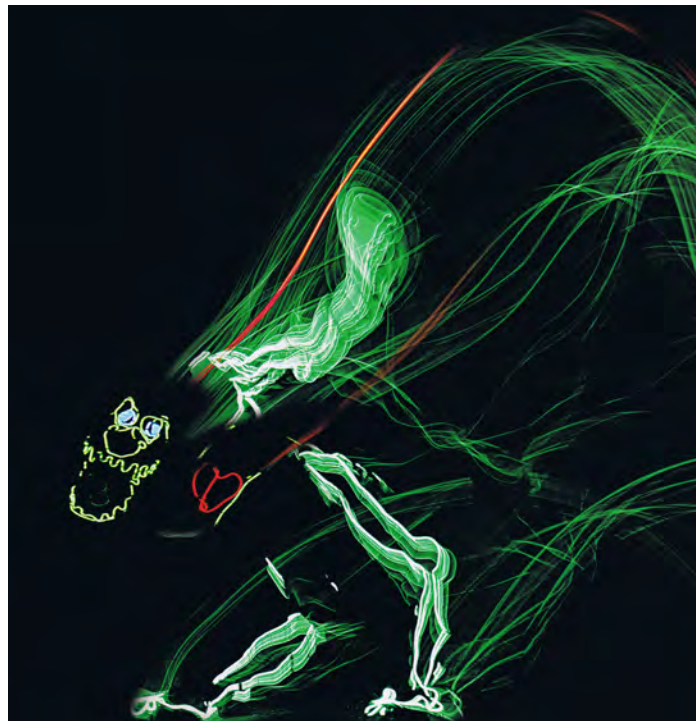




Lightwire Theater presents Dino Light!
Study Guide

For Teacher Classroom Use

School Performances: February 23, 2017 at 10:00am; Public Performance: February 23, 2017 7pm



This program is made possible through the support of Advocate Medical Group,
the Foglia Family Foundation, NICOR and ComEd

This program in conjunction with this study guide supports the following Common Core Standards:

RL.K-5.2, RL.K-5.3, RL.K-5.5, RL.K-5.6, RL.K-5.6, RL.K-5.7, RL.K-5.9

RI.K-5.2, RI.K-5.3

W.K-5.3, W.K-5.7

SL.K-5.2, SL.K-5.4

Also teaches some basic scientific concepts.

A 501(c)3 non-profit, charitable organization dedicated to enriching the lives of all through the arts.
Located in historic, downtown Crystal Lake, Illinois.
26. N. Williams Street | Box Office 815-356-9212
Buy tickets online at rauecenter.org

How Does It Work?

Through art, science, and technology, the characters of Lightwire Theatre come to life!

All of the puppets are lined with electroluminescent wire (EL wire) which glows in the dark.



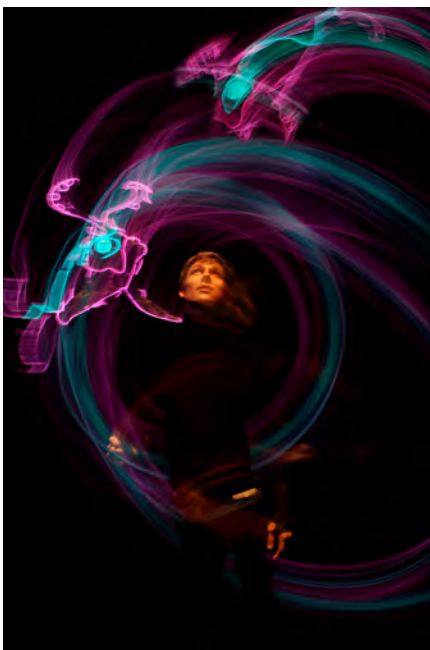
1. Copper in the middle of the EL wire conducts electricity, letting it travel from one place to another.

2. A material called phosphor surrounds the copper wire. The phosphor glows when electricity runs through the wire.



3. A colored plastic tube surrounds the phosphor and copper, completing the EL wire.

4. When the EL wire is attached to a power source, such as a battery, it glows! A battery pack that powers the EL wires is hidden on each creature in the show.



Building and Understanding the Characters

Each character in the Dino Light story is built from a framework of struts and joints covered with black cloth and then lined with electroluminescent wire (EL Wire). The wire is attached to a battery pack that the actors wear and operate and the wire glows when current is run through it. The building process requires knowledge of both art and technology. The designers had to solve problems such as how to make a hinge joint that does not stress the light wire, or a battery pack that is powerful but not too heavy for the actors to wear while moving. Some of the characters like the dinosaurs or birds consist of costumes that the actors wear; others like the fish and the flowers are puppets that are manipulated by the actors. There are also many props that the actors manipulate such as the staff, the book, the bone and the heart.

