Page:
@SciTechAuroraIL

<https://www.facebook.com/SciTechAuroraIL/>

Video instructivo con el
Sr. Ian

Únase a nosotros el
miércoles 15 de julio
de 2020 @ 11:00AM

En la página de
Facebook de SciTech
@SciTechAuroraIL

<https://www.facebook.com/SciTechAuroraIL/>

SciTech STEAM Kits

Sponsored by
The City of Aurora &
Communities In Schools

Raffle Rifa

Enter To Win By Emailing
SciTech a Picture of Your
Favorite Activity! SciTech
will post your picture on
Facebook!

guests@scitechmuseum.org

Please include the
following:

Parent First and Last
Name, Email and Zipcode

The City of Aurora Museum is giving away two-
week memberships and the winners will be
selected and announced in August

El Museo de la Ciencia de Aurora está regalando dos
membresías de dos semanas y los ganadores serán
elegidos y anunciados en agosto

For more information, please contact the museum at
info@scitechmuseum.org or call 708.255.1234

Para más información, por favor contacte al museo en
info@scitechmuseum.org o llame al 708.255.1234

¡Ingrese para ganar enviando un correo electrónico a SciTech con una imagen de su actividad
favorita! ¡SciTech publicará tu foto en Facebook! guests@scitechmuseum.org
Por favor incluya lo siguiente: Nombre y apellido del padre, correo electrónico y código postal

Barn Owl's Lunchbox

Lonchera el Granero de la lechuza común

What is that? Is it POOP? No, it's an owl pellet! ¿Qué es eso? ¿ES POOP? ¡No, es una bolita de bñho!

- In this activity discover what a barn owl ate by dissecting the meals leftovers. So put on your gloves and explore what the owl left us!
- En esta actividad, descubra qué comía una lechuza disecando las sobras de las comidas. ¡Ponte los guantes y explora lo que nos dejó la lechuza!

Use the instruction sheet in the activity bag.
Use la hoja de instrucciones en la bolsa de actividades.



3

Let it Grow!


¡Déjalo CRECER!

From seeds to stems explore the life cycle of a plant. Start your very own garden from seeds and watch your plants grow big and strong. By the end of the summer you might even be able to eat what you grew!



Desde semillas hasta tallos, explore el ciclo de vida de una planta. Comience su propio jardín con semillas y observe cómo sus plantas crecen grandes y fuertes. Para el final del verano, ¡incluso podrías comer lo que cultivaste!

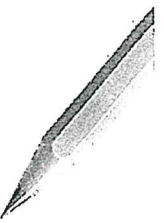
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In this activity we will be planting seeds and recording our observations in our notebooks. An observation is watching something to gain more information.

Once your plants are planted, write your observations in your notebook once a day. Your observations could include, what you see, feel, or smell from your plant. Make sure to include the date and what plant you are observing in your observations.


Directions:

1. Take the wrapper off of all the soil pellets. Place 2 soil pellets in each cup.
 2. Pour about 1/2 of water into each cup and let the soil pellets soak up the water. This will take about 5-10 minutes. Once the water is soaked up use your finger or a spoon to stir up the soil.
 3. Use your finger, or the handle of your spoon, to make a 3-5 small holes in the soil.
 4. Sprinkle some seeds into the the holes . Make sure that there is only one type of seed per cup.
 5. Cover the seeds with some of the remaining soil and water each cup.
 6. Place the cups in front of a sunny window. Make sure to water your seeds and write your observations every day.
 7. Once your plants are big enough you may transfer them in to your home garden if you would like to. Moving them to the garden will help them grow even bigger and produce flowers and food!
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5

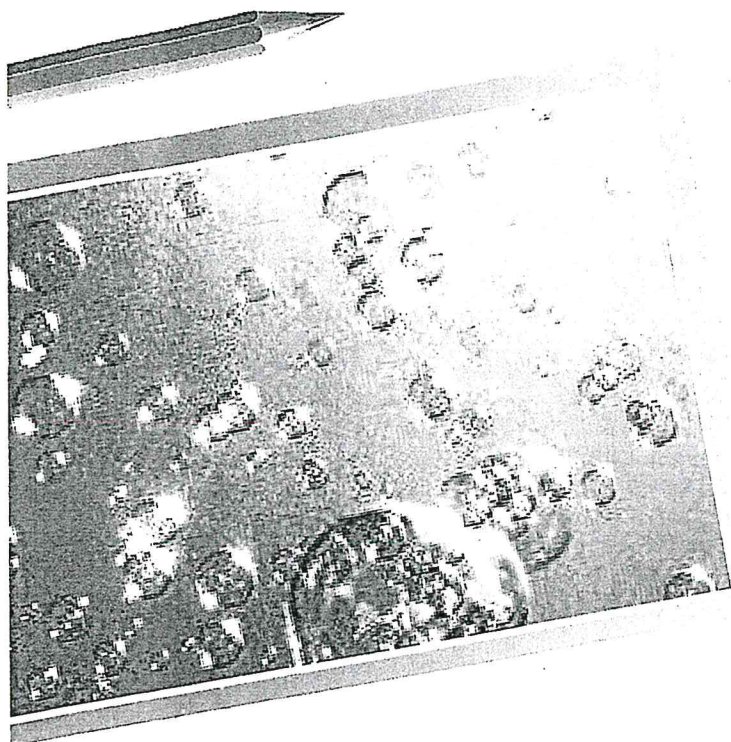
En esta actividad estaremos plantando semillas y tomando nota de nuestras observaciones en nuestros cuadernos. Una observación es mirar algo para obtener más información. Una vez que tus plantas estén plantadas, escribe tus observaciones en tu cuaderno una vez al día. Tus observaciones pueden incluir lo que ves, como se siente o como huele tu planta. Asegúrate de incluir la fecha y la planta que estás observando en tus notas.

Instrucciones:

1. Retira el envoltorio de todos los gránulos de tierra. Coloca 2 gránulos de tierra en cada taza.
 2. Vierte aproximadamente 1/2 de agua en cada taza y deja que los gránulos de tierra absorban el agua. Esto tomará entre 5 y 10 minutos. Una vez que el agua esté absorbida por la tierra, use tu dedo o una cuchara para remover la tierra.
 3. Use tu dedo, o el mango de su cuchara, para hacer 3-5 agujeros pequeños en el suelo.
 4. Rocía algunas semillas en los agujeros. Asegúrate de que solo haya un tipo de semilla por taza.
 5. Cubre las semillas con un poco de la tierra restante y riega cada taza.
 6. Coloca las tazas frente a una ventana soleada. Asegúrate de regar tus semillas y escribe tus observaciones todos los días.
 7. Una vez que tus plantas sean lo suficientemente grandes, puedes transferirlas a tu jardín si lo deseas. ¡Moverlos al jardín los ayudará a crecer aún más y a producir flores y alimentos!
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6





Billions of Bubbles!

Grab a bucket and your bottle of SciTech Super Suds Solution and head outside. It's time to have fun with BUBBLES! Experiment with different objects to see who in your family can make the biggest bubble!

¡Billones de burbujas!
Toma un balde y tu botella de SciTech Super Suds Solution y salga a la calle. ¡Es hora de divertirse con BURBUJAS! ¡Experimenta con diferentes objetos para ver quién en tu familia puede hacer la burbuja más grande!

What is a bubble? A bubble is a thin film of soapy water. Most of the bubbles that you see are filled with air, but you can make a bubble using any gasses. The film that makes the bubble has three layers. A thin layer of water is sandwiched between two layers of soap molecules.

You will be able to experiment with bubbles with your own family at home! Bubbles are a great outside activity for the entire family to enjoy together.

Some questions to think about while experimenting with bubbles.

- Can bubbles be different hold different shapes?
- How can you make a BIG bubble?
- How small can you make a bubble?

Directions:

1. In a large clean tub or bucket pour $\frac{1}{4}$ cup of the SciTech Super Suds Solution and 5 cups of water.
2. With a large spoon mix up the water and the SciTech Super Suds Solution. Let the mixture sit for 10 - 15 min.
3. While the solution is setting, use the pipe cleaners to make various shapes. You will use these to experiment with your bubble solution.
4. Once you have your shapes made, dip them in the bubble solution and blow your bubbles!

