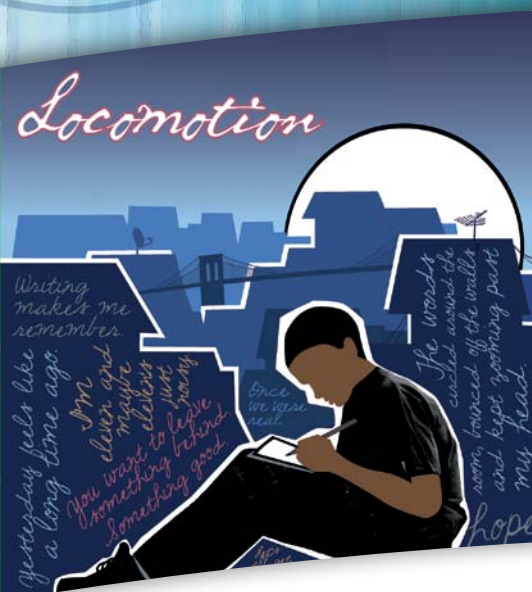
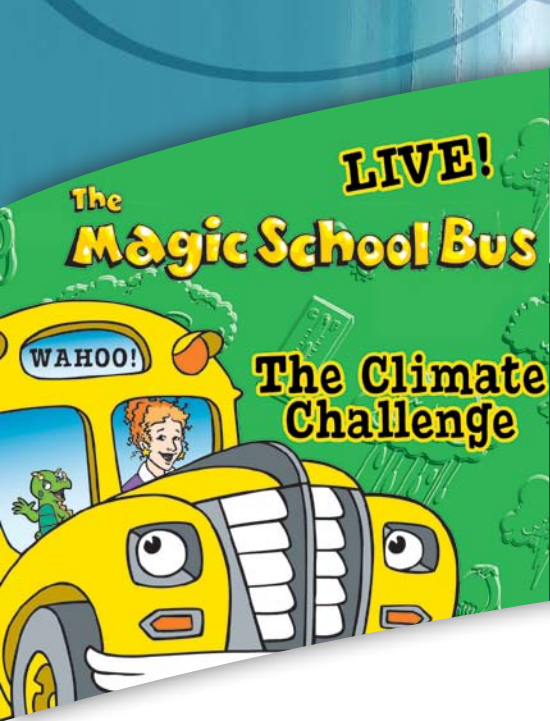


EDUCATION  
*takes center stage*



*Live!*  
**THE MAGIC SCHOOL BUS**

March 22, 2012  
10:00 am - 11:00 am  
12:00 pm - 1:00 pm



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*about the*  
**SANDLER CENTER FOR THE PERFORMING ARTS**



At the heart of every great city are its arts institutions – the centers of culture where residents and visitors can share great works of music, dance and theatre from the classics to the cutting edge. Now in its fifth season, the Sandler Center for the Performing Arts at Town Center provides these arts experiences to the students in Virginia Beach and beyond.

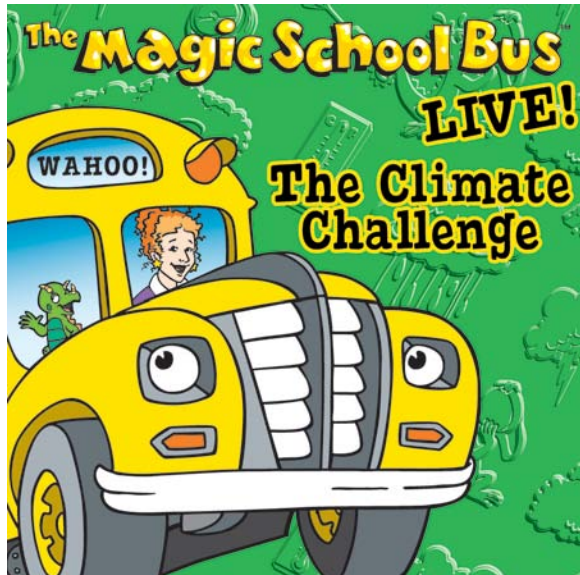
Expansive yet intimate, with not a bad seat in the house, the Sandler Center is the perfect setting for every kind of performance, from classical recitals and symphony concerts to modern dance and ballet, theatre and more. And while audiences of every kind are welcome, the Sandler Center offers a special invitation to the region's young people. With the ultimate goal of "every child, every grade, every year," the Sandler Center, in partnership with the Virginia Arts Festival's WorldClass® Education Department, presents specially priced student matinees and public performances making world-class artists accessible to school children in Hampton Roads. And the excitement reaches beyond the stage as well, as the Sandler Center brings these renowned artists into area schools for performances and master classes. For teachers, the opportunities are immeasurable, offering exciting new ways to inspire and enhance their classroom teaching as they weave the arts into their lessons on history, language arts, math and science.

