

# BILLAGG'S MAGIC in MOTION



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Audi South Austin  
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THE  
PARAMOUNT  
THEATRE

NOVEMBER 4-5, 2019



# MAGIC AT THE PARAMOUNT THEATRE

Today's performance is part of a long history of magic shows at the Paramount Theatre. Over its 104-year-old history, many magicians have graced our stage, including the most famous magician of all!

The Master of Escape, **Harry Houdini**, performed at the Paramount in February of 1916. Back then the theatre was known as the Majestic. (The name was changed in the 1930s when Paramount Pictures purchased the theatre to show movies.)

Check out the Austin Statesman and Tribune newspaper ad about the show below!



## FRIDAY NIGHT'S PERFORMANCE

Houdini will be strapped into a "Punishment Suit" by three deputy sheriffs and he will endeavor to release himself in full view of the audience.

Hundreds of powerful criminals have been so confined successfully.

### Will It Be Houdini's Waterloo?

All Seats Reserved

Seats on Sale Today



PRICES: Matinee and night, lower floor, 50c; first balcony, 35c; second balcony, 25c. In addition to Houdini the regular motion picture play for today will be shown. This is a Tri-angel production, showing Willard Mack in "The Conqueror." The performance will start at 3 o'clock, so that Houdini should appear upon the stage about 4 o'clock or a few minutes later. For the night performance Houdini will appear upon the stage about 9 o'clock. He will be on the stage one hour at each appearance. This will be his last appearance in Texas for probably several years.

# MAJESTIC

THE THEATRE BEAUTIFUL



Houdini's legacy lives on at the Paramount Theatre - in the ceiling! Legend has it that Houdini carved a hole in it to perform one of his grand illusions. You can still see that hole today, just to the left of the painting of Saint Cecilia. Look up and see it for yourself!



## BILL BLAGG

To say that Bill Blagg has had a magical life would be no exaggeration. From the moment he received his first magic kit in 1985, his world was never the same. Today, Bill has one of the largest touring illusion shows in the country. His magic has been featured on NBC, CBS, and FOX television.

Having a love for both magic and science, Bill combined the two to create his one-of-a-kind, education shows called **The Science of Magic**, and today's performance, **Magic in Motion!** The show takes you on a rare, exciting, never-before-seen journey behind the scenes of the magic world. Bill shows you, firsthand, how magicians utilize science to create the impossible.



# MAGIC IN MOTION WORD SEARCH

Hidden below are several words important to the worlds of science and magic! Without these scientific concepts, the magic you saw on stage today would not be possible. Circle or highlight the words when you find them, then draw a line matching each word to its definition. Check your answers upside-down at the bottom of the page!

O N A E C Y Y I W S V R D O Q  
 J X V E N T A F D V P D V Y D  
 I I L U I E X Y U L F I U A X  
 V X E V A S R V B Q O G F Z Y  
 T W A V A N R G W T R T G B M  
 O R U H S O O Z Y B C O A A Y  
 G P Y E V I H G D I E Q S S R  
 H D E K Z T T N C C G S Y J T  
 A T R V E C I F Q Q G N R X V  
 B P O R C I U M Y U R Y D R W  
 H X G V P R O W P S B W D O H  
 B G Q K F F O Q P A A U B I G  
 T D J R K V L F O L Y Y T P I  
 P X K O F L X U K J V F R B M  
 M O T I O N G W S Z W E R Q G

## WORDS

## DEFINITIONS

ENERGY

1. The action or process of moving or being moved

FORCE

2. A natural phenomenon by which all things with mass or energy - including planets, stars, and galaxies - are brought toward one another

FRICTION

3. A push or a pull

GRAVITY

4. The quantity of matter in a body regardless of any forces acting upon it

MASS

5. Examples include both kinetic and potential

MOTION

6. The resistance that one object encounters when moving over another

## A SECRET MESSAGE

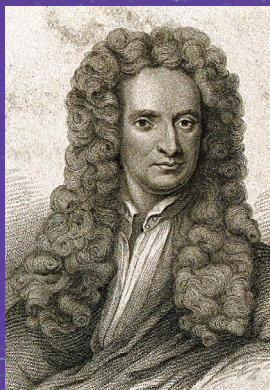
Solve Bill's secret message for you! First, you must crack the secret code. Before telephones became popular, people sent messages by telegram. These messages couldn't be private, because many people were involved in getting the message delivered. So, in order to send private messages, people developed simple codes to pass their messages along in secret. Use the code below to solve Bill's message to you. Here's how it works: In the secret message below the letter A stands for Z, B stands for A, and so on...

A = Z   B = A   C = B   D = C   E = D   F = E   G = F   H = G   I = H   J = I   K = J   L = K   M = L  
 N = M   O = N   P = O   Q = P   R = Q   S = R   T = S   U = T   V = U   W = V   X = W   Y = X   Z = Y

J B M X B Z T G P M M P X O F X U P O ' T M B X T P G N P U J P O !



# NEWTON'S 3 LAWS OF MOTION



## SIR ISAAC NEWTON

(1643 – 1727) was an English physicist, mathematician, and a key figure of the scientific revolution of the 17th century. His three laws of motion formed the basic principles of modern physics. Without Newton's work, Bill Blagg would have no magic tricks to show you today!

Read the Law of Motions below and think of an example of one of them from Bill Blagg's show:

\_\_\_\_\_ Law of Motion

Explain: \_\_\_\_\_

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## NEWTON'S FIRST LAW OF MOTION

An object at rest will stay at rest...



unless acted on by an unbalanced force.



An object in motion will stay in motion, with the same direction and speed...



unless acted on by an unbalanced force.



