2025/26

OVERTURE CENTER FOR THE ARTS

ONSTAGE STUDENT FIELD TRIP

RESOURCE GUIDE

Bill Blagg's The SCIENCE of Magic

overture.org/onstage

Overture
CENTER FOR THE ARTS

ABOUT OVERTURE CENTER FOR THE ARTS

Overture Center for the Arts fills a city block in downtown Madison with world-class venues for the performing and visual arts. Made possible by an extraordinary gift from Madison businessman W. Jerome Frautschi, the center presents the highest-quality arts and entertainment programming in a wide variety of disciplines for diverse audiences. Offerings include performances by acclaimed classical, jazz, pop, and folk performers; touring Broadway musicals; quality children's entertainment; and world-class ballet, modern and jazz dance. Overture Center's extensive outreach and educational programs serve thousands of Madison-area residents annually, including youth, older adults, people with limited financial resources and people with disabilities. The center is also home to ten independent resident organizations.

RESIDENT ORGANIZATIONS

Bach Dancing and Dynamite Society
Children's Theater of Madison
Forward Theater Company
Kanopy Dance Company
Li Chiao-Ping Dance Company
Madison Ballet
Madison Opera
Madison Symphony Orchestra
Wisconsin Academy's James Watrous Gallery
Wisconsin Chamber Orchestra

Internationally renowned architect Cesar Pelli designed the center to provide the best possible environment for artists and audiences, as well as to complement Madison's urban environment. Performance spaces range from the spectacular 2,250-seat Overture Hall to the casual and intimate Rotunda Stage. The renovated Capitol Theater seats approximately 1,110, and The Playhouse seats 350. In addition, three multi-purpose spaces provide flexible performance, meeting and rehearsal facilities. Overture Center also features several art exhibit spaces. Overture Galleries I, II and III display works by Dane County artists. The Playhouse Gallery features regional artists with an emphasis on collaborations with local organizations. The Wisconsin Academy of Sciences, Arts and Letters' Watrous Gallery displays works by Wisconsin artists, and the Madison Museum of Contemporary Art offers works by national and international artists.

Dear Teachers,

In this resource guide you will find valuable information to help you apply academic goals to your students' performance experience. We have included suggestions for activities which can help you prepare students to see this performance, ideas for follow-up activities, and additional resources you can access on the web. Along with these activities and resources, we've also included the applicable Wisconsin Academic Standards in order to help you align the experience with your curriculum requirements.

This Educator's Resource Guide is designed to:

• Extend the scholastic impact of the performance by providing discussion ideas, activities and reading to promote learning across the curriculum;

• Promote arts literacy by expanding students' knowledge of music, science, storytelling and theatre;

• Illustrate that the arts are a legacy reflecting the values, customs, beliefs, expressions and reflections of a culture;

• Use the arts to teach about the cultures of other people and to celebrate students' own heritage through self-reflection;

• Maximize students' enjoyment and appreciation of the performance.

We hope the performance and this resource guide will provide you and your students with opportunities to integrate art learning in your curricula, expanding it in new and enriching ways.

Enjoy the Show!

Curriculum Categories

Science Social Emotional Language Arts

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We want your feedback!

OnStage performances can be evaluated online! Evaluations are vital to the funding of this program. Your feedback educates us about the ways the program is utilized and we often implement your suggestions.

Survey:https://form.jotform.com/91974450543260

Bill Blagg

About *Bill Blagg's The Science of Magic*

If it's tough to get your students excited about science, wait 'til they see how illusionist Bill Blagg uses it to levitate a teacher or make their homework disappear.

It's all part of ***The Science of Magic***, Blagg's one-of-a-kind, action-packed, laughter-filled, highly interactive educational experience.

A blend of magic, personality, and performance (with an extra heaping helping of science education), The Science of Magic takes students behind the scenes in the world of magic to show how magicians use science to make the impossible happen.

In this 55-minute show, performed without an intermission, Blagg harnesses the wonder and amazement magic can evoke, plus some razzmatazz performance skills, to get students excited about the water cycle, the science of reflection, the scientific method, and more.

You'll also see contemporary illusions on a large scale, mind-reading, sleight-of-hand tricks, and a bit of personal backstory. Prepare to be amazed, informed, and intrigued, and remember what Kurt Vonnegut said – "Science is just magic that works."

