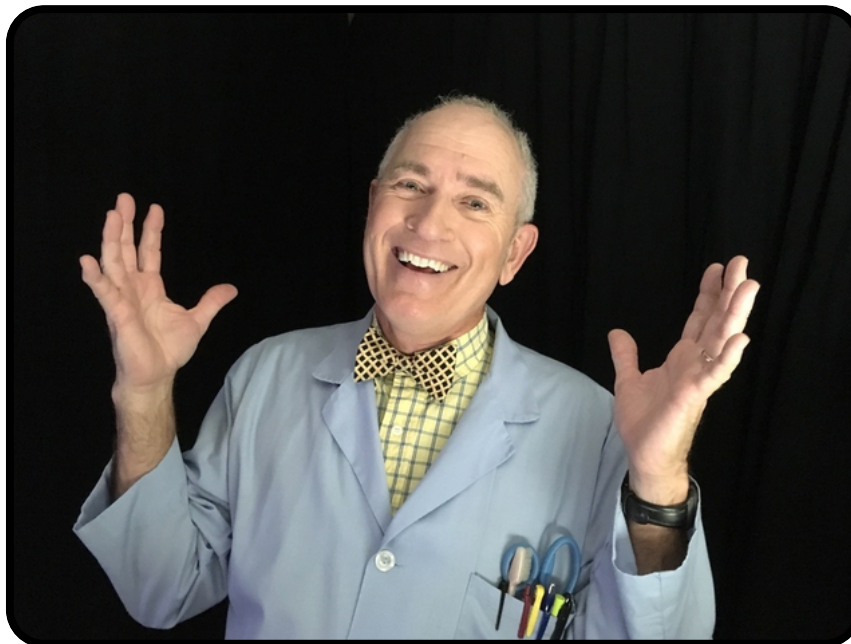


## CURRICULUM CONNECTIONS

# Let's Go Science Professor Smart



Major support for the Student Enrichment Through the Arts program has been provided by



**Frederick A. DeLuca**  
FOUNDATION

# What's included in Curriculum Connections:

Letter to Teachers...page 2

Theater Etiquette...page 3

Student Theater Review...page 4

Synopsis...page 5

Pre and Post Show Worksheets/Links and Activities...pages 6-14

Post Show Cooperative Learning Opportunities

(Group Work Ideas for Teachers)...page 15

Student to Family Cooperative Activity Ideas...page 16

Florida Standards Alignment...page 17

## Know Before you Go:

- Arrive at the theater 15 to 20 minutes before show time. Allow extra time for Broward County traffic. We are unable to start a show late.
- Please stay on the bus until greeted by a SEAS usher. At that time, please give the usher your BUS document and the usher will escort you to the theater.
- Remember to watch our Know Before You Go Video:

<https://tinyurl.com/ElementarySeasWelcome>



Dear **TEACHER**,



We are excited to present this Curriculum Connection (Study Guide) as a valuable resource to support your teaching journey. This guide has been carefully designed to offer engaging and meaningful activities for use in your classroom before and after seeing a S.E.A.S. performance at The Broward Center's Amaturo Theater, The Parker, or Miniaci at NSU. Each section is structured to make it easier for you to integrate cross-curricular connections, providing a seamless experience for students to deepen their understanding while exploring the creative process.

The activities and lessons in this guide have been intentionally crafted to complement Florida's B.E.S.T. standards. By utilizing these resources, you will be able to foster a dynamic and creative learning environment while ensuring students meet key academic goals. We encourage you to adapt the materials to best fit your classroom's needs and objectives, empowering students to think critically and creatively across all disciplines.

We want to take a moment to express our sincere appreciation for the passion and dedication you bring to your classrooms every day. Your commitment to infusing art-full moments into education not only enriches your students' learning experiences but also ignites their curiosity and creativity. Thank you for inspiring the next generation of thinkers, creators, and innovators. We are truly grateful for the impact you have on your students' lives. Consider joining the Teacher's Lounge (QR code below) to be notified of special events and discounts just for Teachers.



Don't forget to distribute your S.E.A.S. stickers when you return to school (after the trip) and share the magic that is Student Enrichment Through the Arts!





