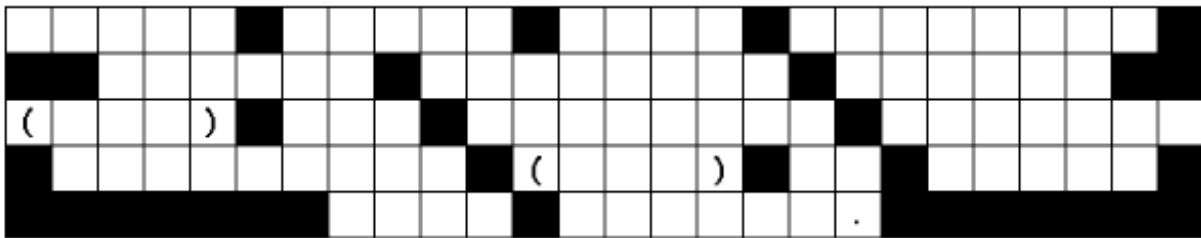


## Super Sleuth Q & A

**Directions:** Answer each of the questions below by placing a letter from each column into the boxes above the letter columns. Each letter is used only once for each column. If you're a super sleuth, the boxes will contain the correct answers to the questions!

**1. How does ozone form?**



S                    O A G

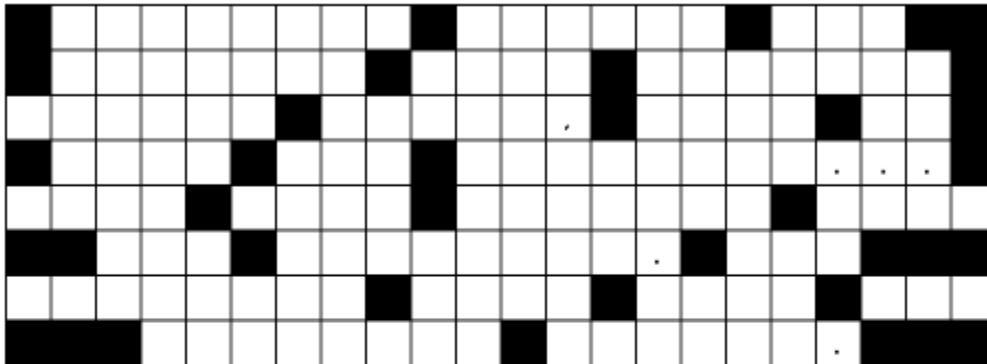
O N     A N R S H     V X E I     T     R D E C

