

studies tree diseases.
These diseases are caused
by many of the same kinds of
microorganisms that make
humans sick, such as fungi,
bacteria, and viruses.

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Important Scientist Characteristics

Critical thinking is essential to science. You have to figure out explanations that meet all the facts. When you lack facts, it's fun to design experiments that will prove them. Sometimes experiments don't prove anything, and you have to figure out whether you were wrong, or if you didn't design your experiment properly.

Example of a simple research question I have tried to answer: Why do some dogwood trees die but others survive, when they become infected with the fungus that causes dogwood *anthracnose*?

Technology or equipment used in research:

We used a ceptometer to measure how much usable light reached the canopy of trees growing in sun or shade. The ceptometer measures light in the wave lengths that plants can use to conduct photosynthesis.

: Most Exciting Discovery

Tall trees in the overstory were using 98 percent of the photosynthetically-active light, leaving the dogwood trees in the understory only 2 percent to live on. No wonder those trees in the understory didn't have any energy reserves to fight back when attacked by the *anthracnose* fungus!

When did you know you wanted to be a scientist?

I didn't know I wanted to be a scientist until I was in college. I took a class in plant pathology and discovered there was a secret, hidden world of microbes attacking plants, and I was hooked.