About Bill Blagg

Talk about the gift that keeps on giving – Bill Blagg received his first magic kit as a present when he was five years old. A few years later, Bill began doing magic shows during recess when he was in elementary school and he became a professional magician by the time he was 16. His family has offered lots of help and support over the years, with his grandfather giving him books on magic and his father helping him build his illusions.

Bill Blagg went to Carthage College in Kenosha, where he used independent study to build every aspect of his career, from creating the show itself to developing the business practices that support it. He graduated in 2002 and has been performing ever since.

About Magic

What is magic? Sorcerers and spells aside, what looks like magic is basically something we don't understand.

No matter how many magic words they recite, magicians do not have super powers. They develop their tricks and illusions through a long process of trial and error, using:

- Scientific principles
- Misdirection
- Sensory manipulation (making people think they see and hear things they really aren't seeing and hearing, confusing the audience's perspective)
- Performing skills, to put on a good show
- Psychological skills to help them "read" audience members, which is very important in "mind-reading" and other tricks

Examples of magic acts include:

- Making things disappear
- Making things appear
- Making things change form

It takes hard work to become a professional magician. Magicians need to have more than technical skills to perform their tricks – they need a personality, a brand, and a style that helps them connect with audiences.

Since magicians have to know their tricks backwards and forwards, it can take a year for then to learn a new trick.

Bill Blagg

There are different kinds of magic acts:

- Close-up magicians work on a small scale, such as card tricks on a table
- Illusionists work on a large scale, like David Copperfield
- Mentalists are magicians who focus on "mind-reading"

The Healing Power of…Magic?

Recovering from an injury or illness can sometimes seem magical, but occupational therapists, physical therapists, and other caregivers are beginning to see how teaching people simple magic tricks can benefit individuals dealing with a variety of challenges, such as brain and spinal injuries, physical handicaps, and learning disabilities. Providers have used magic therapy to help people:

- Improve their dexterity and their ability to grasp and release objects
- Tackle challenges with thinking and perception
- Strengthen impulse control
- Increase their tolerance for frustration

The Magic of Science Guide - The Floating Egg

Magicians use scientific principles to create their illusions. These activities from ***The Science of Magic*** show how. Access the complete study guide here for more.

Bill Blagg

Magic Lesson 1: The Floating Egg

Materials

- Masking tape
- 1/2 cup salt
- Felt-tip pen
- Uncooked egg
- Large spoon
- Quart (liter) jar
- Tap water
- Scissors
- Ruler

The Setup

1. Fill the jar half full of water.
2. Cut a 3" piece of tape and stick it to the outside of the salt container. Use the pen to write on the tape, "Magic Swimming Powder."
3. Place the egg and spoon on the table.

Magic Science Time!

Tell your audience, "I'm going to teach an egg how to swim." Begin by showing the audience the egg doesn't know how to swim by placing the egg in a jar filled with tap water. The egg will sink to the bottom. Remove the egg from the jar with the spoon. Tell the audience you need to add magic swimming powder to the water to help the egg swim. Pour the salt in the water and stir with the spoon. Say some magic words! Place the egg in the water. and it will float!

Discussion

- How did the magic powder help the egg float?
- What was created by mixing the powder in the water?
- Why didn't the egg float without the powder?

Explanation

All matter floats or sinks depending on its density. Less dense substances float on more dense substances. The egg floats in salt water because the egg is less dense than the salt water. However, the egg is denser than tap water, so it sinks. Salt water is a solution that contains both salt and water. A solution occurs when a solid is dissolved in a liquid.

Salt water is a solution that contains both salt and water. A solution occurs when a solid is dissolved in a liquid.

The Magic of Science Guide - The Broken Pencil

In this trick, you'll use water and light to perform an interesting illusion.

Materials

- A glass
- Pencil
- Tap water

The Setup

1. Fill the glass about two-thirds full of tap water.
2. Place the glass of water and pencil on the table.

Magic Science Time!

Hold the pencil in front of you. Tell the audience, "I am going to break the pencil by simply sticking it in this glass of water." Hold the pencil upright in the water so that the tip is about halfway between the surface of the water and the bottom of the glass. Make sure the pencil is near the back of the glass, away from the audience. Move the pencil back and forth in the water, keeping it upright. Ask them what they see. It will appear as though the pencil is broken when in the water. Remove the pencil from the water.

