student should come up with his or her own ideas. Some potential answers include: (1) Animals that use oak trees for food and habitat would no longer have a place to live, (2) the beauty of oak trees, including what they contribute to the area, would be lost, and (3) the ecology of forests with a lot of oak trees would be changed.

- **Do you think research should be done on sudden oak death outside California? Why or why not?** Yes. Because sudden oak death can kill oak trees and is easily transported from tree to tree in California, it would be best to know how it might be transported in areas outside California and which trees might be affected.

And Then There Were Nun

Introduction

- **In your own words, state the question the scientist wanted to answer.** Which tree species in the United States are most likely to be the preferred habitat of the nun moth?
- **What is the advantage of knowing in advance which tree species might be the preferred habitat of the nun moth?** If the nun moth were found in the United States, people would already know which tree species the moths prefer as habitat. People could stop the spread of the nun moth by cutting down those trees within the area where the moths were found, or by otherwise controlling the moths before they spread.
- **The scientist did this study in the Northeastern United States. Do you think she studied the moths inside or outside a laboratory? Explain your answer.** The scientist had to do her study inside a laboratory because she did not want any eggs, larvae, or moths to escape into the outside environment.

Method

- **What did this experiment enable the scientist to discover?** The scientist discovered which species of foliage kept larvae alive and which species of foliage supported the development of larvae into pupae.
- **When the scientist placed fresh foliage in each container, do you think she used the same species of foliage that she had removed from that container? Why or why not?** Yes. If she used foliage from a different tree species, she would have no way of knowing which species of foliage supported the larvae's development.
- **Why do you think the scientist wanted to discover what percentage of larvae became pupae?** If the scientist had stopped the entire experiment at 14 days, she might have overestimated the percentage of healthy larvae. Some larvae may have lived but might never have become pupae.

Findings

- **What species of trees do nun moth larvae prefer to eat?** Most conifer species and many oak species appear to be preferred by nun moth larvae.
- **Do you think these findings are good news or bad news for people worried about the invasion of nun moths into the United States? Why?** These findings would be bad news for people worried about a possible nun moth invasion because nun moth larvae appear to survive on a wide variety of tree species that are found in the United States.

Discussion

- **Trees are important to people in forest industries, such as those using trees for wood products. Many industries that depend on forests might need the trees alive and healthy. What other forest-dependent industries could be affected by a nun moth invasion?** You may need to

encourage your students to think outside the box. One forest industry that encompasses many different businesses is the tourism industry. If many trees are damaged or die from a nun moth invasion, people may not want to visit the forest for recreational activities such as hiking, bird watching, camping, and boating. This lack of visitors could affect businesses such as hotels, stores, restaurants, and recreation guides. Your students may think of other industries that could be affected.

- **In addition to economic problems, what other kind of problems might be created by the damage or loss of a large number of trees in a forest?** It would cause a lot of environmental damage, which could include the loss of habitat for animals, increased erosion that results in loss of soil and in water siltation, and a loss of tree diversity.
- **What is one way we can protect trees in the United States from a possible nun moth invasion?** Your students may come up with a variety of suggestions. Some obvious ones include: (1) Carefully inspect wooden packing crates for nun moth larvae before allowing them into United States ports, and (2) teach people how to identify nun moths so that if they do come into the United States, they can be dealt with before they spread.

Knocked Out by Trout

Introduction

- **Basing your response on the information presented in the "Introduction," state in your own words what the scientists expected to find out about the population of Pacific tree frogs in JMW compared with KCNP. Then, give the reason for your statement.** Your students may state it differently, but in essence, they should state that the scientists expected that the population of Pacific tree frogs would be lower in JMW than in KCNP. The reason for this expected answer is the higher population of nonnative trout found in JMW compared with KCNP.
- **You read about the concept of experimental control in "Thinking About Science." (If you need a reminder, reread that section.) Which variable did natural resource management control, enabling the scientists to study the effect of nonnative trout on Pacific tree frog populations?** The number of nonnative trout living in the lakes in JMW and KCNP was controlled by the natural resource managers.

Method

- **Why did the scientists not include the presence of nonnative trout in their first calculations?** If the number of tree frogs was about the same between JMW and KCNP, then the number of nonnative trout did not affect the population of tree frogs, and the scientists would have no reason to count their presence or absence.
- **Basing your thoughts on previous scientific findings about the presence of nonnative trout and the population of mountain yellow-legged frogs, do you think the scientists found a difference in the populations of Pacific tree frogs in JMW and KCNP? Why or why not?** Yes. One would expect to find a difference based on the previous research. The previous research indicated that when nonnative trout are present, the population of frogs is lower than in areas where nonnative trout are not present.

Findings

- **Why do you think the scientists considered things such as the size and depth of the lakes and how much silt was in them?** The scientists considered that these other things could also influence the presence and number of tree frogs in a lake. If they did not consider these things, they would not know for sure whether the number