



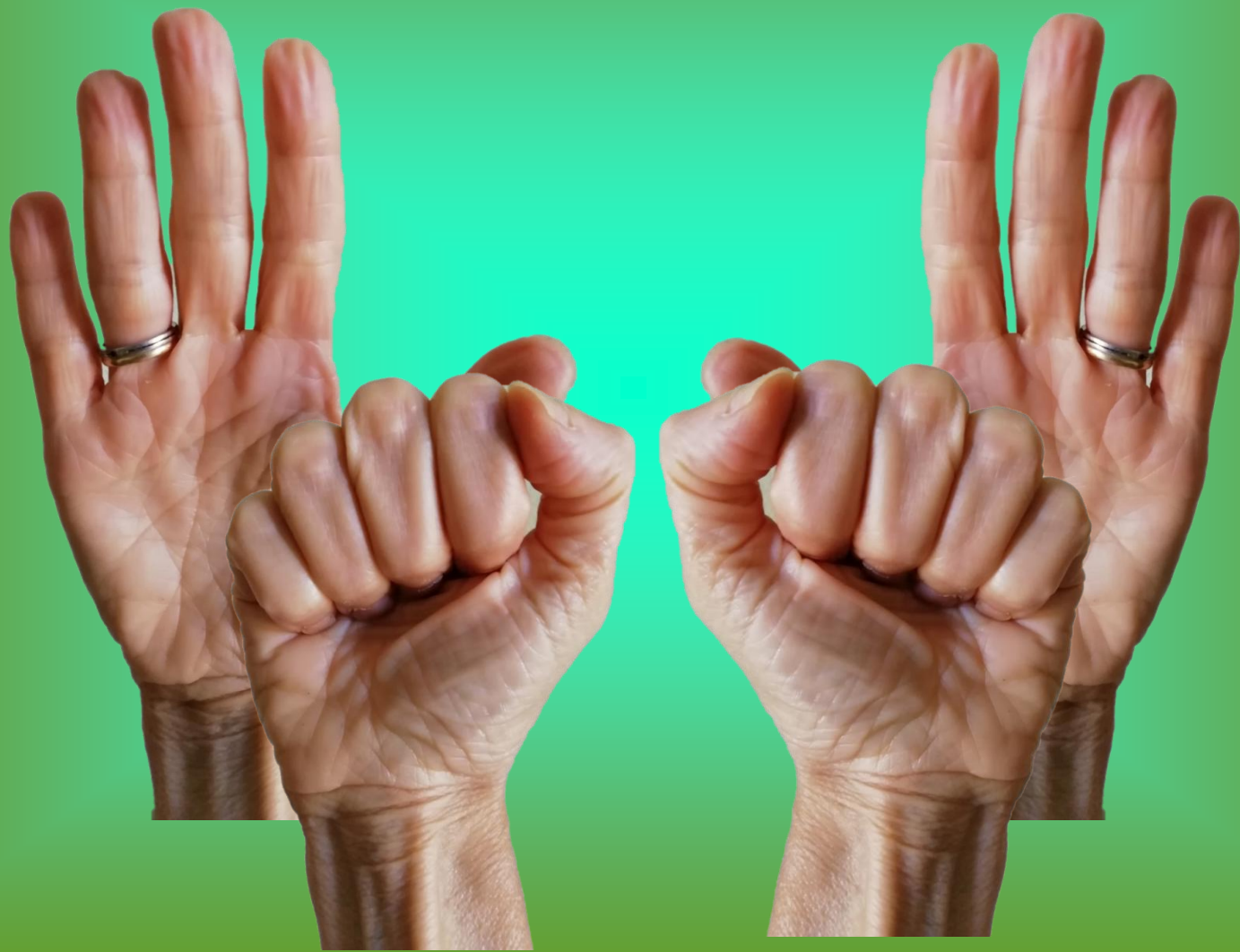
**Parco Pineta**  
Il cuore verde della Lombardia

