

A Celebration of Famous American Scientists

# AMERICAN GIANTS OF SCIENCE

A National Touring Production

Priceless

PRESENTED BY:  
**BRIGHT STAR TOURING THEATRE**  
America's Premier Professional  
Theatre for Young Audiences

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Celebrating the  
amazing men and  
women who  
pioneered American  
science & inventions!  
From Franklin to  
Steve Jobs!

## Who Will Be in our Production?

THESE ARE SOME OF THE  
HIGHLIGHTS OF THE  
FAMOUS AMERICANS IN OUR  
SHOW!

### BENJAMIN FRANKLIN

Statesman and inventor! Aside from his work on putting a key on a kite, did you know that he also invented bi-focal glasses, the Franklin stove and so much more?

### THOMAS EDISON

One of the most prolific inventors in our history. He developed the phonograph, motion picture camera and the Edison light bulb. Edison holds 1093 patents. His work focused on electricity and led him to create a battery for an electric car and even a power station in Manhattan.

### ALEXANDER GRAHAM BELL

Inventor and scientist, he is credited with creating the worlds first telephone. His mother and wife were both deaf so he was dedicated to creating things to make their lives easier.

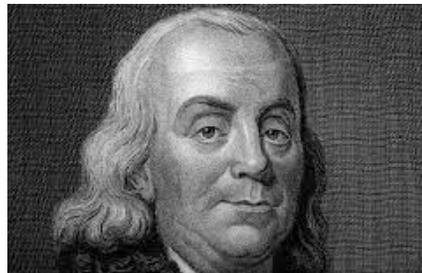
### GEORGE WASHINGTON CARVER

Found hundreds of uses for the peanut in his attempts to find a less labor intensive crop than cotton. He was friends with Henry Ford and even worked to create a car made from a plastic-like product derived from soy beans. Born into slavery, Carver made his inventions public for free to help make America better.

MANY OF LIFE'S  
FAILURES ARE  
PEOPLE WHO DID  
NOT REALIZE HOW  
CLOSE THEY WERE  
TO SUCCESS WHEN  
THEY GAVE UP.

-Thomas Edison

Thomas Edison



Ben Franklin

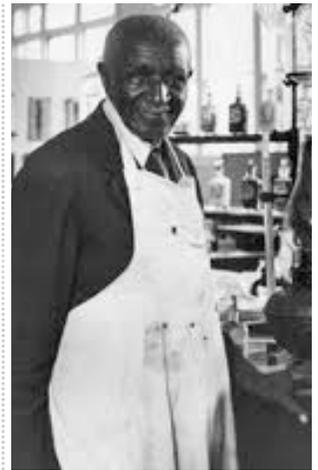


Alexander Graham Bell

This production  
brings to life a  
number of  
remarkable scientists  
in just 45-minutes!



The Wright Brothers!



George Washington Carver

## THE WRIGHT BROTHERS

The Ohio Bicycle Men are credited with building and flying the first airplane. They made their flight in NC on December 17th, 1903. Their design that controls the flying machine is still in use today in many planes. They built their flyer for less than \$1000.

## HENRY FORD

The Detroit, Michigan native went on to perfect the assembly line and create Ford Automobiles. A controversial figure in many ways, his assembly line enabled cars to be made cheap and quick--and thus, purchased by almost anyone who wanted one.

## GEORGE EASTMAN

Inventor of the roll film and then the roll camera--he founded Eastman Kodak Company in Rochester, NY.

## RACHEL CARSON

One of the first voices against the use of synthetic chemicals, Ms. Carson worked hard to remove harmful toxins from the world in which we live.

## GERTRUDE ELION

Worked tirelessly to help find medicines for cancer and other ailments. Her work led to the creation of the AIDS medicine AZT.

## ALBERT EINSTEIN

The world's most famous physicist was born in Germany and became an American citizen in 1940. He is known both for  $E=MC^2$ , as well as his wacky hair!

## DR. DANIEL HALE WILLIAMS

The first African American cardiologist and one of the first surgeons ever to do an open heart surgery--in 1891! Could you imagine the tools used in heart surgery in 1891?

## CHARLES GOODYEAR

In 1839, Goodyear created a way to 'vulcanize rubber.' Vulcanize rubber is created by adding sulphur and other chemicals that enable the rubber to transform into products like shoe soles and pool balls and tires. He did not found Goodyear Tires, but they were named in his honor.

Some of George Washington Carver's uses for the peanut include: facial powder, cheese, shampoo, printers ink, soap, wood stain and, of course, peanut butter!

# Fun Classroom Activities!

## FINDING USES FOR THINGS

Inventing! George Washington Carver once said that everything has a use. That is why he spent his life dedicated to finding so many uses for various plants. Looking around your classroom, what are other uses for everyday objects? Maybe a door wedge, or pencil sharpener, or spiral from a notebook? Thinking outside of the box, what are some things you could do to put these mundane, everyday objects to work as brand new inventions?

## POINTS OF DISCUSSION

What exactly is an inventor? A Scientist? What is an invention? Who can be a scientist? Who are famous scientists that are alive today or recently? Bill Gates, Steve Jobs...anyone else?

