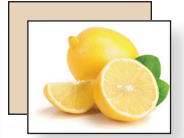


kids' kreation



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95

ACID, ACIDS EVERYWHERE

Jesus uses acids to reveal His character

Venus rains sulfuric acid. This reflects God's **holiness** because no one can stand on Venus, or before a holy God, without protection!

Jesus put a number of mild acids in oranges to keep you healthy. These include ascorbic acid (Vitamin C), citric acid, and two B vitamins—pantothenic and folic acid. This shows His **goodness**.



Venus



The hydrangea bush radiates the rainbow of Christ's **beauty**. If grown in acidic soil, hydrangea flowers are blue, but are pink in alkaline or basic soil.



Hydrangea flowers

The Lord keeps the acid level in lakes quite stable, showing **compassion** to His creatures!

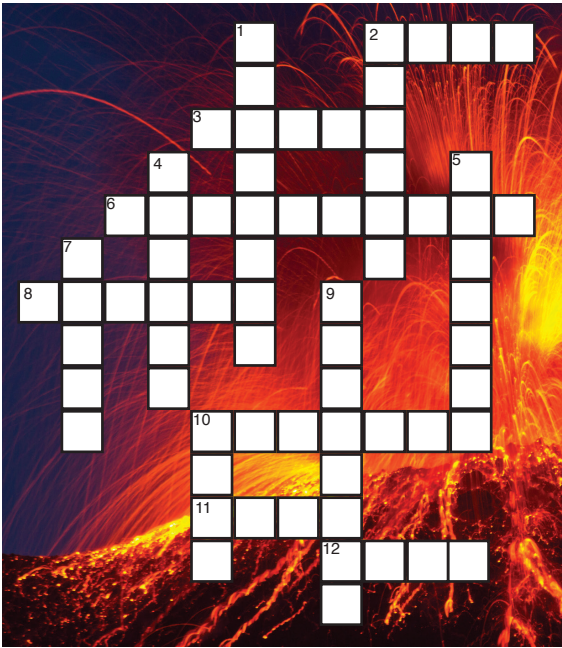


CORROSIVE MATERIALS,
WEAR REQUIRED
PROTECTION

Jesus **protects** bees by giving them an acidic sting with which to defend themselves.

Acid can eat through metal. This ability displays the **power** of an almighty God!

girl eating orange—© JBryson/iStockphoto
Venus—© JAXA / ISAS / DARTS / Damia Bouic
fish—© Willard/iStockphoto
Hydrangea—© IvonneW/iStockphoto
warning sign—PrintableSigns.net
bee—© marima-design/iStockphoto
volcano—© AZ68/iStockphoto



CROSSWORD

Answers to CROSSWORD found in *kids' kreation* #94

Across: 4. LEAVES 6. RAPIDLY
7. COOLER 8. RELEASE
9. PANTING 10. SHIELD

Down: 1. ESTIVATION
2. EVAPORATION 3. FLUTTERING
5. ENDOTHERMS

The words used in the CROSSWORD are taken from the articles found in **CREATOR** Volume 23 Number 3.

FAMILY ACTIVITIES: Acid/Base Indicators

With an adult's help, you can use household materials to make **acid/base indicators**; that is, liquids that **indicate** whether something is an **acid** or a **base**. BE CAREFUL, these indicators can STAIN!

A Curry Slurry

Mix ½ teaspoon (2.5 ml) of curry (turmeric) powder with ½ cup (125 ml) rubbing alcohol in a clean glass. Next, add a chemical you suspect is a base, like baking soda. Bases turn the curry solution from **yellow** to **purplish brown**.

The Red Head

Place one cup (250 ml) of finely chopped red cabbage in a blender with two cups (500 ml) water. Blend vigorously for one minute, then pour through a strainer, keeping the **red-violet** juice. Divide the juice into 3 or more clear containers. Add something you suspect is an acid or base to each container—like vinegar, lemon juice, or baking soda. Acids turn cabbage juice **pink** or **red**, while bases change its color to **blue** or **purple**.

Paper Caper

Use the litmus paper strips attached to page 4 of **CREATOR** Volume 23 Number 3 to test different household solutions to see if they are an acid or a base. (Be sure to check with an adult before testing a solution.) Acids change litmus to **pink**; bases turn litmus **blue**.

Down

1. "Cl" is the symbol for _____ .
2. "Na" is the symbol for _____ .
4. Most living things need a fairly neutral or _____ pH in order to survive.
5. Hot springs and _____ have a pH as low as 2.
7. Fish are very sensitive to the pH of the _____ in which they live.
9. Volcanoes produce hydrochloric and _____ acids.
10. A _____ is a chemical whose pH is greater than 7.

Across

2. "You are the _____ of the Earth."
3. Our _____ is a very mild base.
6. Acids and bases reflect the _____ of our wonderful Lord Jesus.
8. "C" is the symbol for _____ .
10. Our Lord Jesus uses _____ to keep the pH of the ocean, a lake or stream, and our blood stable.
11. Acids have a _____ taste.
12. An acid forms _____ in water.

WORD SEARCH



WORD BANK

- | | |
|-----------|------------|
| ACIDS | LABORATORY |
| BASES | LEMON |
| BEAUTY | LITMUS |
| BITTER | LYE |
| CARBON | NEUTRAL |
| CHEMICALS | OXYGEN |
| CITRUS | SALT |
| HYDROGEN | SOUR |

S A L T B E A U T Y
L E M O N S O U R H
A S H X L E A O L B
C A S Y O R T S I R
I N E B D A U T T O
M O S E R R T I M X
E B A O T E O S U Y
H R B I R A E G S G
C A C I D S U R E E
L C A L A R T U E N