

Name: _____

Date: _____

Problem Solving: Applying Scientific Information

Learning goals

After completing this activity, you will be able to ...

- Apply information that you read in a scientific source.

Using Scientific Information to Solve Problems and Answer Questions

Often, the point of reading a scientific source is not just to learn new information. You want to be able to apply that information to a problem or question you have. Practice this skill by reading the excerpt on this worksheet and answering the questions that follow.

Suppose the following excerpt came from your local AgriLife Extension Office's website. As you read the text, think and take notes about the following:

- What do termites look like?
- Where do they occur?
- How are colonies started?
- How do termites communicate?
- How can you protect your house from termites?

Common name: Drywood Termite

Scientific Order: Isoptera

Description: Drywood termites are light brown to black and about 3/8 inches long. Worker and Soldier termites are wingless, with large powerful jaws capable of eating through wood. Termites are closely related to ants and have a very similar body plan and life cycle.

Pest Status: Termites occur in Texas coastal counties, with western spot infestations in Uvalde and San Antonio and north to Collin County, causing a great deal of concern to homeowners. Colonies of this social insect occur in sound, dry wood. Swarming occurs at dusk or early evening and the swarmers are attracted to lights. The mated pair starting a colony seeks a crack and crevice in wood, such as the spaces between wood shingles. The queen and male (king) produce and tend the first brood.

Communication: Within a colony, most termites are workers. Workers hunt for food and build the nest. Workers are blind, but they are able to communicate with one another using chemical signals known as pheromones. Interestingly, chemicals in red ballpoint ink are very similar to the pheromones used by termites to create a trail for other termites to follow. Workers also release chemicals that warn other termites away from an area or indicate where a new food source is located.

For additional information, contact your local Texas AgriLife Extension agent.

Literature: Drywood termites: Borror et al. 1989; Hamman and Gold 1992.

Now answer the following questions:

1. You see the insects at right near your house. From the description on the Web site, do you think they could be termites? Explain your answer, and then describe how you could find out for sure.



2. The pesticides currently used to treat termites kill many beneficial insects and may cause soil and groundwater pollution. Use the information on the Web site to propose a way to remove termites infesting a house without having to use pesticides.

3. Suppose your house is currently termite-free, but your next-door neighbor's house is infested. Use the information on the Web site to propose at least two ways you could protect your home from a termite invasion.
