



Intro to Ecology



TEACHER'S PET

BIOLOGY

MAIN DIFFERENCES ECOLOGY AND ECOSYSTEM

DEFINITION

Ecology is a branch of biology which deals with the relationships of organisms to one another and to their physical environment

Ecosystem is a community of interacting organisms and their physical environment; an ecosystem is a subpart of ecology

RELATIONSHIP

Ecology includes the study of relationship between living organisms and their environment

Ecosystem is a place like a forest, taiga, grass land, desert, stillwater, river or a stream, coral reefs etc



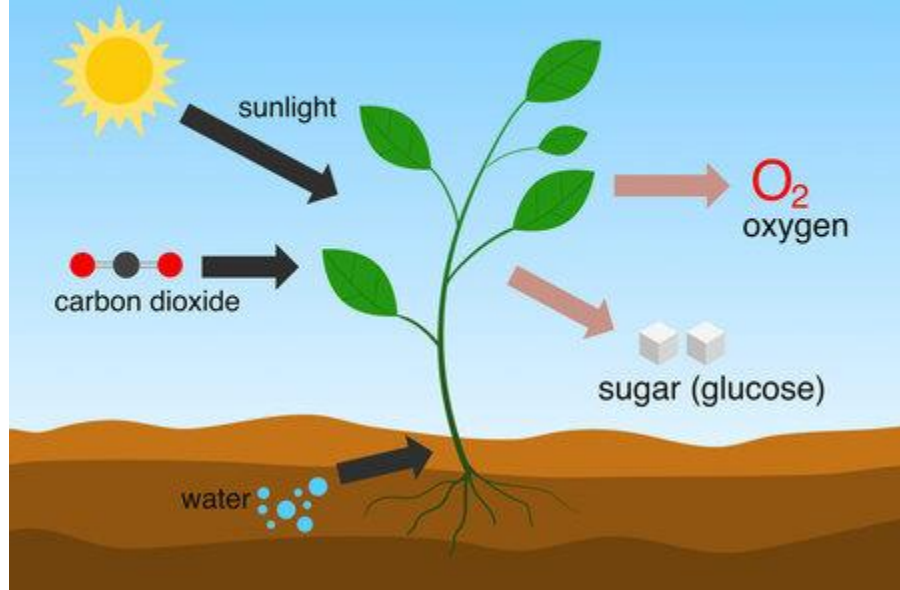
Ecologist

Explore more about ecologists!

- Ecologists for kids [here](#)
- What is an ecologist [here](#)
- Simple explanation [here](#)



PHOTOSYNTHESIS






Explore More!

National Geographic entry [here](#)


Photosynthesis explained [here](#)

Breakout of organelles involved [here](#)



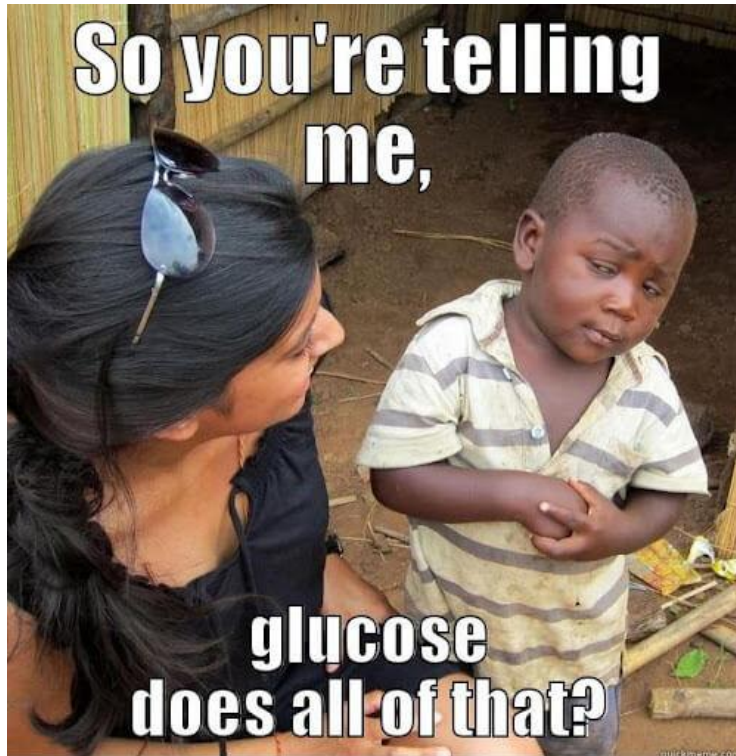
What is the equation
for photosynthesis?