¿Qué es una burbuja? Una burbuja es una película delgada de agua jabonosa. La mayoría de las burbujas que ves están llenas de aire, pero puedes hacer una burbuja con cualquier gas. La película que hace la burbuja tiene tres capas. Una capa delgada de agua se encuentra entre dos capas de moléculas de jabón.

¡Podrás experimentar con burbujas con tu propia familia en casa! Las burbujas son una gran actividad para el aire libre y para que toda la familia disfrute juntas.

Algunas preguntas para pensar al experimentar con burbujas.

- ¿Pueden las burbujas ser diferentes y tener formas diferentes?
- ¿Cómo puedes hacer una burbuja GRANDE?
- ¿Qué tan pequeña puedes hacer una burbuja?

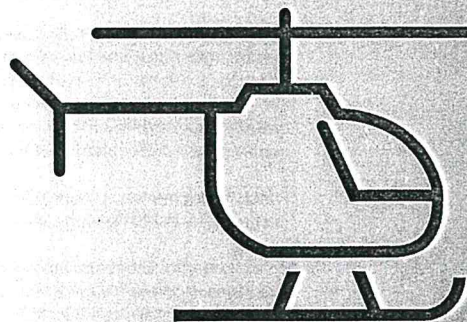
Instrucciones:

1. En una tina o cubeta grande y limpia, vierte 1/4 taza de la solución SciTech Super Suds y 5 tazas de agua.
2. Con una cuchara grande, mezcla el agua y la solución SciTech Super Suds. Deje que la mezcla repose durante 10-15 min.
3. Mientras se mezcla la solución, usa los limpiadores de tuberías para hacer varias formas. Los usarás para experimentar con tu solución de burbujas.
4. Una vez que hayas hecho tus formas, ¡sumérgelas en tu solución de burbujas y sopla las burbujas!

Soaring to New Heights Volando a Nuevas Alturas

Discover what it takes for airplanes and helicopters to fly! With your very own rubber band powered helicopter and hand powered SciTech flyer, explore what it takes for these objects to soar into the sky.

¡Descubre lo que hace volar a los aviones y helicópteros! Con tu propio helicóptero con banda elástica y volante manual SciTech, explora lo que se necesita para que estos objetos se eleven hacia el cielo.





Have you ever seen a helicopter in the air and wonder how they fly? Well it all has to do with air pressure. Air pressure is caused by fast- and slow-moving air. The helicopter has a set of blades on top that rotate extremely fast. The rotating blades move the air up. This causes higher air pressure under the blades and lower air pressure above the blades. The higher pressure under the blades causes lift allowing the helicopter to raise off the ground.

You will be able to experiment with two different types of helicopters. One is powered by a rubber band while the other is powered by your hands.

In your notebook write down your hypothesis, or prediction, of what helicopter might fly better and why. Once you have this written, follow the directions below and test your helicopters and write down your observations of what happened.

Directions:

1. Follow the written directions on the prepackaged rubber band powered helicopter.
- 2.
3. Put your SciTech Flyer together by placing the blue blade on to the orange stick.
- 4.
5. In your notebook, write down your hypothesis of what helicopter will fly the highest and why.
- 6.
7. GO OUTSIDE and test your helicopters. Follow the directions on the package for how to fly your rubber band powered helicopter. To make your SciTech Flyer work place the orange stick towards the base of your palm on your right hand. Then place your fingertips of your left hand on the orange stick and push forward. BE CAREFUL WHILE FLYING YOUR HELICOPTERS. KEEP THEM AWAY FROM YOUR EYES AND FACE.



- ¿Alguna vez has visto un helicóptero en el aire y te preguntas cómo vuelan? Bueno, todo tiene que ver con la presión del aire. La presión del aire es causada por el movimiento rápido y lento del aire. El helicóptero tiene un juego de hélices en la parte superior que giran extremadamente rápido. Las hélices giratorias mueven el aire hacia arriba. Esto provoca una mayor presión de aire debajo de las hélices y una presión de aire más baja por encima de las hélices. La mayor presión debajo de las hélices provoca un levantamiento que permite que el helicóptero se levante del suelo.
- Podrás experimentar con dos tipos diferentes de helicópteros. Uno es impulsado por una liga de goma, mientras que el otro es impulsado por tus manos.
- En tu cuaderno, escribe tu hipótesis o predicción sobre cual helicóptero podría volar mejor y por qué. Una vez que hayas escrito esto, sigue las instrucciones a continuación, prueba tus helicópteros y escribe tus observaciones de lo que sucedió.
- Instrucciones:
 1. Sigue las instrucciones escritas en el helicóptero pre empaquetado con banda elástica.
 2. Arma tu volante SciTech colocando la hélice azul en el palo naranja.
 3. En tu cuaderno, escribe tu hipótesis de cual helicóptero volará más alto y por qué.

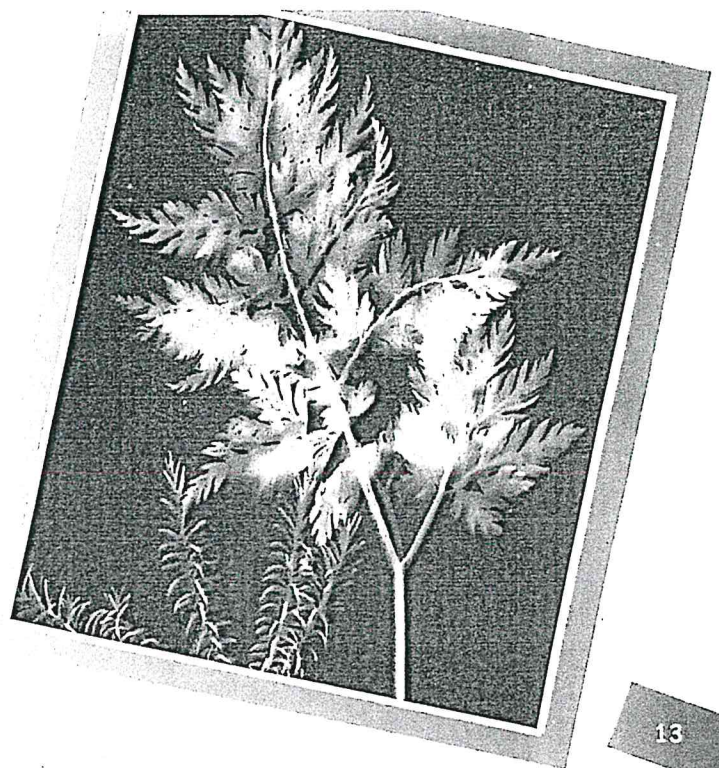


4. SAL AFUERA y prueba tus helicópteros. Sigue las instrucciones en el paquete para saber cómo volar tu helicóptero con banda elástica. Para que tu Flyer SciTech funcione, coloca el palo naranja en la base de la palma de tu mano derecha. Luego, coloca las yemas de los dedos de la mano izquierda en el palo naranja y empuja hacia adelante. Ten cuidado al volar tus helicópteros. MANTÉNLOS LEJOS DE TUS OJOS Y TU CARA.

Solar Sketches Bocetos Solares

Put on your SciTech Sunglasses and make a masterpiece with the power of the sun. Discover how this can be done with a leaf from your yard, a special piece of paper and light from the sun!

Ponte tus gafas de sol SciTech y crea una obra maestra con el poder del sol. ¡Descubre cómo se puede hacer esto con una hoja de tu jardín, un trozo de papel especial y la luz del sol!



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Did you know that the Sun is a star?! The Sun is made up of mostly two gasses, hydrogen and helium. The sun is our Earth's source for natural light and heat. The light from the sun not only allows us to see during the day but, also allows things to make shadows!

In this experiment we will be using the sun to make a piece of art. We will be using a special kind of paper called Sun Paper paper. This paper is made with a special kind of chemical that changes colors when exposed to sunlight for a long time.

Directions:

1. In your yard find a leaf or leaves
2. Inside your house, arrange your leaves on your Sun Paper
3. Outside, Place the Sun Paper and leaves on a flat surface in the direct sunlight. Remember, where ever the leaves are not at the paper will change colors.
4. Let your paper sit for 2-5 minuets in the direct sunlight
5. Bring your paper inside and let the paper sit in the water for 1-2 minuets.
6. Let the paper dry on your tray!