# FOTOSINTESI

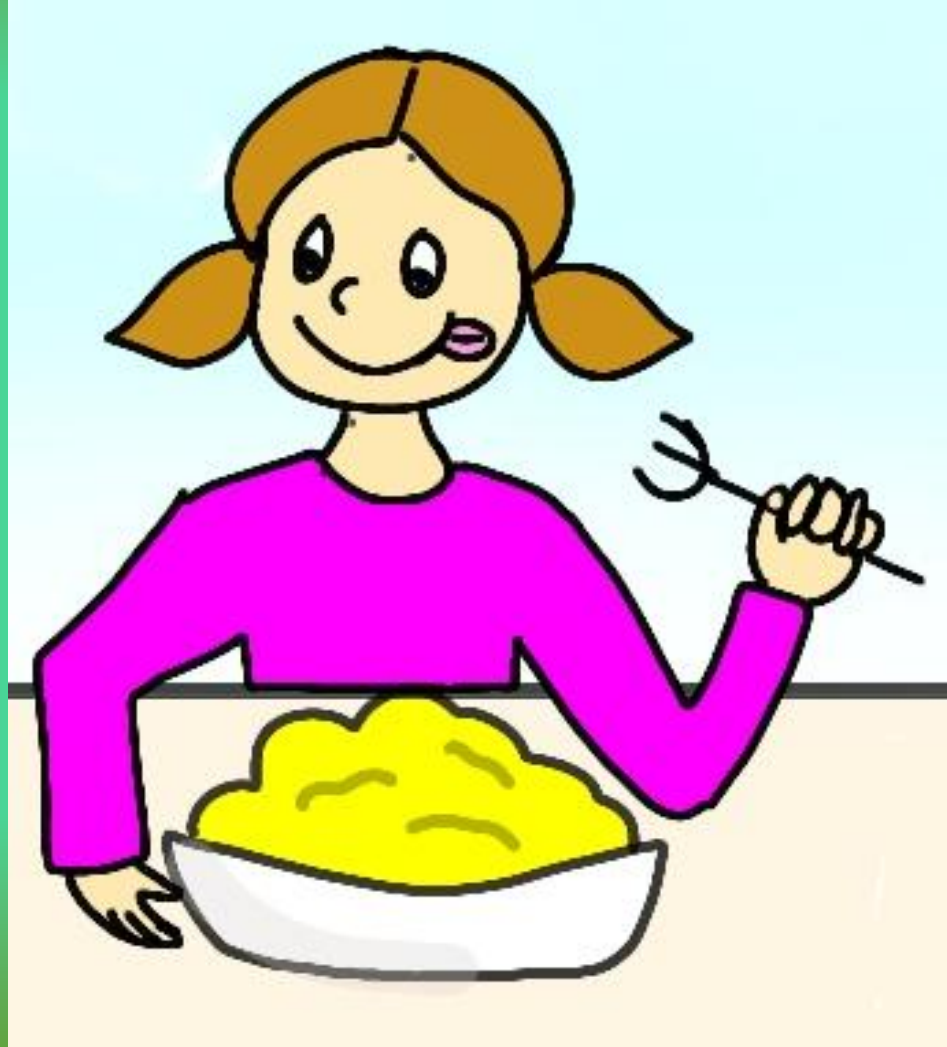
**ENERGIA CHE DA' VITA**

3° parte: la fotosintesi

**SALUTIAMOCI!  
APRI E CHIUDI LE MANI**

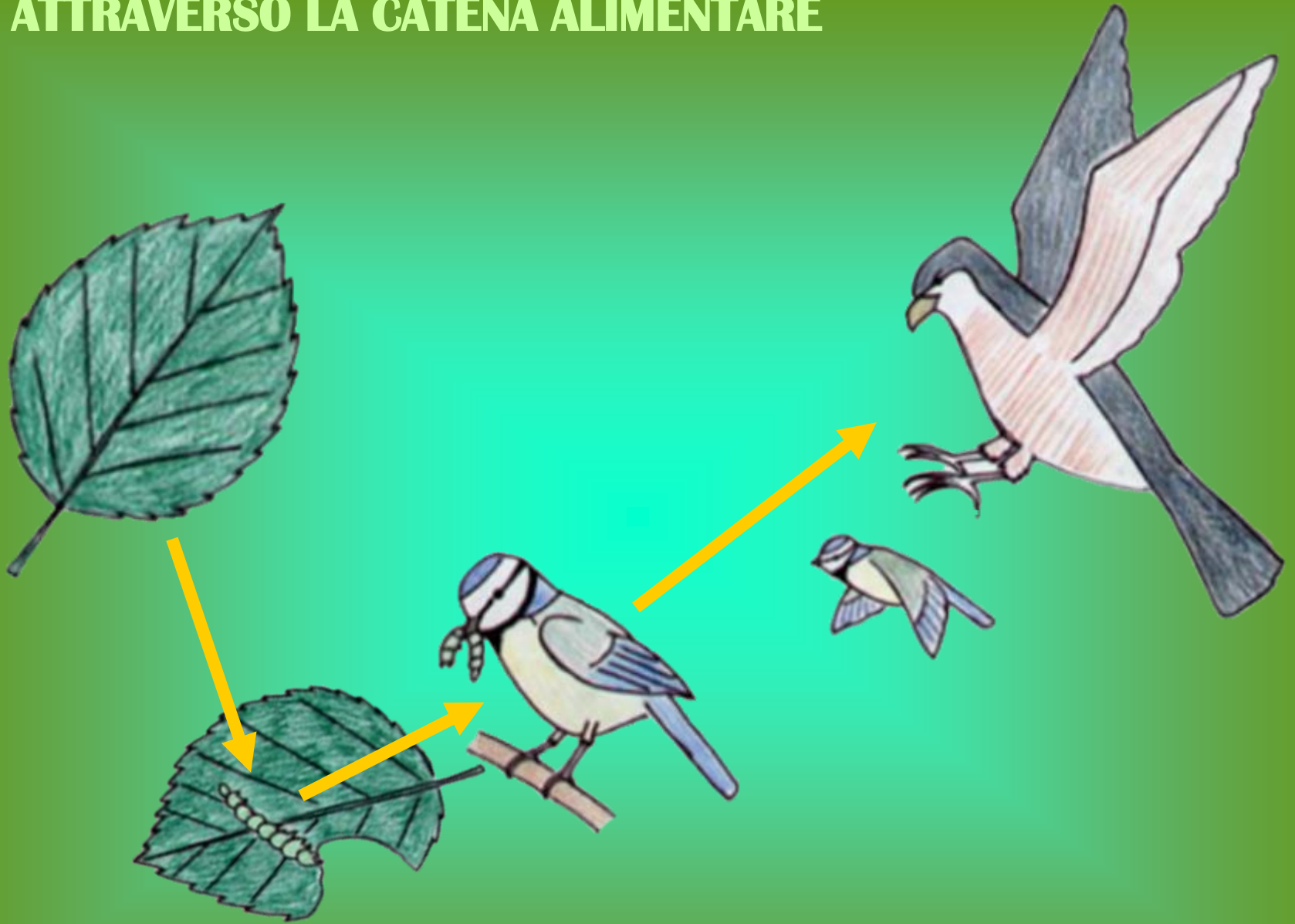


**PER VIVERE HAI BISOGNO DI ENERGIA.  
PER AVERE ENERGIA MANGI!**

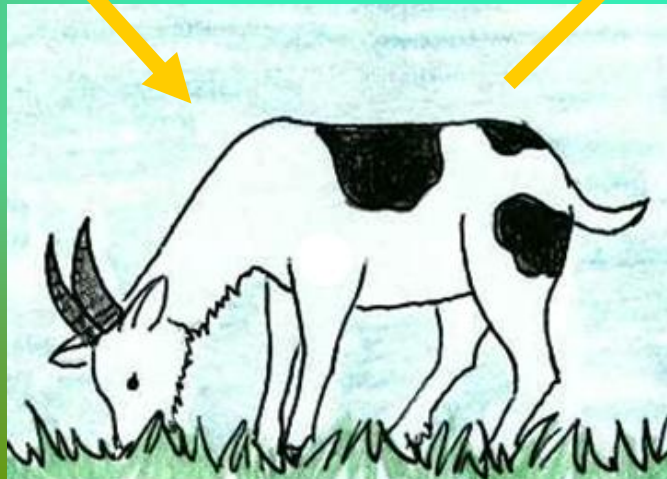
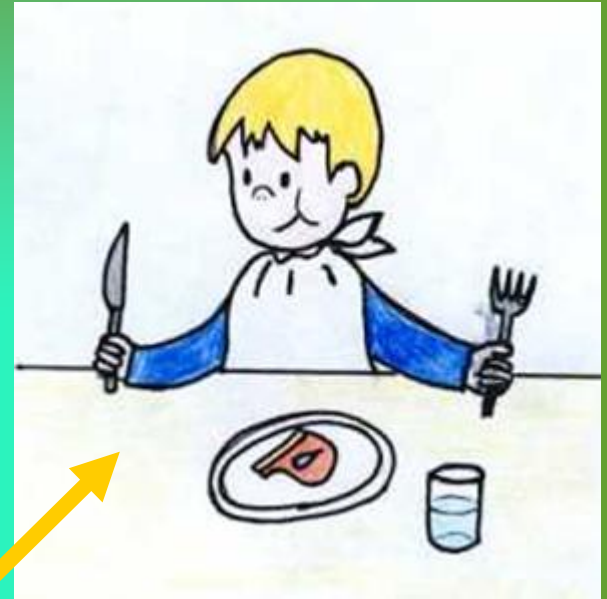