Discussion

The designers made many artistic choices when they made the characters that determine the kinds of roles they play in the story. Some examples are choices of color, size and shape. How do these aspects affect how you feel about the different characters? Would Brutus be so scary if he was tiny or would the fish be so fun if they were all white?

Activity

Draw a picture of three different creatures. Use different colors, sizes and shapes to show the nature of these creatures and how they relate to each other. Can you imagine what your creatures eat, what sounds they make, how they walk, if they are friendly, how they behave when they meet other creatures?

Discussion

Consider the kinds of choices the actors and director made in order to bring the characters to life. If you were an actor, what would you need to know to make your character believable? For example, you might want to know how old your character is, how he walks, what makes her angry. Can you think of 5-10 other things an actor would need to know about their character?

Activity

Creative improvisation for character development. Think of an animal you would like to portray. Consider how this animal moves, sounds, looks, feels etc. Now try to embody these characteristics and move through the space the way your animal would move. Next, pay attention to the other animals around you. How does your animal respond to meeting the other animals? If your animal is afraid, what does your body do? For an added challenge, gradually allow your animal to become more and more human still allowing those animal traits to inform your behavior. Do this activity without physically touching anyone else.

Discussion

Anybody have any ideas about a discussion involving the nature of light? Is light a particle or a wave? Or Both?

Activity

Turn off the lights and hold a flashlight while you move carefully around the space. Watch how the light moves. Add another dancer with a flashlight. Trying not to let the beams of light collide, continue to add more dancers with more lights. Experiment with patterns and sequences.



The Choreography

The story of Dino Light is told through movement, gestures and images much like a ballet. Many of the scenes are carefully choreographed to convey specific meaning; there are also scenes whose main purpose is to entertain the audience and make them laugh. The choreographers are working with three specific parameters that are defined by the nature of the puppets. **First**, the effect of the light against a black background creates a two dimensional effect. **Second**, the actors have to try to remain invisible, this means that one actor cannot pass in front of another otherwise they will be back-lit and their bodies will show. **Last**, the puppets or costumes themselves have physical limitations in how they can move, for example the legs on the dinosaurs and birds can only move in parallel lines, that is the feet must face forward at all times.

Discussion

Gestures are small movements that have meaning and are often used to emphasize things we are saying. Can you remember some of the gestures used in Darwin that convey emotions like joy, sadness, surprise and curiosity? Was it easy to understand what was happening even though no words were spoken?

Activities

1. Choose three different emotions and see how many physical gestures you can find to express each one using your hands, arms, heads, shoulders, fingers, legs or your entire body. Work in pairs or groups and then present your gestures to the class. Next, try to have a conversation using gestures, notice that it is easier for the audience to understand when gestures are performed only one at a time and do not overlap just as it is when you are talking to someone, each person takes a turn to speak.
2. Create an improvisational score in groups. The score is a set of parameters or movement problems that can be applied to the use of space or pathways, the timing of movements or the movement quality. An example of a parameter could be that a student can only move in a zigzag line, or a student has to use strong forceful movements coming forward but slow fluid movements going backwards. See the table on Effort Actions for more ideas.

Space Direction, level relationship to others	Direct Stab, punch, and move in a straight line from one position to the next.	Indirect Curve, carve the space, circle, spiral, and zigzag, and take a complicated pathway from one position to the next.
Weight	Strong Stomp, swing, feel very grounded and use tense muscles.	Light Flick, dab, and flutter, feels weightless.
Time	Sudden Quick movements that may start slow and end with impact or start quickly in an impulse and fade out, rebound.	Sustained Continuous movement that does not change speed.
Flow	Bound Press or wring, moving with great muscular resistance, imagine moving through thick mud.	Free Gliding, floating, tumbling, easy movement without restrictions.

Adapted from the work of Rudolf Laban

Integrating the Different Art Forms



Puppetry is an ancient art form that exists in many different cultures. Puppets are used in storytelling to convey simple, clear meaning about universal themes such as love, friendship or discovery. Some examples of different kinds of puppets are shadow puppets, hand puppets, a ventriloquist's dummy, marionettes or the creatures made from light wire in the Dino Light show. Building a puppet can be considered a visual art while a puppet performance is part of the theatre arts. In Dino Light, instead of using a dialogue, the actors use a musical score to enhance the atmosphere of the story and the show is

choreographed using movement and gesture like a dance piece. All the different art forms are equally important in telling the story of Dino Light.