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¿Sabías que el Sol es una estrella? El Sol está compuesto principalmente por dos gases, hidrógeno y helio. El sol es la fuente de luz y calor natural de nuestra Tierra. ¡La luz del sol no solo permite ver durante el día, sino que también permite que las cosas hagan sombras!

En este experimento usaremos el sol para hacer una pieza de arte. Utilizaremos un tipo especial de papel llamado papel Sun Paper. Este papel está hecho con un tipo especial de químico que cambia de color cuando se expone a la luz solar durante mucho tiempo.

Instrucciones:

1. En tu patio encuentra una hoja o varias hojas
2. Dentro de tu casa, coloca tus hojas en el papel de sol
3. Afuera de tu casa, coloca el papel solar y las hojas sobre una superficie plana a la luz directa del sol. Recuerda, donde las hojas no estén en el papel, este cambiará de color.
4. Deje que tu papel repose durante 2-5 minutos a la luz solar directa
5. Trae tu papel adentro de la casa y deja que el papel repose en el agua durante 1-2 minutos.
6. ¡Deje que el papel se seque en su bandeja!

15

Wind Power

Energía Eólica

Can you use science and fill up a long bag with just one breath? We challenge you to experiment and explore the power of wind!

¿Puedes usar la ciencia y llenar una bolsa larga con solo una exhalación de aire? ¡Te retamos a experimentar y explorar el poder del viento!



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How many breaths of air will it take you to fill a plastic bag that's 8 feet long and 10 inches wide? Depending on your size, it may be anywhere from 10 to 50 breaths of air, that is, if you have the stamina for it. However, with a little practice and some knowledge of how to use air pressure differences, you'll be able to inflate the same bag with only one breath!

Directions:

1. Unfold the bag and loosen it up a little by opening it up.
2. Tie one end of the bag off with a simple knot. Then put the bag to your mouth and blow 3 big breaths of air into the bag.
3. Grab the bag near your mouth and squeeze the bag closed. Slide that hand down the bag so you push the air you blew into it toward the knotted end. How did you do? The bag is completely full? How many breaths do you think you will need to fill the entire bag using this method?
4. Have a helper hold the knotted end of the Windbag at your mouth level. The bag should be horizontal and straight away from you. Spread out your fingers and use them to make the opening of the bag as wide open as you can get it.
5. Keep your mouth about 10 inches from the wide open end of the Windbag. Take a couple of deep breaths and blow one long, single, comfortable breath of air into the opening of the bag. Watch what happens to the bag.
6. Quickly grab and seal the bag near your mouth with your hand as you did before. Slide your hand forward until it stops. It's likely you'll be surprised! You can either tie off the end with a simple knot as before or push the air out from the knotted end and have your assistant give it a try.

What just happened?!

The bag quickly inflates because air from the atmosphere is drawn into the bag along the sides of the stream of air from your lungs. In 1738, a scientist named Daniel Bernoulli observed that a stream of moving air is surrounded by an area of low atmospheric pressure. In fact, the faster the stream of air moves, the lower the pressure drops around it. When you blow into the bag, you create an area of low pressure inside the bag. Higher pressure air around you in the atmosphere rushes into the bag to equalize things. In other words, air in the atmosphere is drawn into the bag at the same time you're blowing into it as long as the opening of the bag is not on your mouth.

Did You Know... Firefighters use Bernoulli's principle to quickly and efficiently force smoke out of a building. Instead of placing the fans up against the doorway or window, a space is left between the opening and the fan in order to force a greater amount of air into the building. Firefighters call this "Positive Air Flow."

¿Cuántas exhalaciones de aire te llevará llenar una bolsa de plástico de 8 pies de largo y 10 pulgadas de ancho? Dependiendo de su tamaño, puede tener entre 10 y 50 exhalaciones de aire, es decir, si tienes la resistencia necesaria. Sin embargo, con un poco de práctica y algunos conocimientos sobre cómo utilizar las diferencias de presión de aire, ¡podrás inflar la misma bolsa con solo una exhalación!

Instrucciones:

Desdobra la bolsa y afójala un poco abriéndola.

1. Ata un extremo de la bolsa con un nudo simple. Luego pon la bolsa en tu boca y sopla 3 grandes exhalaciones de aire dentro de la bolsa.
2. Toma la bolsa cerca de tu boca y cierra la bolsa. Desliza esa mano hacia abajo de la bolsa para empujar el aire que soplaste hacia el extremo anudado. ¿Cómo hiciste? ¿La bolsa está completamente llena? ¿Cuántas respiraciones crees que necesitarás para llenar toda la bolsa con este método?
3. Haz que un ayudante sostenga el extremo anudado de la bolsa de aire a la altura de tu boca. La bolsa debe estar horizontal y recta lejos de ti. Extiende tus dedos y úsalos para abrir la bolsa lo más que puedas.
4. Mantén la boca a unas 10 pulgadas del extremo abierto de la bolsa de aire. Toma un par de respiraciones profundas y sopla una bocanada de aire larga, única y cómoda en la abertura de la bolsa. Mira lo que le pasa a la bolsa.
5. Agarra y sella rápidamente la bolsa cerca de tu boca con tu mano como lo hiciste antes. Desliza tu mano hacia adelante hasta que se detenga. ¡Es probable que te sorprendas! Puedes atar el extremo con un nudo simple como antes o sacar el aire del extremo anudado y hacer que tu asistente también lo haga.

¿Qué es lo que acaba de suceder?!

La bolsa se infla rápidamente porque el aire de la atmósfera se introduce en la bolsa a lo largo de los lados de la corriente de aire desde tus pulmones. En 1738, un científico llamado Daniel Bernoulli observó que una corriente de aire en movimiento está rodeada por un área de baja presión atmosférica. De hecho, cuanto más rápido se mueve la corriente de aire, más baja cae la presión a su alrededor. Cuando soplas en la bolsa, creas un área de baja presión dentro de la bolsa. El aire a mayor presión a su alrededor en la atmósfera se precipita hacia la bolsa para igualar las cosas. En otras palabras, el aire en la atmósfera es atraído hacia la bolsa al mismo tiempo que lo soplas mientras la abertura de la bolsa no esté en tu boca.

Sabías que... Los bomberos utilizan el principio de Bernoulli para expulsar de manera rápida y eficiente el humo de un edificio. En lugar de colocar los ventiladores contra la puerta o ventana, se deja un espacio entre la abertura y el ventilador para forzar una mayor cantidad de aire en el edificio. Los bomberos llaman a esto "Flujo de aire positivo".

Incredible Insects

Insectos Increíbles

Discover the amazing world of insects in your very own backyard! Be an entomologist and study all the incredible insects that we share our planet with.

¡Descubre el increíble mundo de los insectos en tu propio patio trasero! Sé un entomólogo y estudia todos los insectos increíbles con los que compartimos nuestro planeta.



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Did you know that there are at any time on earth there are over 10 quintillion (10,000,000,000,000,000,000) insects on our planet! That's A LOT of insects! Insects help our planet in so many ways. Insects like bees and ant help plants grow by pollinating them. Insects like termites, cockroaches, and flies help breakdown and decompose plants and dead animals. Did you know that there are even insects that eat animal poop! Insects are incredible!

Body sections of insects:
Insects have three main body sections.
The Head
The Thorax
The Abdomen


Activity Directions:

1. Use your insect catchers to capture an insect you find outside.
2. Look at your insect. What do you see? Record your observations in your notebook. Your observations and be written as words, pictures, or even both!
3. Once your observations are complete. Release your insect back into the yard so they can help make the world a better place!
4. You can keep catching, observing, and releasing insects as much as you'd like!

Did You Know...

A person that studies insects in call an entomologist. These people observe and study insects to learn more about these amazing creatures and, how we as humans can help protect them.