Thank you for joining us this season as we spark your students' imaginations with the joy and power of the performing arts.



*what to expect*

## WHAT IS THE MAGIC SCHOOL BUS?



The Magic School Bus is a series of books for kids about science. They're written by author Joanna Cole. A main character, Ms. Frizzle, an elementary school teacher, takes her class on great adventures. Her class climbs aboard a magical school bus that takes them on field trips to impossible locations such as the solar system, clouds, the past, and the human body. The class pet, Liz, a lizard, accompanied the class on their field trips.

The Magic School Bus books are written in the **first person** – they're told by a character in the story. In this case, it's a student in Mrs. Frizzle's class.

The books are works of **fiction**, which means the character and the story are invented by the author. **Non-fiction** books give information or tell stories in which the plot happened in real life and the characters are (or were) real people.

### The Climate Challenge

Ms. Frizzle's students are putting on a play about global warming, and they need some cold, hard facts. The Friz knows just where to find them! A hop on the Magic School Bus takes the kids on a whirlwind tour. From the Arctic to the Equator, they see telltale signs of climate change. But to get the really big picture, the class has to get really small – so they can see exactly what is in the air and why it is making the world warmer. What they find gives them a real cause for concern!

Ms. Frizzle and her class are up for the climate challenge. Are you?

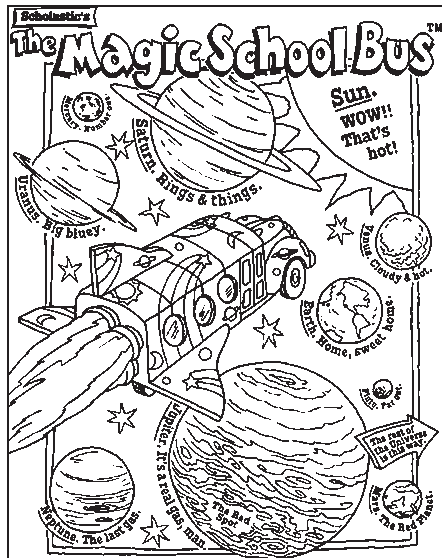
## A FEW OTHER BOOKS IN THE SERIES

### THE MAGIC SCHOOL BUS: BLOWS ITS TOP

Ms. Frizzle's class is having a hard time putting together a giant globe of the world. A piece is missing...an island so new it hasn't been discovered yet! And the Friz knows where to find it. Before they know it, the kids are beneath the ocean's surface, exploring an underwater volcano. Join the class as they learn about volcanoes. It's an explosive field trip you won't want to miss!

### THE MAGIC SCHOOL BUS: PLANTS SEEDS

Ms. Frizzle's class is growing a beautiful garden, but Phoebe's plot is empty. Her flowers are back at her old school! So, the class climbs aboard The Magic School Bus. And, of course, the kids don't only go back to Phoebe's school, but they go inside one of Phoebe's flowers! Follow the kids' adventure and learn how living things grow.



### THE MAGIC SCHOOL BUS: SEES STARS

Ms. Frizzle and her class are trying to come up with a birthday present for Dorothy Ann. A TV salesman seems to have the perfect idea – the kids can buy a star and name it after Dorothy Ann. But Keesha doesn't want to buy anything sight unseen. So, Ms. Frizzle rockets the class off on a field trip to outer space. Join the class as they do some careful star shopping and gain a lot of star knowledge along the way.

### THE MAGIC SCHOOL BUS: IN THE TIME OF THE DINOSAURS

What luck! Ms. Frizzle is taking her class to a dinosaur dig to look for Maiasaura nests. But as soon as the kids get to fossil country, The Magic School Bus turns into a time machine and transports them back to prehistoric times – when dinosaurs roamed the earth!