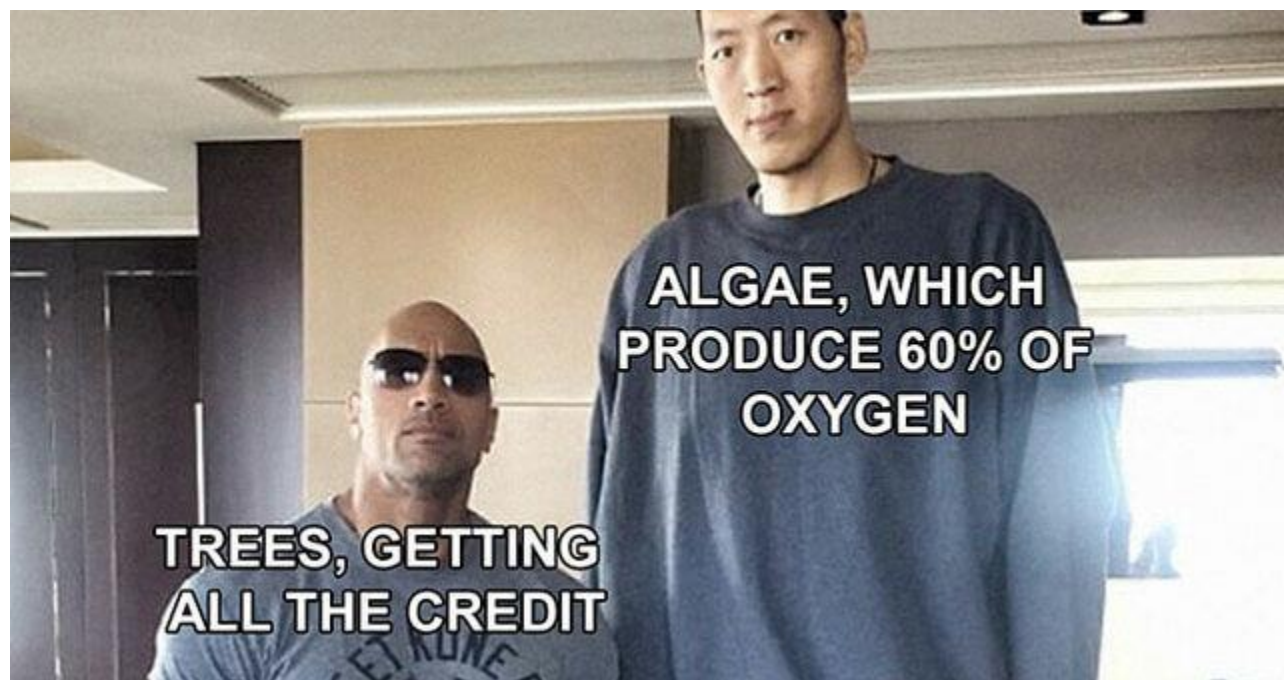


Why is photosynthesis
the beginning of every
ecosystem?

