Broward Center for the Performing Arts Education Programs

SEAS Student Enrichment Through the Arts

Broward County Public Schools Est. 1915

DOKTOR KABOOM
AND THE WHEEL OF SCIENCE

CURRICULUM CONNECTIONS

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DOKTOR KABOOM
AND THE WHEEL OF SCIENCE
How to use Curriculum Connections:

Dear Teacher,

We appreciate you!

This guide can help in your classroom, whether before or after coming to see a play or musical it can be used to highlight important concepts. The curriculum connections introduced by the Broward Center for the Performing Arts are always aligned to the Florida Standards with the idea that they introduce another tool to effectively implement engaging methods to bring the page to the stage.

Curriculum Connections improve comprehension, help students organize information, and assist students' metacognition by enabling students to check for understanding. It is designed to be used before or after coming to the theater unless otherwise stated and may contain activities for certain grade levels (this will be clearly labeled).

Curriculum Connections will always contain a reminder of theater etiquette as well as a social emotional learning activity, and a Student-Family Cooperative Activity. The activities may be re-printed for individual use, used on smart boards as class activities, or in groups. It is suggested to discuss the play or musical as a class before your field trip.

Remember to follow us on Facebook and Instagram @Broward Center Education and use the QR code (below) for our Teacher's Lounge to receive insight about discounted tickets and information for you and your students!

BROWARD CENTER
FOR THE PERFORMING ARTS
EDUCATION PROGRAMS

Theater etiquette

It is often helpful to remind students of appropriate audience etiquette by explaining and discussing WHY these rules of behavior are important:

- Restroom visits are best made prior to the performance.
- Listen carefully to the ushers and your teachers. This gets everyone to your seats quickly and ensures a pleasant experience.
- Turn watches and cell phones to silent.
- Walk single file, hold hand rails as you use the steps for your safety.
- Listen carefully to each performer. They are working hard to entertain and inform with lots of clues about the story.
- Refrain from TALKING. This allows everyone to enjoy the show without distraction. Sometimes we think that if we whisper it is okay. But, if everyone in the audience whispers, it becomes disruptive.
- Laugh if something is funny, but not too loudly, you don't want to miss any dialogue.
- Photography and recording are not permitted.
- Pay attention to the lighting, scenery, costumes and music-all of these elements help provide more details to tell the story in an interesting way.
- Applaud (clap) at the end. This shows the performers that you respect and appreciate their work.

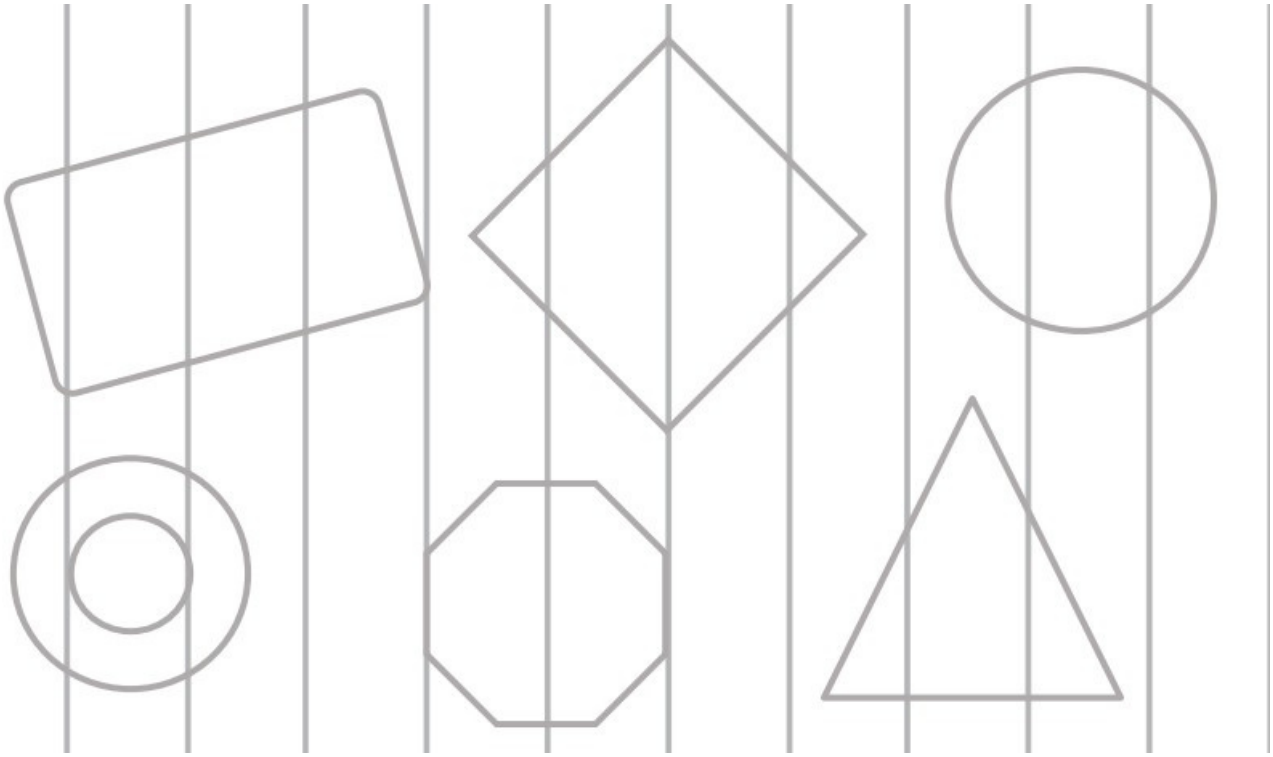
DOKTOR KABOOM ANDTHE WHEEL OF SCIENCE SYNOPSIS:

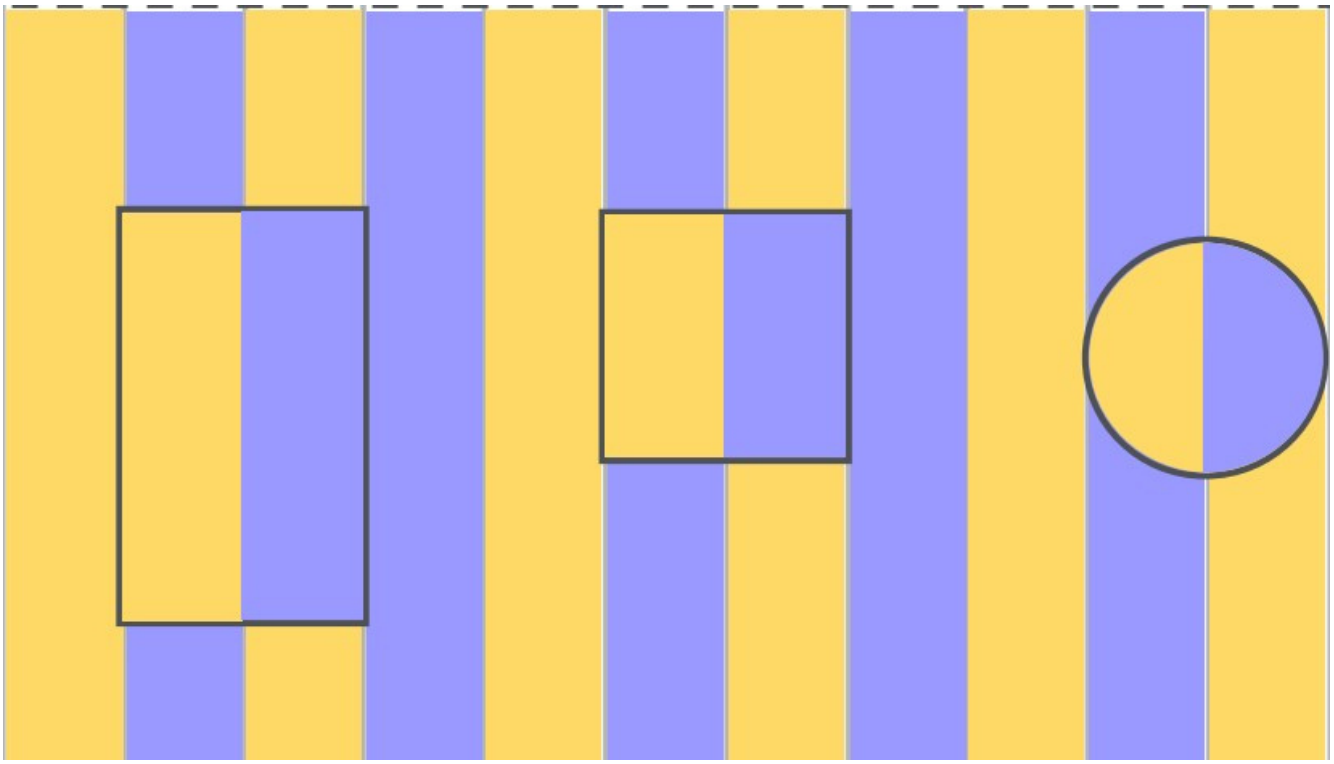
So much science, so little time. . . Doktor Kaboom is having trouble picking his favorite science demonstrations, so he's bringing them all! Unfortunately, there are way too many to do them all in one show.

