COOL SCHOOL COMICS

Thank You!

PUKING PUMPKINS

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Contact Person:

Laura L. Balliett

coolschoolcomic@gmail.com

www.coolschoolcomics.com

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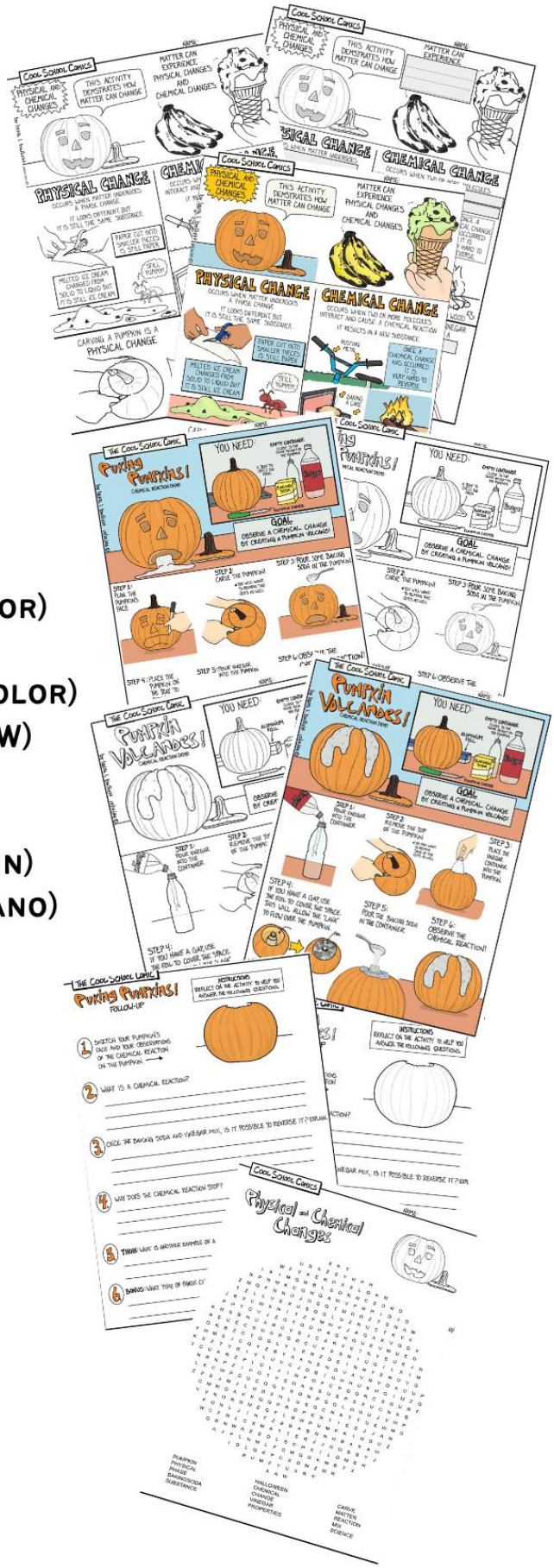
TABLE OF CONTENTS

PUKING PUMPKINS



COOL SCHOOL COMICS

Puking Pumpkins Lab

Teacher Tips!

The goal of a Halloween demo is to review physical and chemical changes of matter in a fun and spooky way!

You can use **THIS VIDEO** as a visual how-to

Physical & Chemical Change Review Comic-

- This is a spin-off of the **Properties of Matter Lesson Plan**
- Use this comic to review content before the demo
- The Doodle Notes are provided to enable learners to follow along

Visual Instructions-

- I have provided two formats: the "puking" version and the "volcano" version. This allows you some flexibility to meet the needs and maturity level of your class.
- I tend to use the puking pumpkins because I teach middle school 🙃
- These instructions will make it easy for every student to engage in the activity.

Demo Prep-

- I have always prepped the pumpkin before the demo/lab, meaning the pumpkin is already gutted when it reaches the hands of my students (middle schoolers are far too messy!)
- If you do plan to have each student/team carve the pumpkin in class, perhaps have them bring a gutted pumpkin from home.
- Pre-measure the two ingredients beforehand to avoid overuse

Predictions-

- Have students make predictions as a class and build excitement for the demo

Follow-up Questions-

- Once the demo is complete, learners can complete these questions
- This will help them tie the demo back to the content

.**Word Search**-

- Great for early finishers or an extension if you have extra classtime.