**So you're telling
me,**

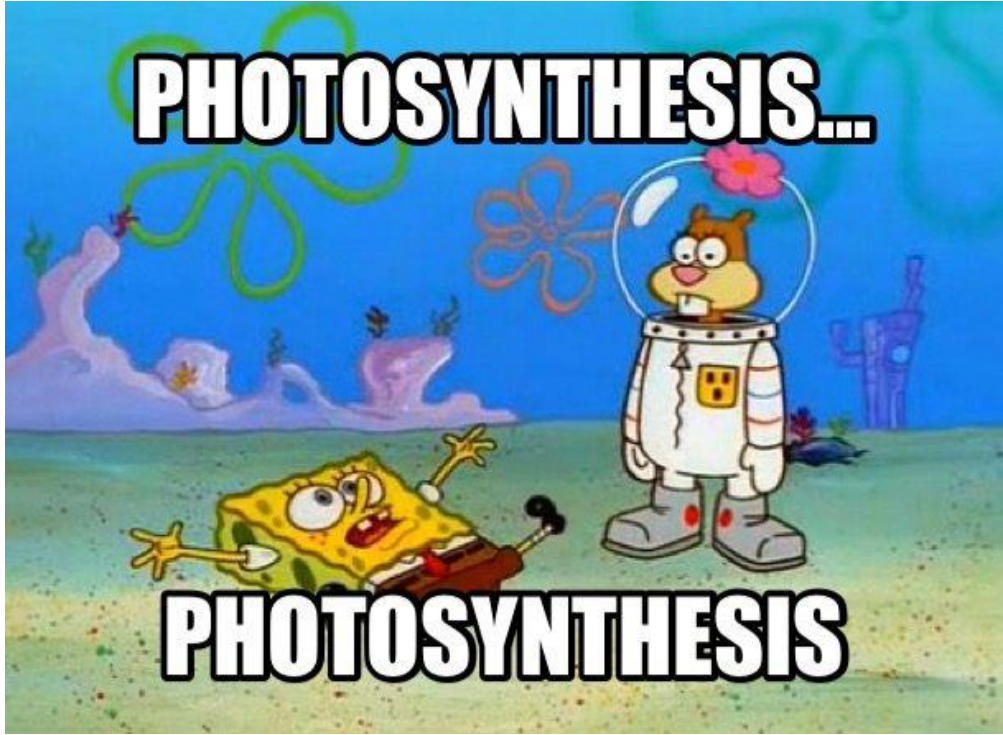


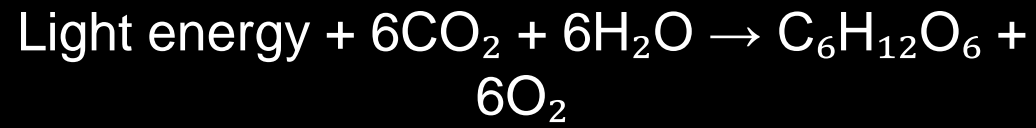
**glucose
does all of that?**



**TREES, GETTING
ALL THE CREDIT**