The solution: **The Wheel of Science!** Doktor Kaboom has built a great big spinning wheel and labeled it with everything from optical illusions to chemical reactions to a homemade hovercraft, and more! At least a dozen fantastic demonstrations ready to go. Wherever the wheel stops, that's what's next! Will we turn a water bottle into a rocket or catapult bananas across the stage? Electrocute a pickle or create artificial gravity? Who knows? No two shows will be the same. So, step right up, and let's spin that wheel!

DOKTOR KABOOM
AND THE WHEEL OF SCIENCE:OPTICAL ILLUSIONS

Choose two colors and shade in each of the strands below alternately (for example: blue, red, blue, red). Now, each time a shape crosses into that strand, it must be colored the opposite color!
(Check the example to see how it could end up looking)



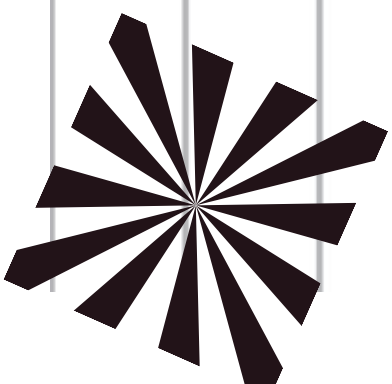


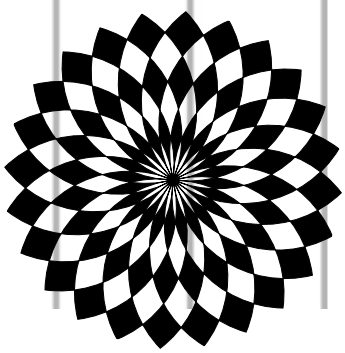
ELA.K12.EE.1.1;ELA.K12.EE.2.1;ELA.K12.EE.3.1;ELA.K12.EE.4.1;ELA.K12.EE.5.1; ELA.K12.EE.6.1; SC.6.E.7.9; SC.6.P.13.1; SC.5.P.10.1

DOKTOR KABOOM

AND THE WHEEL OF SCIENCE:OPTICAL ILLUSIONS (CONTINUED)

Now it's your turn to get creative!





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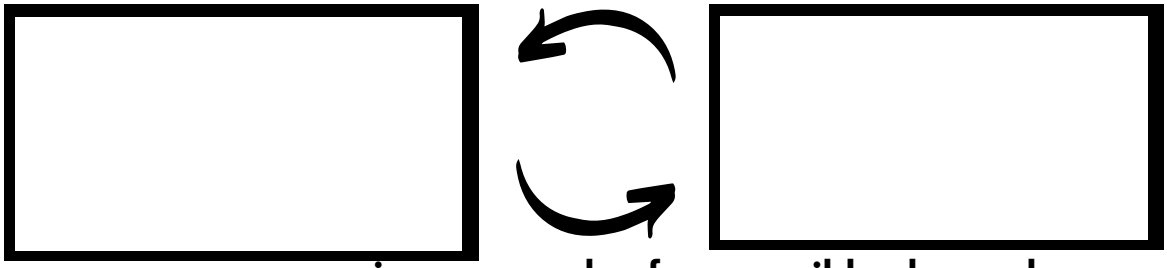
DOKTOR KABOOM
AND THE WHEEL OF SCIENCE:CHEMISTRY