C C M E     E W I T V     L O C E N S U O L G A S I

Z O X U O U N D M S T W O Y N L E O N R E G H T

O N O A P S F O D N I O R H T G E N O X I I A N T C

**2. Where do nitrogen oxides come from?**



N                    N                    L

A T A     R F             G S R     I S C A

C S S I F E H D     O A M     S U V E

V M I D O C E G E R U O L E I E E     A

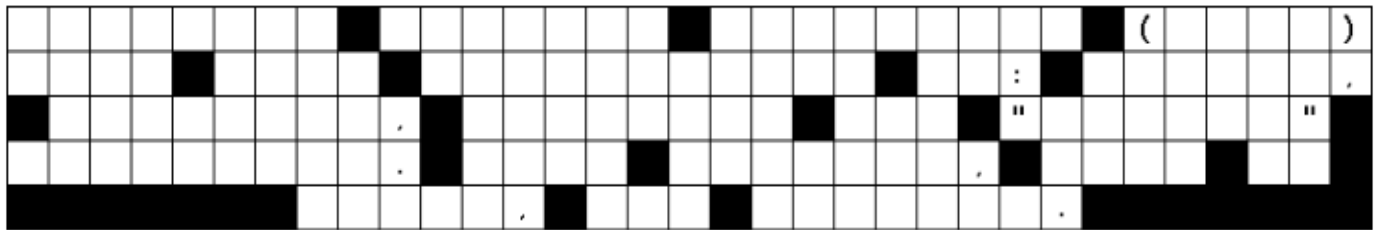
E O A I T E O N A B X O X I I N N R O S

F N R N L T R D U R N S S N B D G A I N F

E O E N R C G O A E L O I O L U G S W E G D

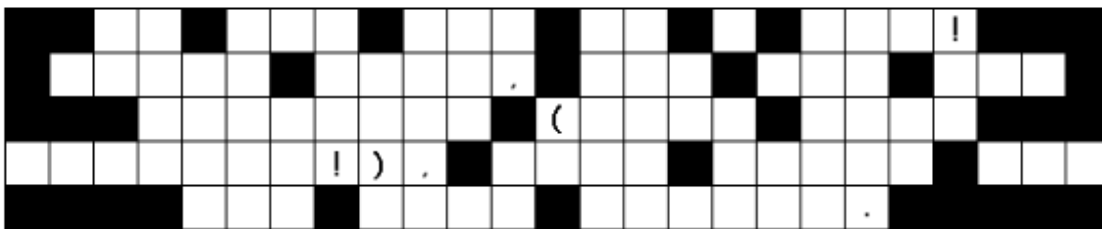
F U I N T L A S M F C O A D G N R H S O O F

3. Where do VOCs come from?



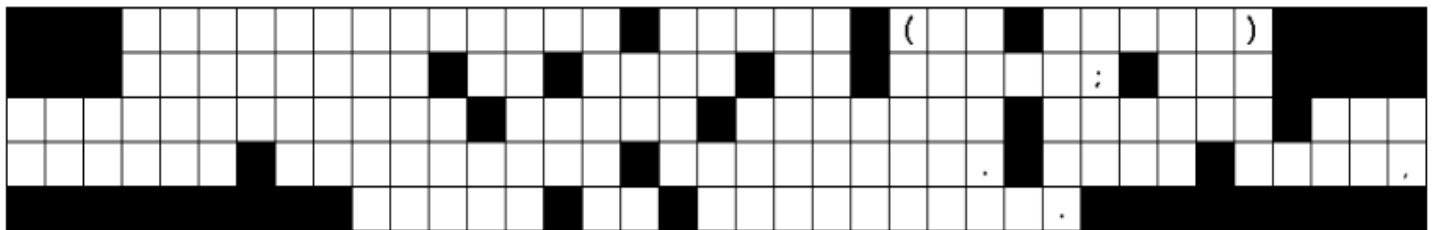
L G A U A O  
 H M A C L E M V A P E R I O E M T E D I Y  
 V C L E T F E O R R S A N I L S N I A P U U A S T I H O C S  
 C O L E I I R T S O E S A M O C A C O O N N S N L S U C V K A S  
 C O E M A N A R S E E G O S O R E T N R C O R F D S P A N N T S

4. What can I do about ozone pollution in my area?



C E E A  
 E R O A A S D O R Y R  
 R P U T S L E S L F U L E S M Y O U  
 D R I N S D U C T S L E S E A L L O T R O N  
 P A W E V E E N L E S S U T N L L G O W T V A C D

5. What's the problem with ozone?



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

## **Solutions:**

*1. How does ozone form?*

**Ozone forms when sunlight causes nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) to react with oxygen.**

*2. Where do nitrogen oxides come from?*

**Nitrogen oxides are emitted from burning fossil fuels, such as coal and gasoline... even from burning wood and charcoal. Gas furnaces also give off nitrogen oxides.**

*3. Where do VOCs come from?*

**Volatile organic compounds (VOCs) come from evaporation of: paints, cleaners, gasoline and "stinky" chemicals. Some sources, such as trees, are natural.**

*4. What can I do about ozone pollution in my area?*

**We can all do a lot! Drive less, use low VOC products (tell your parents!), fuel smart and use less energy.**

*5. What's the problem with ozone?*

**Stratospheric ozone (up there) protects us from UV light; but tropospheric ozone damages plants and causes breathing problems. Down here, ozone is unhealthy.**