**ALGAE, WHICH
PRODUCE 60% OF
OXYGEN**

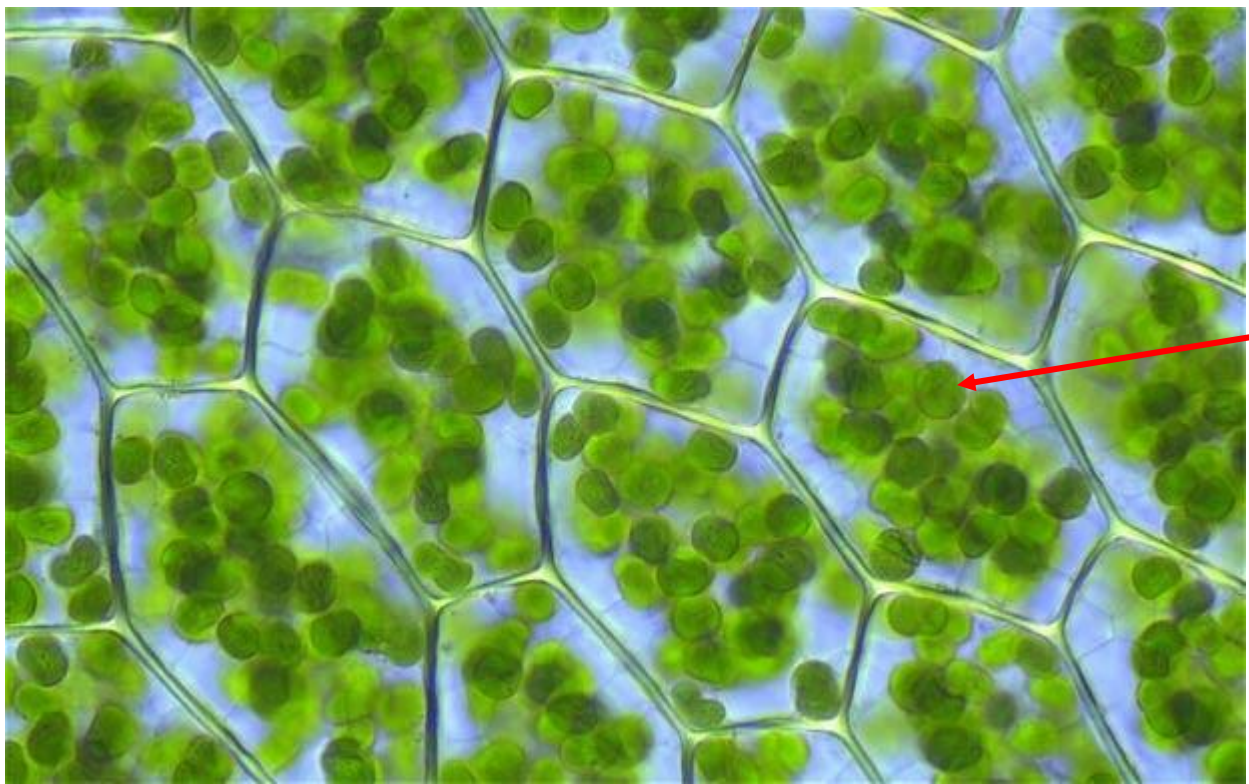






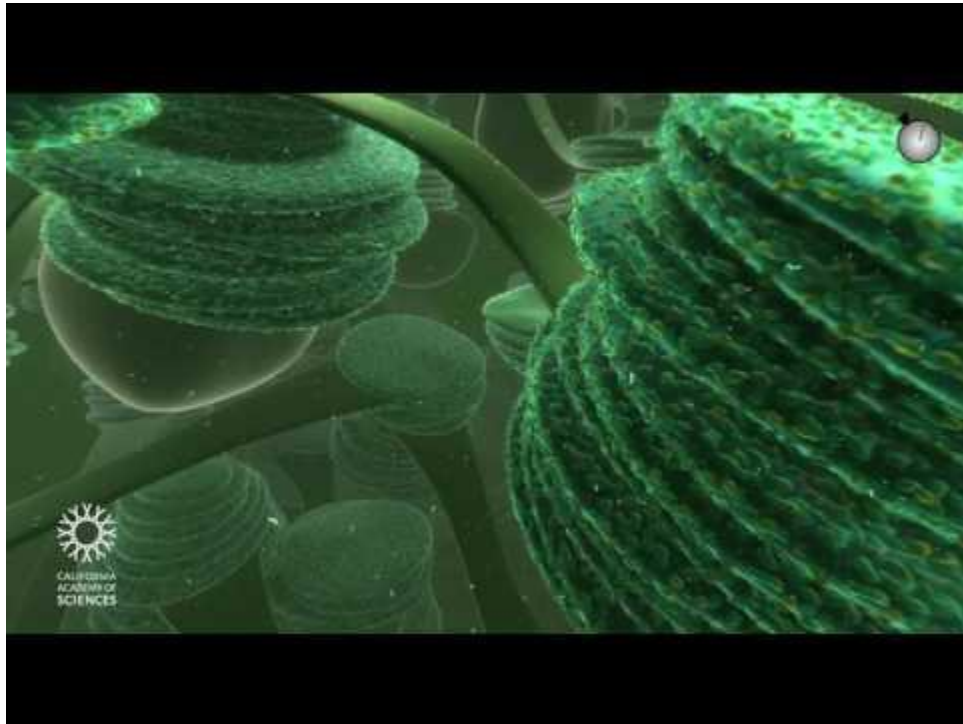
theAwkwardYeti.com






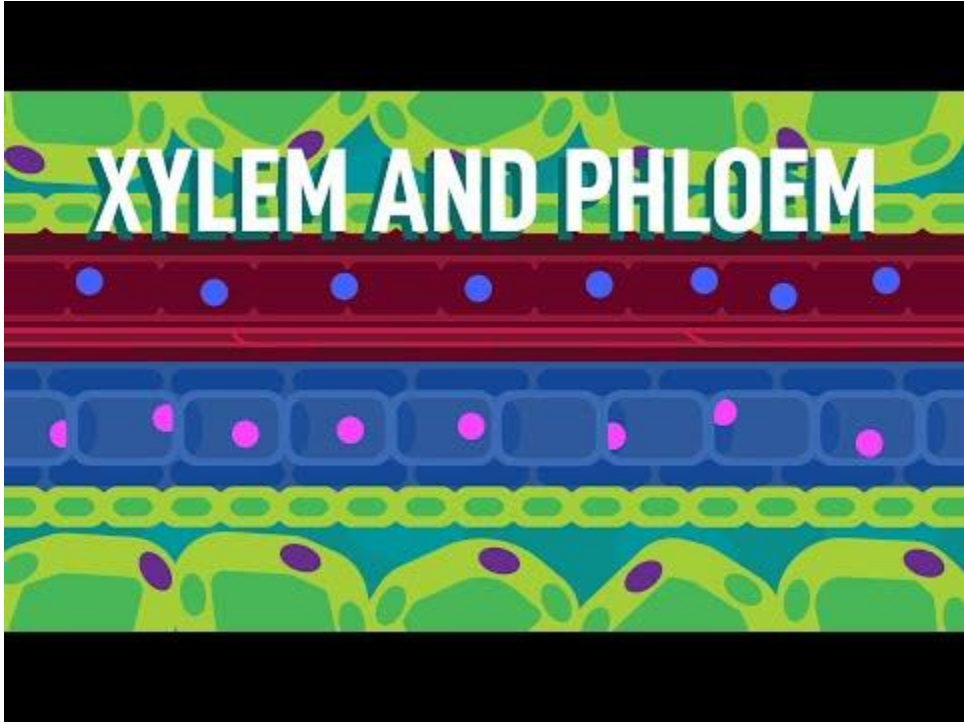