**PERCHE' NEL CIBO C'E' ENERGIA ? DA DOVE VIENE?**

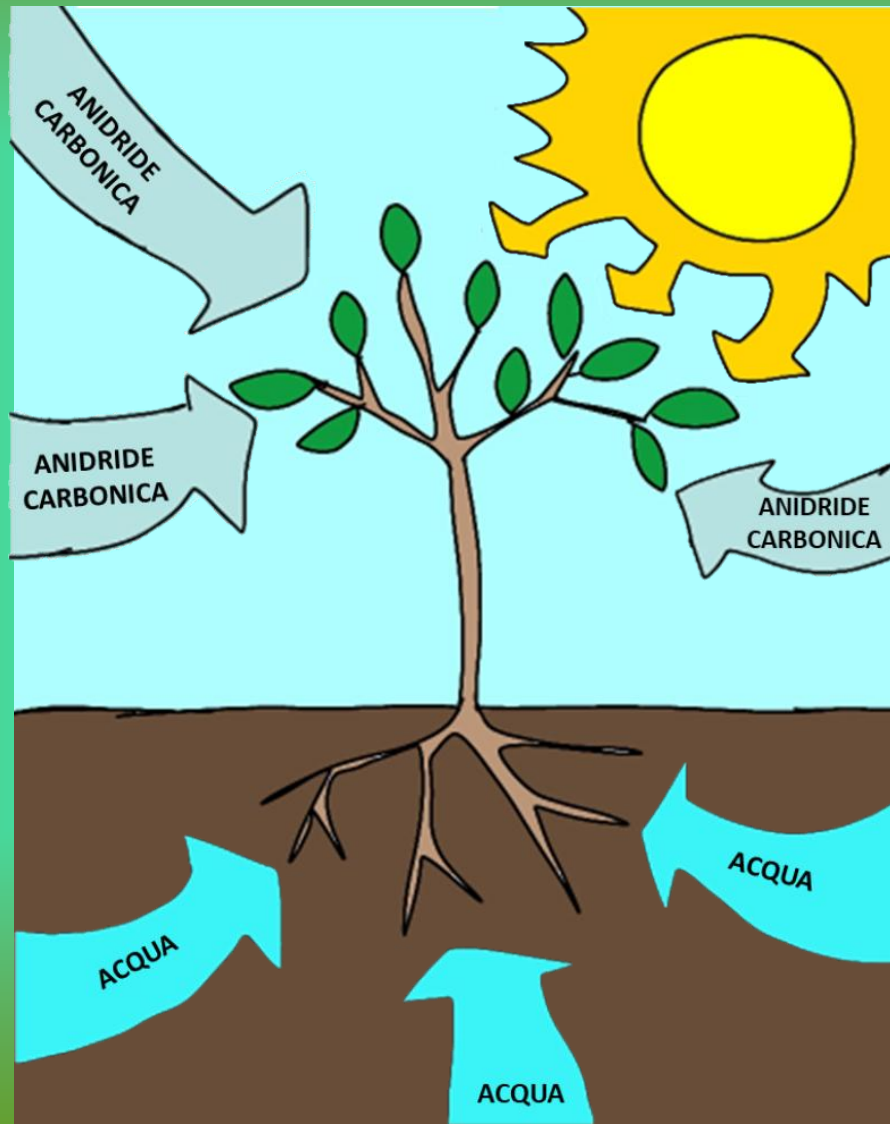
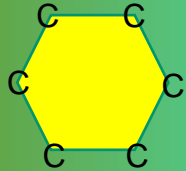
# ATTRAVERSO LA CATENA ALIMENTARE



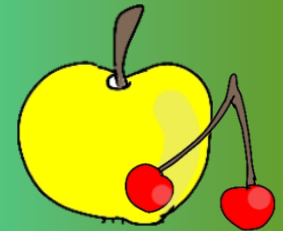
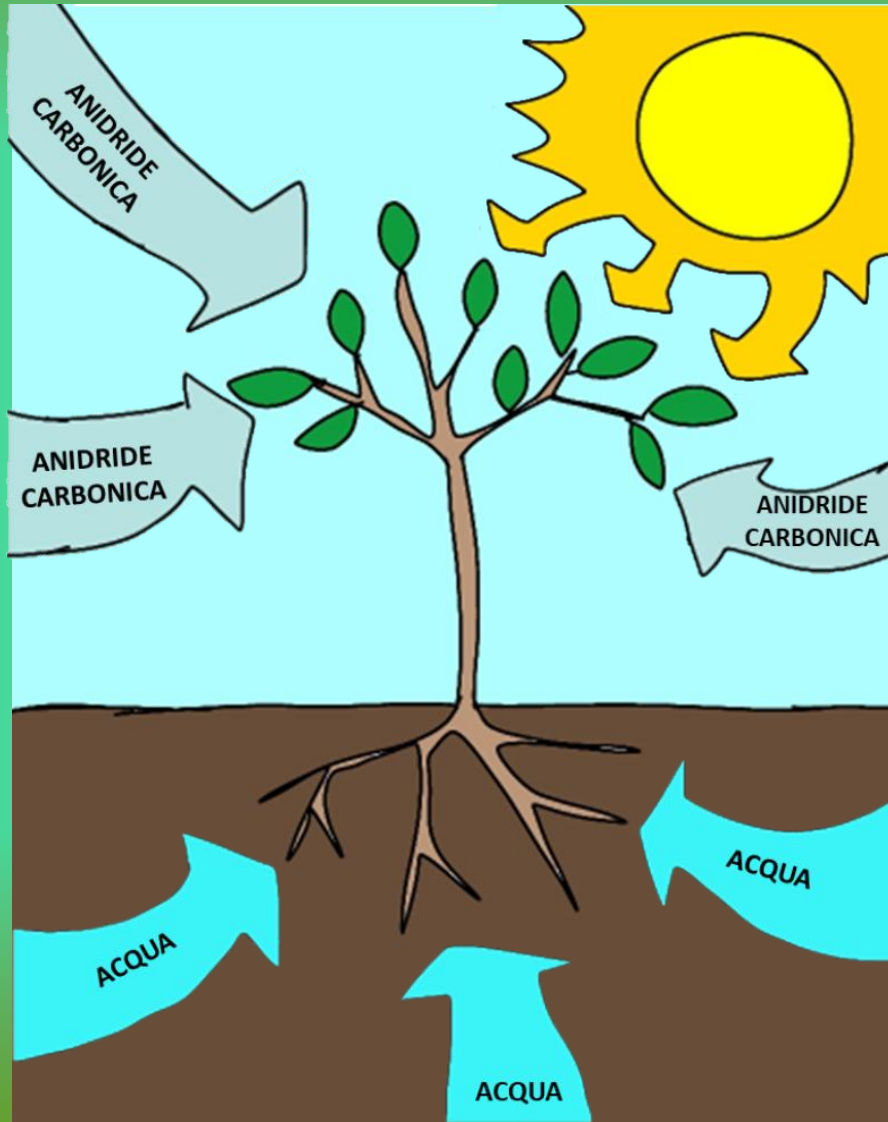
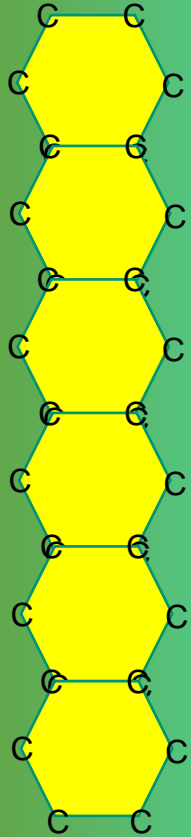
# ATTRAVERSO LA CATENA ALIMENTARE