*book report*  
**MAGIC SCHOOL BUS**

There are dozens and dozens of Magic School Bus books to choose from. Pick one and read it or have it read to you.

Book Title:

What is the central problem in the story?

How was the problem solved?

What new facts did you learn from your book?

List five new words you found in your reading and provide definitions.



*meet the author*  
**JOANNA COLE**

“ I discovered in the fifth grade that I enjoyed explaining things and writing reports for school. I had a teacher who was a little like Ms. Frizzle. She loved her subject. Every week she had a child do an experiment in front of the room, and I always wanted to be that child. Grade school was very important to me maybe that’s why I ended up writing books for children as an adult.

After graduating from college, I worked as an elementary school teacher, a librarian, a children’s book editor, and a writer. My first book was *Cockroaches*. An article in the *Wall Street Journal* inspired me to do some research. I discovered that there had never been a children’s book written about cockroaches before. So I thought, why not? Plus, I had ample time to study that creature in my low-budget New York apartment!

Since then I have written both nonfiction and fiction books for children. In my science books, including *The Magic School Bus* books, I write about ideas, rather than just the facts. I try to ask a question, such as “how do scientists guess what dinosaurs were like?” Then I try to answer the question as I write the book.

Writing is hard work, but it’s the greatest fun in the world. ”

–Joanna Cole

The *Magic School Bus* books have sold millions of copies and have been translated into many languages. Imagine, a kid just like you reading *The Magic School Bus* in Chinese! In China!

## BEHIND THE SCENES

It takes a lot of people to put together a musical show like *The Magic School Bus!* The **Writer** is where it all begins. The writer has an idea for a performance and writes many drafts, getting closer and closer to putting on the page what, so far, only exists in the imagination. But the writer has a story to tell and keeps working until it's just right.

Then the writer finds a **Producer**. This job can be many things. The producer is the one in charge, the one who says yes or no to things like buying costumes and choosing performers. It's usually the producer's money that is being spent getting things ready. The producer hires someone who has experience in the theater, someone who will work closely with the people on stage and backstage, and this is the Director. The **Director** reads the script, imagines the action on stage, and asks, "How should the final production look?" The director chooses all the performers.

There are lots of other very important people. The **Choreographer** designs the performers' movements, plans the dance moves, and works with the dancers, through many rehearsals, until they are prepared to perform the show.

Behind the dancers is, of course, music, which requires a Musical Director. This person determines the appropriate music and brings together the necessary musicians. The musical director works with the musicians, again through many rehearsals, until everyone is ready for the performance.

In order for all this to look its best, and often to add drama to the show, the performance may require a **Lighting Designer** who determines how the stage should be lit – when the lights should be bright and when they can dim for effect, who to focus on, and how to control the mood. The goal of the lighting director is to make you feel things about what's happening onstage without you even realizing that the lights had something to do with it. Bright, colorful lights? Happy feelings. Dim, dark lighting? Sad or scared feelings.

A **Costume Designer** is someone who understands the power of what we wear. Clothes can tell us a lot about a character, create interest for the audience, bring color and excitement to the production and help tell the story.

Which one of these jobs is the most appealing to you? Watch the performance and look for evidence of work that went on behind the scenes. How did the lighting and costumes add to the performance? What you see happening on stage is only one part of the whole production. Enjoy the show, and remember that even if you're not a singer, actor, or dancer, there could still be a place for you in the world of theater.

## WEATHER VERSUS CLIMATE

**Weather** is a specific event or condition that happens over a period of hours or days. For example, a thunderstorm, a snowstorm, and today's temperature all describe the weather.

**Climate** refers to the average weather conditions in a place over many years (usually at least 30 years). For example, the climate in Minneapolis is cold and snowy in the winter, while Miami's climate is hot and humid. The average climate around the world is called global climate.

Weather conditions can change from one year to the next. For example, Minneapolis might have a warm winter one year and a much colder winter the next. This kind of change is normal. But when the average pattern over many years changes, it could be a sign of climate change.

Here's an easy way to remember the difference between weather and climate: Climate helps you decide what clothes to buy, and weather helps you decide what clothes to wear each day.

What is the weather like today?

What is the climate like in Southeastern Virginia?



“Climate is what we expect,  
weather is what we get.”



