

IT'S NOT
MAGIC
IT'S
SCIENCE

**BIRTHDAY BLAST
EXPERIMENT GUIDE**

EXPERIMENT

Fun experiments disguised as
a magic tricks!

EXPLANATION

Discover the science behind
the magic!

EXPLORATION

Bring the "magic" to life with
real world applications!

IN PARTNERSHIP WITH

SHPE
NOCHE de
CIENCIAS™

Interactive “family science nights” for high school students and families bring STEM to life. Imagine yourself in different STEM careers and discover what excites you. All the while, your parents learn how to support you in achieving these new found ambitions.



Diana Mogena
Industrial Engineer
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This is everything you will need in order to make the "magic" happen!

EXPERIMENT INSTRUCTIONS - PAGE 4

Now that you've gathered all your materials we will guide you through the process to bring the science magic to life!

EXPLANATION - PAGE 5

Wow that was cool! Now let's learn how it works.

EXPLORATION - PAGE 6

Now that you know the science behind the magic it's your turn to share cool ideas of how we can use it to make the world a better or cooler place!



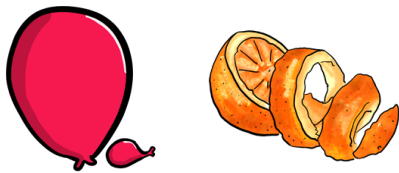
EXPERIMENT

Birthday Blast

MATERIALS

Balloon

Orange Peel



SAFETY

- This experiment may require the use of a knife or cutting tool. Adult supervision required!
- This experiment involves a loud noise. Warn your family and try to avoid completing this experiment around pets.

WATCH (OPTIONAL)

Scan the QR Code below or visit www.jayfloresinspires.com/blog/magicsciencekit to watch "It's Not Magic, It's Science" hosts Jay Flores and Diana Mogena conduct the Birthday Blast experiment!



EXPERIMENT

Birthday Blast

INSTRUCTIONS

1. Gather all of your materials from the equipment list and set up a safe space to conduct the experiment
2. Inflate and tie your balloon as large as you feel you can without popping it
3. With adult supervision or support slice an orange and remove $\frac{1}{4}$ of the peel
4. Squeeze the orange peel in your hand very close to the balloon without touching it (you will notice a small amount of liquid landing on the balloon)
5. Continue squeezing the liquid from the orange peel until the balloon pops
6. Remind everyone that "It's Not Magic, It's Science!"

Tips: Try to find an orange with a thick peel. The more you inflate the balloon the better this experiment will work.



EXPLANATION

Birthday Blast

"MAGIC" REVEAL - HOW IT WORKS

We hope you enjoyed our Birthday Blast experiment! You were able to "magically" pop a balloon with an orange peel!

So how did we do it? Remember, it's not magic, it's science! It looks like you didn't even touch the balloon but there was a liquid making contact with it.

When you squeeze the orange peel the liquid you see spraying onto the balloon contains a hydrocarbon called limonene. When it comes into contact with the rubber balloon which is also a hydrocarbon it begins to dissolve it. The area that is dissolving gets thin enough to the point that the air pressure in the balloon causes it to pop!

BRING THE "MAGIC" TO LIFE

Now that you know the science behind the magic how do you think we can apply this science to solve real life problems? Use the following exploration pages to start bringing your ideas to life!



ABOUT SHPE

Organization Overview

SHPE is the nation's largest association dedicated to fostering Hispanic leadership in the STEM field.

Mission

SHPE changes lives by empowering the Hispanic community to realize its fullest potential and to impact the world through STEM awareness, access, support, and development.

Vision

SHPE's vision is a world where Hispanics are highly valued and influential as the leading innovators, scientists, mathematicians, and engineers.

SHPE Jr.

Starting early is the key to successfully exploring a future in Science, Technology, Engineering or Mathematics. If you're a high school student, and you think STEM might be the path for you, join a SHPE Jr. Chapter today. If your school doesn't have one, let's start one together!