Reversible & Irreversible Changes

Draw and label an example of a reversible change:



_____ **is an example of a reversible change because:**

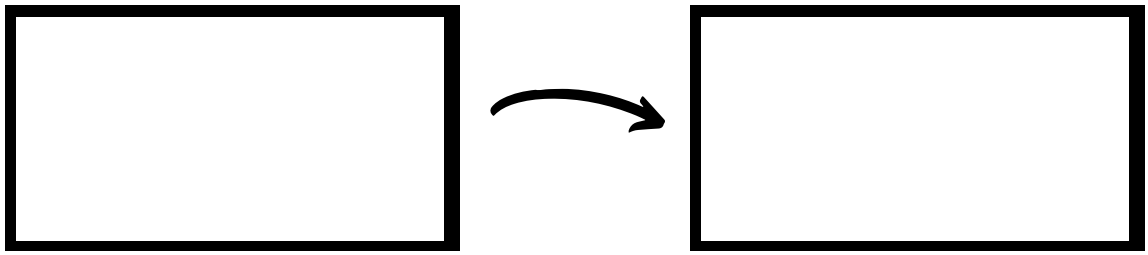
_____

_____

_____

_____

Draw and label an example of an irreversible change:



_____ **is an example of an irreversible change because**

_____

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ELA.K12.EE.1.1;ELA.K12.EE.2.1;ELA.K12.EE.3.1;ELA.K12.EE.4.1;ELA.K12.EE.5.1; ELA.K12.EE.6.1; SC.6.E.7.9; SC.6.P.13.1; SC.5.P.10.1

DOKTOR KABOOM
AND THE WHEEL OF SCIENCE:FORCE

FORCES INVESTIGATION

Conduct the following experiment as a whole class to investigate Newton's Third Law of Motion theory.

What You Need:

Toy car
Wall
Chalk

CLASS PROJECT!

Method:

1. Mark out a line three feet from the wall.
2. Line the toy car up on the line.
3. Apply a gentle force when rolling the car towards to wall.
4. Measure the distance the car rolls back from the wall using informational measurements.
5. Conduct the investigation a second time using a stronger force to push the car.
6. Measure the distance it rolls back after it collides with the wall.
7. Compare the two forces and discuss.

ELA.K12.EE.1.1;ELA.K12.EE.2.1;ELA.K12.EE.3.1;ELA.K12.EE.4.1;ELA.K12.EE.5.1; ELA.K12.EE.6.1; SC.6.E.7.9; SC.6.P.13.1; SC.5.P.10.1

DOKTOR KABOOM
AND THE WHEEL OF SCIENCE: ATMOSPHERE

WORD SEARCH

Can you find the words hidden in the puzzle?

T	R	O	P	O	S	P	H	E	R	E	A	N	S
G	R	E	X	O	S	P	H	E	R	E	A	S	S
A	A	S	L	Y	M	L	A	Y	E	R	S	U	T
S	Z	O	A	A	G	T	O	S	A	U	R	U	R
E	I	V	Z	L	B	E	I	T	I	S	H	V	A
S	L	T	E	O	T	L	N	L	A	A	C	A	T
C	A	R	B	O	N	D	I	O	X	I	D	E	O
T	W	A	W	N	N	E	H	O	G	U	O	E	S
V	E	M	E	S	O	S	P	H	E	R	E	U	P
A	A	R	O	F	R	O	N	C	H	I	V	T	H
P	T	H	E	R	M	O	S	P	H	E	R	E	E
O	H	C	Y	N	M	E	Y	O	C	O	N	L	R
R	E	A	E	U	N	C	O	U	N	N	R	U	E
N	R	N	R	N	I	T	R	O	G	E	N	U	N

EXOSPHERE	NITROGEN	CARBON DIOXIDE	OZONE
MESOSPEHERE	OXYGEN	STRATOSPHERE	LAYERS
TROPOSPHERE	WEATHER	THERMOSPHERE	GASES

ELA.K12.EE.1.1;ELA.K12.EE.2.1;ELA.K12.EE.3.1;ELA.K12.EE.4.1;ELA.K12.EE.5.1; ELA.K12.EE.6.1; SC.6.E.7.9; SC.6.P.13.1; SC.5.P.10.1

