
TIME
The Science of
Magic
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Table of Contents

Magic, Imagination, and Science 4
You Can't Believe Your Eyes 8
Sleight of Hand and Misdirection 18
Open Up Your Brain to a Mentalist 28
Lighter Than Air 36
Daring Physical Feats 46
Is Magic Real? 56
Glossary 58
Index 60
Check It Out! 62
Try It! 63
About the Author 64

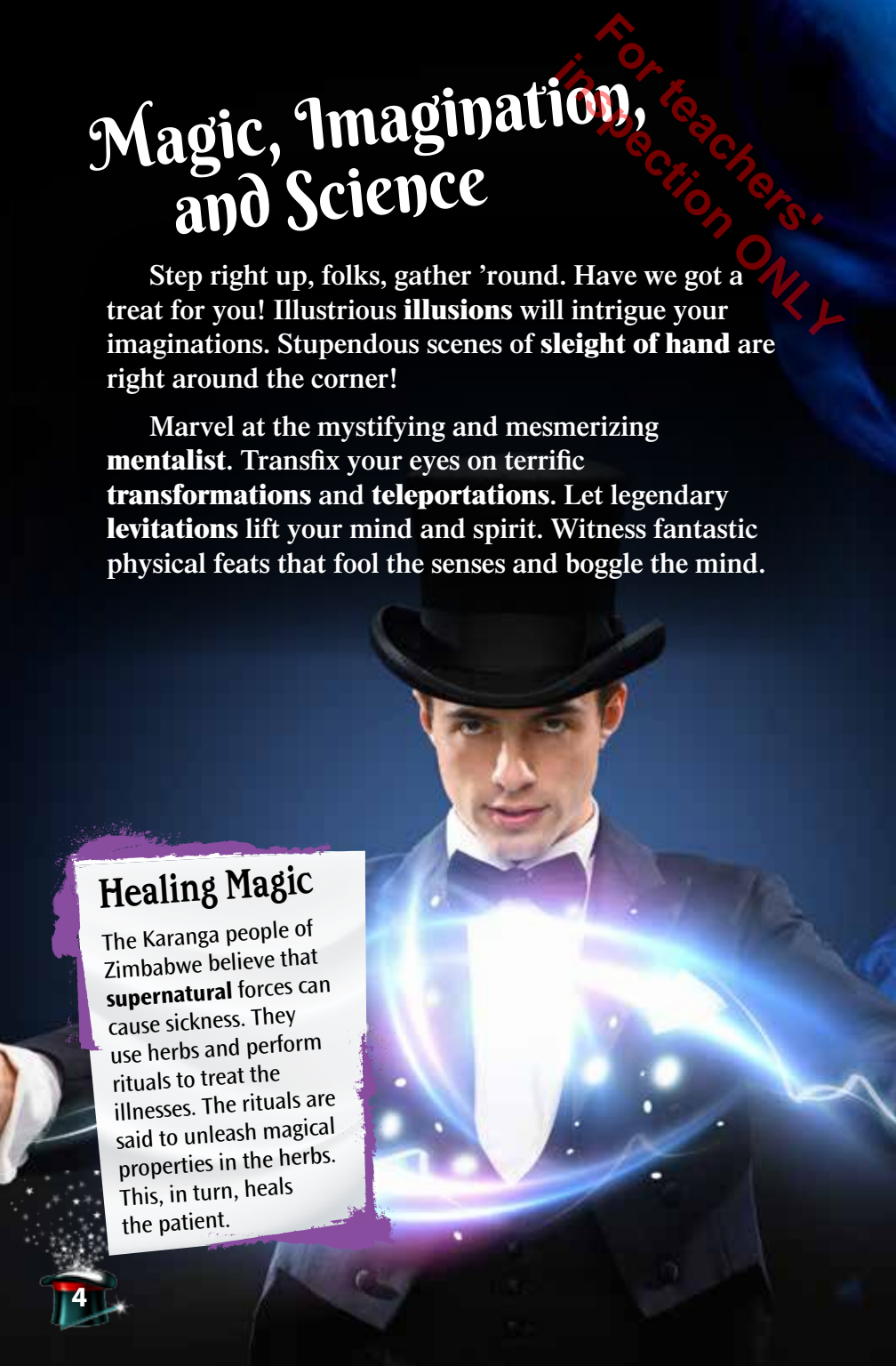
For teachers' inspection ONLY

Magic, Imagination, and Science

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Step right up, folks, gather 'round. Have we got a treat for you! Illustrious **illusions** will intrigue your imaginations. Stupendous scenes of **sleight of hand** are right around the corner!