Discussion

How does the music enhance the story telling? How did you feel when you heard Brutus, the red dinosaur's music, or Verla the ostrich's music?

Activities

Choose or write a poem or story, then choose a piece of music that fits the atmosphere of your story. Develop a gesture phrase that illustrates your story. Can you present your story using gestures and music? See if your classmates can follow the meaning of your story.

Write a review of the performance giving details about the plot and what you liked and didn't like. Who would you recommend to go and see the show?

- Write a poem about Darwin getting a heart .
- Tell the Story of how Professor Henslow discovered his magic powers.
- Concoct a magic potion for Darwin to drink, write down the recipe with specific instruction about how to make it. What powers does it give Darwin?
- Draw a huge backdrop (the setting for a story) and tell at least three different stories that fit the scenery. (For example a spaceship, underwater coral reef, school cafeteria.)
- Draw a poster to advertise Dino Light. It must have a picture and a slogan and some interesting quotes about the show.

Behind the Curtain:

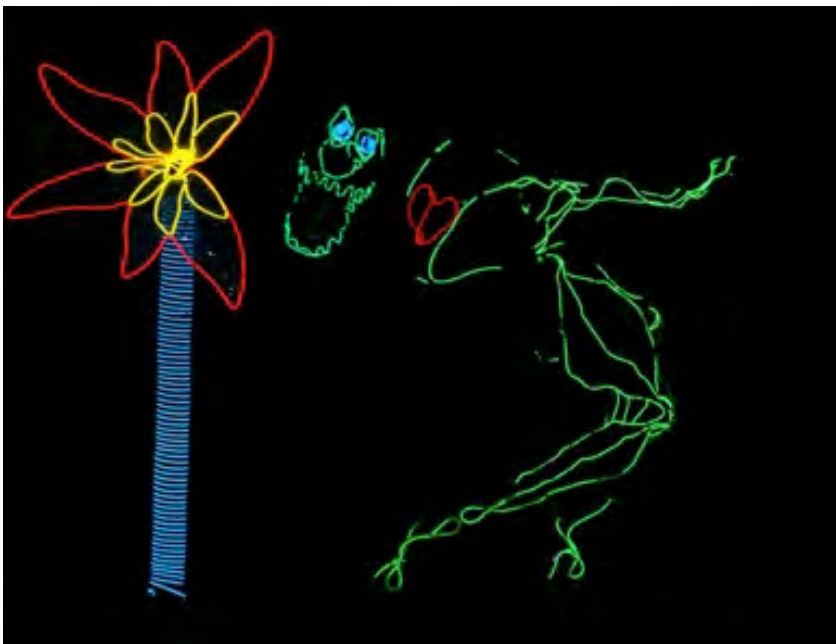
What you will find backstage at the Dino Light performance???? Hot glue gun, solder iron, zip ties, battery tester, spare battery packs, backups, battery recycle box, bike racks to hold the creatures.

Did You Know?

- The show runs on approximately 250 batteries. We run on AA and 9v batteries.
- Many of our batteries come from Broadway shows that only use their batteries for one performance.
- How many feet of EL wire can you expect to see in the show? Approx: 2000 ft
- How long has it taken to bring the show to life? 4 YEARS!
- What are some common household items/toys in our costumes? Skateboard trucks, supper balls, shin-guards, and paint poles. Can you find any more as you walk backstage?

Pre-Show Discussion

1. Read parts of the study guide to the students or have the students read on their own. Discuss any questions they may have about that aspect of the topic they will see. This will help clear up any confusion they may have before the show.
2. Have the students seen any shows that were based on books or stories before? What about movies? How do they expect this show to be different from what they have seen in the past? How do they expect the show to be different from the book?
3. Have the students draw or write predictions on what they think they will see based on what they read in the study guide, pictures, and history. After the show, look at the predictions and see who was correct.
4. For the older students, have them research the scientific terminology provided in this study guide to get a better idea of how the technology works.
5. Have the students research storytelling in other countries or history. How is it different or similar to American folktales and fables? This can be a research paper, project or just a homework assignment. Have them present what they found to the class.
6. Since the main theme of the play is love (and dinosaurs), have a class discussion on the topic. Have the students think of a moral or a lesson that they would want to teach someone and write their own fable using an animal like they do at Lightwire. Have them go a step further and illustrate the story, similar to the explanation of the puppetry with deciding what they want the animals to look like. Have them present to the class explaining why they told the story in the way they did. (What animals did they use, if any, and why did they choose them?)
7. Have the students read another story about dinosaurs or love in other countries or watch a movie featuring the topic. What are some common themes of these stories? What is the main theme of these stories? Are there other stories they can think of that have the same theme? Consider using other folk tales and fables to illustrate this point: Greek mythology, fables, American folk tales, etc. What are some other famous stories? Was the lesson the same in each story?
8. Go on the Lightwire website (lightwiretheater.com/dino-light/) and review video. Based on the video, what do students anticipate seeing on stage? Have the students research other stories based on the topic. How are the stories similar to what they see (themes, characters, setting, etc.)? How are they different? Even if they haven't read the stories, is there anything that they can tell from the description or even pictures that are similar to the story in the show?