Chloroplasts





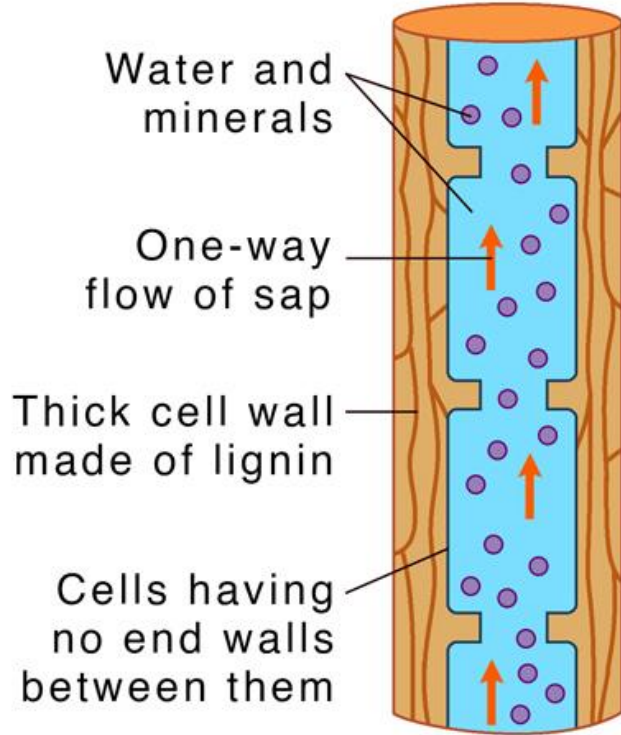


But how does all the needed materials for photosynthesis and the glucose produced get to where it needs to go in the plant?