Discussion

Did the pencil really break when it was placed in the water? If not, then why did it look like the pencil was split in half?

Explanation

This trick works because of refraction. Light travels in straight lines, but when it travels from one transparent substance to another the light rays bend. This is refraction. When light travels from a more dense transparent substance, such as water, to a less dense substance, such as air, the light refracts, or bends, noticeably. Light travels at different speeds in substances with different densities. Light reflected from the pencil appears to the audience to be in one place when it travels to their eyes through the air, and in another place when it is refracted through water.

Bill Blagg The Magic of Science

Resources & a Magician from Wisconsin

Resources

- Bill Blagg's website
- 14 fun facts about magic
- Learn about the history of magic here
- The abracadabra is a website full of information about magic
- A radio interview about Harry Houdini and his Wisconsin connection
- Cool science tricks
- An article on using magic in the classroom
- Learn more about "Magic Therapy" here
- An article on the similarities between teaching and magic
- Just for fun or further study, a scholarly article on magicians

"Magic is the only honest profession. A magician promises to deceive you and he does."

-Karl Germain, a magician performing as Germain the Wizard

Harry Houdini (March 24, 1874 – October 31, 1926) was one of the most celebrated magicians, illusionists, and all-around performers of his time. He was a top notch escape artist, known for picking locks, working his way out of strait jackets, and breaking out of water-filled tanks, nailed crates, and more. He was born Erik Weisz in Budapest, and moved to Appleton, Wisconsin, with his family, when he was four. He moved to New York City with his father when he was 13 years old, when he was already performing as a trapeze artist. He later changed his name to "Harry Houdini" after reading the autobiography of the French magician Robert-Houdin.

Harry Houdini

Learning Activity – Magic Comb

From *Education.com*

Grades: K-2

A lot of things can act like magnets—they just need an electric charge. If we give a comb an electric charge, can it separate pepper from salt? Let's find out!

Learning Objectives:

After participating in this activity, students will be able to:

- Understand that particles (salt and pepper) have different densities
- Describe how static electricity changes the charges of particles
- Use a "magic trick" to demonstrate scientific principles in action

Materials:

- Plastic Comb
- Pepper
- Salt
- Tissue
- Notebook
- Pen

Bill Blag's The Science of Magic

Procedure:

1. Lay the tissue flat.
2. Pour some salt onto the tissue.
3. Pour an equal amount of pepper onto the tissue.
4. Mix the salt and pepper together until you achieve an even consistency.
5. Do you think the comb can separate the salt and pepper? If so, how do you think it does this? Use this time to write down your guess, also called a hypothesis, in your notebook.
6. Give the comb an electric charge by rubbing it through your hair a few times.
7. Hold the comb about an inch above the salt and pepper.
8. Slowly move the comb over the mixture.

Learning Activity – Magic Comb (*continued*)

Results:

The pepper particles will attach to the comb, leaving the salt in the tissue.

Why?

Salt and pepper both have neutral charges. However, the static electricity in the comb can change these charges. Because pepper is less dense than salt, it has more surface area that can be charged by the comb's static electricity. This allows the pepper to be attracted to the comb, leaving the salt behind on the tissue. The salt may have been charged slightly, but not nearly as much as the pepper was. What if you repeated this experiment using different substances? Keep experimenting. There's a whole world of questions to answer!

A comb which may or may not be magic

"Magic is believing in yourself, if you do that you can make anything can happen."

-- Wolfgang Von Goethe

Learning Activity – Magic Toothpick Trick

KidZone Magic Tricks © Contributed by Leanne Guenther

Grades: 3-6

A magician shows a pan full of water with five toothpicks in the shape of a pentagon, takes a "magic toothpick," and dips it in the center of the pentagon. The five toothpicks fly apart, breaking the pentagon!

Someone from the audience says... "Oh, that's just what happens when you do that, it's not magic."

The magician arranges the five toothpicks back into a pentagon and hands the person in the audience the magic toothpick. The person dips it in the center. Nothing happens. Was it really magic?