# Theater Etiquette

*There is so much that goes into creating a show for the stage. Behind the scenes, there are people who control the lights and the sound, the sets and the props. There are directors, writers, producers, musicians, and choreographers. So many people work together to create the performance you and everyone in the audience watches.*

It is 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) and laugh at the right moments. This shows the performers that you respect and appreciate their work.



# My Theater Review

I saw: \_\_\_\_\_

Reviewed by: \_\_\_\_\_

This play/musical was about...

Here's a drawing of  
my favorite character:

It made me feel:

I learned:

I gave this play/musical .... stars.



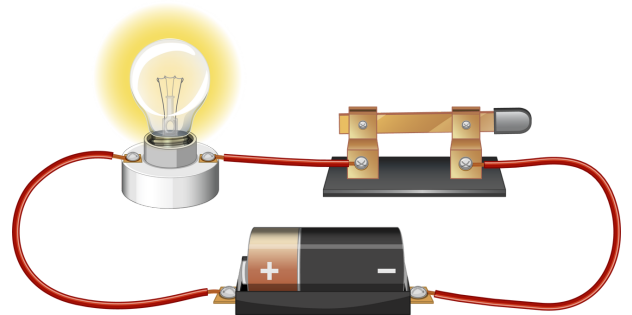
**We'd love to hear from you! If you'd like to submit this review,  
please send to [jenriquez@browardcenter.org](mailto:jenriquez@browardcenter.org)**

# Synopsis

## LET'S GO SCIENCE

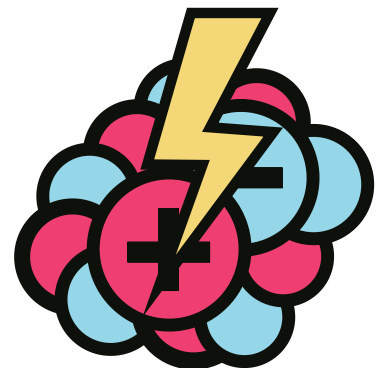
Get ready to laugh and learn. Trained as jugglers and comedians, Todd Victor, also known as Professor Smart, and Lizette Guy, otherwise known as Dr. Knowitall, bring science to life with storytelling and cool demonstrations.

Watch out because things will be flying!



### The Let's Go Science Show Goals:

- Have fun learning about science.
- Increase your students' science vocabulary.
- Learn several physics concepts.
- Have students grasp the scientific method.
- Encourage kids to study science.



# LET'S GO SCIENCE: VOCAB!

**Atom:** The basic unit of a chemical element. Example: A person weighing 150 pounds is made up of approximately 7,000,000,000,000,000,000,000,000 atoms.

**Atmosphere:** The mixture of gases that surrounds the earth and other planets. Example: The earth's atmosphere is made up of 78% nitrogen, 21% oxygen, and 1% argon, carbon dioxide, and other trace gases.

**Attract:** To pull or draw someone or something towards oneself. Example: A magnet is attracted to objects with iron in them

**Balance:** The point where two things are equal in weight or force. Example: Two teams pulling on a rope with equal force.

**Center of Gravity:** The center of mass of an object or thing. Also known as the point where gravity can be said to act. Example: In the human body, the center of gravity is an imaginary point that would exist if you crushed your body into a single, centrally located point. This point lies behind and just below the navel.

**Circuit:** A path that ends at its beginning. Example: A path where electrical current can flow in a circle. **Column:** An upright shaft or pillar, or a vertical, roughly cylindrical shaped thing.

**Compression:** To press something into a smaller space. Example: Your lungs can compress air into a balloon.

**Data:** A collection of facts and statistics collected together for reference or analysis.

**Demonstrate:** To show something and explain how it works.

**Drag:** To pull something across a surface with force. Example: The wings of an airplane have flaps that lift up to create a drag in the air that slows down the plane before it lands.

**Effort:** The physical or mental energy needed to accomplish a task.

**Electricity:** Electricity is the flow of electrical power. Example: Lights are powered by electricity. The computers, printers, and video games in your houses use a lot of the electricity in your home (13%).