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¿Sabías que en cualquier momento en la tierra hay más de 10 quintillones (10,000,000,000,000,000) de insectos en nuestro planeta? ¡Son MUCHOS insectos! Los insectos ayudan a nuestro planeta de muchas maneras. Los insectos como las abejas y las hormigas ayudan a las plantas a crecer polinizándolas. Los insectos como las termitas, las cucarachas y las moscas ayudan a desfigurar y descomponer plantas y animales muertos. ¿Sabías que incluso hay insectos que comen excremento de animales? ¡Los insectos son increíbles!

Secciones corporales de insectos:

Los insectos tienen tres secciones principales del cuerpo.

La cabeza

El tórax


El abdomen

Instrucciones para la actividad:

1. Usa tus cazadores de insectos para capturar un insecto que encuentre afuera.
2. Mira a tu insecto. ¿Que ves? Apunta tus observaciones en tu cuaderno. ¡Tus observaciones que se escribirán como palabras, imágenes o incluso ambas!
3. Una vez que tus observaciones estén completas. ¡Libera a tu insecto en el patio para que pueda ayudar a hacer del mundo un lugar mejor!
4. ¡Puedes seguir atrapando, observando y liberando insectos tanto como quieras!

Sabías que...

Una persona que estudia insectos se le llama entomólogo. Estas personas observan y estudian insectos para aprender más sobre estas increíbles criaturas y cómo nosotros, como humanos, podemos ayudar a protegerlas.



**HAVE A GREAT SUMMER AND WE HOPE YOU ENJOYED
YOUR ACTIVITIES! DON'T FORGET TO SHARE YOUR
ACTIVITIES WITH SciTech Hands On Museum
AND ENTER TO WIN A FREE SciTech FAMILY
MEMBERSHIP BY JULY 31,2020!**

**¡TENGA UN GRAN VERANO Y ESPERAMOS QUE
DISFRUTE DE SUS ACTIVIDADES! NO OLVIDES
COMPARTIR TUS ACTIVIDADES CON SciTech Hands On
Museum**

**¡Y ENTRE PARA GANAR UNA MEMBRESÍA GRATUITA
DE LA FAMILIA SciTech PARA EL 31 DE JULIO DE 2020!**

Project 1: Block Puzzle

Week Two

Video demonstration: bit.ly/APAC_blocks

Inspiration: Falling Water, Frank Lloyd Wright. Bear Run, PA, 1935 (see color photo on the Cover)

Introduction:

Frank Lloyd Wright was an iconic American architect. He used new shapes to work with nature and create structures in harmony with the land. Check out his work at the links below.

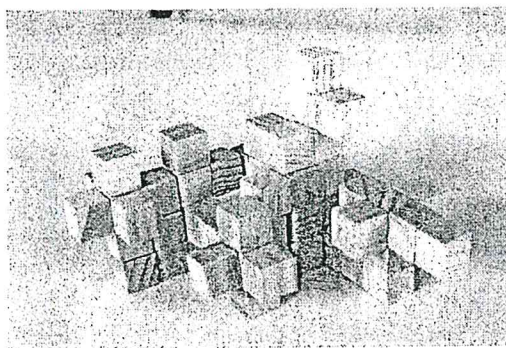
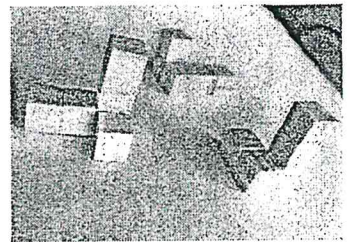
Today, we will be looking at Falling Water, a house he designed and built over a waterfall. We will use blocks to create a 3-dimensional structure to examine form and negative space. The blocks will stick out like the cantilevers Wright used in Falling Waters, creating space for a body of water to pass through

Supplies:

- 36+ half-inch wooden blocks (available at the dollar store or craft store)
- Glue

Instructions:

1. Glue two blocks together using only a small drop of glue.
2. Give the glue a short time to dry before picking up the glued blocks.
3. Glue 2-6 additional blocks to the first two. Glue the extra blocks where they will stick out in different directions.
4. Use all of the single blocks to make different three dimensional shapes of 4-8 blocks each.
5. Wait five minutes for the glue to dry enough to handle the shapes
6. Use the shapes like a three-dimensional puzzle; try to fit them together or balance them. Your sculpture should look different from every side.
7. Glue all of the shapes together to make one sculpture, or leave them separate for a puzzle you can play with again.



Learn more!

- Video about Wright's life and work (including how he played with wooden blocks as a kid)
 - https://bit.ly/FLW_info
- Khan Academy site with resources for learning more about Frank Lloyd Wright and Falling Water:
 - https://bit.ly/FLW_Khan

Project 2: Japanese Patterns

Inspiration: The Great Wave Off Kanagawa, Hokusai, ca. 1830, Japan (see color photo on Cover)

Introduction:

The Great Wave Off Kanagawa, by Hokusai in 18 is the most famous Japanese woodblock print. It's from a series called *Thirty Six Views of Mt. Fuji*. See how the waves frame the mountain in the background. Today, we are focusing on the repeating lines and pattern in the wave.

Notice the curving shapes at the end of the waves look a little like fingers reaching toward the fishermen. There are a few other repeating shapes like the droplets of water and the thick and thin lines.

Another artist in this genre is Mori Yuzan. His free downloadable sketchbooks of wave drawings and patterns are available online - see link below or on Aurora Public Art's website. Some of his sketches are provided in your kit for you to color.

Let's also take a look at analogous color schemes. This is when you use a few colors that are next to each other on the color wheel. In this case, we could use blue-green, blue, and blue-violet for the waves. But you don't have to stick to blue for water - see the color wheel on the Cover Page and choose any 3 colors that are next to each other.

Supplies:

- Coloring sheets (in the packet, or links to printables are available on our website)
- Colored pencils or markers

Instructions:

1. Examine the color wheel on the cover page.
2. Choose 3 colors that are next to each other on the color wheel.
3. Use those colors to fill in one of the repeating patterns in this packet.

Learn more!:

Free Coloring Pages, Japanese Wave Prints

<https://archive.org/details/hamonshuyv3mori/page/n28/mode/2up>

<https://archive.org/details/hamonshuy00mori/page/n27/mode/2up>

<https://archive.org/details/hamonshuyv1mori/page/n28/mode/2up>

Khan Academy - Great Wave Off Kanagawa

https://bit.ly/khan_academy_great_wave

A massive Japanese woodblock print database. <https://ukiyo-e.org/>

Great Wave Off Kanagawa image links:

<https://ukiyo-e.org/image/artelino/44169g1>

More Free Coloring Pages from Museums

https://bit.ly/museum_coloring_pages

Project #3 Masks

Demonstration Video: bit.ly/APAC_mask

Inspiration: Northern Water Spirit, Emmanuel Opoku Asante, Ghana (see color photo on cover)

Introduction:

Water is an important part of African folklore. Traditional African religions include water spirits. The mask featured here is an example of a Water Spirit mask, often placed near crops to encourage rainfall. Take a look at the color photograph of the mask on the cover page of the lesson packet. Notice the pattern on the face and the way the lines curve around the eyes and edges of the mask.

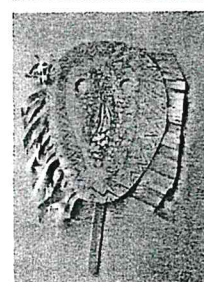
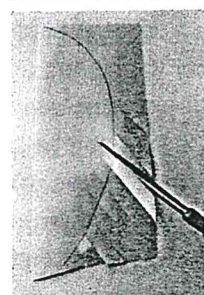
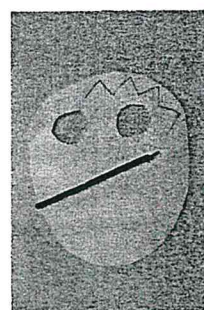
We are going to explore the use of repeating patterns as we make our own version of a mask. Remember the pattern and lines from *The Great Wave*? Let's incorporate those as we work. Try to capture the idea of water with your patterns.