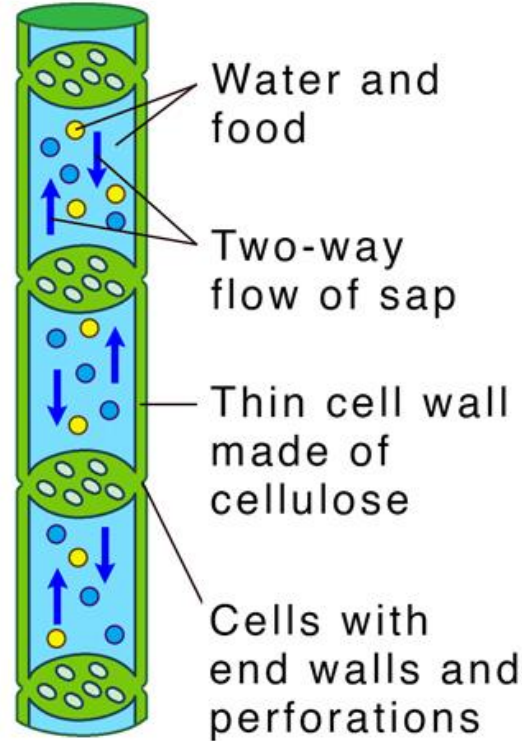


XYLEM AND PHLOEM

Xylem and Phloem



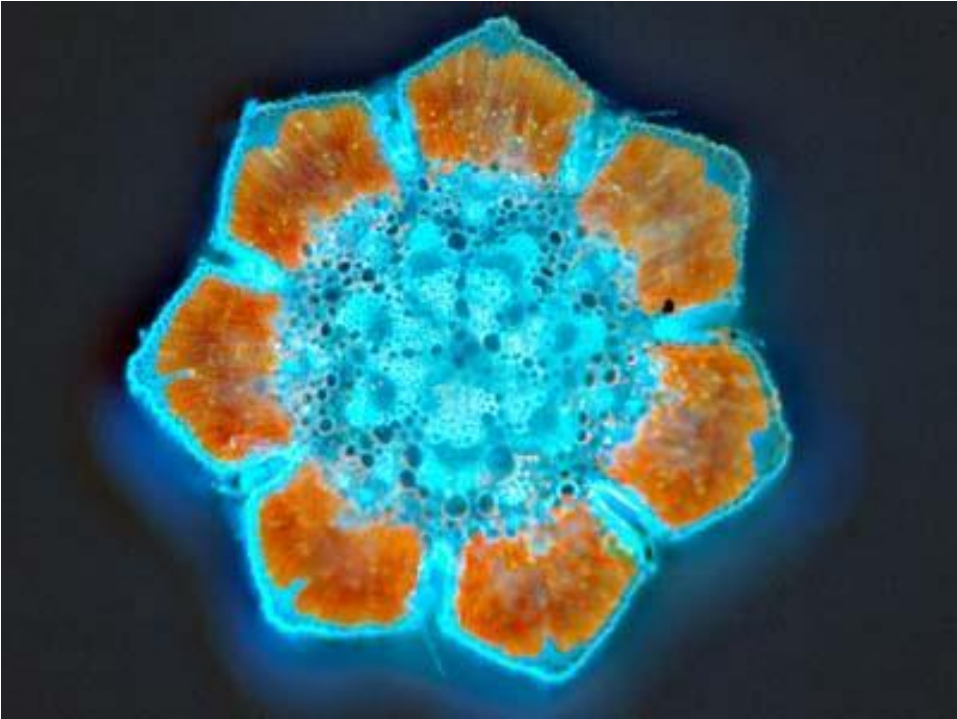
Xylem




Phloem

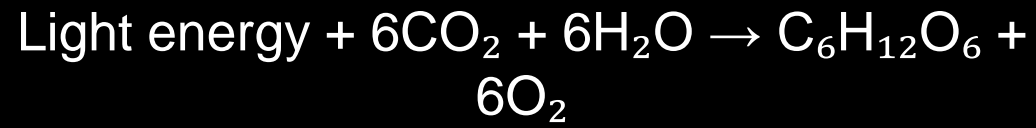









Xylem moves water and minerals UP the plant while phloem moves water and glucose both UP and DOWN.





Interested in an at home
experiment about
photosynthesis? Check [this](#) out!