—Mark Twain

## WHAT IS CLIMATE CHANGE?

When scientists talk about global climate change, they're talking about the global climate and a pattern of change that's happening over many years. One of the most important trends that scientists look at is the average temperature of the Earth, which has been increasing for many years. This is called global warming. Rising global temperatures lead to other changes around the world, such as stronger hurricanes, melting glaciers, and the loss of wildlife habitats.

That's because the Earth's air, water, and land are all related to one another and to the climate. This means a change in one place can lead to other changes somewhere else. For example, when air temperatures rise, the oceans absorb more heat from the atmosphere and become warmer. Warmer oceans, in turn, can cause stronger storms.

### Today's Climate Change

More than 100 years ago, people around the world started burning large amounts of coal, oil, and natural gas to power their homes, factories, and vehicles. Today, most of the world relies on these fossil fuels for their energy needs. Burning fossil fuels releases carbon dioxide, a heat-trapping gas, into the atmosphere, which is the main reason why the climate is changing.

Heat-trapping gases are also called greenhouse gases. They exist naturally in the atmosphere, where they help keep the Earth warm enough for plants and animals to live. But people are adding extra greenhouse gases to the atmosphere. These extra gases are causing the Earth to get warmer, setting off all sorts of other changes around the world – on land, in the oceans, and in the atmosphere. And these changes affect people, plants, and animals in many ways.

## LEARN MORE ABOUT IT

### <http://www.epa.gov/climatechange/kids/>

An Environmental Protection Agency site that focuses on science and impacts of global warming or climate change, and on actions that help address global warming. Features games, events, and links.

### [www.climateclassroom.org](http://www.climateclassroom.org)

The National Wildlife Federation's site designed to engage and educate kids on climate and other environmental issues. Puzzles, games, and lots of information.

### <http://climate.nasa.gov/kids>

NASA's site for kids includes a planet health report, climate time machine, and information on green careers.

## How can you reduce your "carbon footprint"?

Your carbon footprint is the amount of carbon dioxide released into the air because of your own energy needs. You need transportation, electricity, food, clothing, and other goods. Your choices can make a difference. Do some research and list five ways in which you can change your habits and reduce your impact on the environment.

### THE THREE R's **REDUCE!**

This one's all about choices. Drink water from a water fountain or from your tap at home, instead of buying bottled water. And turn off the tap when you're brushing your teeth! Think about the packaging around the things you buy – what will happen to that packaging when you're done with it? Can you use it for something else? Can you find another product with less packaging? Or with packaging that can be reused or recycled? Do you really need the thing inside in the first place?

### **REUSE!**

Think before you throw anything away! Is the back of that piece of paper clean? Save it. Can you use that cardboard box for a project? What are some common things that you can reuse?

### **RECYCLE!**

Recycling is processing used materials into new products to prevent waste. Lots of things can be recycled. Recycling reduces the use of new materials, cuts down on our energy use, and reduces water and air pollution. What materials can you collect to be recycled?

## WHERE DOES OUR ENERGY COME FROM?

About 92% of the energy consumed in the United States comes from non-renewable energy sources, which include uranium ore and the fossil fuels – coal, natural gas, and petroleum.

What does it mean to be non-renewable? How are non-renewable energy sources used in your daily life?

Renewable energy sources including biomass, hydropower, geothermal, wind, and solar provide 8% of the energy used in the United States. Most renewable energy goes to producing electricity.

What does it mean to be renewable? How do you use renewable energy sources?



