

- **In today’s society, what are some disadvantages of using the telephone to ask questions of citizens?** *Students may come up with a host of reasons. Some include: 1: People no longer use land lines; 2) People are too busy to answer survey questions; 3: The phone may be busy or not answered because of caller ID.*

Findings

- **What are some of the positive things citizens had to say about forest managers?** *Citizens feel that forest managers are somewhat effective, reliable, and competent in managing fires. They think that forest managers are honest and care about citizens’ needs.*
- **What are some of the negative things citizens had to say about forest managers?** *They do not pay attention to what people think, citizens are not entirely confident in the way forest managers manage fire, and citizens are not completely satisfied with the way fire is managed.*
- **If you were the scientists, what would you tell the forest managers to do to increase the level of trust?** *This is an individual question, but students should realize that forest managers should pay more attention to what people think, should look for ways to raise the confidence in their actions, and should find out why citizens are not completely satisfied with the way fire is managed.*
- **Although all three parts were important, the scientists found that “the belief that others are capable of acting correctly” was the most important part of trust. Based on your own experience, which part do you think is most important and why?** *This is an individual question, and students should be able to back up their position with logic and sound reasons.*

Discussion

- **How can better communication build more trust between an individual and a trustee? Use an example from your own life.** *This is an individual question, and students may be urged to think about how they might improve communication to increase trust. Students may consider themselves as being the trustee, or the person who feels trust.*
- **Think about any public land close to your home. This can be a local park, a State park, a national park, or State or national forest land. Do you trust the managers to do a good job of managing the land? Why or why not?** *This is an individual question. Students should provide logic and sound reasons to support their position.*

Can We Grow Now?

Introduction

- **In the form of a question, state what the scientists wanted to discover.** *What are the best conditions under which bristlecone pine seeds take root and grow?*
- **Name two things that make it hard for Rocky Mountain bristlecone pine trees to survive.** *(1) These trees need occasional fire, which opens up areas for seeds to take root and seedlings to grow; (2) The trees take between 50 and 100 years before they produce seeds; (3) The white pine blister rust is threatening to kill the trees.*

Methods

- **Why did the scientists select their study sites randomly?** *Because the scientists needed to make sure that the site selection was unbiased. If the scientists selected the sites just by choosing them, they could be affecting their results through their own preferences. For example, they might always select sites with more bristlecone pine trees.*

- **Why do you think the scientists measured the distance from each seedling to other objects?** *This is an individual question. Students should be challenged to think critically about why the scientists wanted to know if seedlings were found close to other objects.*
- **Why do you think the scientists measured the distance from randomly selected points to nearby objects?** *Students should be asked to think critically about why the scientists would do this. They did this so they could determine whether the seedlings' distance to objects was by chance or whether seedlings tended to grow closer to other objects. The scientists, therefore, compared the seedlings' average distance to objects with the average distance from just any other point.*

Findings

- **Look at figure 10. You can see that more bristlecone pine trees were found growing in partly burned areas. What else does that chart tell you?** *That unburned areas had more trees than completely burned areas, and that completely burned areas had few trees growing in them.*
- **Explain the evidence for calling boulders, stones, fallen wood, and standing tree trunks nurse objects.** *Students should be able to explain that seedlings were found growing closer to these objects than if they were growing there by chance. Therefore, these objects were thought to be helpful to the establishment and growth of bristlecone pine trees. Nurses are people who often help others to regain or maintain their health.*

Discussion

- **Do you think forest managers should use fire as a tool to help save the bristlecone pine? Why or why not?** *Students should realize that fire can be used as a tool to help*

save the bristlecone pine. You may also hold a discussion about whether fire should be used as a tool to protect natural resources. (Note that forest managers purposely use fire to promote or maintain the health of forests.)

- **Name other ways that objects such as boulders, stones, fallen trees, and standing tree trunks provide benefits to the natural environment, anywhere they are found.** *These objects are habitats for insects, reptiles, amphibians, and other small animals. Tree trunks may be used by woodpeckers, owls, and other birds to find food or for nesting. As fallen wood decays, it helps to build the soil. Students may come up with other ways that these objects benefit the natural environment.*

Snake, Rattle, and Roll

Introduction

- **What are the questions the scientists wanted to answer?** *How do restoration activities affect snake populations? What are the different types of snakes in the area? What type of trap is best for capturing snakes?*
- **If there were fewer snakes in the ecosystem, what do you think would happen to the populations of vertebrates and invertebrates?** *Populations of vertebrates and invertebrates that are prey for snakes may increase if the snake population decreases since there would be fewer predators.*

Methods

- **Look at figures 7 and 8. Which trap do you think would work best for capturing snakes? Why?** *This is an individual question that should be supported with logic and reasoning. Long snakes can climb out of the pitfall traps.*
- **Why do you think scientists had a control area in every region?** *Controls are used by scientists so that they can compare*