Supplies:

- Cardstock
- Markers or colored pencils
- Glue
- Construction paper
- scissors
- Popsicle stick

Instructions:

1. Carefully cut eye holes in your mask. Ask a grown-up for help, if needed.
 - a. First, hold the cardstock in front of your face and use your finger to mark where one eye is. Put the cardstock down, keeping your finger in place, then draw an X on the spot. Use scissors to pierce the page and cut an eye hole.
 - b. Hold the hole in front of your eye, then use your finger to mark where the other eye hole should go. Repeat the marking and cutting process.
 - c. Optional: Add a mouth hole.
2. Cut the corners off the cardstock to create a mask shape - draw it before cutting.
3. Create a pattern that reminds you of water. Repeat that pattern with colored pencils or markers, extending to the edges of the mask. Keep it simple!
4. Cut construction paper in half lengthwise. Place the side of the mask on top of the construction paper so that the construction paper extends several inches beyond the edge of the mask. Trace the curve of the mask on the construction paper. Repeat on the other side with the other half of the construction paper.
5. Cut fringe along the construction paper, stopping at the line you traced (the uncut part is where you will glue the fringe to the mask).
6. Apply glue to the uncut part of the construction paper (just inside the line you traced), then glue the construction paper to the back of the mask. Repeat on the other side.
7. Glue the popsicle stick to the back of the chin. Once the glue dries, you can use the stick to hold your mask in front of your face.



Learn more!

Ghana water spirit mask image: https://bit.ly/ghana_mask

British Museum Virtual Tour: https://bit.ly/british_museum_tour

Kirikoku: trailer: <https://www.youtube.com/watch?v=-6jw9S5Ym10>

Project 4: Paper Mache

Video demonstration: bit.ly/APAC_fish

Inspiration: Arbol de Vida, Soteno Family, Mexico (see color image on cover sheet)

Introduction:

The work we're looking at today was made by the Soteno family in Mexico. They are ceramic artisans who work as a group to create sculptures. Their works have become more elaborate and colorful over the generations. They add a lot of found items to their sculptures, which is an art technique known as "Assemblage."

Variety is a design principle that uses different design elements, like all different shapes, colors and textures in one artwork. In assemblage, we add materials to make the sculpture. How elaborate and colorful can we make our sculpture?

Supplies:

- | | | | |
|----------------|------------|-----------------|----------------|
| • Tissue paper | • Glue | • Bowl of Water | • Glitter glue |
| • Balloons | • Scissors | • Fork | • Gem stickers |

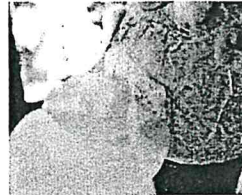
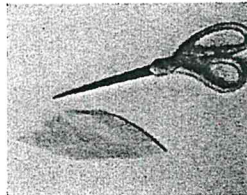
Instructions:

Day 1

1. Cover your work area. Place a few wet paper towels nearby for wiping your fingers.
2. Blow up the balloon about halfway, and tie it off.
3. Cut several sheets of tissue paper into pieces about 2"x4".
4. Mix 1 tablespoon of water and 3 tablespoons glue in a cereal bowl.
5. Wipe a little of this watery glue onto the balloon; place a piece of tissue on this spot and smooth it over so it is a little wet.
6. Repeat this process, overlapping the pieces, until you can no longer see the color of the balloon.
7. Only use enough glue to make the tissue paper look damp.
8. Let it dry. Rest the tissue-covered balloon on top of a cup overnight. Be sure to flip it after a few hours so that all sides get dry.

Day 2

1. Cut tissue paper into leaf shapes about 3' long.
2. Glue 2 or 3 of these leaf shapes to the balloon on each side for fins, the top for a dorsal fin, and the back for a tail.
3. Glue on as many decorations as you can find: sequins, pom poms, beads, small toys, whatever you think of.



Learn more!

- Virtual tour of museum in Mexico: https://bit.ly/olmedo_tour
- Soteno Family: https://en.m.wikipedia.org/wiki/Soteno_family
- National Aquarium Live Feed - <https://www.aqua.org/Experience/live#pcr>



Week Three

Join the Aurora Public Library for a Facebook Live program on Friday, July 31st at 11:00 a.m. for some art and conversation around author Kwame Alexander and illustrator Kadir Nelson's Caldecott winning and Newbery honor book, *The Undefeated*.

Únase a la Biblioteca Pública de Aurora para un programa de Facebook en vivo el viernes 31 de julio a las 11:00 a.m. para un poco de arte y conversación sobre el autor Kwame Alexander y el libro de honor de Newbery, ganador de Caldecott del ilustrador Kadir Nelson, *The Undefeated*.

Questions to reflect on as you read the book:

- How did this book make you feel? Did your feelings change throughout your reading?
- What do you think this poem is about? Why do you think that?
- How can both art and the written word help us bear witness to what happens in our communities/world? For example, Kwame Alexander repeats the phrase "This is for the unspeakable" together with Kadir Nelson's paintings of lives lost across time.
- The author uses many words that begin with "un". Find all of them. What do these words mean to you?

Preguntas para reflexionar al leer el libro:

- ¿Cómo te hizo sentir este libro? ¿Cambiaron tus sentimientos a lo largo de tu lectura?
- ¿De qué crees que trata este poema? ¿Por qué piensas eso?
- ¿Cómo pueden el arte y la palabra escrita ayudarnos a dar testimonio de lo que sucede en nuestras comunidades / mundo? Por ejemplo, Kwame Alexander repite la frase "Esto es para lo indecible" junto con las pinturas de vidas perdidas en el tiempo de Kadir Nelson.
- El autor utiliza muchas palabras que comienzan con "un". Encuentra todos ellos. ¿Qué significan estas palabras para ti?

Other activities:

1. Download a free audio version of the poem by visiting hmhbooks.com/freedownloads. Access code is UNDEFEATED
2. There are many important people represented through Nelson's artwork. Can you identify who they are and why they are important? See below for a matching exercise.
3. With an adult, look for YouTube videos featuring some of the people represented in the book.
4. An activist is defined as a person who works to bring about political or social change. Social changes are changes in our interactions and relationships that transform our culture and institutions. How can you be an activist for change in your community or the world?

Otras actividades:

1. Descargue una versión de audio gratuita del poema visitando hmhbooks.com/freedownloads. El código de acceso es INDEFINIDO
2. Hay muchas personas importantes representadas a través de las obras de arte de Nelson. ¿Puedes identificar quiénes son y por qué son importantes? Vea a continuación un ejercicio de emparejamiento.
3. Con un adulto, busque videos de YouTube con algunas de las personas representadas en el libro.
4. Un activista se define como una persona que trabaja para lograr un cambio político o social. Los cambios sociales son cambios en nuestras interacciones y relaciones que transforman nuestra cultura e instituciones. ¿Cómo puedes ser un activista por el cambio en tu comunidad o en el mundo?

Match the person below with why they are important:

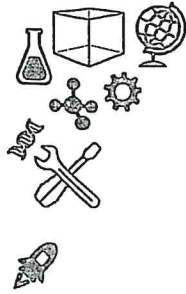
Haga coincidir a la persona a continuación con las razones por las que son importantes:

1. Jesse Owens
2. Langston Hughes
3. Althea Gibson
4. Romare Beardon
5. Martin Luther King Jr.
6. Zora Neal Hurston
7. Sheryl Swoops
8. John Lewis
9. Phyllis Wheatley
10. Sarah Vaughn

- a. Poet, novelist, & playwright. A major figure during the 1920's Harlem Renaissance
- b. Writer and anthropologist; famous for the book *Their Eyes Were Watching God*
- c. Baptist minister and activist who supported non-violent civil disobedience
- d. First player to be signed to the Women's National Basketball Association
- e. Professional tennis player & golfer; first person of color to win a Grand Slam tennis title
- f. Politician and prominent civil rights leader
- g. 1936 Berlin Olympics gold medalist
- h. Jazz singer and four-time Grammy Award winner
- i. A collagist (artist) who won the National Medal of Arts in 1987
- j. First published African female poet in America

- a. Poeta, novelista y dramaturgo. Una figura importante durante el Renacimiento de Harlem de 1920
- b. Escritor y antropólogo; famoso por el libro *Sus ojos estaban mirando a Dios*
- c. Ministro bautista y activista que apoyó la desobediencia civil no violenta
- d. Primer jugador en firmar con la Asociación Nacional de Baloncesto Femenino
- e. Tenista profesional y golfista; primera persona de color en ganar un título de tenis Grand Slam
- f. Político y destacado líder de derechos civiles.
- g. Medallista de oro de los Juegos Olímpicos de Berlín de 1936
- h. Cantante de jazz y cuatro veces ganador del premio Grammy
- i. Un collagista (artista) que ganó la Medalla Nacional de las Artes en 1987
- j. Primera poeta africana publicada en América

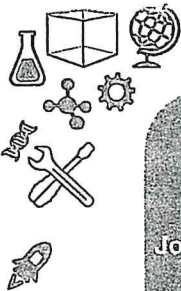
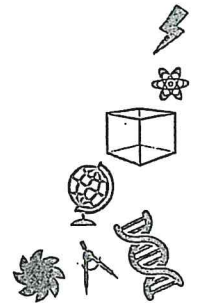
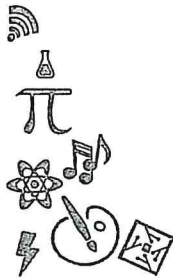
Week Four



SciTech's STEAM Kit

Sponsored By:

City of Aurora Youth Services &
Community's In School of Aurora



Facebook Live!