## NEWTON'S SECOND LAW OF MOTION

**Acceleration happens when a force acts on a mass.** Example: When you ride your bicycle, your leg muscles (the force) push on the pedals. As a result, your bicycle increases speed.



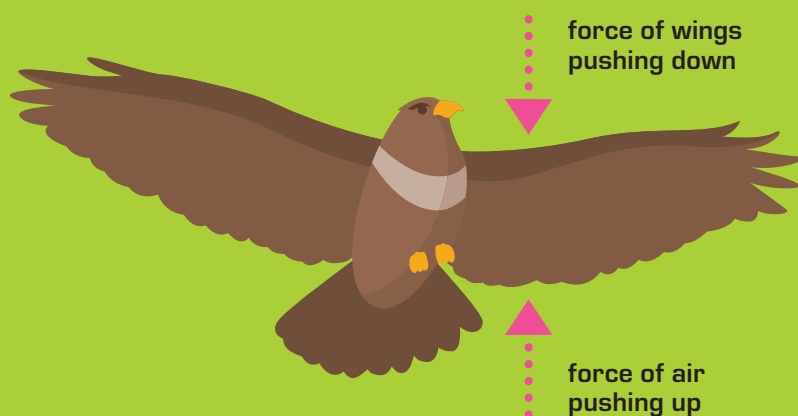
**The second law also states that if you exert the same force on two objects with different mass, you will get different accelerations.** Example: Say you have two identical bicycles, except one has a basket full of rocks. If you push on the pedals of each with the exact same strength, you will be able to accelerate the bike with the empty basket more than the bike with the basket full of rocks. (The rocks add mass to the second bicycle, so you would have to apply more force to the pedals to make it move.)



## NEWTON'S THIRD LAW OF MOTION

**For every action, there is an equal and opposite reaction.**

Example: When a bird flies, its wings push in a downward and a backward direction. This pushes air downward and backward. The air pushes back on the bird in the opposite directions—upward and forward. This force keeps a bird in the air and propels it forward.



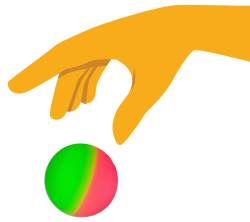


# POTENTIAL AND KINETIC ENERGY

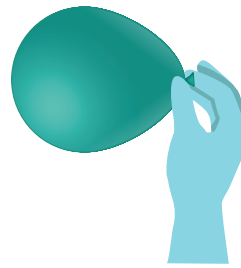
There are two primary types of energies: **Kinetic** and **potential**. They are found in all objects. Potential energy (PE) is energy that is "stored" because of the position and/or arrangement of the object. If an object is moving, it is said to have kinetic energy (KE). Label the images below to indicate which type of energy they have:



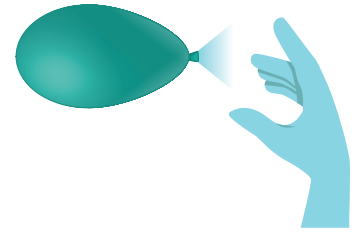
\_\_\_\_\_ Energy



\_\_\_\_\_ Energy



\_\_\_\_\_ Energy



\_\_\_\_\_ Energy

## MOON CRATER EXPERIMENT

Have you ever seen pictures of the moon and noticed large craters covering the surface? Over billions of years, the moon has been hit by asteroids and meteors pulled to the surface by the moon's gravity.

### MATERIALS:

- Large plastic container
- Plastic Easter egg shell
- Short ruler, 12 inches or less
- Flour to fill the container to a depth of 4 inches
- 10 pennies for weight inside the egg
- Cloth/tarp under the container for easier cleanup

### DIRECTIONS:

Drop a weighted plastic egg into a tub of flour. Where/when do you see potential energy?

\_\_\_\_\_

Where/when do you see kinetic energy?

\_\_\_\_\_

Does dropping the egg from different heights have an effect on the size of the craters made in the flour? Use your ruler to measure the craters and record your observations.

\_\_\_\_\_

Alter the plastic egg's mass by adding pennies inside it. What effect does changing the egg's mass have on the size of the craters? Make a prediction:

\_\_\_\_\_

Did your predictions come true?

\_\_\_\_\_





**THE PARAMOUNT THEATRE** was built 104 years ago in 1915. Back then, Congress Avenue was a dirt road and the automobile was a new invention. As one of the first examples of early theatre architecture, the Paramount has been bringing Austin families together for generations. When you visit the theatre, you enter a place that feels exciting and welcoming. From your seat, you can almost reach out and touch the performers on stage! Many famous people have performed at the Paramount. From magician Harry Houdini to the premier of the original Batman movie, the Paramount and its audiences have seen it all over the past 100 years...here's to the next century!

# DISCOVERY SERIES

THEATRE FOR FAMILIES



Make unforgettable memories at the Paramount Theatre with your whole family. Tickets and subscriptions are available now! Visit:

[austintheatre.org/discovery](http://austintheatre.org/discovery)

## PARAMOUNT EDUCATION

We inspire the intellect and imagination of young people by providing opportunities to **experience, perform, and learn** through the arts. We can't wait to see you again at our theatre or in our school programs! Paramount Education programs are made possible through generous donations from our community. If you are interested in finding out more or want to make a contribution, please reach out to Natalie Seeboth at [nseeboth@austintheatre.org](mailto:nseeboth@austintheatre.org) or 512.233.0121. Thank you!

## THANK YOU TO OUR 2019-2020 EDUCATION PARTNERS

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**PARAMOUNT**  
EDUCATION

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[www.austintheatre.org/education](http://www.austintheatre.org/education)

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