

THE GEORGIA BALLET

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Coppélia



An Enrichment Guide with STEM lesson
for Educators of grades k-3
Presented by The Georgia Ballet
Guide conceived and written by Amy Cassaniti

A NOTE TO EDUCATORS

The following enrichment guide is meant as a resource for educators to use in an educational setting in conjunction with The Georgia Ballet's production of *Coppélia*. The guide includes a synopsis of the ballet as well as content activities that can be incorporated into a larger unit of study. These content activities are merely suggestions, and educators should feel free to adapt the activities to suit the needs of their curriculum and level of study.

We here at The Georgia Ballet are so pleased to be able to present this production for study. We hope that it inspires an appreciation for dance and music in those it reaches.

Sincerely,

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Arts in Education Coordinator
The Georgia Ballet
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CONTENTS

Synopsis: <i>Coppélia</i>	4
STEM: A Robotics Lesson	5
The Teacher's Guide to Theater Etiquette	7
Suggested Activities Post-Performance	8
Biography of Leo Delibes	9
Biography of Arthur Saint-Leon	10
Coloring Page	11

Synopsis

When Swanhilda catches her fiancé, Franz, flirting with Coppélia, a girl who is often seen reading on the balcony of Dr. Coppélius' home, she is determined to discover more about this mysterious girl. The opportunity arises one day when Dr. Coppélius leaves his home and on his way out accidentally drops his key in the village square. Swanhilda and her friends sneak into Dr. Coppélius' home and explore his workshop. They discover that he has many life-like mechanical dolls—and that Coppélia is one of them!

Dr. Coppélius returns home to find the girls in his workshop. He shoos them out—all except Swanhilda who has hidden behind the curtain that also hides Coppélia. Meanwhile, Franz has also decided to discover more about Coppélia and climbs a ladder into the house. He is confronted by Dr. Coppélius, who offers him a drink containing a sleeping potion.

After Franz falls into a deep sleep, Dr. Coppélius begins his plan to put Franz's breath into Coppélia. He is thrilled when Coppélia comes to life before his very eyes. The truth, however, is that Swanhilda is pretending to be Coppélia. She eventually rouses the drowsy Franz, reveals to Dr. Coppélius that she is not a doll, and escapes the house with Franz. Franz and Swanhilda are happily reunited, and the villagers celebrate their wedding with dancing and festivities.



Science Technology Engineering Mathematics (STEM)

Lesson: Robotics

Robotics is the science or study of the technology associated with the design, fabrication, theory, and application of robots. A robot any machine that does work on its own, automatically, without continual manipulation from outside itself. Many robots require some form of artificial intelligence. Artificial Intelligence is the ability of a computer or other machine to perform activities that are normally thought to require cognitive intelligence. It is also referred to as the branch of computer science concerned with the development of programming to give machines this ability.

Some questions to think about:

- Will robots ever really be able to think for themselves?
- Will computers ever be smarter than humans? Are they already?
- Will robots ever pose a threat to humans?

Try it!

The ability to sense and navigate the external environment is important for people and machines. In order for robots to perform complex, multi-stage tasks, scientists must develop elaborate sensors so that robots can continually obtain information about the environment. In order for students to gain an appreciation for the complexity of the problem, have them try the following activity.

Blindfold walking activity:

Set up a simple obstacle course. Divide students into pairs. Blindfold one student and let the other student, using only voice commands, guide his “robot” around the course. Switch places and let the other student be the robot. Have students evaluate the experience by answering the following questions:

What was the most challenging part of “programming” your robot?

What would have made “programming your robot easier?

What was the most challenging part of being a robot?

What would have made being a robot easier?

Why is it so difficult to “program” a robot?

Programming 101:

Have each student untie and retie his shoelaces.* Now, ask each student to write the details of each step required to tie a shoelace. Using his list of steps for tying a shoelace, have one student read his list to a second student – the robot. The robot can only make the moves called out by the programmer. Switch roles and let the second student try using his “program” of steps. If students are not able to tie shoes using the first set of program instructions, have them rewrite them until the “robot” is successful. Have students evaluate the experience by answering the following questions:

How many times did you have to rewrite your program?

