PHOTOSYNTHESIS FLOW CHART

**adapted from The Forest Foundation's "Forests Today, Tomorrow & Forever"

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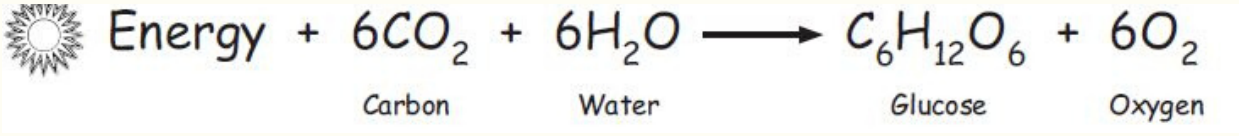
WORD BANK

Roots: the network below ground that anchors the tree in the soil. Root hairs push their way through the soil and absorb moisture and minerals from the soil.
Chlorophyll: the green substance found in
leaves and needles that captures the sun's energy
Photosynthesis: the process of channeling energy from the sun by means of chlorophyll and converting the carbon dioxide in the air to produce nutrients for the tree and oxygen.
Oxygen: an element found freely in nature that is needed for humans and animals to be able to breathe
Carbon Dioxide: colorless, odorless gas
that is formed during respiration, and organic decomposition

There is an official equation for the changing of energy during Photosynthesis



Use the Word bank AND the equation above to help fill in the blanks in the photosynthesis flow chart below.

Bonus question: what leave is in the middle of the flow chart?
hint: this tree produces acorns

Bonus answer: Oak Tree leaf

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FLOW CHART

_____ _____ enters the leaf through the stomata openings.

_____ pigment in the leaf captures energy from the sun.

Photosynthesis needs:

_____ energy

_____ from the roots

_____ _____ from the air

Photosynthesis makes:

_____ (food for the plant)

_____ (that is relased into the air for humans and animals to use)

People and animals breath in _____ and exhale _____ _____ .

Plants take in _____ _____ and exhale _____.

Water is absorbed by the _____ _____ and transported to the leaves.

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ANSWERS FOR THE FLOW CHART

CARBON DIOXIDE enters the leaf through the stomata openings.

CHLOROPHYLL pigment in the leaf captures energy from the sun.

Photosynthesis needs:

SUNLIGHT energy

WATER from the roots

CARBON DIOXIDE from the air

Photosynthesis makes:

GLUCOSE (food for the plant)

OXYGEN (that is released into the air for humans and animals to use)

People and animals breath in **OXYGEN** and exhale **CARBON DIOXIDE.** Plants take in **CARBON DIOXIDE** and exhale **OXYGEN**.

Water is absorbed by the tree **ROOTS** and transported to the leaves.