## INVENT SOMETHING AS A CLASS

Science can be a LOT of fun and can bring a lot of excitement to your classroom. The internet is full of ideas of simple experiments and things that you can do as a class to get young people to think creatively. Why not do a project together? It could be building catapults out of small cups or playing with vinegar and baking soda, etc. Google can be a wonderful resource for free or cheap ideas for such projects.

## WHO INSPIRES YOU?

Have your students think about a famous scientist from the show or someone else and research additional information about this individual. Then have them prepare presentations as if they were that person--talking about their inventions and work. One idea would be to have them spread around in a hallway, gymnasium or

cafeteria and let other students approach them--like a wax museum or exhibit hall--the character could then come to life and tell the other students about why they are famous and what they invented.

## ACTIVATING SCIENCE

Some concepts in science are admittedly difficult to grasp, even as adults. By activating and acting them out, it will help young people understand them. In an open area have your students experience what a vortex is; how electrons work; gravity--(A vortex for example could be experienced by having the class imagine they are in a giant bathtub--have them running around in circles towards an imaginary drain. When they hit the drain they can yell out 'Vortex' cause that's where the vortex happens...Do you have other idea for activating these science terms?

## DESIGNING A BETTER LIFE

What's something that frustrates your students in their every day life? Walking a pet? Cleaning their room? Doing their homework? What's an invention that they could create to help make their life better? Most inventions come about to help the world be a better place. Have them think about something that would help them. Perhaps sketching it out on paper down to the very materials they would need. The Wright Brothers spent \$1000 to build the first plane, how much would they need to create their invention?



Thomas Jefferson: Lover of Science!

Kids can be inventors! In fact, a number of things, like ear muffs, were actually invented by young people.

It's never too early to be an inventor!



Our storefront.

We travel the country in mini vans!

## WHO ON EARTH IS BRIGHT STAR THEATRE?

Founded in 2003, Bright Star tours with a number of shows each season from anti-bullying to Black History and everything in between. The company strives to make professional theatre as accessible as possible with affordable pricing and quality shows. We thank you for the opportunity to serve your young audience and hope you found the show and actors pleasant and enjoyable! We strive to make theatre a part of every young person's life!

### THEATRE DEFINITIONS

**Actors:** The people on stage that performed the play.

**Backdrop:** The background for the play.

**Props:** Anything that an actor holds while on stage--a cane, book or rubber chicken.

**Downstage:** the area closest to the actors--a long time ago stages were built at angles.

**Upstage:** The area away from the audience--like the back wall of a stage.

**Director:** The person who told the actors where to go while they were on-stage and helped them create the characters they would play.

**Costumes:** The wigs, clothing and glasses that the actors wore to help flush out their characters.

**Auditions:** How an actor gets a role is by auditioning, they may have to interview, pretend to be a character from the play, read something from it, etc.

**Set designer:** The person who decided what should be on the background and who painted or created it.

### CONTACT US ANYTIME

Connect with us anytime! We love hearing feedback, thank you cards, pictures and whatever else from you and your students. [David@brightstartheatre.com](mailto:David@brightstartheatre.com) is our founder's email. If you have an experience you'd like us to know about--please take the time to let us know!

Our actors average around 1,000 miles a week traveling the country to entertain young audiences.

Our company is owned by an Emmy winning Actor.

Our programs have been seen around the country and across the world!

# Classroom Science Ideas!

## Marketing, Roller Coasters & Eating a Meal!

### THESE ARE THREE MORE INTENSE CLASSROOM ACTIVITIES

#### Marketing your invention!

Let's think of a new invention that you've just created! How would you go about marketing your invention? What will it take to get people excited about your creation and how will it make their life easier? For older grades, think of things like a logo or slogan for your new invention. Younger grades can always decorate paper that can be glued onto cardboard packages as the marketing material for their invention. For older grades this activity can spark all kinds of things like how marketing works and why some companies aim at young people. What messaging is most important to sell your product and how would you get it into the marketplace?

#### Building a Roller Coaster

This can be a great PTA event or team-building exercise. Using PVC pipe, cardboard tubes, insulated foam tube or something else, have your students build a roller coaster--to be ridden by a marble, ball or matchbox car. For older grades, what forces are in play to allow the object to run the whole track, to loop upside down, etc? This exercise offers an opportunity to explore all kinds of different science theories and facts. Why is it not possible to have a roller coaster made entirely of loops? How does momentum work? You can make this activity easily touch on all sorts of subjects like reading, math, art, etc.

#### Playing with Food

This activity works great when you are able to have a little help from the cafeteria staff. Have your students work with their parents or guardians or in your class designing, then building a contraption that would enable them to successfully eat a meal of spaghetti--or something similar without using a fork.

This activity can be especially fun following a class discussion on table manners and formality. Create the eating space like a formal event and have your young people use their best manners and politeness as they simultaneously attempt to eat a challenging meal with their new invention.



*The late Steve Jobs, the mind behind Apple*



*Bill Gates: Windows and beyond!*