*the magic school bus*  
**THE PARENT REPORT**

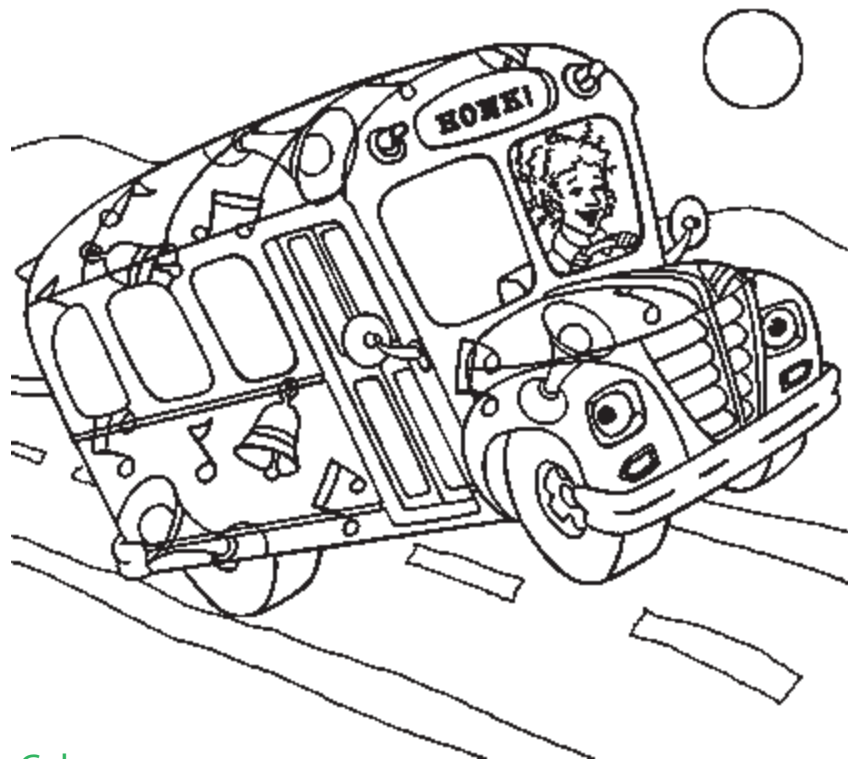
Take this sheet home and use it to tell your parent what you saw today!

Describe the main characters in the play. Who was your favorite? Why?

Describe the plot. Name three things that happened in the story.

What was your favorite scene, or part, of the play? Why was that your favorite?

List three things you learned about the earth and earth's climate.



Color me

## FEEDBACK FORM

We need your feedback to make our Education Programs even better! Please take a moment to complete this form and either return it to the Sandler Center Education Department at 440 Bank Street Norfolk, VA 23510, fax it to (757) 282-2787 or e-mail your answers to [education@sandlercenter.org](mailto:education@sandlercenter.org).

1. Complete form
2. Attach or include student work (optional)
3. Return both to Sandler Center Education Department by mail, fax, or e-mail.

Education Event: \_\_\_\_\_

(please check)  Matinee     In-School Performance/Master Class

How did your students respond to the performance?

How did you prepare your students for this performance? Did you use the Education Guide? Which activities did you use? Were they helpful? Did students enjoy the materials?

How did this performance contribute to experiential learning in your classroom?

What role do the arts play in your school community? In your classroom?

If you could change one thing about your experience, what would it be?

Please include student work with this form, including letters, artwork, activity responses, and anything inspired by the performance.

(Optional)

Name: \_\_\_\_\_

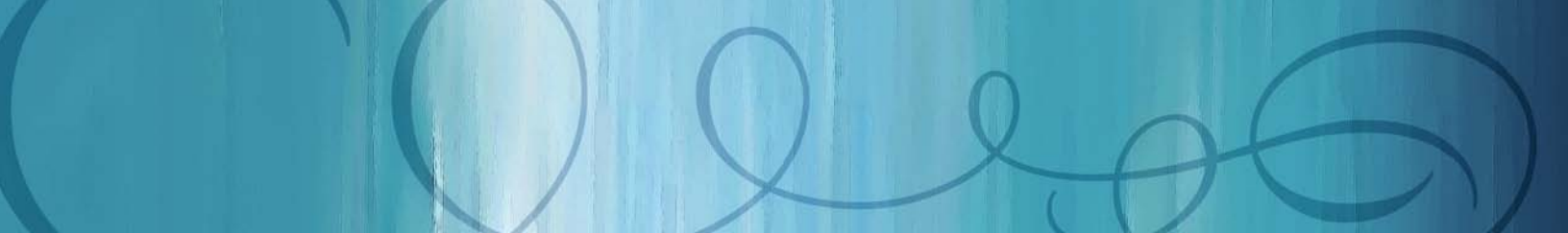
School: \_\_\_\_\_

City: \_\_\_\_\_

Would you like to be part of our database?  Yes     No



[WWW.SANDLERCENTER.ORG](http://WWW.SANDLERCENTER.ORG)



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place  
stamp  
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Sandler Center for the Performing Arts  
Education Department  
440 Bank Street  
Norfolk, VA 23510

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**SANDLER CENTER FOR THE  
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**EDUCATION**  
*takes center stage*

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