Instructional Video with Mr. Ian
Join us on Wednesday, August 5, 2020
@ 11:00AM

On SciTech's Facebook Page:
@SciTechAuroraLL
<https://www.facebook.com/SciTechAuroraLL/>

Video instructivo con el Sr. Ian
Únase a nosotros el miércoles 5 de agosto de 2020 @ 11 A.M

En la página de Facebook de
SciTech: @SciTechAuroraLL
<https://www.facebook.com/SciTechAuroraLL/>

Raffle

Rifa

Enter To Win By Emailing SciTech a
Picture of Your Favorite Activity!
SciTech will post your picture on
Facebook!

quests@scitechmuseum.org

Please include the following: Parent
First and Last Name, Email and
Zipcode

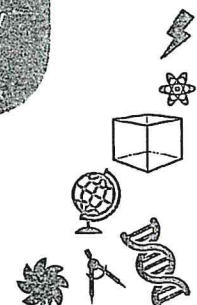
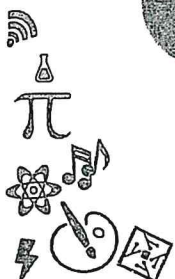
¡Ingrese para ganar enviando un correo
electrónico a SciTech con una imagen de su
actividad favorita! ¡SciTech publicará tu foto
en Facebook!

quests@scitechmuseum.org

Por favor incluya lo siguiente: Nombre y
apellido del padre, correo electrónico y
código postal

SciTech Hands On Museum is giving away two Family Memberships and
the winners will be chosen at random and announced in August 2020.
All submissions must be received by 8/22/2020

SciTech Hands On Museum está regalando membresías de dos familias y los
ganadores serán elegidos al azar y anunciados en agosto de 2020.
Todas las presentaciones deben recibirse antes del 22/08/2020





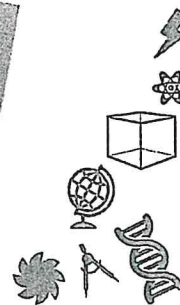
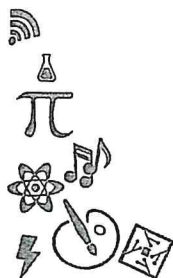
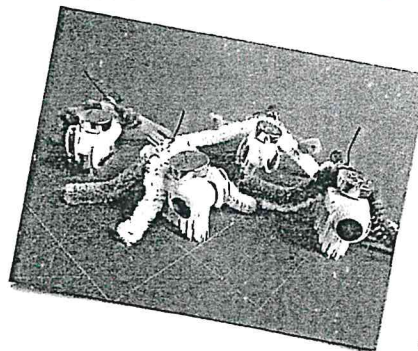
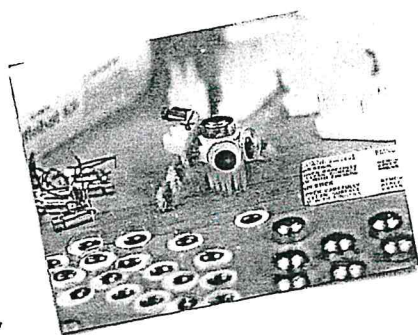
Bristle Bots

Build your very own Bristle Bot from your friends at Brown Dog Gadgets! Follow the step by step directions on the included instruction sheet or watch the instruction video on the Brown Dog Gadgets website.

Website Link: <https://browndoggadgets.dozuki.com/Guide/Bristlebot/2>

¡Construye tu propio Bristle Bot de tus amigos en Brown Dog Gadgets! Siga las instrucciones paso a paso en la hoja de instrucciones incluida o mire el video de instrucciones en el sitio web de Brown Dog Gadgets.

Enlace de página web:
<https://browndoggadgets.dozuki.com/Guide/Bristlebot/2>



Terrific Tangrams

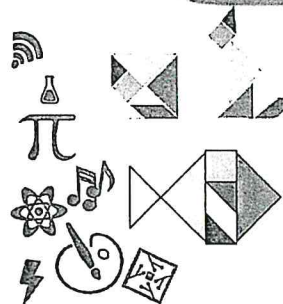
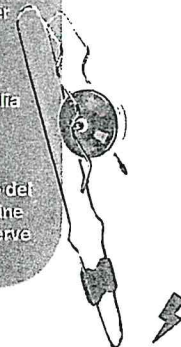
What's a Tangram?
A Tangram puzzle focuses on the objective to rearrange the seven separate pieces into a complete image of various shapes in outline or silhouette only. Coming from China, this logic game brings the mathematical thought of Asia and incorporates it with bright colors and figures. What can you make with these shapes? Make sure to share your pictures by tagging #SelfieHandsOnMuseum!

¿Qué es un tangram?
Un rompecabezas de Tangram se enfoca en el objetivo de reorganizar las siete piezas separadas en una imagen completa de varias formas, solo en contorno o silueta. Vinendo de China, este juego de lógica trae el pensamiento matemático de Asia y lo incorpora con colores y figuras brillantes. ¿Qué puedes hacer con estas formas? ¡Asegúrate de compartir tus fotos etiquetando #SelfieHandsOnMuseum!

Marvelous Momentum

When an object is moving it has momentum. With this fun toy you and your family can experiment with this fantastic force of physics! First, put the wheel on the wand by resting the small tips on either side on the side of the wheel on to the wand. Then, tilt the wand back and forth and watch as the wheel spin faster and faster!

Cuando un objeto se mueve, tiene impulso. ¡Con este divertido juguete, usted y su familia pueden experimentar con esta fantástica fuerza física! Primero, coloque la rueda sobre la varita apoyando las puntas pequeñas a cada lado del lado de la rueda sobre la varita. Luego, incline la varita hacia adelante y hacia atrás y observe cómo la rueda gira más y más rápido.



Tangram Challenge Links!

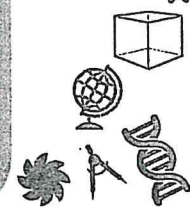
Shapes: <https://www.tangram-channel.com/tangram-puzzles/geometrical-shapes-easy/>

Animals: <https://www.tangram-channel.com/tangram-puzzles/animals-easy/>

Letters & Numbers: <https://www.tangram-channel.com/tangram-puzzles/letters-numbers-signs-easy/>

Everyday Things: <https://www.tangram-channel.com/tangram-puzzles/miscellaneous-easy/>

Boats: <https://www.tangram-channel.com/tangram-puzzles/boats-easy/>





Geology ROCKS!



In your activity bag we have provided you 3 stones of your own with a stone identification card. Can you figure out what stones you have? Also, while you are exploring The Lizzadro Museum's website make sure to write down 5 interesting things you learned in your notebook!

There is a museum in Oak Brook, Illinois that has a huge collection of sculptures made from precious stones from all around the world. This museum is called The Lizzadro Museum of Lapidary Art. Lapidary is the art of cutting and polishing stones. Check out the links to learn more about this amazing form of art. Even see Castle Lizzadro made of gold!

En su bolsa de actividades le hemos proporcionado 3 piedras propias con una tarjeta de identificación de piedra. ¿Puedes descubrir qué piedras tienes? Además, mientras explora el sitio web del Museo Lizzadro, asegúrese de escribir 5 cosas interesantes que aprendió en su cuaderno.