**Electrical Energy:** The movement of charged particles, negative (-) and positive (+).

**Electrons:** Electrons orbit the positively charged nuclei of atoms and are responsible for binding atoms together in molecules and for the electrical, thermal, optical, and magnetic properties of solids. Electric currents in metal and in semiconductors consist of a flow of electrons and light, radio waves, x-rays and much heat radiation are all produced by accelerating and decelerating electrons.

**Experiment:** A test done in order to learn or discover whether something works or is true.

**Flight Theory:** The theory that describes how forces act on an airplane in flight including; physical descriptions, laminar airfoils, fluid dynamics, flow equations, and the axis of an airplane.

# LET'S GO SCIENCE: VOCAB CONTINUED

**Force:** A push or pull capable of moving or changing an object. Example: Racing dragsters leave the starting line of a race with a force nearly five times that of gravity.

**Friction:** The tension created when one object or thing slides against another object or thing. Example: By rubbing two sticks together quickly, you can create enough friction to cause heat. The heat generated by the friction can light a fire.

**Fulcrum:** The point at which a bar or object is balanced or supported. Example: The pivot point on a seesaw. **Gas:** The state in which a substance does not have a definite shape or volume. Example: Air, helium, and natural gas. Did you know that helium is lighter than air? That is why a balloon filled with helium floats but a balloon that you blow up with air from your lungs falls to the ground.

**Gram:** A unit of measurement equal to 1 thousandth of a kilogram. Example: There are 453.59 grams per pound. That means that a person weighing 150 pounds would weigh 68,038.5 grams.

**Gravity:** A force that attracts objects toward one another. Example: Gravity at the equator is slightly less than at the North Pole because the Earth bulges at the equator making it farther from the center of the Earth.

**Gyroscope:** A thing that has a disc or a wheel, which spins freely within it. **Gyroscopic:** Having the characteristics or qualities of a gyroscope. Example: The first gyroscope was invented in 1743 and was used at sea to measure where the horizon was in foggy and low-visibility conditions.

**Hypothesis:** An idea or explanation for something that is based on facts but has not yet been proven. Example: A guess as to why or how something happens.

**Inertia:** The property that keeps an object motionless unless a force is applied to it, or, keeps an object moving in a straight line unless a force is applied to it.

**Kilo:** Kilo means 1000 when put in front of another word. Example: 1 kilogram equals 1000 grams.

**Kinetic Energy:** Energy that pushes or pulls. Example: Sound, motion, heat, and electricity are all examples of kinetic energy.

**Laws of Motion:** Otherwise known as Newton's Laws of Motion. Three physical laws which provide relationships between the forces acting on a body and the motion of the body. I. Every object in the state of uniform motion tends to remain in that state of motion unless an external force is applied. II. The relationship between an object's mass ( $m$ ), its acceleration ( $a$ ), and an applied force ( $F$ ) is  $F=ma$ . III. For every action there is an equal and opposite reaction.

**Lever:** A simple machine consisting of a rigid bar pivoted on a fixed point (fulcrum) used to move an object or thing.

**Lift:** To raise to a higher position or level. Example: The Liebherr LTM 11200-9.1 crane can lift objects up to 328 feet in the air. That is taller than a 30 story building.

# LET'S GO SCIENCE: VOCAB CONTINUED

**Machine:** Any device that transmits or modifies energy. Example: Some of the simplest machines are inclined planes, wheels and axles, levers, pulleys, wedges, and screws.

**Mass:** The quantity of matter that any body contains. Example: On Earth we weigh our mass against the forces of the Earth's gravity. **Massive:** Very large in amount, size, or number.

**Matter:** Any substance that has mass, including gases, liquids, and solids which describe the three states of matter.

**Microscope:** A machine that is used to make small objects look bigger. Example: This is how a human hair looks under a microscope. **Molecules:** The smallest unit of a substance made up of atoms. Example: There are over 300 million molecules of hemoglobin in a single red blood cell.

**Momentum:** The force that keeps an object moving. Example: A car traveling at 70 mph needs a stopping distance of 324 feet to completely stop its forward momentum.

**Ounce:** A unit used to measure weight, smaller than a pound.

**Particle:** A very tiny piece of matter.

**Physics:** The study of matter and energy and how they interact.

**Potential Energy:** Energy that has built up or stored up but has not yet been used.

**Pressure:** The force used when something pushes against something else. Example: Steam engines use the pressure from vaporizing water to produce energy that is used to move an object.