9. Ask the students if they have ever visited a farm or the zoo. If so, what kinds of animals did they see there? Explain that fables are used to teach by using animals like they have seen in these places. Have the students research animals and explain how animals can act like humans. What are their human characteristics? How would they move like those animals to show those characteristics? Is there a reason they chose the animals they chose to tell their stories (ducks, mice, cats, etc.)?

Post-Show Discussion

(Some of these are good to discuss with your students while you wait for your bus to arrive at the theatre after the show!)

1. Professor Henslow: Scientist/Magician/Artist
While magicians only exist in stories, many scientists in real life have to draw on their creative capacity as artists to break new ground in science. What is the difference between a scientist, a magician and an artist? In what ways is Professor Henslow like a scientist, a magician or an artist?
2. Companionship
What friends do Darwin, our dinosaur make on his journey? In what ways are they similar and in what ways are they different from him? How do they make Darwin stronger? In what ways can your friends make you stronger?
3. Adventure
What did Darwin learn from his experiences? What other adventure stories do you know? Is there always a hero? What are the characteristics of a hero? Does Darwin have any of these characteristics?
4. Tell the story of Professor Henslow's life before the play begins. Why does he decide to create Darwin?
5. Tell the story of what Darwin does after the play is over.
6. Have each student come up with one or two of their favorite parts of the show. What was their least favorite part?
7. Compare the show they just saw with other theatre shows or movies they've seen. How are they different? How are they similar?
8. What is the difference between a book and the show they've just seen? Are there similar aspects in each or are they completely different?
9. Do the students think they could write a play based on their lives? Have the students write a story that could be turned into a play. Maybe include their favorite day, vacation they've taken, school or friend adventures. To expand on this activity, have the students write a scene of their play. Go to the library and look at the format of a play including stage directions, dialogue and scene description. Have the students perform their scene for the class. If they can't come up with something on their own lives, have them write something for another story.
10. Write a journal entry about the play. Include favorite or least favorite parts. Scenes or times in the show that students related to in some way. Did they have any moments where they identified with any of the puppets at any point (the excitement of the holidays, etc.)? Would they handle anything differently?
11. Have the students pretend they are a reporter for a newspaper and write a review of the play they have just seen.
12. Have the students read the synopsis and background information. What are the common themes? What is the main theme of the show? After the show, have the students recall what they read about the story before they came to the show. Does their idea of the theme change after seeing the show? How is what they saw different/ similar to what they read? Did the play use specific words or descriptions to add to the story or create the mood of the story? Use specific examples.
13. Have the students pick out their favorite part of the story and describe it in detail from the perspective of the main character in the scene. Have them rewrite the story from another character's perspective (i.e. from Darwin to Verla the Ostrich, Peche the Fish or Brutus, the red dinosaur). Did that change the story at all? How? How is each story told—first person or third person perspective? Have the students rewrite it one more time from their own perspective as an audience member. What do they notice that even Darwin didn't notice?
14. Explain the idea of cause and effect using the actions of the characters in the story.
15. Have the students choose their favorite character in the show. How are they important to the story? What are they like? Do the mannerisms or actions coincide with the animal they are? (Does Darwin do anything or act in a specific way to show that he is a dinosaur or are his mannerisms more like a human in this instance?)
16. An important aspect of the show is the music chosen. How is music used in setting the mood? What kind of music is played for the happy parts? The sad parts? Tell the students to listen for music that sets the mood the next time they see a movie or a television show. Do you think the songs are intentionally chosen or just because the director liked the songs?
17. Review the moral of the story, if there is one, and discuss what happened to the characters to show the moral (what bad thing happened that made them learn the lesson). How might you apply this lesson to your life?
18. Are there other ways the students can think of to tell the stories? Play, storyboards, etc. Have them try telling a fable using that medium.
19. There are many poems that are written from stories and fables. Present poems on the fables to the class and have a discussion on the difference between a poem, a play and a story.
20. What did the students think about the puppets? How did they help tell the story?