

VeggieTales

THE LEAGUE OF INCREDIBLE VEGETABLES

SCIENCE GUIDE



SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything when performing any experiment.
- **REMEMBER** experiments may require small parts. Those objects could become a **CHOKING HAZARD**. Adults are to perform those experiments using these objects.

MOVIE PLOT

It was a bright and sunny day in Bumblyburg...until Dr. Flurry came to town. This chillin' villain wants to freeze the entire city...in fear! This job is too big for LarryBoy to handle alone, so he turns to the "League of Incredible Vegetables" for help! Thingamabob (Bob the Tomato), S-Cape (Mr.Lunt), Vogue (Petunia Rhubarb), and Ricochet (Junior Asparagus) are up for the task, but find that their own fears could land them in Dr. Flurry's deep freeze! Will they remember to turn to the One who is bigger than all their fears before the whole town ends up on ice?

SCIENCE WORDS

When introducing new vocabulary words, write each word somewhere in the classroom for students to observe, pronounce the word, explain its meaning, and encourage students to apply and elaborate on the new science word.

GOD GIVES US STRENGTH EXPERIMENT VOCABULARY

Air - Air is the mixture of gases that surrounds the earth.

High Pressure System - A high-pressure system or an anticyclone is an area where the air diverges and sinks. A high-pressure system usually brings clear skies.

Low Pressure System - A low-pressure system or cyclone is an area where the air converges and rises. A low-pressure system usually brings precipitation.

THE ULTIMATE FORECASTER VOCABULARY

Cloud - A cloud is millions of tiny water droplets or ice crystals suspended in the air.

Condensation - Condensation occurs as water vapor cools and turns into drops of water.

MOVIE WEBSITE

www.veggietales.com/league



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THE LEAGUE OF INCREDIBLE VEGETABLES

EXPERIMENT



THE ULTIMATE SCIENTIST

MOVIE CONNECTION

Dr. Flurry, the mad scientist plans to freeze the entire city of Bumblyburg. The Bible says, God controls all weather and by the end of the movie we learn God is the ultimate scientist.

WHAT THE BIBLE SAYS

Exodus 9:29 *Moses replied, "When I have gone out of the city, I will spread out my hands in prayer to the Lord. The thunder will stop and there will be no more hail, so you may know that the earth is the Lord's."*

HANDS-ON EXPERIMENT

Cloud in a Bottle

Ingredients

- 2-liter Clear Plastic Bottle
- Water
- Matches

Instructions

STEP 1: Add a small amount of water into the bottom of the plastic bottle.

STEP 2: Light a match, place the burning match into the bottle, and quickly screw the top on the plastic bottle.

STEP 3: Squeeze and release the plastic bottle several times.

Explanation

When the plastic bottle is released the pressure and temperature decrease, which allows water vapor to condense on the smoke particles. When this occurs a cloud is created.

Bible Connection

Although we were able to create a cloud by using a specific set of ingredients and instructions, God controls all weather and is the ultimate scientist.



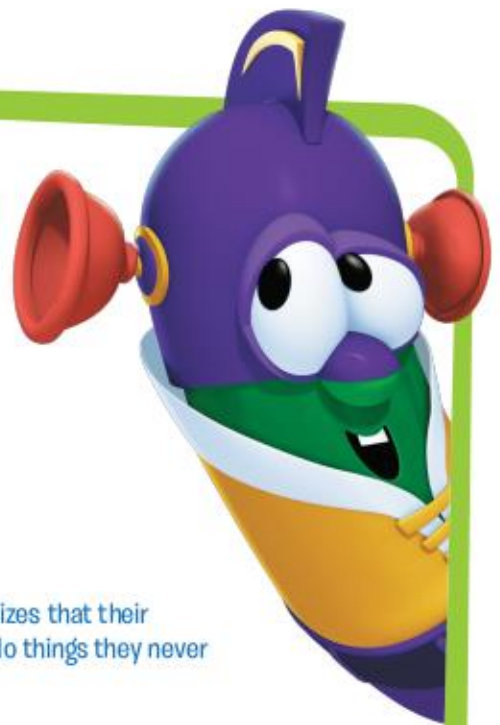
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THE LEAGUE OF INCREDIBLE VEGETABLES

EXPERIMENT



GOD GIVES US STRENGTH

MOVIE CONNECTION

In an effort to save the city from Dr. Flurry, the League of Incredible Vegetables realizes that their true strength is not in their super-abilities. They learn God gives them strength to do things they never imagined.

WHAT THE BIBLE SAYS

Job 5:9 *He performs wonders that cannot be fathomed, miracles that cannot be counted.*

HANDS-ON EXPERIMENT

Soaring Toilet Paper

Ingredients

- Leaf Blower
- Toilet Paper
- Dowel Rod

Instructions

STEP 1: Place the toilet paper on the dowel rod and unroll a few pieces of tissue.

STEP 2: Hold the dowel rod horizontally so the roll will unroll away from you.

STEP 3: Turn on the leaf blower and aim the stream of air over the top surface of the roll of toilet paper.

Explanation

Bernoulli's Principle states that the pressure exerted by a fluid decreases as its velocity increases. Increasing the velocity over the top surface of the toilet paper lowers the pressure of the air pushing down on the paper. The paper is lifted because there is now an unbalanced force of air pressure acting upward.

Bible Connection

Just as the strong air flowing from the leaf blower gives strength to the toilet paper, God gives us strength to do things we never imagined.



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QUIZ



**COMPLETE EACH SENTENCE
WITH THE CORRECT SCIENCE WORD(S).**

CLOUD

AIR

LOW PRESSURE SYSTEM

HIGH PRESSURE SYSTEM

CONDENSATION

1. _____ occurs as water vapor cools and turns into drops of water.
2. A _____ or an anticyclone is an area where the air diverges and sinks.
3. A _____ is millions of tiny water droplets or ice crystals suspended in the air.
4. _____ is the mixture of gases that surrounds the earth.
5. A _____ or cyclone is an area where the air converges and rises.

Match each Incredible Vegetable to their correct super ability.

- | | |
|---------------------|---|
| 1. ____ LarryBoy | a. Quick change into outfits for any situation! |
| 2. ____ S-Cape | b. Can get out of any situation (even chores)! |
| 3. ____ Ricochet | c. Turbo-bouncing. |
| 4. ____ Vogue | d. Amazing with gadgets and doo-dads. |
| 5. ____ Thingamabob | e. Super suction ears. |



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