**Properties:** A quality or description of an item or thing. Example: Gold is shiny and has a golden, butter yellow, metallic color.

**Prove:** Demonstrate the truth or the existence of something by evidence or argument.

**Repel:** To push someone or something away from oneself.

**Research:** A systematic study or investigation of sources and materials in order to establish facts and reach new conclusions.

**Resistance:** A force that makes something slower or that stops its motion.

**Scientific Method:** The method by which scientific experiments are conducted. Usually consisting of a theory, hypothesis, designed experiments, and a conclusion of the results.

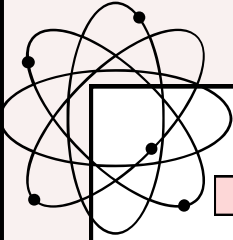
**Scientist:** A person who studies science.

# LET'S GO SCIENCE

## Science Vocabulary In Action

Use the vocabulary words from the previous pages to research what's new and interesting to you.

Choose FOUR new words from your list of vocabulary words.



\_\_\_\_\_

- ☐ What is the meaning of the word?
- ☐ Provide an example of the scientific use of the word.
- ☐ How would I explain it to someone else?

\_\_\_\_\_

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\_\_\_\_\_

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\_\_\_\_\_

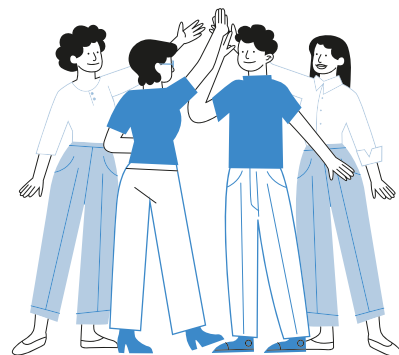
- ☐ What is the meaning of the word?
- ☐ Provide an example of the scientific use of the word.
- ☐ How would I explain it to someone else?

# LET'S GO SCIENCE: GROUP/CLASS WORK

## Group Work:

Each group take a topic from the list below and research using the internet or classroom texts for **10** minutes. Share your findings with the class.

Don't forget to use visuals!



1. How did dry ice get its name?
2. What do the molecules do in matter when you add energy?
3. How could you turn a rock into a liquid?
4. Why do smaller things burn easier than big things?
5. What 3 things do you need to have a fire?
6. What is the scientific reason that a helium balloon floats?
7. What state(s) of matter are you?
8. How are molecules acting when in each of the different states – solid, liquid, gas?

# LET'S GO SCIENCE: AERO DESIGN

Description: Make and fly a paper airplane and investigate what factors affect the aerodynamics of flight.

## Materials:

paper  
paper clips  
tape

## Procedure:

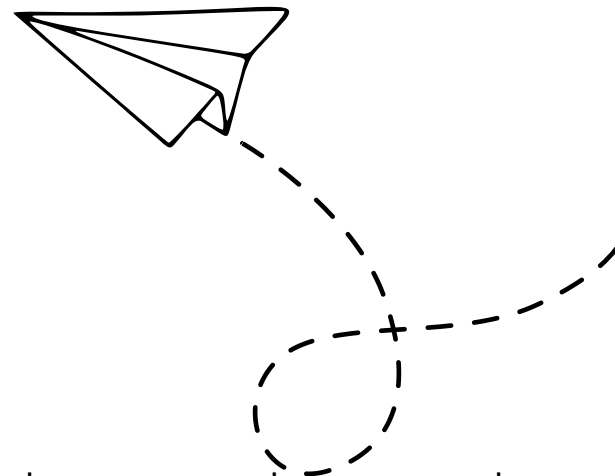
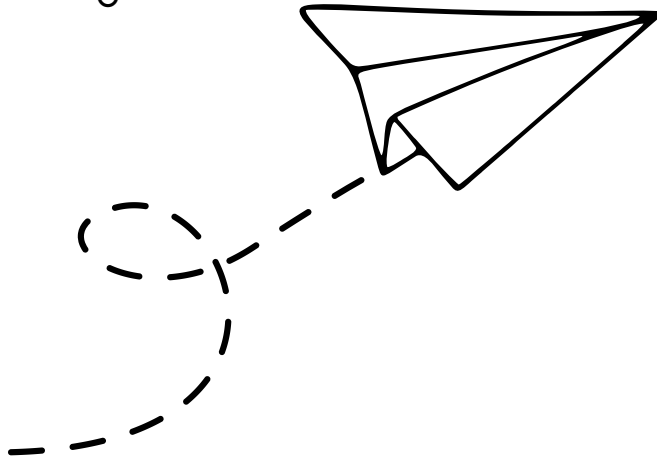
1. Each student designs his/her own paper airplane using **only** the provided supplies.
2. Students should analyze airplanes (preflight) to observe design variations.
3. Test planes for each of these criteria:
  1. height of flight
  2. length of flight
  3. stunt maneuvers

