

XYLEM and PHLOEM

1 Xylem

In order for photosynthesis to occur, all green plants need water in their leaves.

Water is absorbed by the roots of the plant.

- 5 It then passes into a type of plant tissue called xylem. Xylem is found in roots, stems, and leaves. In woody stems, such as trees, xylem makes up most of the stem. Xylem has many long, dead cells that stand vertically next to one another, much like straws in a glass. Water passes upward through tubes made of xylem.
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Xylem is a type of plant tissue that carries water upward from the roots to the stems and leaves.

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Xylem tissue dies after one year and then develops a new ring in the tree trunk. When someone cuts an old tree down, a set of rings is revealed. Those rings are the remains of old xylem tissue, one ring for every year the tree was alive.

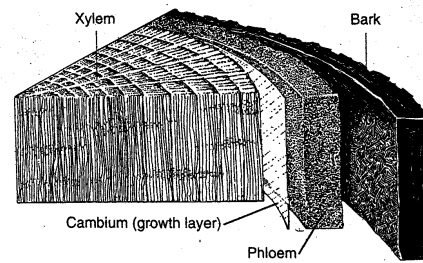
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Phloem is a type of tissue used for transporting food in plants. Phloem delivers food from leaves to other parts of the plant. In woody stems, such as trees, phloem is located under the outermost layer of plant tissue. Phloem is a type of plant tissue that carries food to other parts of the plant.

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- 30 Most plants have green leaves, where photosynthesis happens. When those sugars are made, they need to be given to every cell in the plant for energy. The phloem cells transport the sugars created by the plant.
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Phloem is always alive. One way to remember phloem is to think about sap coming out of a tree. That dripping sap usually comes from the phloem.



1. Which tissue carries the food produced during photosynthesis?
 - ① bark
 - ② phloem
 - ③ leaves
 - ④ xylem
 - ⑤ roots
2. What would happen to a plant if all of its xylem tissue became damaged or clogged?
 - ① Photosynthesis could not occur because the leaves would not get enough water.
 - ② The phloem would start carrying water to the leaves.
 - ③ The roots would start carrying food and water to the leaves.
 - ④ The bark would protect the xylem tissue from collapsing.
 - ⑤ The xylem tissue would continue to carry water to the leaves.
3. According to the Wikipedia diagram above, which type of plant tissue makes up most wood?
 - ① bark
 - ② xylem
 - ③ phloem
 - ④ leaves and stems
 - ⑤ bark and cambium
4. The MAIN source of water for most plants is
 - ① lakes.
 - ② rain and surface water soaking into the soil.
 - ③ water vapor.
 - ④ snow.
 - ⑤ irrigation systems.