Hay un museo en Oak Brook, Illinois, que tiene una gran colección de esculturas hechas de piedras preciosas de todo el mundo. Este museo se llama El Museo Lizzadro de Arte Lapidario. Lapidario es el arte de cortar y pulir piedras. Consulte los enlaces para obtener más información sobre esta increíble forma de arte. ¡Incluso ve el castillo de Lizzadro hecho de oro!



The Lizzadro Museum of Lapidary Art - <https://lizzadromuseum.org>

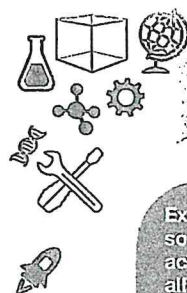
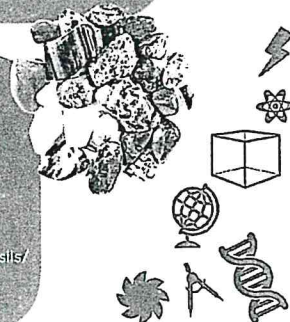
What Is Lapidary - <https://lizzadromuseum.org/lapidary/>

Explore the museum's collection - <https://lizzadromuseum.org/collections/>

Rock vs. Mineral - <https://lizzadromuseum.org/what-are-rocks-what-are-minerals/>

How are Rocks, Minerals, and Fossils formed? - <https://lizzadromuseum.org/rock-mineral-fossils/>

Castle Lizzadro - <https://lizzadromuseum.org/castle-lizzadro/>



Fizzing Colors



Explore the chemical reaction of baking soda and vinegar with a colorful twist! This activity is great for children, and adults, of all ages. In this experiment you will be able to see, smell, hear and feel a chemical reaction taking place.

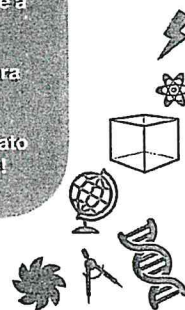
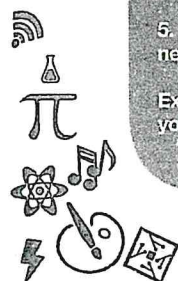
1. In your three small sections of your tray put 1-2 drops of food coloring. One color per section (red, yellow and, blue).
2. Pour the vinegar into the sections.
3. Scoop 4-5 tablespoons of baking soda into the large section of the tray.
4. Use your pipette to transfer the vinegar on to the pile of baking soda.
5. Try using the different colors to create new colors!

Extension: Try holding the baking soda in your hand and feel the reaction!

¡Explore la reacción química del bicarbonato de sodio y el vinagre con un toque colorido! Esta actividad es ideal para niños y adultos de todas las edades. En este experimento podrás ver, oler, escuchar y sentir una reacción química.

1. En las tres secciones pequeñas de su bandeja, ponga 1-2 gotas de colorante para alimentos. Un color por sección (rojo, amarillo y azul).
2. Vierta el vinagre en las secciones.
3. Coloque 4-5 cucharadas de bicarbonato de sodio en la sección grande de la bandeja.
4. Use su pipeta para transferir el vinagre a la pila de bicarbonato de sodio.
5. ¡Intenta usar los diferentes colores para crear nuevos colores!

Extensión: ¡Intenta sostener el bicarbonato de sodio en la mano y siente la reacción!



Wicking Rainbow

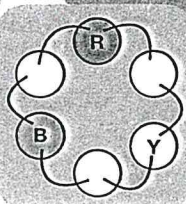
Imagine creating a rainbow in your own home! This experiment will allow families explore how the primary colors - red, yellow and blue - create all the other colors of the rainbow. In addition to learning about colors, families will also discover the science of capillary action. Essentially, the adhesive force between the paper towel and the water are more powerful than the cohesive force inside the water itself. This results in the paper towel pulling the water up. The water keeps traveling up the paper towel, across the bridge and into the other cup.

1. Set up cups in a circle
2. Put 2 or 3 drops of food coloring in to the cups according to the diagram.
3. Pour water into all the cups about 1/3 of the way
4. Rip the 2 paper towels into thirds. Then twist paper towel pieces and place into cups according to diagram.
5. Hypothesize what will happen and record your hypothesis in your notebook.
6. Observe what happens over the next 10 - 15 min. Write your observations in your notebook.

¡Imagina crear un arcoíris en tu propia casa! Este experimento permitirá a las familias explorar cómo los colores primarios (rojo, amarillo y azul) crean todos los demás colores del arco iris. Además de aprender sobre los colores, las familias también descubrirán la ciencia de la acción capilar. Esencialmente, la fuerza adhesiva entre la toalla de papel y el agua es más poderosa que la fuerza cohesiva dentro del agua misma. Esto hace que la toalla de papel suba el agua. El agua sigue subiendo por la toalla de papel, cruzando el puente y hacia la otra taza.

1. Coloque tazas en un círculo.
2. Ponga 2 o 3 gotas de colorante alimentario en las tazas según el diagrama.
3. Vierta agua en todas las tazas aproximadamente 1/3 del camino.
4. Rasgue las 2 toallas de papel en tercios. Luego fuerce los trozos de toallas de papel y colóquelos en tazas según el diagrama.
5. Haga una hipótesis de lo que sucederá y registre su hipótesis en su cuaderno.
6. Observe lo que sucede en los próximos 10 a 15 min. Escriba tus observaciones en tu cuaderno.

Diagram / Diagrama



Fantastic Forces

There are forces acting upon us all the time. The biggest one is gravity. This is the force that pulls everything towards the ground. That is why when you toss a ball into the air it falls back to your hand. In this experiment you will explore the force called lift that causes objects to float in the air.

1. Put your Bernoulli Pipe toy together by attaching the white basket to your colorful pipe.
2. Place the white ball in the basket.
3. Put the open end of the pipe in your mouth and blow.
4. Record your observations in your notebook!

What happened?

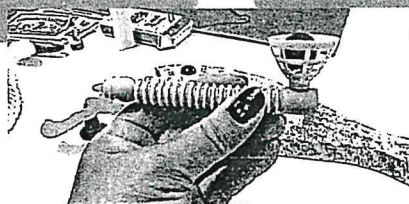
When you blew the air through the pipe it pushed the ball into the air. The air moved very fast around the ball and caused less pressure above the ball and more pressure under the ball allowing the ball to float!

Hay fuerzas que actúan sobre nosotros todo el tiempo. El más grande es la gravedad. Esta es la fuerza que tira de todo hacia el suelo. Es por eso que cuando lanzas una pelota al aire, vuelve a caer a tu mano. En este experimento, explorarás la fuerza llamada elevación que hace que los objetos floten en el aire.

1. Arme su juguete Bernoulli Pipe uniendo la canasta blanca a su colorida tubería.
2. Coloque la bola blanca en la canasta.
3. Coloque el extremo abierto de la tubería en su boca y sopla.
4. ¡Registre sus observaciones en su cuaderno!

¿Que pasó?

Cuando soplo el aire a través de la tubería, empujó la pelota hacia el aire. ¡El aire se movió muy rápido alrededor de la pelota y causó menos presión sobre la pelota y más presión debajo de la pelota permitiendo que la pelota flotara!



Fizz Inflator

There are three basic states of matter: solid, liquid, and gas. In this experiment you will use all three to blow up a balloon.

Solids: A solid is anything that is hard or can hold its shape while under pressure. An example would be a table or the floor of your house.

Liquid: A liquid is matter that takes the shape of the container that holds it. An example of this would be water or juice.

Gas: A gas is the invisible state of matter. Gas is all around us. The air we breathe is a gas.

1. Using your measuring cup, pour about 1/4 cup of vinegar into the plastic bottle.

2. With your measuring spoon, scoop 1 tablespoon (TBS) of baking soda out of the box. Then carefully pour the baking soda into the balloon. You may need an adult or helper to assist with this.

3. With the baking soda in the large part of the balloon, stretch the mouth of the balloon over the mouth of the plastic bottle. Be careful not to pour the baking soda into the vinegar yet!

4. In your notebook, write down your hypothesis of what you think will happen when the baking soda (solid) and vinegar (liquid) mix?

