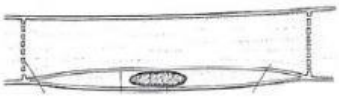
NAME:_____ DATE:_____

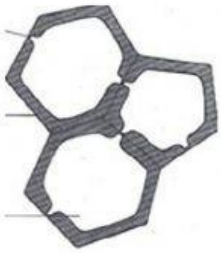
TRANSPORT IN PLANTS

1. Complete the table comparing xylem and phloem. Where provided, use the words in uppercase to answer. Only ONE word should go on each line.

FEATURE	XYLEM	PHLOEM
Cells LIVING or DEAD?	_____	_____
Lignin PRESENT or ABSENT?	_____	_____
End walls broken down PARTIALLY or COMPLETELY?	_____	_____
Are cells completely empty? NO or YES.	_____	_____
ONE or TWO types of cells?	_____	_____
Companion cells PRESENT or ABSENT?	_____	_____
Are substances transported DOWN or UP?	_____	_____
Name pf substances transported	W_____ and M_____	S_____

2. Beneath each diagram, writhe **XYLEM** or **PHLOEM**.





3. What is the pathway of water from soil, into the plant and to the atmosphere? Drag the following phrases into place in the correct order.

Up the xylem in the stem	Evaporation of water from the stomata of the leaves	Movement across root cortex by osmosis	Movement of water across leaf cells	Into roots by osmosis

WATER IN SOIL						THE AIR

4. Water moves up the xylem in the following FIVE ways. Draw a line linking the term to its meaning.

TERM	MEANING
Capillarity	Force of water entering the root to push water up the plant
Cohesion	Ability of a liquid to flow up a narrow tube
Adhesion	Loss of water from leaves act as a suction force that helps pull water up from roots
Root Pressure	Water molecules being attracted to another substance
Transpiration pull	Water molecules attracted to one another

5. Write TRUE or FALSE after each statement.

a. Water and sugar are transported in the xylem. _____

b. Water molecules are not able to stick together. _____

c. Water exiting the leaf is a type of evaporation. _____

d. Water exits the leaf through small pores called stomata. _____

e. Plants do not need transport systems because they are not living. _____

f. Wood is made of lignin. _____