Discussion: Discuss how forces affect airplanes.

Here are some websites that show you how to make super cool paper airplanes:

<http://www.bestpaperairplanes.com/>

<http://www.amazingpaperairplanes.com/>



# LET'S GO SCIENCE: LAB SAFETY

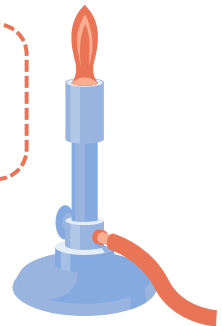


Question 1: Why do we need safety rules in the science lab?

Answer:

Question 2: How does the science lab differ from a normal classroom?

Answer:



Question 3: What are some of the risks and dangers in a science lab?

List your answers in the table below:

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |

Question 4: Match each picture to the name and description of how this piece of safety equipment will reduce the risk of an accident in a science lab

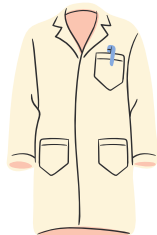
**Gloves**

We use these to hold hot objects when conducting an experiment with a bunsen burner



**Safety Glasses**

We wear these when conducting an experiment with chemicals to protect our hands from chemical burns



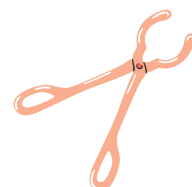
**Tongs**

We wear this to protect our bodies from dangerous chemicals when conducting experiments



**Lab Coat**

We wear these to protect our eyes from chemicals or objects when conducting experiments.



# LET'S GO SCIENCE: SCIENTIFIC METHOD



COMPLETE EACH BOX BASED ON A SIMPLE EXPERIMENT YOU'VE DONE IN CLASS.

IDEAS INCLUDE:

BALLOON INFLATION /FLOATING EGG /MAGIC MILK /WALKING WATER/ DANCING RAISINS

Question

Materials

Hypothesis

Procedure

Results

Conclusion

# LET'S GO SCIENCE

## CRACK THE CODE: SEL

*positive affirmations*

**Use the key below to help you crack the code!**

| a  | b  | c  | d  | e  | f  | g  | h  | i  | j  | k  | l  | m  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| n  | o  | p  | q  | r  | s  | t  | u  | v  | w  | x  | y  | z  |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |

|   |   |    |    |    |    |    |   |    |
|---|---|----|----|----|----|----|---|----|
| 9 | 1 | 13 | 23 | 15 | 18 | 20 | 8 | 25 |
|   |   |    |    |    |    |    |   |    |

|   |   |    |    |   |    |    |   |   |
|---|---|----|----|---|----|----|---|---|
| 9 | 1 | 13 | 22 | 1 | 12 | 21 | 5 | 4 |
|   |   |    |    |   |    |    |   |   |

|   |   |    |    |    |    |   |   |
|---|---|----|----|----|----|---|---|
| 9 | 1 | 13 | 12 | 15 | 22 | 5 | 4 |
|   |   |    |    |    |    |   |   |

|   |   |    |   |    |   |    |   |
|---|---|----|---|----|---|----|---|
| 9 | 1 | 13 | 2 | 18 | 1 | 22 | 5 |
|   |   |    |   |    |   |    |   |

|   |   |    |   |    |    |    |   |   |
|---|---|----|---|----|----|----|---|---|
| 9 | 1 | 13 | 5 | 14 | 15 | 21 | 7 | 8 |
|   |   |    |   |    |    |    |   |   |

# Post Show Cooperative Learning Opportunities

(Group Work Ideas for Teachers)



## 1. Group Reflection Circle

Sit together and share your favorite moments, characters, or songs from the performance. Encourage everyone to explain why they liked those parts.