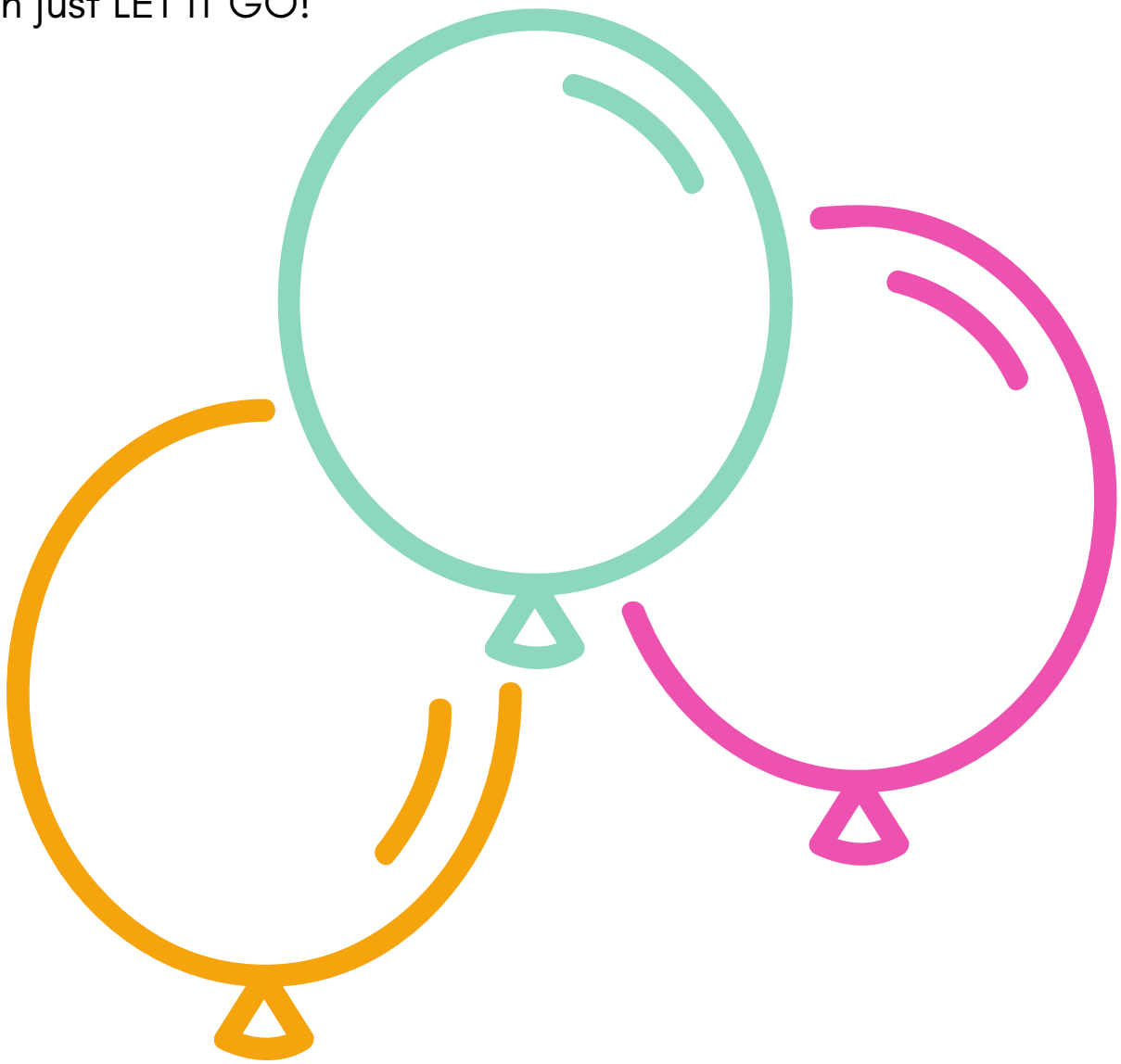
DOKTOR KABOOM
AND THE WHEEL OF SCIENCE: SEL

Let it go!