COOL SCHOOL COMICS

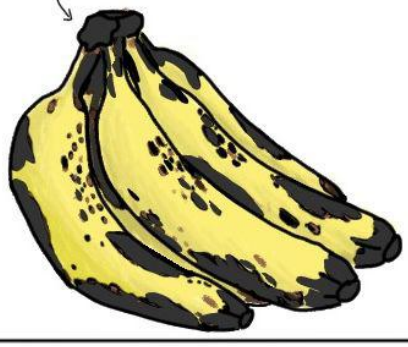
NAME:

PHYSICAL AND CHEMICAL CHANGES

by laura l. ballett 09/14/24 ©

THIS ACTIVITY DEMSTRATES HOW MATTER CAN CHANGE

MATTER CAN EXPERIENCE PHYSICAL CHANGES AND CHEMICAL CHANGES.



PHYSICAL CHANGE

OCCURS WHEN MATTER UNDERGOES A PHASE CHANGE

IT LOOKS DIFFERENT, BUT IT IS STILL THE SAME SUBSTANCE.

PAPER CUT INTO SMALLER PIECES IS STILL PAPER

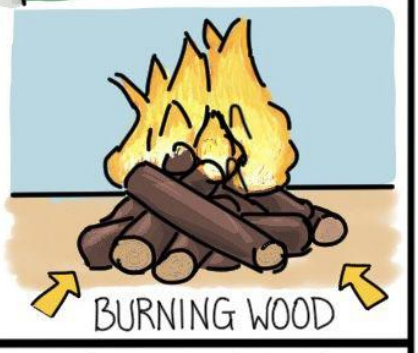
MELTED ICE CREAM CHANGED FROM SOLID TO LIQUID BUT IT IS STILL ICE CREAM.

CHEMICAL CHANGE

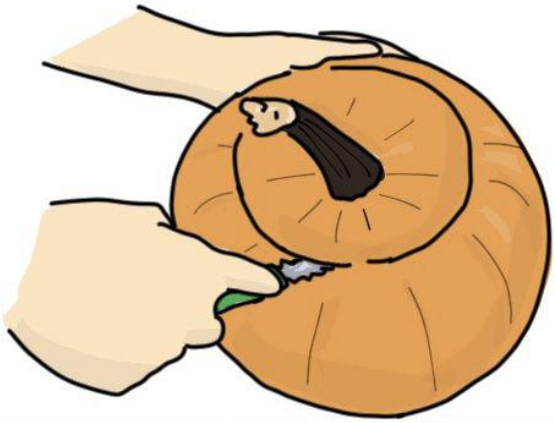
OCCURS WHEN TWO OR MORE MOLECULES INTERACT AND CAUSE A CHEMICAL REACTION

IT RESULTS IN A NEW SUBSTANCE.

ONCE A CHEMICAL CHANGE HAS OCCURRED IT IS VERY HARD TO REVERSE.



CARVING A PUMPKIN IS A PHYSICAL CHANGE.



WHEN BAKING SODA AND VINEGAR COMBINE IT RESULTS IN A CHEMICAL CHANGE.

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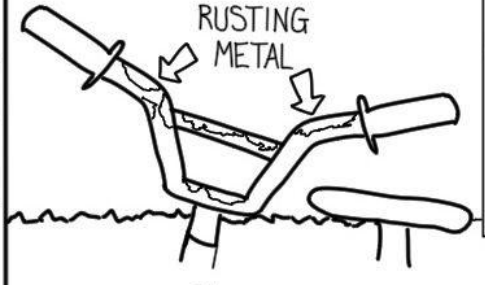