# E LA PIANTA DA DOVE PRENDE L'ENERGIA?

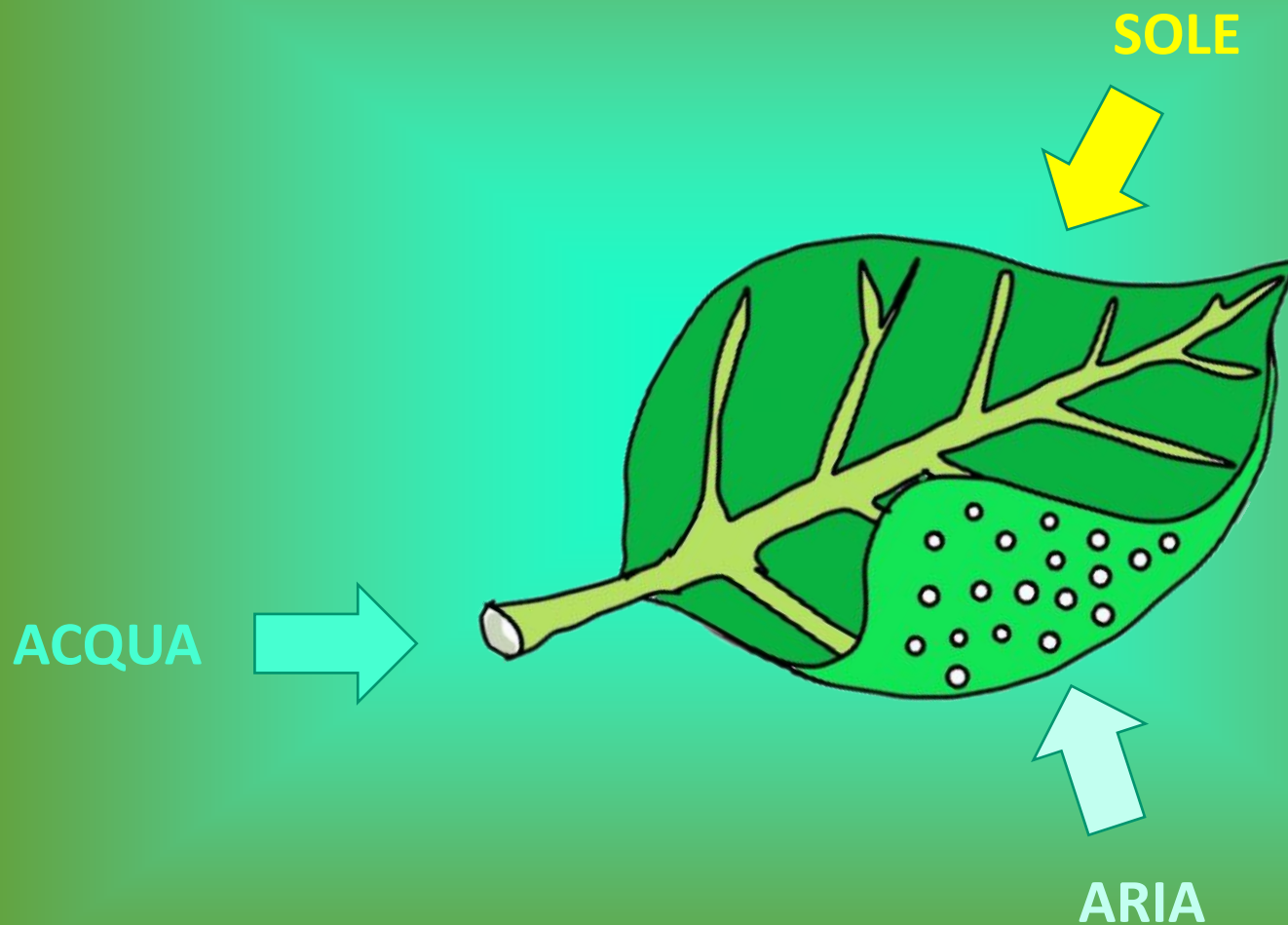


# L'ENERGIA FINISCE NEL CIBO



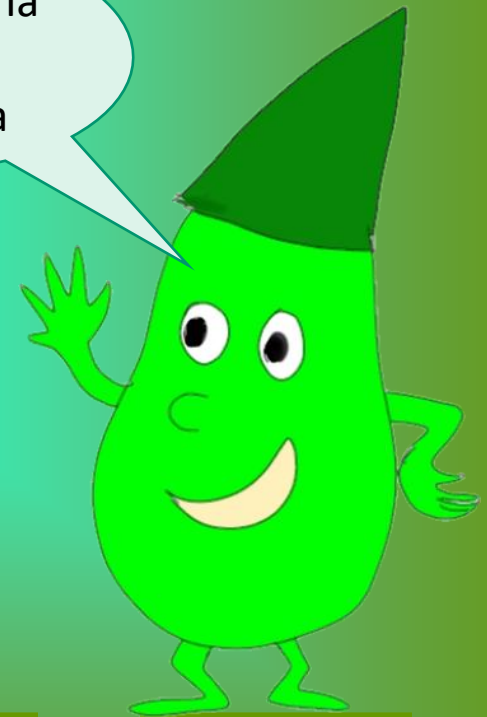
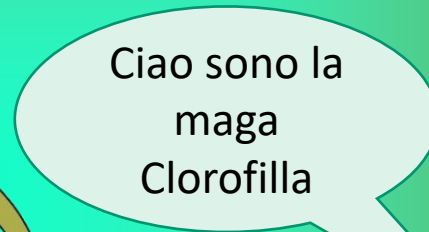
# ENTRIAMO IN UNA FOGLIA PER SCOPRIRE COSA SUCCEDDE

CI SONO 2 INGRESSI: PICCIOLO E STOMI





# PRONTI A SCOPRIRE IL SEGRETO DELLE PIANTE? GUARDIAMO DENTRO LA FOGLIA!



stomi



stomi



stomi

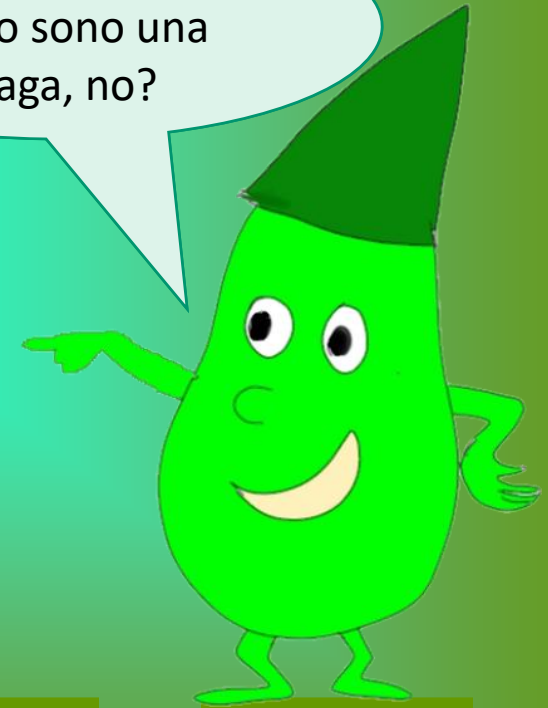


stomi

# UNA RICETTA FANTASTICA: CIBO CON ACQUA E ARIA!



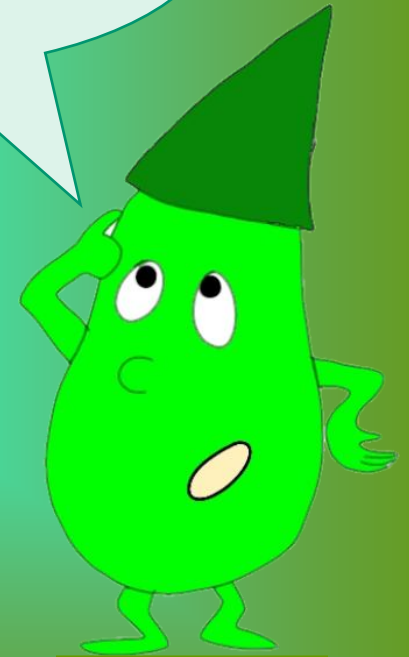
Facile per me, in  
fondo sono una  
maga, no?