Bill Blagg The Magic of Science

Learning Objectives:

After participating in this activity, students will be able to:

- Understand that clinging water molecules can create surface tension
- Describe how soap molecules affect surface tension
- Use a "magic trick" to demonstrate scientific principles in action

Materials:

- A tinfoil pan or a pie plate
- Water
- 6 flat wooden toothpicks
- The magic ingredient: liquid dishwashing soap

Procedure:

Before the Audience - Preparation:

1. Dip one of your toothpicks in liquid dishwashing soap. Set it aside for now.
2. Make sure your pan is clean. Rinse it well with water. Fill it quite full of water (but not so full you'll spill it).

In Front of the Audience - Preparation:

1. Arrange the five SOAPLESS toothpicks in the shape of a pentagon. Make sure the tips of the toothpicks overlap so your pentagon stays together. This can be a bit of a challenge the first time you do it, so practice arranging the toothpicks at home a few times first and consider arranging them while the audience is sitting.

Learning Activity – Magic Toothpick Trick (*continued*)

2. When the audience is settled, have them look at the pentagon. Tell the audience you've arranged the toothpicks into a special five sided shape called a pentagon and you're going to cast a spell on the sixth toothpick to imbue it with some of your magical force so it can break apart the pentagon (big words always impress an audience *grin*).
3. Take the sixth toothpick (the one that was dipped in dish soap) and wave your hand over it while chanting some magical words. Close your eyes and frown so it looks like you're working on putting your magic into the toothpick.
4. Dip the magical toothpick into the center of the pentagon (Make sure you dip the soapy end in the water and try to get it as close to the center of the shape as possible). The five toothpicks will fly apart.
5. If you have a non-believer in the audience, offer to let them try the trick. Arrange the pentagon in the water again and hand them the magic toothpick. Let them dip it in the center. It won't work!
6. If the audience asks you to do the trick a second time, tell them it takes a while to recharge your magical force. You have to rest before you can put more of it into a toothpick, otherwise you could lose your magic forever!

Secret: Throughout history, a lot of "magic" has really been science disguised with a few silly words. This is one of those tricks All things (including water) are made up of tiny things called molecules. Water molecules stick together. The surface of the water has a layer of clingy molecules on it – this layer is called the water's surface tension. The toothpicks were nice and flat so they were floating on this layer.

Remember that we dipped the sixth toothpick in dish soap? That's the real trick to this trick. The soap molecules break the surface tension of the water. This effect spreads out in an ever widening ring. The molecules originally holding the toothpicks break apart. The molecules farther away from where you dipped the toothpick still have surface tension, so they pull the toothpick toward them. Eventually the "ripples" of soap hit those molecules, too.

Once the soap is in the water, the surface tension won't come back. That's why the audience member couldn't recreate the trick. It will only work once, or you have to clean everything up and use new toothpicks to do the trick a second time. That's also why you have to be careful that your pan is well rinsed before you do the trick.

Bill Blagg The Magic of Science

BE YOUR OWN CRITIC

Now it is your turn to tell us what you thought about the performance that you saw at Overture Center! Use this worksheet to brainstorm some ideas. Make sure to use specific examples from the performance. If you forgot anything, ask your friends and teachers who went to the show with you. Turn your ideas into a rough draft and then send a final copy to us!

I saw _____
(SHOW TITLE)

Overture Center is...

because...

What would you say this show is about?

Two things that I really loved about the performance were...

Two things that could have been better in the performance were...

I thought the artistic elements (scenery, sound/music, lighting, costumes) were...

because...

I would want to meet the character...

in real life because...

If I could ask the performer(s) a question, I would ask them...

Imagine that you're telling a friend about this show. What would you say?

Academic Standards

Theatre Education

TP.R.4.i: Analysis

Identify separate elements in a theatrical work such as characters, plot, and performance elements.

TP.R.6.i: View Performance

Demonstrate developmentally appropriate audience etiquette.

TP.Cn.5.i: Cultural Social Context

Explain how theatre relates to self, others, and the world

TP.Cn.7.i: Career Connections

Describe a profession in theatre.

TP.Cn.8.i: Cross Disciplinary

Identify how theatre connects to literature and social studies.