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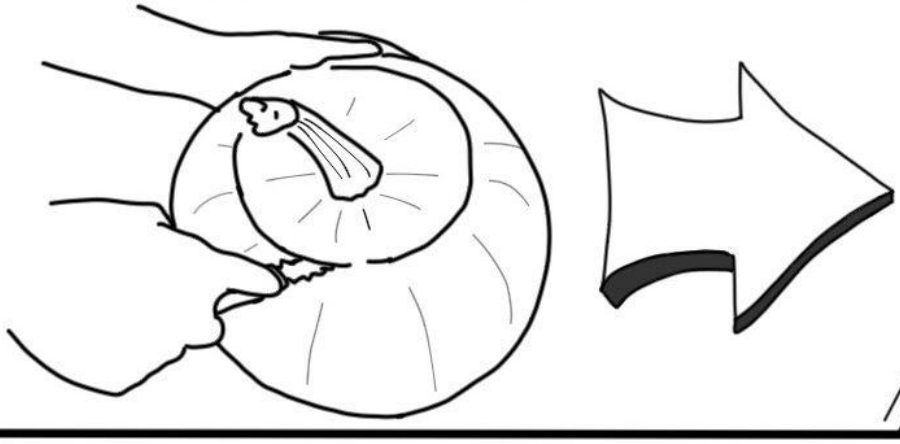

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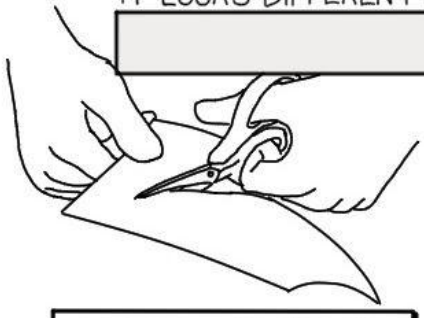

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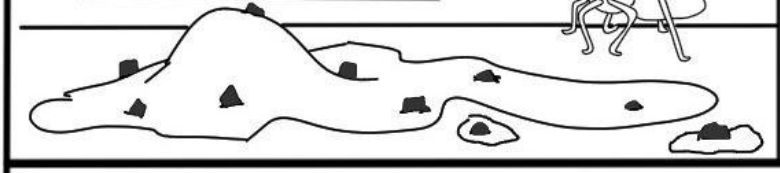
MELTED ICE CREAM CHANGED FROM SOLID TO LIQUID BUT IT IS STILL ICE CREAM.

STILL YUMMY!



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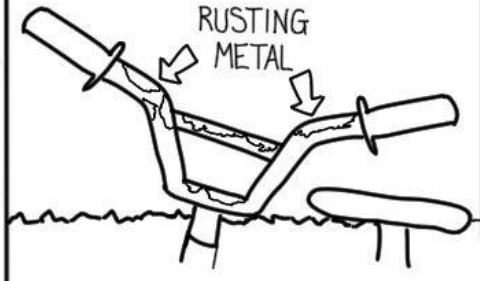

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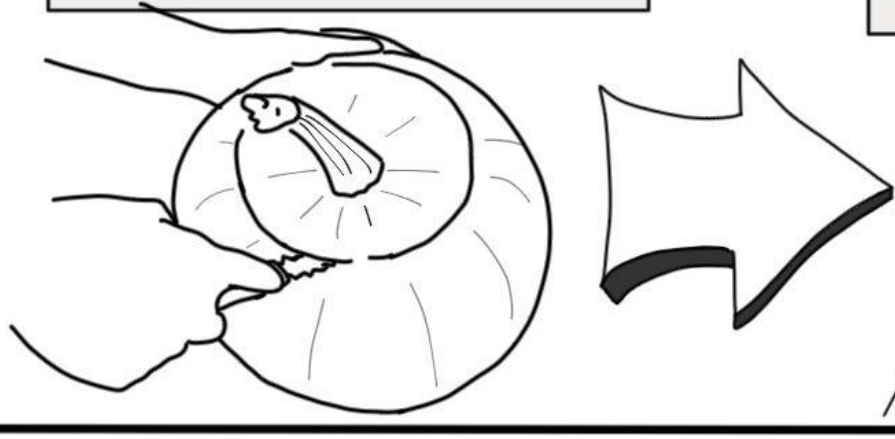