5. Lift up the top of the balloon and allow the baking soda to fall into the bottle with the vinegar. Make sure to get as much of the baking soda into the bottle for the best results.

6. Write your observations in your notebook!

Extension: Try different amounts of vinegar and baking soda to see which has an effect.

Hay tres estados básicos de la materia: sólido, líquido y gaseoso. ¡En este experimento usarás los tres para volar un globo!

Sólidos: Un sólido es todo lo que es duro o puede mantener su forma mientras está bajo presión. Un ejemplo sería una mesa o el piso de su casa.

Líquidos: Un líquido es materia que toma la forma del recipiente en el que se encuentra. Un ejemplo de esto sería agua o jugo.

Gas: un gas es el estado invisible de la materia. El gas nos rodea. El aire que respiramos es un gas.

1. Usando su taza medidora, vierta aproximadamente 1/4 taza de vinagre en la botella de plástico.

2. Con su cuchara dosificadora, saque 1 cucharada (TBS) de bicarbonato de sodio de la caja. Luego vierta cuidadosamente el bicarbonato de sodio en el globo. Es posible que necesite un adulto o un ayudante para que lo ayude.

3. Con el bicarbonato de sodio en la mayor parte del globo, estire la boca del globo sobre la boca de la botella de plástico. ¡Tenga cuidado de no verter el bicarbonato de sodio en el vinagre todavía!

4. En su cuaderno, escriba su hipótesis de lo que cree que sucederá cuando se mezclan el bicarbonato de sodio (sólido) y el vinagre (líquido).

5. Levante la parte superior del globo y permita que el bicarbonato de sodio caiga en la botella con el vinagre. Asegúrese de obtener la mayor cantidad de bicarbonato de sodio en la botella para obtener los mejores resultados.

6. ¡Escriba sus observaciones en su cuaderno!

Extensión: Pruebe diferentes cantidades de vinagre y bicarbonato de sodio para ver si esto tiene algún efecto.

Colorful Chemistry

In this activity we used a chemical process called paper chromatography. The water moves through the filter paper, carrying the marker pigments and separating the different color molecules in each marker. Chromatography reveals which colors combine to make the all the colors. Mystery solved!

With paper chromatography the water carries different color molecules at different speeds depending on the size of the molecule and how attracted the molecules are to the paper. For example, pigments in the secondary color orange (made from a combination of primary colors) separates out to show a range of yellows and reds.

1. Take one coffee filter and place a few small spots of color near the center using a marker. We suggest using green, purple, orange, or black.

2. Fill one of your measuring cups with water and place your colored coffee filter on the plastic tray.

3. With your pipette, put 2-3 small drops of water on each spot of color.

4. Wait 2-3 minutes and observe the reaction the water has on the colors. What colors do you see?

5. Let your coffee filter dry. Then you can hang it up with your other artwork!

Extension: Try using only black on the coffee filter and observe what colors you see!

En esta actividad utilizamos un proceso químico llamado cromatografía en papel. El agua se mueve a través del papel de filtro que transporta los pigmentos marcadores y separa las diferentes moléculas de color en cada marcador. La cromatografía revela qué colores se combinan para formar todos los colores. ¡Misterio resuelto!

Con la cromatografía en papel, el agua transporta diferentes moléculas de color a diferentes velocidades dependiendo del tamaño de la molécula y de lo atraída por el papel. Por ejemplo, los pigmentos en el color secundario naranja (hecho de una combinación de colores primarios) se separan para mostrar una gama de amarillos y rojos.

1. Tome un filtro de café y coloque algunas pequeñas manchas de color cerca del centro con un marcador. Sugerimos usar verde, morado, naranja o negro.

2. Llene una de sus tazas de medir con agua y coloque su filtro de café de color en la bandeja de plástico.

3. Con su pipeta, coloque 2-3 gotas pequeñas de agua en cada punto de color.

4. Espere 2-3 minutos y observe la reacción que el agua tiene sobre los colores. ¿Qué colores ves?

5. Deje que su filtro de café se seque. ¡Entonces puedes colgarlo con tu otra obra de arte!

Extensión: ¡Intenta usar solo negro en el filtro de café y observe qué colores ves!



Week Five

Join the Aurora Public Library for a Facebook Live program on Friday, August 14th at 11:00 a.m. and we will share more about these kits!

¡Únase a la Biblioteca Pública de Aurora para un programa de Facebook Live el viernes 14 de agosto a las 11:00 a.m. y compartiremos más sobre estos kits!

Try some of these journaling prompts:

Write a story about a magical button

What is your favorite video game?

Where would you most like to visit?

Write about a time when you were mad

Write a story using the first sentence "Yesterday, I found my favorite..."

Pruebe algunos de estos mensajes de diario:

Escribe una historia sobre un botón mágico

¿Cual es tu video juego favorito?

¿Dónde te gustaría más visitar?

Escribe sobre un momento en que estabas enojado

Escribe una historia usando la primera oración "Ayer, encontré mi favorito ..."

You can also use a journal as a place to create art! Try the following prompts and challenge yourself to draw each of the following:

A chicken crossing the road

The first day of school

Your favorite memory

Ice cream

An imaginary friend

The library

¡También puedes usar un diario como lugar para crear arte! Pruebe las siguientes indicaciones y desafíese a dibujar cada uno de los siguientes:

Un pollo cruzando la calle.

el primer día de escuela

Tu recuerdo favorito

Helado

Un amigo imaginario

La biblioteca

Check out one of these books to inspire you on our journaling journey:

Mira uno de estos libros para inspirarte en nuestro viaje de diario:

Dear Dumb Diary by Jim Benton

Diary of a Wimpy Kid by Jeff Kinney

Dork Diaries by Rachel Renee Russell

Ellie McDoodle Diaries by Ruth McNally Barshaw

Frazzled series by Booki Vivat

Justin Case by Rachel Vail

My Life as a Youtuber (and other titles) by Janet Tashjian

Owl Diaries by Rebecca Elliott

Journaling Word Search

Ode
Art
Story
Literary

Ballad
Pen
Rhyme
Write

Haiku
Page
Journal

E	I	T	K	A	B	A	L	L	A	D	E	N	I
N	D	A	R	I	A	L	W	L	E	P	O	I	R
D	E	O	L	A	A	T	M	U	E	K	W	N	D
O	H	K	S	H	O	I	E	W	S	D	A	R	B
P	M	R	A	T	T	W	T	R	T	L	D	E	A
U	U	O	H	R	U	P	U	I	O	E	E	H	T
L	N	Y	I	Y	A	A	E	T	R	R	P	D	A
A	E	L	I	N	M	G	S	E	Y	H	Y	U	T
R	P	R	U	I	A	E	H	A	I	K	U	N	Y
T	G	L	A	L	H	R	T	D	T	H	I	U	R
D	E	T	R	H	A	I	A	G	K	A	R	J	E
P	M	T	T	A	Y	R	A	R	E	T	I	L	K
A	E	R	L	E	D	U	D	Y	H	H	L	A	U
P	G	N	R	J	O	U	R	N	A	L	T	A	R

Búsqueda de palabras en el diario

Oda
Arte
Historia
Literario

Balada
Bolígrafo
Rima
Escribir

Haiku
Página
Diario

I	I	G	F	N	G	I	A	T	L	A	N	A	R
I	L	E	I	I	E	L	T	D	S	A	N	I	A
E	O	R	A	C	A	R	O	L	O	A	R	R	R
A	O	A	I	R	O	T	S	I	H	O	A	T	I
N	B	F	I	O	I	R	A	R	E	T	I	L	E
A	O	N	A	I	R	A	T	R	E	I	A	H	S
R	L	B	G	S	A	D	A	L	A	B	A	A	C
K	I	I	D	U	R	A	D	B	R	N	D	I	R
R	G	A	A	G	S	C	B	C	I	A	O	K	I
F	R	O	R	I	R	I	R	G	A	R	I	U	B
B	A	A	H	L	A	E	A	H	R	T	R	T	I
R	F	A	B	R	A	P	I	I	O	E	A	R	R
D	O	N	D	L	D	I	M	O	K	A	I	A	L
A	B	E	I	I	E	A	T	L	H	I	D	K	I