Were you surprised at how many steps it takes to program a simple task?

Why is it so hard to write a program to communicate a simple task?

Chat bot activity:

Understanding the nuances of language is one of the most challenging tasks for robots. Let students experiment communicating with a robot using the following websites or one similar to it:

<http://alice.pandorabots.com>

How long will it take to confuse the chat bot?

Why is it so hard for programs like these to understand language?

*If tying shoelaces is too challenging, have students write programming for picking up a crayon and beginning to color.

The Teacher's Guide to Theater Etiquette

Introduction to the theater: Going to see a production at the theater is an exciting experience. You will be watching live dancers perform on stage. This makes each performance very special. No two performances are alike due to the spontaneity of live performances. If a dancer forgets his/her steps, accidentally trips on stage, or if there is a problem with scenery, it all becomes a part of the performance. However, you might need a keen eye to pick out these blunders. The dancers are very skilled at staying in character and making sure that the show continues on.

What to expect: After entering the lobby of the theater, you should stay in a single file line. This will make it easier for your class to walk together down the aisles without getting separated or interrupting other groups of audience members.

What is expected of me: Everyone uses hushed voices in the theater. Noise carries very easily due to the high ceilings and raised seating. The theater is made this way so that the performers can be heard all over the theater when they are on stage. After you are seated, the lights will dim until it is dark in the seating areas, but there is some light near the stage. (Don't worry – you'll still be able to see) This is a sign that the performance is starting. You will notice that the curtains are closed on the stage. The curtains will open only after the lights have dimmed. The opening of the curtains means that the performance has begun. If you need to talk to someone during the performance, please use a quiet voice. (Remember – the dancers are on stage, and if you can hear them, they can hear you) This is a courtesy to the performers and others around you.

When the curtain closes: After the performance is over, the curtain will close. This is the appropriate time for applause. Your applause is greatly appreciated by all of those who worked on the production; however, please remember that yelling is never appropriate behavior for the theater.

Please note: Please remain in your seat until the entire performance has ended and the lights have come on in the theater. This ensures that you do not block anyone's view of the stage. We ask that afterwards you stay in your seat until your teacher has designated that it is time for your class to leave the theater.

Finally... The most important rule of the theater is the golden rule: "Do unto others as you would have them do unto you." Courtesy makes everything run smoothly in the theater, making the experience much more pleasant for everyone.

Suggested Activities Post-Performance:

1. In *Coppélia* Swanhilda makes many decisions. She decides to take the key that she finds in the village and enter Dr. Coppélius' home. She and her friends decide to explore his workshop without his consent. Was this a good decision? Why or why not? Could Swanhilda have discovered the secret about *Coppélia* in a more ethical manner? In what ways did Swanhilda respect or disrespect those around her? What right or wrong decisions did Franz make in the ballet? Discuss among the class or write about some of the moral lessons that were learned from the ballet.

[Georgia Quality Core Curriculum Standards, Second Grade, Character Education (Respect for Others: Respect for Self): 13; (Respect for Self: Respect for Others): 11]

2. Dr. Coppélius loved his doll Coppélia so much that he wanted her to be a live human rather than a doll. Draw a picture of one of your favorite items (this could be a toy, a basketball, or even a special colored crayon) and tell a story of what you and your favorite item would do together if it was alive.

[Georgia Quality Core Curriculum Standards, Second Grade, Language Arts (Listening/Speaking/Viewing): ELA2LSV1b, ELA2LSV1d.]

