

## Wood Wide Web

You may have heard of the World Wide Web, but what about the *Wood* Wide Web? That's what scientists call the network of communication between trees. That's right, trees talk to each other. They have a secret system of communication underground.

The communication network relies on mycorrhizal fungi, or root fungus, that form a mat of long strands. These strands connect 90 percent of land plants, which allows them to pass information and resources back and forth to each other.

What are the trees saying? It turns out that they can communicate about many things. Adult trees can send food to younger trees, healthy trees can send resources to sick trees, and sick trees can send any remaining resources back to the others before they die. They can also communicate about dangers and share warnings about insect infestations and other threats.

New research shows that this communication network is around 450 million years old. It is mutually beneficial for the trees and the fungi. The trees benefit by receiving nutrients from the fungi. These nutrients, such as phosphorus and nitrogen, are obtained from the soil by the fungi using enzymes that the trees don't have. The fungi benefit by taking some of the food that the trees produce during photosynthesis. This carbon-rich sugar



helps the fungi to survive even though they can't do photosynthesis themselves.

Scientists are just beginning to understand the functions of the Wood Wide Web. Their discoveries have led to more questions about where species begin and end, and whether a forest is made up of many organisms or just one. It also raises questions about whether human traits such as trading, sharing, and friendship might be found among plants. There is a lot we still don't know about this ancient methods of plant communication and its meaning. Maybe one day you will be the scientist who learns more.



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NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

1. Trees communicate through an underground system of \_\_\_\_\_.
  - a. Roots
  - b. Fungi
  - c. Plants
  - d. Water
  
2. Which of the following is NOT mentioned as something that trees might send through the Wood Wide Web?
  - a. Food
  - b. Resources
  - c. Information about dangers
  - d. Songs
  
3. The Wood Wide Web is beneficial for \_\_\_\_\_.
  - a. Trees
  - b. Fungi
  - c. Both trees and fungi
  - d. Neither trees nor fungi
  
4. Which of the following is NOT mentioned as a new question that scientists have about trees and plants?
  - a. Where does one species begin and another end?
  - b. Do fungi benefit from photosynthesis?
  - c. Is a forest made up of one organism or many?
  - d. Do plants share, trade, and have friendships?

Instructions for teachers:

These questions can be used to assess understanding of the reading passage.

The item in bold is the correct answer for each question.

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