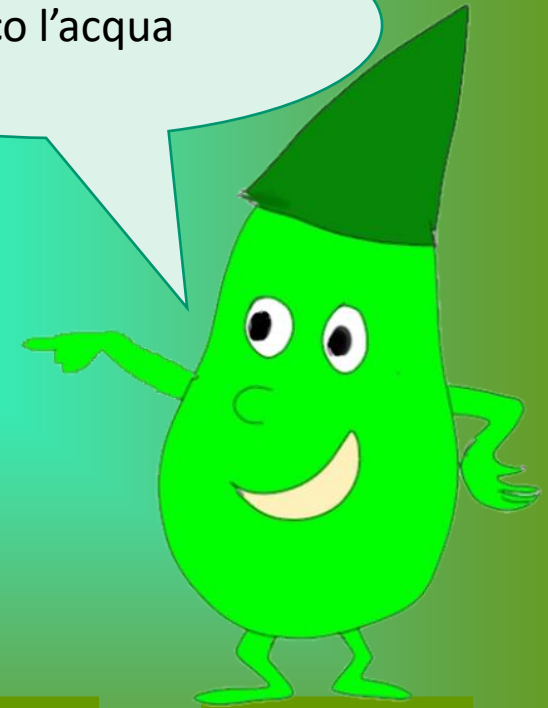
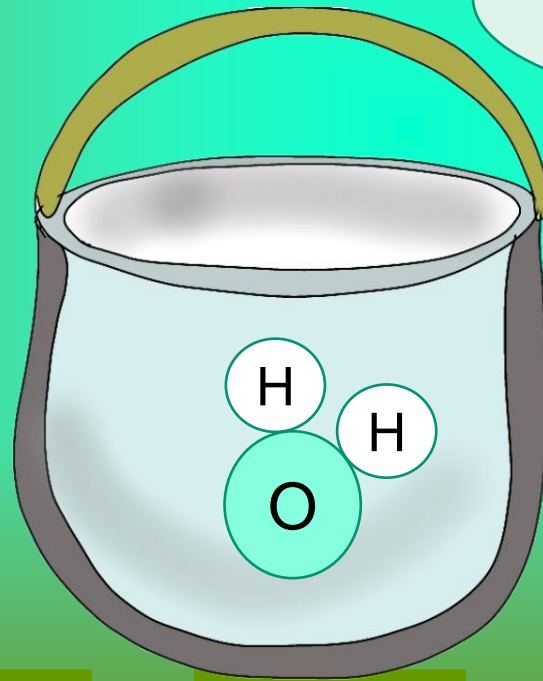
# IL PRIMO INGREDIENTE E' L'ACQUA



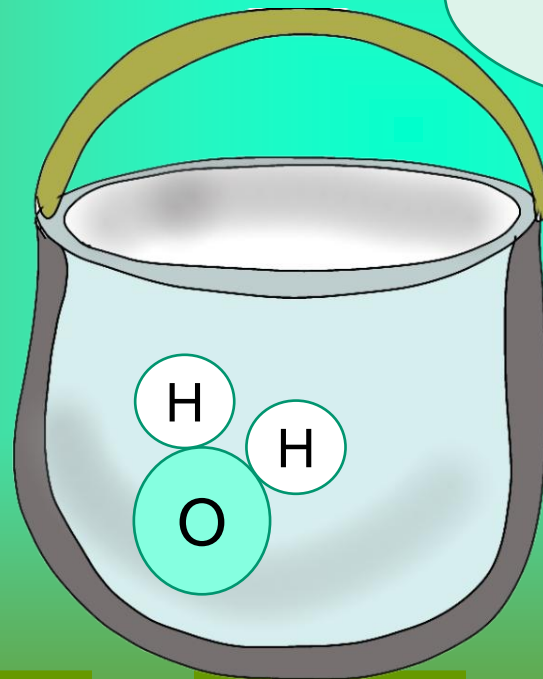
Dove prendo  
l'acqua? Ah, sì arriva  
dalle radici attraverso  
il picciolo



# IL PRIMO INGREDIENTE E' L'ACQUA



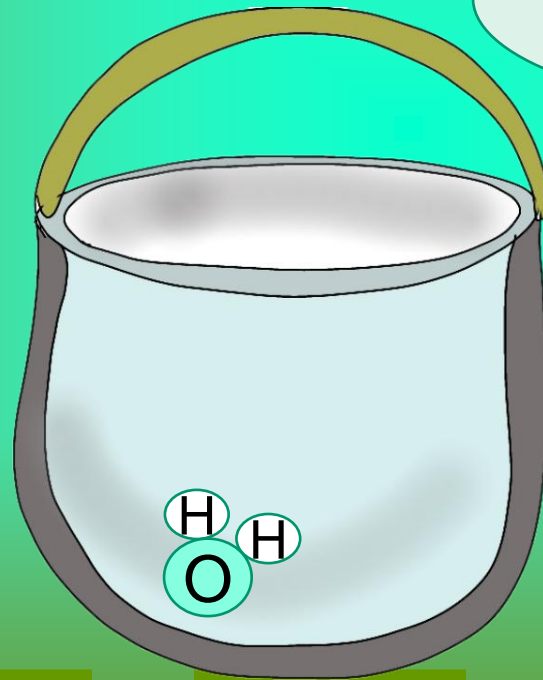
# IL PRIMO INGREDIENTE E' L'ACQUA



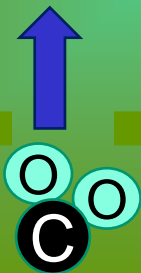
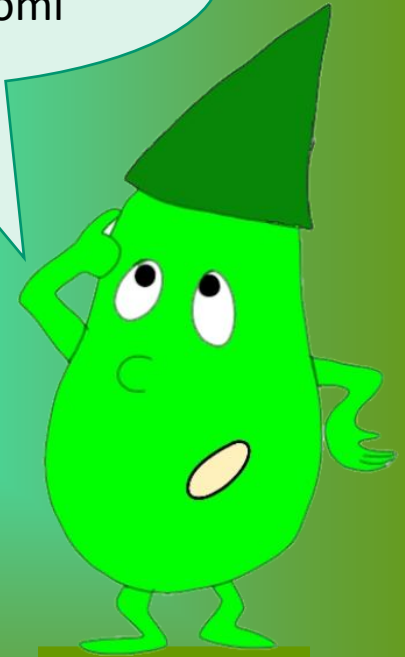
Si chiama H<sub>2</sub>O perché  
è fatta da due atomi di  
Idrogeno e uno di  
Ossigeno