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THE COOL SCHOOL COMIC

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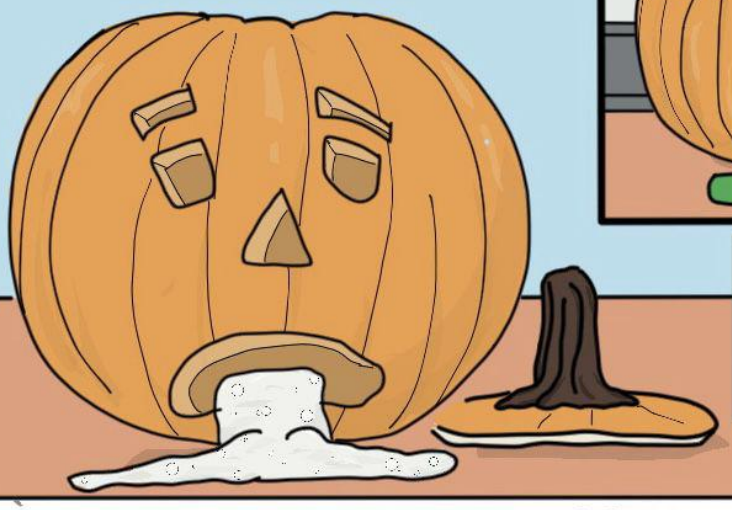
PUKING PUMPKINS!

CHEMICAL REACTION DEMO

by laura l. ballieth 10/21/22 ©



YOU NEED:

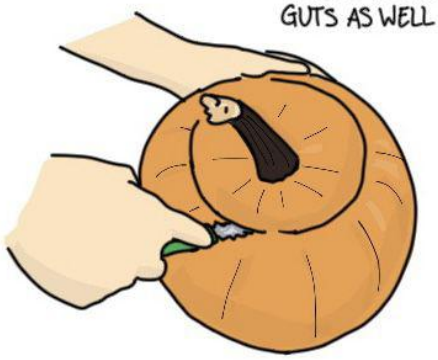
GOAL

OBSERVE A CHEMICAL CHANGE BY CREATING A PUMPKIN VOLCANO!

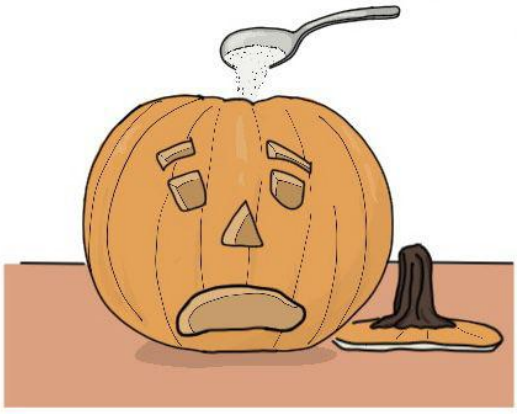
STEP 1: PLAN THE PUMPKIN'S FACE

STEP 2: CARVE THE PUMPKIN!

*YOU WILL WANT TO REMOVE THE GUTS AS WELL



STEP 3: POUR SOME BAKING SODA IN THE PUMPKIN.



STEP 4: PLACE THE PUMPKIN ON THE TRAY TO CATCH THE MESS.

STEP 5: POUR VINEGAR INTO THE PUMPKIN

STEP 6: OBSERVE THE CHEMICAL REACTION!

THE COOL SCHOOL COMIC

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by laura l. ballicht 10/2/22 ©

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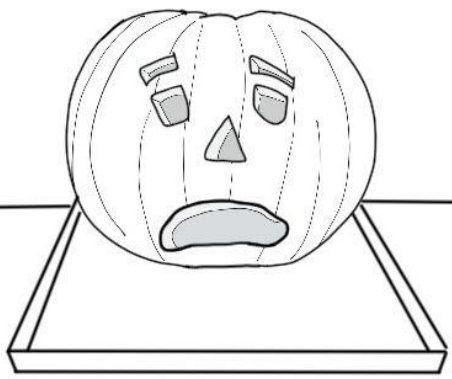
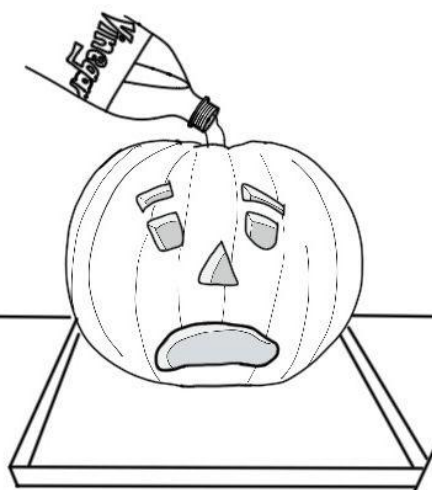


STEP 5: POUR VINEGAR INTO THE PUMPKIN



STEP 6: OBSERVE THE CHEMICAL REACTION!

