



## Chemistry Rocks!



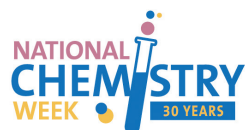
Images courtesy American Chemical Society

### Mini Fact:

This is the 30th year for National Chemistry Week.

Look all around you — at your desk, your backpack, the walls of your room, even at your classmates. Every single thing we see is made up of chemicals.

**Chemistry** is the study of **matter** — the materials around us and the changes they go through. In fact, some people call chemistry the “central science” because it’s the basis of every other science.



The American Chemical Society is celebrating National Chemistry Week, Oct. 22-28. The Mini Page joins in by finding out more about the science of chemistry.

### Chemistry is everywhere

Think about how your body gets fuel to keep it going. You eat food (made of chemicals), which is then digested (by chemicals in your stomach) and changed into various other chemicals that are needed by your body to nourish it and keep you warm.

Will you burn wood in a fireplace this winter? Fire is a chemical reaction between oxygen, heat and a fuel (wood).

When you cook or bake, you are causing a chemical reaction. For example, a cake batter starts out as a thick liquid, but after you bake it, it’s a solid. Those bubbles in a cake’s surface or in bread are made by carbon dioxide (CO<sub>2</sub>), which is created when yeast eats sugars and breaks them down.

### Controlling nature

Human beings can make changes to things in nature by using chemistry. We can burn fuel to cause a car to run. We can develop medicines that heal illnesses. We can clean our clothes with detergents made from chemicals.

### Why study chemistry?

Would you like to be a chemist? This year’s National Chemistry Week theme is “Chemistry Rocks!” It’s all about **geochemistry** — the chemistry of geological substances, such as rocks (which can melt in a volcano and become lava), soils and caves.



Other chemists study **textiles**, developing new fabrics that repel stains or keep us cool during exercise. People in the chemistry field may work on new medicines to help cure diseases. **Forensic** chemists work in labs to help solve crimes.

Chemistry is very important in finding new sources of energy and cleaning up environmental disasters. Chemists may also study the health risks of working with hazardous materials and discover ways to protect people who work in mines or with pesticides.

Some chemists study colors, dyes and paints to develop products that will hold up longer and adhere better to walls or other surfaces.

### Safety in science

Science teachers love to share experiments and observations with students. But the first thing they’ll teach is safety.

Scientists have to make choices about which containers to store certain materials in, and which chemicals can be safely combined with other chemicals. For example, nail polish remover, or **acetone**, can be stored in plastic, but it will eat through styrofoam. Hydrofluoric acid, which is used to etch glass, must be stored in plastic containers.

**Bleach** and **ammonia** can be dangerous and should be stored properly to avoid unpleasant reactions.

### Safety rules

• Teachers may ask students and others in the classroom to wear **goggles** whenever they’re doing experiments.



- A lab **apron** or smock will protect your clothes from splashing materials.
- **Gloves** should be used when handling dry ice or plants or chemicals that cause reactions on skin.

### Resources



#### On the Web:

- [bit.ly/MPchemweek](http://bit.ly/MPchemweek)
- [bit.ly/MPchemistry](http://bit.ly/MPchemistry)

#### At the library:

- “Chemistry: Investigate the Matter That Makes Up Your World” by Carla Mooney

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## Try 'n' Find

Words that remind us of chemistry are hidden in this puzzle. Some words are hidden backward, and some letters are used twice. See if you can find:



ACETONE, AMMONIA,  
BLEACH, CHANGES,  
CHEMISTRY, CONTAINER,  
ENERGY, FORENSIC, GAS,  
GEOLOGICAL, GLOVES,  
GOGGLES, MATERIALS,  
MATTER, NATURE,  
REACTION, SAFETY,  
SCIENCE, TEXTILES.

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

## Cook's Corner

### Chicken Fingers With Almond 'Nails'

#### You'll need:

- cooking spray
- 1 pound boneless, skinless chicken breasts, cut into thin strips
- salt and ground black pepper

- 1 tablespoon honey mustard
- 1/4 cup sliced, blanched almonds



#### What to do:

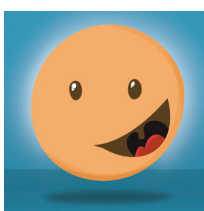
1. Preheat oven to 400 degrees. Coat large baking sheet with cooking spray.
2. Season chicken strips with salt and pepper and arrange on baking sheet.
3. Brush honey mustard all over top of each chicken strip. Arrange a sliced almond on the end of each chicken finger, making a “fingernail.”
4. Bake chicken for 20 minutes or until cooked through and golden brown. Makes 4 servings.

Adapted from “The Robin Takes 5 Cookbook for Busy Families” with permission from Andrews McMeel Publishing ([andrewsmcmeel.com](http://andrewsmcmeel.com)).

\* You'll need an adult's help with this recipe.

## 7 Little Words for Kids

Use the letters in the boxes to make a word with the same meaning as the clue. The numbers in parentheses represent the number of letters in the solution. Each letter combination can be used only once, but all letter combinations will be necessary to complete the puzzle.



1. grown-up (5) \_\_\_\_\_
2. small, red fruit (6) \_\_\_\_\_
3. cutting part of a knife (5) \_\_\_\_\_
4. where food is digested (7) \_\_\_\_\_
5. soup scooper (5) \_\_\_\_\_
6. what you shave with (5) \_\_\_\_\_
7. fuel for the car (8) \_\_\_\_\_

ER	SO	STOM	LE
ADU	ACH	DE	RA
CH	GA	LAD	RY
ZOR	BLA	LINE	LT

Answers: adult, cherry, blade, stomach, ladle, razor, gasoline.

## Mini Jokes



**Joe:** Why did Hydrogen marry Carbon?

**Jim:** Because they bonded so well!

## Eco Note



Two hippos came to the rescue of a wildebeest whose leg was caught in the mouth of a crocodile in South Africa’s Kruger National Park. The hippos watched the scene for a while and then rushed the croc, causing it to lose its grip on the wildebeest’s leg.

adapted with permission from Earthweek.com

## Thank You



The Mini Page thanks Andrew Jorgensen, retired associate professor of general chemistry at the University of Toledo, and Sally Mitchell, high school chemistry teacher in Rye, New York, for help with this issue.

**Teachers:** For standards-based activities to accompany this feature, visit: [bit.ly/MPstandards](http://bit.ly/MPstandards). And follow The Mini Page on Facebook!



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