Balloons are filled with the chemical HELIUM, and will float to the sky if released.

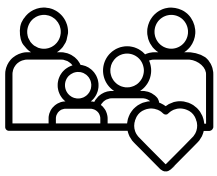
There may have been a time in your past where something happened that upset you.

Fill the balloons with ideas or thoughts that may have upset you and then just LET IT GO!



Student to Family Cooperative Activity Ideas:

- Create a home theater space: Dedicate a specific area in your home as a temporary theater space. It can be anywhere with a little bit of space to "put on a show". Create a cozy ambiance with lighting and comfortable seating.
- Create tickets and programs: Design and print them at home or even hand made. Deliver the tickets to family members, and the programs can include information about the performance, cast, and crew. This adds a touch of authenticity and excitement.
- Snack bar and concessions: Set up a snack bar or concessions stand with a variety of treats and refreshments. You can even create special themed snacks related to the performance you are watching.
- Interactive viewing experience: Encourage audience participation during the performance. For example, during a musical, you can sing along to the songs and clap during applause-worthy moments!
- Post-show discussions: After the performance, have a family discussion about the show. Share your thoughts, favorite moments, and discuss the themes or lessons portrayed. This can foster critical thinking and encourage creativity in your kids.
- **Remember, the goal is to create a memorable and immersive experience. Adapt these ideas based on your family's preferences and the resources available to you. The key is to have fun and enjoy the theater experience in your digs!**



Additional Activity Ideas:

- Memory jars: Create a memory jar with your children. Write down favorite childhood memories on small pieces of paper and put them in a jar. Each week or month, take turns pulling out a memory and sharing it. This can spark conversations and lead to further discussions about your childhood experiences, and theirs too!
- Bedtime stories: Instead of reading traditional bedtime stories, take turns sharing personal stories from your childhood. These could be tales of adventure, funny incidents, or heartwarming experiences. This can create a strong bond between you and your children as you share personal narratives.
- Encourage your kids to create their own journals or scrapbooks to document their childhood memories. Take the opportunity to share your childhood stories as you help them with their own projects. You can even contribute by adding some of your own stories or mementos to their journals.
- What was your favorite song, band or genre growing up? Play a few songs for your child/children and let them play a few of their favorites for you!
- Create traditions with your child/children!: Establish special rituals or traditions that you can share. It could be a weekly movie night, cooking together on weekends, going for a walk after dinner, or singing at the top of your lungs before bedtime.

Standards Alignment: Doktor Kaboom

Standards Alignment: The activities in this guide are aligned with the standards listed below. When teachers incorporate the arts, they increase student engagement, offer multiple points for students to access the curriculum, and provide alternate means for students to demonstrate what they know.

Florida's Benchmarks for Excellent Student Thinking (**B.E.S.T.**)	
Kindergarten through Grade 12/ English Language Arts	
ELA.K12.EE.1.1	Cite evidence to explain and justify reasoning.
ELA.K12.EE.2.1	Read and comprehend grade-level complex texts proficiently.
ELA.K12.EE.3.1	Make inferences to support comprehension.
ELA.K12.EE.4.1	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
ELA.K12.EE.5.1	Use the accepted rules governing a specific format to create quality work.
ELA.K12.EE.6.1	Use appropriate voice and tone when speaking or writing.
5-8 Grade Science	
SC.5.P.10.1	Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.
SC.6.P.13.1	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.
SC.6.E.7.9	Describe how the composition and structure of the atmosphere protects life and insulates the planet.

New:

Each time you submit student work, your name is entered in a drawing for tickets to a show at the Broward Center:

Fall Show: **HADESTOWN**

Spring Show: **MRS. DOUBTFIRE**

Dear Teachers,

Thank you for your continued support of the SEAS Program. We value the preparation you make before the show to attend the Broward Center for the Performing Arts, and the introduction you forge for the students when the show has concluded to continue making connections long after the buses have returned to school!

If you'd like to share any of the work from the study guides, please use this link:

Click Here to Upload Student Work Samples:

https://tinyurl.com/SEAS2324-samples

Should you have any questions, please contact Lauri Foster at: mailto:lauri.foster@browardschools.com

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SEAS Student Enrichment Through the Arts

Community Foundation of Broward