THE COOL SCHOOL COMIC

NAME:

PUMPKIN VOLCANOES!

CHEMICAL REACTION DEMO

by laura l. ballicht 10/12/22 ©

YOU NEED:

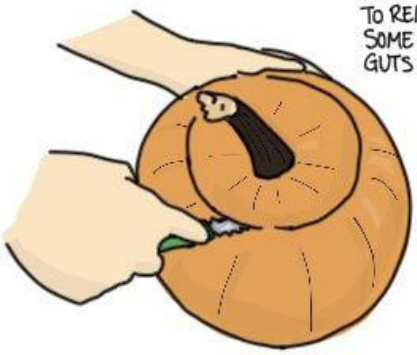
GOAL

OBSERVE A CHEMICAL CHANGE BY CREATING A PUMPKIN VOLCANO!

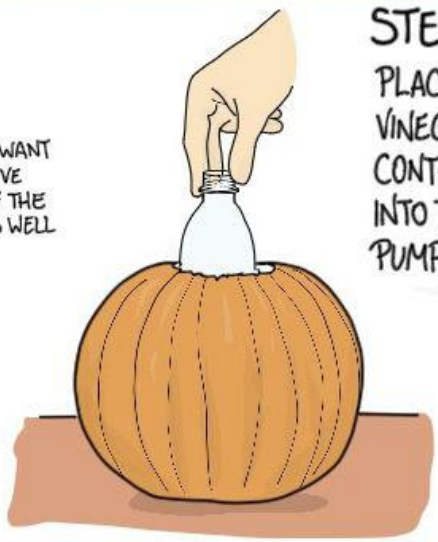
STEP 1: POUR VINEGAR INTO THE CONTAINER

STEP 2: REMOVE THE TOP OF THE PUMPKIN

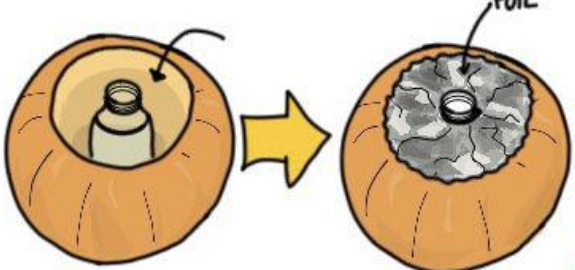
*YOU MAY WANT TO REMOVE SOME OF THE GUTS AS WELL



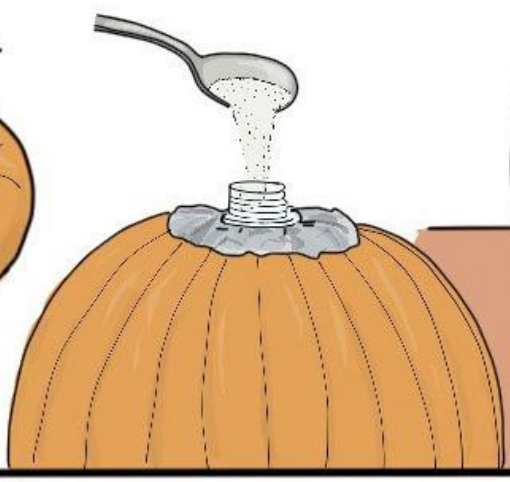
STEP 3: PLACE THE VINEGAR CONTAINER INTO THE PUMPKIN.



STEP 4: IF YOU HAVE A GAP, USE THE FOIL TO COVER THE SPACE. THIS WILL ALLOW THE "LAVA" TO FLOW OVER THE PUMPKIN.



STEP 5: POUR THE BAKING SODA IN THE CONTAINER.



