RL 4: I can determine the meanings of unknown words.

**Canine Courage**

***By Laura McClure***

**Why have 9/11 rescue dogs fared better than human workers?**

After airplanes destroyed the World Trade Center on September 11,

2001, veterinarian Cindy Otto arrived in New York City, New York, with a small army—dozens of dogs trained to find missing people. The search-and-rescue canines quickly went to work, nosing their way through seemingly endless piles of steel and concrete.

The air was thick with smoke, dust, and dangerous **toxins,** or poisonous substances. Many human rescue workers wore masks, but the dogs worked without protective gear. They needed their noses free so they could sniff out victims.

Even with masks, human rescue workers faced danger. Nearly 70 percent of the people who helped with the World Trade Center recovery efforts have reported new or worsened **respiratory**1 symptoms between 2002 and 2004. Problems include asthma, persistent coughs, wheezing, and chest pain.

**1respiratory:** relating to the process of inhaling and exhaling; breathing.

**CONCEPTS OF COMPREHENSION: VOCABULARY IN CONTEXT 6t h GRADE UNIT**

Otto feared that the dangerous rescue conditions would have similarly damaging health effects on canines such as Deja Vu, a German shepherd from Pennsylvania. "The environment was so awful, I couldn't imagine they wouldn't have problems," Otto told *WR News.* She organized a study to find out. More than five years later, Otto has surprising results: Many of the dogs remain healthy. In fact, the hardy animals are just as fit as search-and-rescue dogs that weren't involved in 9/11 recovery efforts.

**Stay-Safe Secrets**

Deja Vu and her handler, Pat Thompson, helped search for victims in the **debris,** or rubble, at a New York landfill. Thompson was concerned about what her dog was breathing in and walking through at the site. But "Deja Vu has remained in good health since 9/11," Thompson is happy to report.

Otto has three **hypotheses,** or theories, about why the dogs stayed healthy and the people didn't. First, she points out, the dogs spent less time at the recovery sites than human rescue workers did. Many of the people who now report breathing problems worked for months cleaning up after the attacks. The dogs in Otto's study were at the disaster sites an average of 10 days.

Otto says dogs also are less **susceptible,** or vulnerable, to respiratory problems such as asthma. "When dogs have allergies, they tend to have skin problems," she explained. "But the owners haven't reported any skin problems."

Another reason may be the dogs' superior snouts. Scientists say a dog's nose, which is longer than a human's nose, can better filter air that goes to the dog's lungs. Even though the people and the canines breathed the same air, fewer hazardous particles may have reached the dogs' lungs.

**Waiting Game**

Despite the surprising study results, the dogs aren't in the clear yet,

Otto says. Some diseases take years to materialize, including **mesothelioma,** a type of cancer caused by **asbestos** exposure. Asbestos is hazardous material once used to insulate and fireproof buildings, including the World Trade Center. Some of the material was released into the air when the twin towers were destroyed. Mesothelioma can take about five years to develop in dogs. "The next couple of years are our critical period," Otto said. "If we don't find anything, it's pretty impressive." Learning how to keep the canines healthy is important, says Philip R. Fox, a veterinarian at the Animal Medical Center in New York City. "These animals are vital assets for state, local, and federal programs for disaster management," he told *WR News.*

Trish Cartino's Australian shepherd Joey searched for victims at the

Pentagon in Washington, D.C., the site of another 9/11 terrorist attack. "Search-and-rescue dogs like Joey are just doing what they love to do," Cartino says. "It's our responsibility to keep them safe."

**Hound Heroes**

Search-and-rescue dogs aren't born with the ability to find missing people. They must train for at least 20 hours a week for about a year and a half to perfect their sniffing skills. Most rescue dogs are German shepherds or Labrador retrievers, but any canine can fit the bill—if it meets certain requirements. A pup must be able to search for a hidden toy for long periods, tirelessly pursue someone, and track a toy despite distractions. Inquisitiveness, trainability, and energy are also pluses.

Veterinarian Cindy Otto says there are about 100 certified top-level search-and-rescue dogs in the United States. The canines are a precious resource, she says. "No piece of equipment can ever do the job that these dogs do," Otto told *WR News.*

\_\_\_\_1. In the sentence, “A pup must be able to...tirelessly pursue someone...,” pursue means

a. to chase.

b. to look at.

c. to play with.

d. to bark at.

2. In the sentence, “...dogs worked without protective gear,” gear means

a. leashes and muzzles.

b. water bowls.

c. toys.

d. clothing and equipment.

3. The rescue dogs seem to have less illness than humans who worked at the Trade Center disaster site, because

a. humans are more likely to have skin diseases than dogs.

b. the dogs did not wear masks.

c. the dogs were there a relatively short time, about 10 days.

d. the dogs’ handlers took good care of them.

4. In the sentence, “These animals are vital assets for state, local, and federal programs for disaster management,” an asset is

a. a valuable resource.

b. anything that is alive.

c. something owned by the government.

d. a major problem.

\_\_\_ 5. What is the main idea of the passage? Provide at least three supporting details.

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