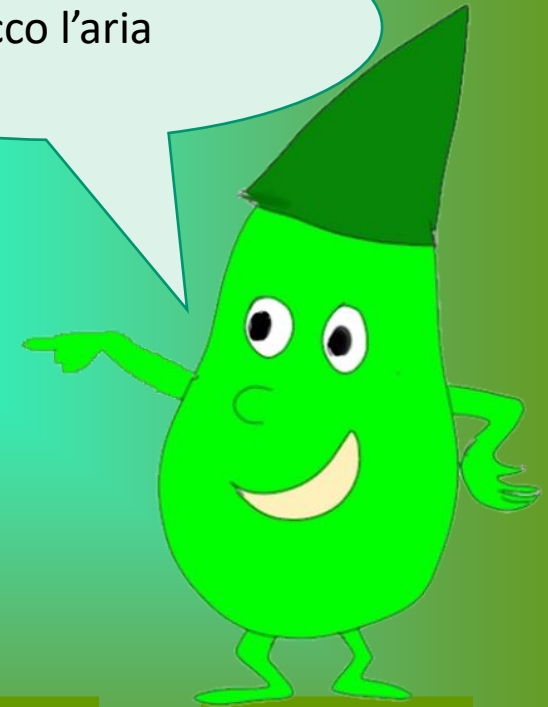
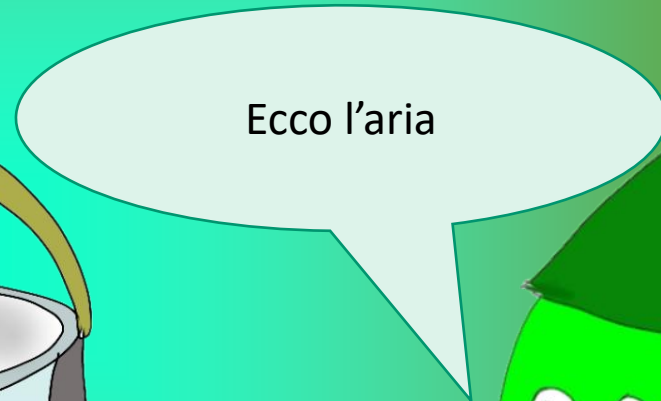
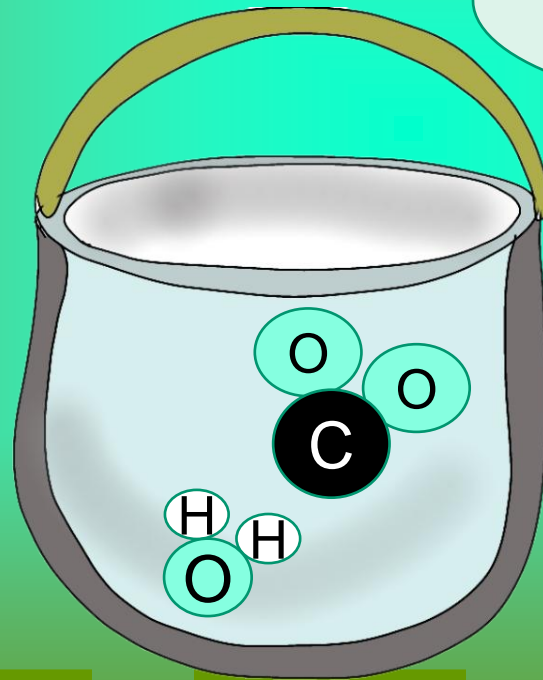
# IL SECONDO INGREDIENTE E' L'ARIA



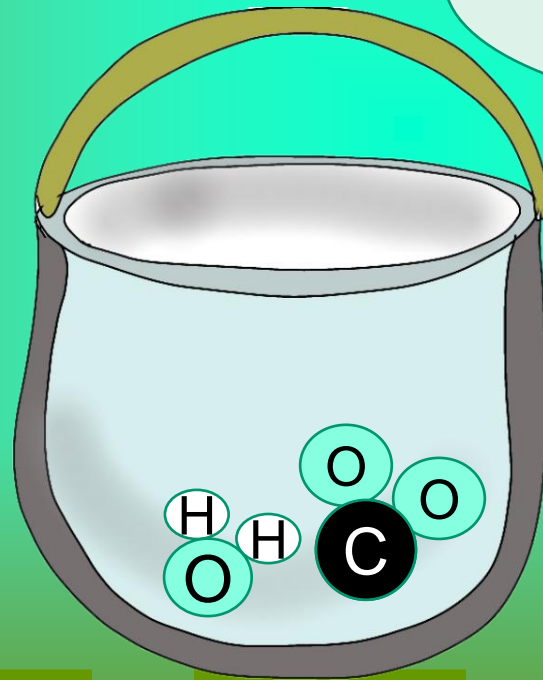
Da dove arriva l'aria?  
Ma sì, dagli stomi



# IL SECONDO INGREDIENTE E' L'ARIA



## IL SECONDO INGREDIENTE E' L'ARIA

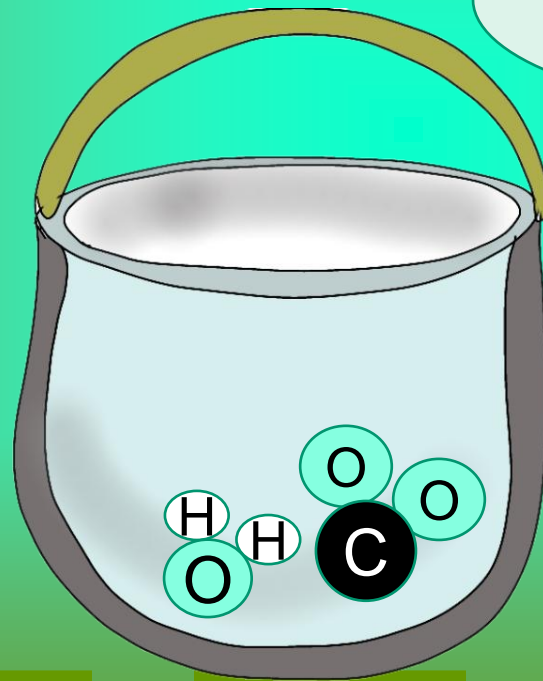


Si chiama CO<sub>2</sub> perché  
è fatta da un atomo di  
Carbonio e due di  
Ossigeno

