



### Reflection Section

- Based on the results of this research, do you think that

there will ever be much danger for firefighters from breathing smoke? Why or why not?

- Why do you think that it is important to know that when one dangerous chemical is measured in the smoke, there are other dangerous chemicals as well?

### Implications

Although firefighters do not usually breathe in dangerous amounts of smoke, they do so occasionally. This especially happens when a wildfire has just started. Because people can estimate how smoky the conditions are, firefighters should be trained to determine when the conditions are too smoky and dangerous. If conditions are too smoky, firefighters should limit the amount of time they are breathing the smoke. Equipment should also be used that measures the amount of carbon monoxide in the smoke. By using equipment to measure the amount of carbon monoxide in the smoke, the amount of danger from many chemicals can be determined.



### Reflection Section

- What are the advantages of training fire-

fighters to estimate the danger from smoky conditions over using equipment to measure the amount of dangerous chemicals in smoke?

- What are the disadvantages of having firefighters estimate the danger from smoky conditions compared to using equipment to measure the amount of dangerous chemicals in smoke?

### FACTivity



The question you will answer in this FACTivity is: How consistently can you

and your classmates estimate the amount of smoke coming from a wildland fire? The method you will use to answer this question is: Examine the photographs in figures 5-9 of the article above. Pay particular attention to the amount of smoke in the photograph and the rating assigned to each. Each student will take a piece of paper and create the form at the top of the next column.

Next, each student will look at the photographs on the next page and rate the amount of smoke in each one from 1-5. Write your rating in the form beside the correct number for each photograph. After everyone is finished,

Photograph #	Rating (1-5)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

nominate someone to record the ratings on the blackboard. For each photograph, record every student's rating. Now count the number of times each rating was given. For each photograph, you can create a bar chart (see example on page 13). Use the form on page 13 to record the number of ratings for each photograph.

Evaluating the bar charts should tell you how consistent you and your classmates are in your ratings of the amount of smoke from wildland fire photographs. Would you say that you are consistent, not consistent, or mixed? What is it about the bar charts that tells you that?

From Reinhardt, T. E. and Ottmar, R. D. (2000). Smoke exposure at western wildfires. Res. Pap. PNW-RP-525. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 72 p.



Photograph #1



Photograph #2



Photograph #3



Photograph #4



Photograph #5



Photograph #6



Photograph #7



Photograph #8



Photograph #9



Photograph #10

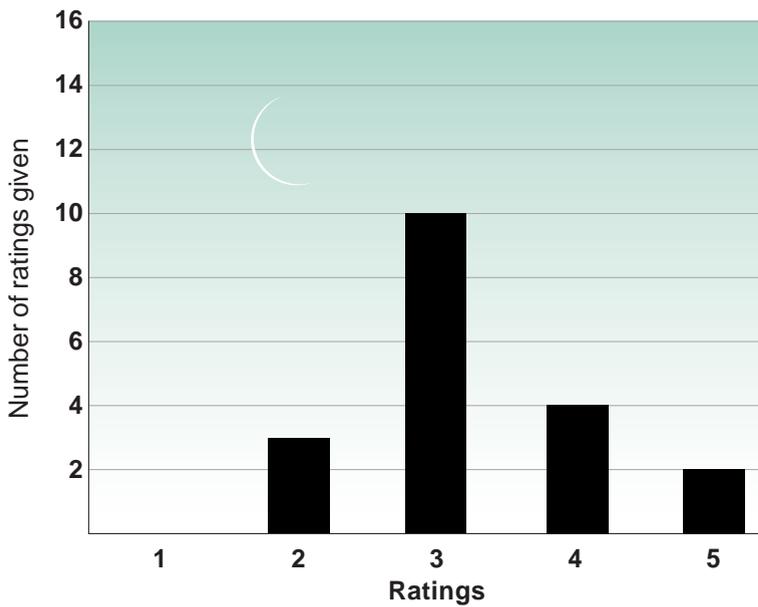


Photograph #11



Photograph #12

Photograph #	No. of 1's	No. of 2's	No. of 3's	No. of 4's	No. of 5's
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					



*Example of bar chart*

**Photograph 1** 1 = No smoke, 5 = Very heavy smoke

### Fire Safety Tips

Here are some tips from the Arkansas Fire Prevention Commission (kuh **mish** un) to help keep you safe from uncontrolled fires in your home:

1. Plan two escape routes out of your home and practice using them.
2. Be sure you can open all doors and windows from the inside.
3. Call the fire department **AFTER** you have left the building.

4. **DON'T** stop to get valuables.
5. Never re-enter a burning building.
6. Plan a place to meet outside of your home.
7. If your clothing catches on fire, stop, drop, and roll. Do not run. Call for help.