3. Dr. Coppélius specializes in making dolls. He often receives orders for many different kinds of dolls at once. See if you can help him with some of his orders:
 - Dr. Coppélius has an order for 20 dolls. He has already made 7 of them. How many more does he have to make? (*Substitute different numbers for more word problems.*)
 - Dr. Coppélius has 3 Chinese dolls, 2 rag dolls, and 7 Spanish dolls. How many dolls does he have total? (*Substitute different numbers for more word problems.*)

[Georgia Quality Core Curriculum Standards, Second Grade, Mathematics (Problem Solving: Addition and Subtracting): 29; (Problem Solving: Word Problems): 31, (Whole Number Computation; Estimation; Whole Number Operations: Addition and Subtraction): 36,43,44]

THE COMPOSER

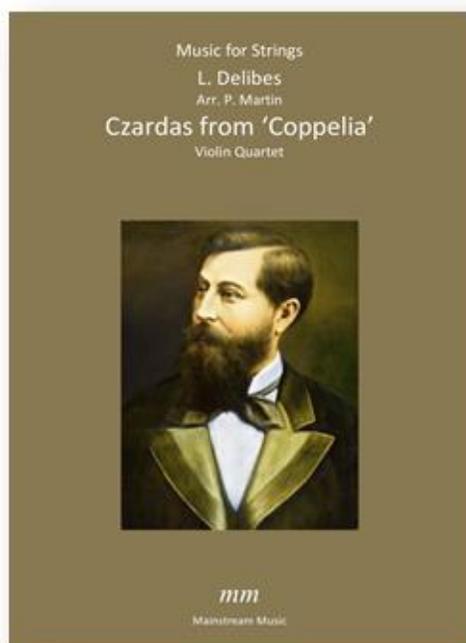
Léo Delibes was born in France on February 21, 1836. Delibes began his musical studies at the Paris Conservatoire in 1847, and in 1864, he became second chorus master at the Paris Opéra.

Delibes first major triumph came with the ballet *Coppélia*. *Coppélia* was the first complete ballet score Delibes composed by him. It was also noted as a work that moved ballet music forward, assisting the art in its transition from the Romantic Movement into the Classical Era. The score for *Coppélia* was musically advanced. Delibes built on the use of musical selections to identify character and atmosphere. He provided a generous amount of expressive character in his music; a new idea at the time.



The longevity of this ballet is often attributed to the strength of the music. *Coppélia's* music is structured and very well-conceived. The sections of music easily flow together and this has played a large part in the continuing success of *Coppélia*.

Delibes went on to create additional scores for both ballets and operas. He died in Paris on January 16, 1891.



A page of sheet music for "Czardas from Coppelia". The title "Czardas from 'Coppelia'" is at the top center. Below it, the tempo marking "Allegro moderato - c. 108" is visible. The music is written for a string quartet, with four staves (Violin I, Violin II, Viola, and Cello/Double Bass). The notation includes various musical symbols such as notes, rests, and dynamic markings. At the bottom of the page, there is a copyright notice: "© Mainstream Music 1999".

THE CHOREOGRAPHER



Arthur Saint-Léon is most famous for creating the choreography for the ballet *Coppélia*.

Arthur Saint-Léon was born in Paris in 1821. Saint-Léon's father was a dancer at the Paris Opéra who encouraged his son to study both music and dance. Arthur Saint-Léon studied as a violinist and a dancer. When he was 17 years old, Saint-Léon began to tour across Europe dancing in Germany, Italy, and England. The London audience was particularly fond of Saint-Léon's dancing and he gained great applause in every theatre he danced in. While touring Europe, Arthur Saint-Léon danced with a very famous ballerina, Fanny Cerrito, whom he married in 1845. They performed together for many years. In 1859, Saint-Léon was invited to be the ballet master at the Imperial Bolshoi Kamenny

Theatre in St. Petersburg, Russia. This theatre was the home of the Russian Tsar's renowned Imperial Ballet. Saint-Léon worked there until 1869.

In 1868 Saint-Léon began choreographing the ballet *Coppélia* for the Paris Opéra. Before the ballet was finally presented, on May 25, 1870, years had gone by because Saint-Léon had to travel between Russia and Paris. When *Coppélia* premiered at the Paris Opéra in 1870 it was an immediate success. Unfortunately, Saint-Léon did not get to enjoy much of *Coppélia's* success. He died just three months after its premiere. Saint-Léon created many ballets, but *Coppélia* is his only ballet still performed today.



*If busy hands need something to do while they wait for the show to begin
– A coloring page to take to the theatre...*