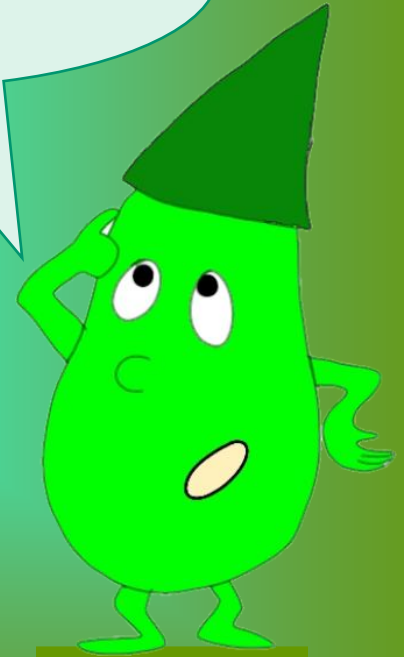




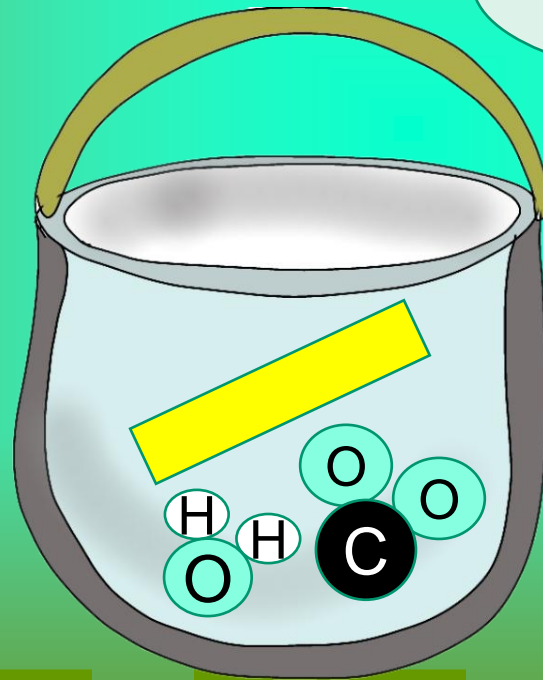
# IL TERZO INGREDIENTE E' L'ENERGIA



Poi mi serve tanta energia. La prendo dal sole



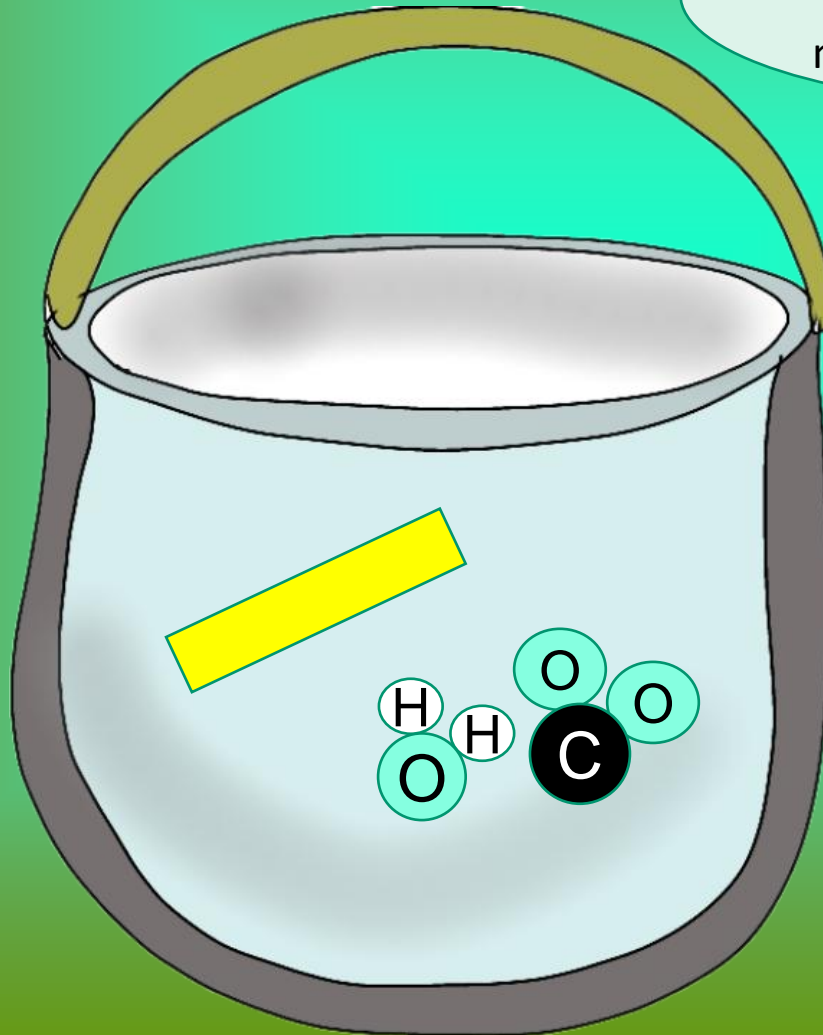
# IL TERZO INGREDIENTE E' L'ENERGIA



Ora ho tutti gli ingredienti



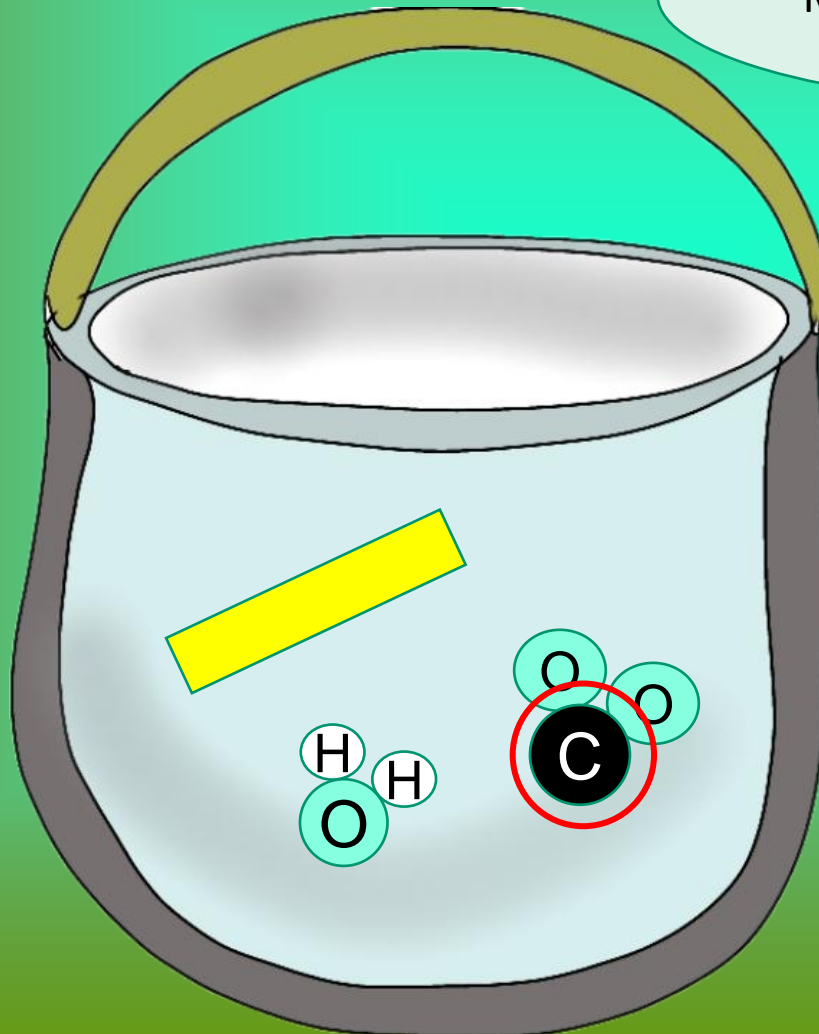