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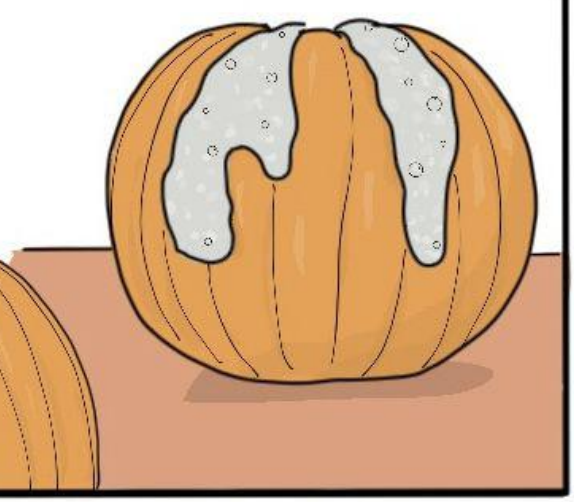

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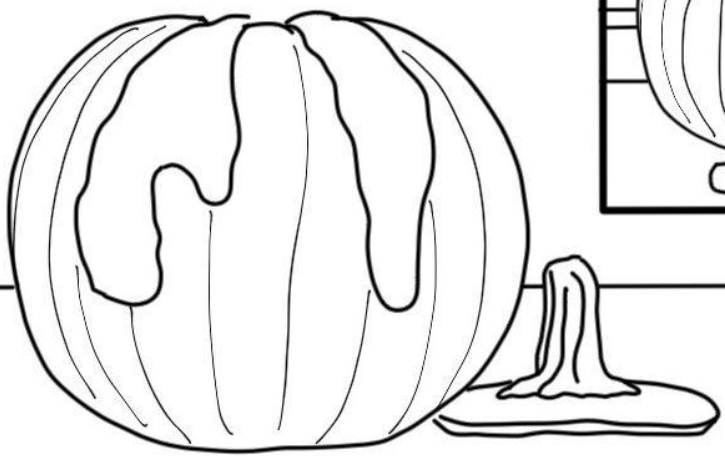

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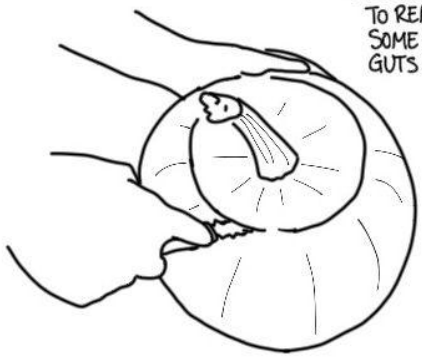
GOAL

OBSERVE A CHEMICAL CHANGE BY CREATING A PUMPKIN VOLCANO!

STEP 1: POUR VINEGAR AND FOOD COLORING INTO THE CONTAINER

STEP 2: REMOVE THE TOP OF THE PUMPKIN

*YOU MAY WANT TO REMOVE SOME OF THE GUTS AS WELL



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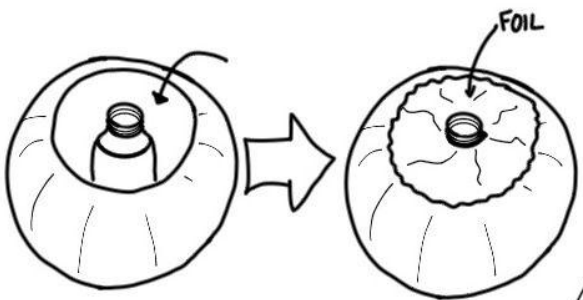

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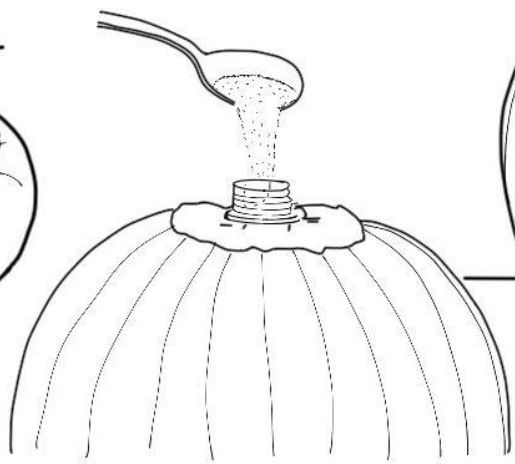

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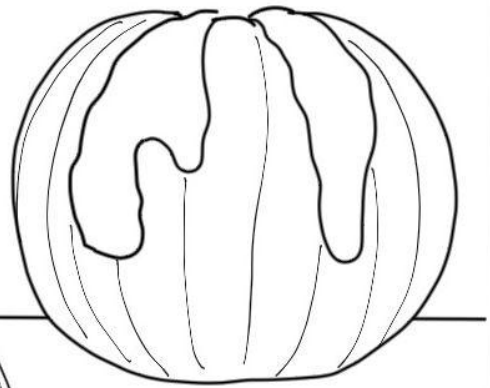