Marvel at the mystifying and mesmerizing **mentalist**. Transfix your eyes on terrific **transformations** and **teleportations**. Let legendary **levitations** lift your mind and spirit. Witness fantastic physical feats that fool the senses and boggle the mind.



Healing Magic

The Karanga people of Zimbabwe believe that **supernatural** forces can cause sickness. They use herbs and perform rituals to treat the illnesses. The rituals are said to unleash magical properties in the herbs. This, in turn, heals the patient.

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The Magic of Myth and Legend

A prince flies a magic carpet high above an Arabian desert. A wizard places a sword inside solid stone. A magician folds a lake in half to find a lost amulet. Stories of great magic have been a part of almost every culture for thousands of years. But why? What is our collective fascination with magic? And is magic real or just myth and legend?

The Magician's Oath

The secrets behind magic tricks and illusions are closely guarded. In fact, magicians even swear an oath to prevent non-magicians from knowing how they create their magical acts.

"As a magician I promise never to reveal the secret of any illusion to a non-magician, unless that one swears to uphold the Magician,s Oath in turn. I promise never to perform any illusion for any non-magician without first practicing the effect until I can perform it well enough to maintain the illusion of magic."





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Our Limited Senses

Science is the study of our universe. We explore and experiment. We make observations and catalog our understandings. Our five senses help us understand what we observe. But there are things that we cannot observe with our senses. Scientific tools can help us expand our senses. Even with tools and invention, our understanding is limited.

Imagine you took your smartphone back in time to medieval England. The people of that time may look at the smartphone with fear and amazement. You may find yourself running for your life as they try to destroy the smartphone and you along with it! To them, your smartphone is magical and even supernatural.

Fooling Our Senses with Science

Magician Doug Henning was known to say, "The magic of today is the science of tomorrow!" Magicians through the ages have studied the limits of human senses. The illusions they perform work outside the range of those senses. Using science and technology, magicians and illusionists are able to fool our senses.

Career Spotlight—Illusion Designer

Magicians need a team of experts to help them craft large illusions. Do you want to make an elephant disappear or teleport across the room? Illusion designers are there to help. They use advanced algebra and geometry to affect the audience's perspective. They also design and build props and help the magician perform the illusions.

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The Power of a Story

It's not enough for a magician to create the props needed to perform an illusion. A magician also needs to lead the audience's attention. Through story and **patter**, or dialogue, an illusionist leads you to believe one thing while showing you another.



Doug Henning

You Can't Believe Your Eyes

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When it comes to illusions, you really cannot trust your eyes. A magician who has mastered illusion can make things appear and disappear at will. A magician can transform a man into a tiger or make a zebra's stripes vanish. Illusions bend our perception of reality and show us the amazing, the impossible, and the bizarre!

Lights, Camera, Apparition!

Magicians and illusionists have long used the properties of light to intrigue audiences. Imagine yourself sitting in a dark theater. A magician on the stage waves his arms in large, slow, circular movements. With the muscles in his face tensed, he says a few mysterious magic words in a commanding voice.

HSSSSS! A foggy mist floats across the floor and a shadowy figure materializes, staring straight at the audience! You gasp and almost leap out of your seat. The magician looks on in awe, as shocked as the audience. He has just produced a ghost!

The ghost floats gracefully across the stage, gives one last look at the audience, and vanishes. The audience erupts in applause.

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The Proteus Cabinet

The Proteus cabinet is a stage prop that uses mirrors to make people disappear. Inside a cabinet, two mirrors are set at angles against a pole so they reflect the sides of the cabinet. During the illusion, an assistant steps into the cabinet. The doors close, and the assistant hides behind the mirrors. When the cabinet is reopened, the assistant seems to have vanished.

Say the Magic Words

Some magicians say magic words to add mystery to their shows. "Abracadabra" is probably the most famous magic word. In the 1920s and '30s, the great magician, Dante, would say, "Sim sala bim" after performing illusions to draw applause from the audience.



Reader's Guide

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1. What classes might people need to take to become illusion designers? How would the classes make them better illusion designers?
2. Describe the most dangerous type of magic. How can magicians stay safe when performing this type of magic?
3. What is your favorite type of magic, and why?
4. The magician Teller says, "Laughter disables your ability to think critically." He and Penn use the audience's laughter as distractions in their performances. Explain other situations where laughter can be a distraction.