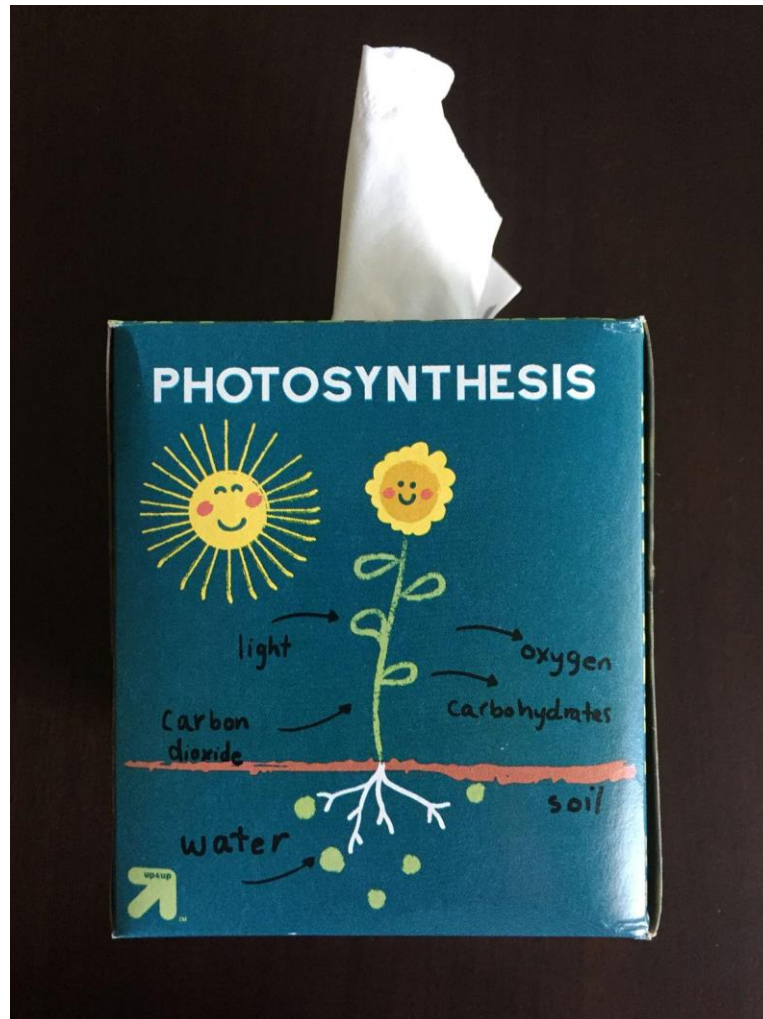



Go Explore!

Now that you know about different parts of a plant and how they help the process of photosynthesis, go find the xylem and phloem!

Go outside and take off either a leaf or the stem of a weed. Look for the xylem and phloem in the plant.

Can't find it? Look in another plant!





When you went outside
yesterday, did you find some
xylem and phloem?


ORGANELLES GOT TALENT

I will now make sugar...
FROM THE SUN!



@AmoebaSisters





Photosynthesis is awesome and wonderful, but it's not the only cool thing plants do!

Cool Things

- Phototropism with sunflowers
- Leaves changing colors in the fall
- Green bark in desert plants
- Sharing of information and nutrients through the roots
- Shape of roots in desert plants



Phototropism

Phototropism is the movement of plants to grow towards the light.

(there are also other tropisms like geotropism and hydrotropism)



Changing Colors



Leaves on trees change colors because they are losing their green chlorophyll to help get ready for winter.

This losing of their green chlorophyll means that less obvious colors can show through now that dominant green is gone.

Green Bark

Leaves lose water through transpiration and the photosynthesis process. But what about in the desert where water loss could mean death?

Just make chlorophyll everywhere instead of just in your leaves!



Share Information



Trees seem pretty solitary, but there is a LOT going on under your feet as you walk through a forest.

Tree share information, nutrients, and help through the Wood Wide Web.

Desert Roots

Roots grow out instead of super deep in the desert. This helps capture all the water they can.

Cause water capture is super important in the desert!



Cool Things

- Phototropism with sunflowers
- Leaves changing colors in the fall
- Desert plant adaptations
- Sharing of information and nutrients through the roots