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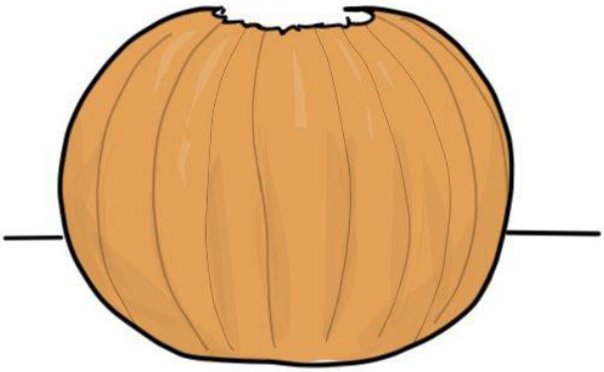
PUKING PUMPKINS!

FOLLOW-UP

INSTRUCTIONS
REFLECT ON THE ACTIVITY TO HELP YOU ANSWER THE FOLLOWING QUESTIONS.



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2. WHAT IS A CHEMICAL REACTION?

3. ONCE THE BAKING SODA AND VINEGAR MIX, IS IT POSSIBLE TO REVERSE IT? EXPLAIN.

4. WHY DOES THE CHEMICAL REACTION STOP?

5. **THINK**: WHAT IS ANOTHER EXAMPLE OF A CHEMICAL REACTION? (NOT WITH THE PUMPKIN)

6. **BONUS**: WHAT TYPE OF PHASE CHANGE OCCURS WHEN THE PUMPKIN IS CARVED? EXPLAIN.

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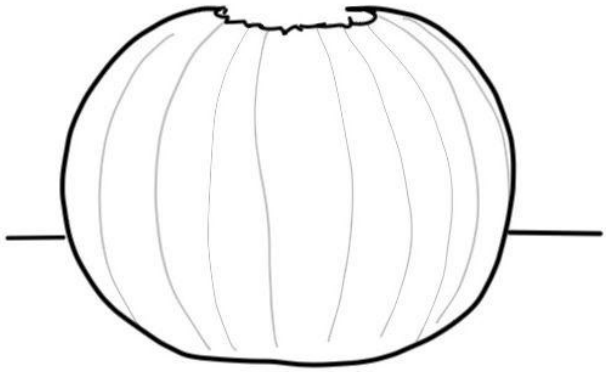

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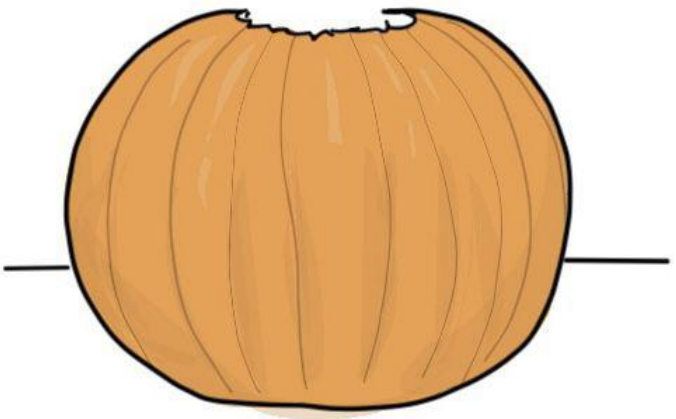

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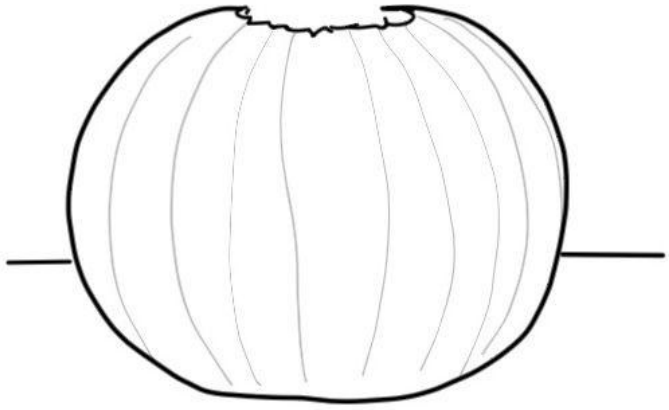