Science

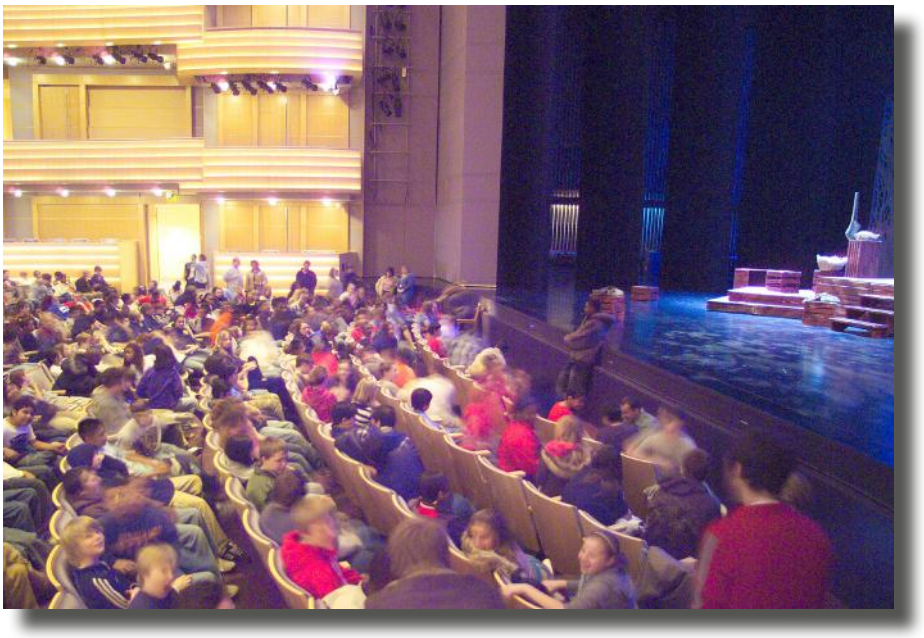
SCI.CC2.m
Students classify relationships as causal or correlational, and recognize correlation does not necessarily imply causation. They use cause and effect relationships to predict phenomena in natural or designed systems. They also understand that phenomena may have more than one cause, and some cause-and-effect relationships in systems can only be explained using probability.

SCI.ETS3.B.3-5
Basic laws of nature are the same everywhere in the universe (e.g. gravity, conservation of matter, energy transfer, etc.).
Engineering solutions often have drawbacks as well as benefits.

Bill Blagg The Magic of Science

About Live Performance

Unlike movies or television, theater is a LIVE performance. This means that the action unfolds in front of an audience, and the performance is constantly evolving. The artists respond to the audience's laughter, clapping, gasps and other reactions. Therefore, the audience is a critical part of the theater experience. In fact, without you in the audience, the artists would still be in rehearsal!



Remember, you are sharing this performance space with the artists and other audience members. Your considerate behavior allows everyone to enjoy a positive theater experience.

Prepare: Be sure to use the restroom before the show!

Find Your Seat: When the performance is about to begin, the lights will dim. This is a signal for the artists and the audience to top conversations. Settle into your seat and get ready to enjoy the show!

Look and Listen: There is a lot to hear (dialogue, music, sound effects) and a lot to see (costumes, props, set design, lighting) in this performance. Pay close attention to the artists onstage. Unlike videos, you cannot rewind if you miss something.

Energy and Focus: Artists use concentration to focus their energy during a performance. The audience gives energy to the artist, who use that energy to give life to the performance. Help the artists focus that energy. They can feel that you are with them!

Conversations: Talking to neighbors (even whispering) can easily distract the artists onstage. They approach their audiences with respect, and expect the same from you in return. Help the artists concentrate with your attention.

Laugh Out Loud: If something is funny, it's good to laugh. If you like something a lot, applaud. Artists are thrilled when the audience is engaged and responsive. They want you to laugh, cheer, clap and enjoy your time at the theater.

Discover New Worlds: Attending a live performance is a time to sit back and look inward, and question what is being presented to you. Be curious about new worlds, experience new ideas, and discover people and lives previously unknown to you. An open mind, curiosity, and respect will allow a whole other world to unfold before your eyes!

Please, don't feed the audience: Food is not allowed in the theater. Soda and snacks are noisy and distracting to both the artists and audience.

Unplug: Please turn off all mobile phones and other electronics before the performance. Photographs and recording devices are prohibited.

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Overture Center's mission is to support and elevate our community's creative culture, economy and quality of life through the arts.

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