*This builds listening skills and helps everyone appreciate different perspectives.*

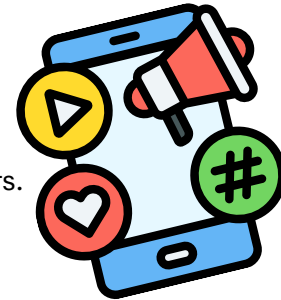


## 2. Create a Mini Review Together

Work as a team to write a short review of the show.

Assign roles: one person writes, another edits, others brainstorm key points.

You can post it on social media or keep it in a class journal.



## 3. Reenact a Scene

Pick a favorite scene and act it out as a group.

Add your own twist—maybe change the setting or improvise new dialogue.

*This sparks creativity and teamwork.*



## 4. Design a Poster or Program

Collaborate to create a poster or program for the performance you saw.

Include drawings, quotes, and fun facts.

*This is great for artistic expression and memory keeping.*



## 5. Plan a "Behind the Scenes" Discussion

Research how the performance was made (costumes, music, choreography).

Assign each group member a topic to present.

*This turns curiosity into a cooperative learning activity.*



# K-5 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.

## Let's Go Science Standards Alignment

**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.)/NGSSS |                                                                                                                               |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Kindergarten through Grade 12/ English Language Arts                 |                                                                                                                               |
| ELA.K.12.EE.1.1                                                      | Cite evidence to explain and justify reasoning.                                                                               |
| ELA.K.12.EE.2.1                                                      | Read and comprehend grade-level complex texts proficiently.                                                                   |
| ELA.K.12.EE.3.1                                                      | Make inferences to support comprehension.                                                                                     |
| ELA.K.12.EE.4.1                                                      | Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations. |
| ELA.K.12.EE.5.1                                                      | Use the accepted rules governing a specific format to create quality work.                                                    |
| ELA.K.12.EE.6.1                                                      | Use appropriate voice and tone when speaking or writing.                                                                      |
| Next Generation Sunshine State Standards/Science                     |                                                                                                                               |
| SC.3.P.10.2                                                          | Recognize that energy has the ability to cause motion or create change.                                                       |
| SC.4.P.10.2                                                          | Investigate and describe that energy has the ability to cause motion or create change.                                        |
| SC.5.P.13.1                                                          | Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.    |
| SC.5.P.13.2                                                          | Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.        |
| SC.6.P.13.3                                                          | Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.     |
| SC.7.P.11.2                                                          | Investigate and describe the transformation of energy from one form to another.                                               |

# CURRICULUM CONNECTIONS DONORS

We thank the Broward Performing Arts Foundation and the following funding partners for their support of educational programming at the Broward Center this season.

Linda and Ed Appleby & Family  
Bank of America Charitable Foundation  
Community Foundation of Broward  
The Frederick A. DeLuca Foundation  
Florida Power & Light Company  
Florida Panthers Foundation  
Florida Theatrical Association  
Charles F. and Esther M. Frye Foundation  
Funding Arts Broward  
Genesis Inspiration Foundation  
City of Hollywood  
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Harold Rosenberg Fund  
for Children's Education  
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Taft Foundation  
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Albert E. & Birdie W. Einstein Endowed Fund  
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Fund for Children's Education  
Dr. Stanley & Pearl Goodman Endowed Fund  
Gotta Dance Ted Stephens Endowed Fund  
Barbara & Arnold Grevior Education Endowed Fund  
Mary Jane Harlow Charitable Trust  
Education Endowed Fund

JM Family/Jim & Jan Moran Endowed Fund  
Kapila Family Foundation Endowed Fund  
Kapila Family Foundation Endowed Fund  
for Sensory-Inclusive Preschool Programs  
Rose Miniaci Education Endowed Fund  
Anita Perlman Endowed Fund  
Sandy and Kenny Tate  
Endowed Education Fund  
I. Lorraine Thomas Endowed Fund for Children  
Jerry Taylor and Nancy Bryant  
Endowed Fund for Education