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NAME:

Physical and Chemical Changes

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

PUMPKIN
PHYSICAL
PHASE
BAKINGSODA
SUBSTANCE

HALLOWEEN
CHEMICAL
CHANGE
VINEGAR
PROPERTIES

CARVE
MATTER
REACTION
MIX
SCIENCE

COOL SCHOOL COMICS

NAME: KEY

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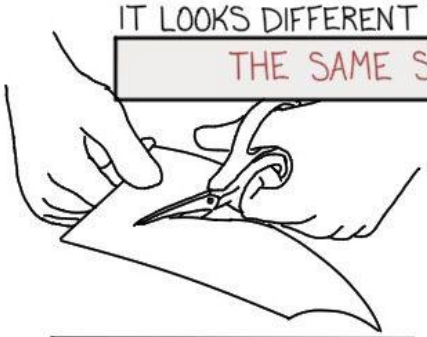

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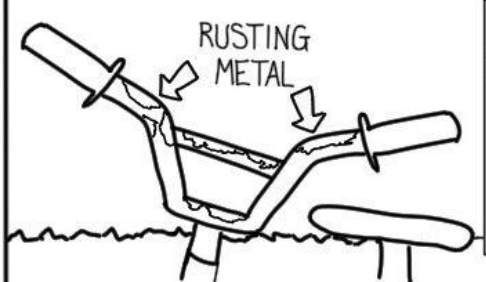

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THE COOL SCHOOL COMIC

NAME: KEY

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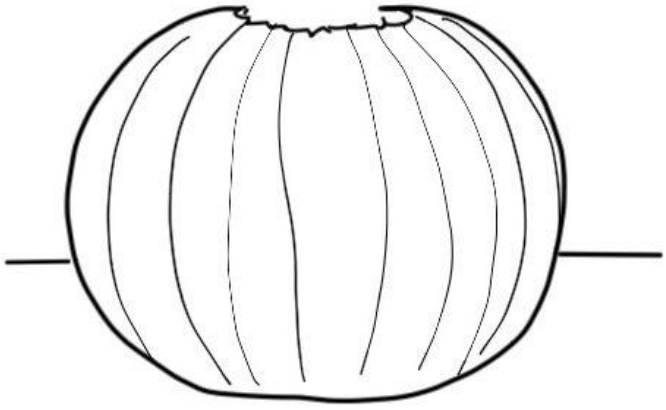
INSTRUCTIONS
REFLECT ON THE ACTIVITY TO HELP YOU ANSWER THE FOLLOWING QUESTIONS.



1. SKETCH YOUR OBSERVATIONS OF THE CHEMICAL REACTION ON THE PUMPKIN. →

2. WHAT IS A CHEMICAL REACTION?

A CHEMICAL REACTION IS WHEN ONE OR MORE SUBSTANCES ARE CONVERTED TO ONE OR MORE DIFFERENT SUBSTANCES.

3. ONCE THE BAKING SODA AND VINEGAR MIX, IS IT POSSIBLE TO REVERSE IT? EXPLAIN.

NO. IT IS NOT POSSIBLE BECAUSE IT IS A CHEMICAL CHANGE. THE MOLECULES HAVE BEEN PERMINENTLY ALTERED

4. WHY DOES THE CHEMICAL REACTION STOP?

THE CHEMICAL REACTION STOPS BECAUSE ALL OF THE "FUEL" IS USED UP.

5. **THINK**: WHAT IS ANOTHER EXAMPLE OF A CHEMICAL REACTION? (NOT WITH THE PUMPKIN)

ANSWERS WILL VARY → RUST, BAKING A CAKE, ROTTING FOOD, BURNING SOMETHING, ETC.

6. **BONUS**: WHAT TYPE OF PHASE CHANGE OCCURS WHEN THE PUMPKIN IS CARVED? EXPLAIN.

IT IS A PHYSICAL CHANGE BECAUSE IT IS STILL THE SAME SUBSTANCE.

COOL SCHOOL COMICS

NAME: KEY

Physical and Chemical Changes

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

HALLOWEEN
CHEMICAL
CHANGE
VINEGAR
PROPERTIES

CARVE
MATTER
REACTION
MIX
SCIENCE

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THANK YOU!

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