# COSTRUIAMO UN CARBOIDRATO



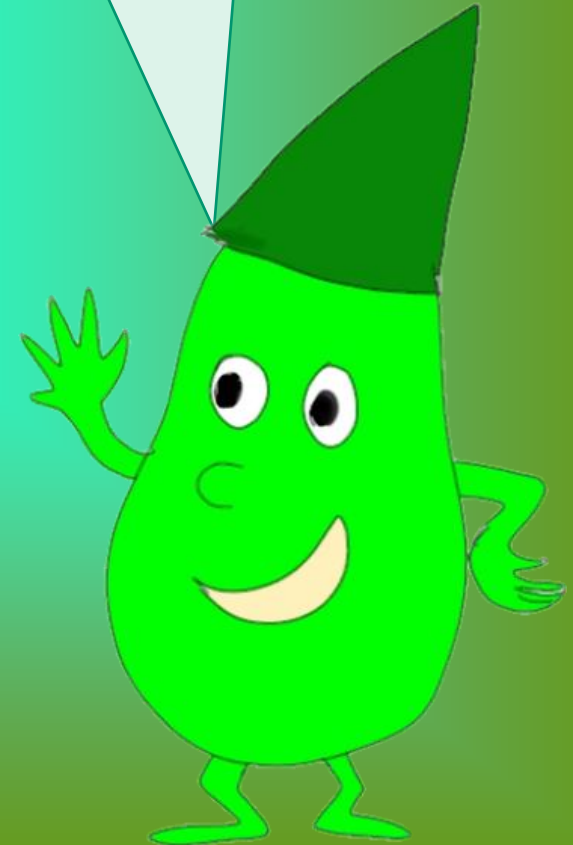
Devo costruire un  
carboidrato.  
mmm... Carbo....idrato



# COSTRUIAMO UN CARBOIDRATO

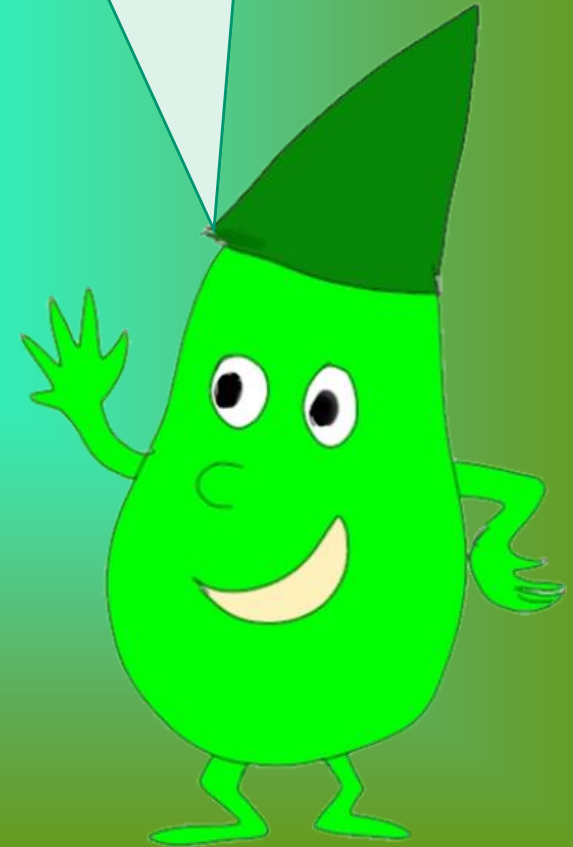
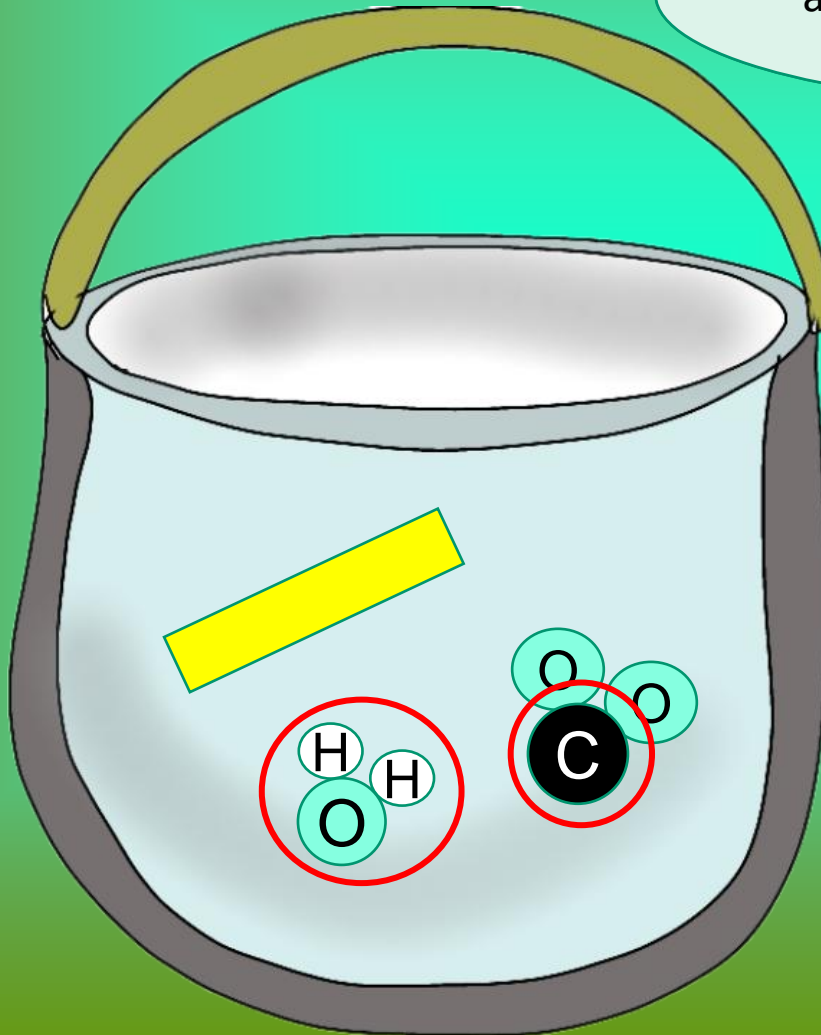


Ma certo: Carbo = carbonio



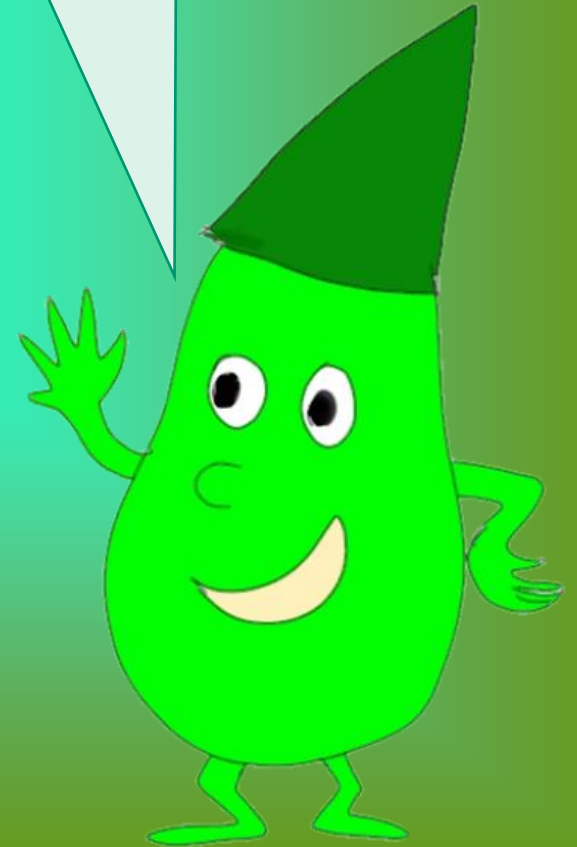
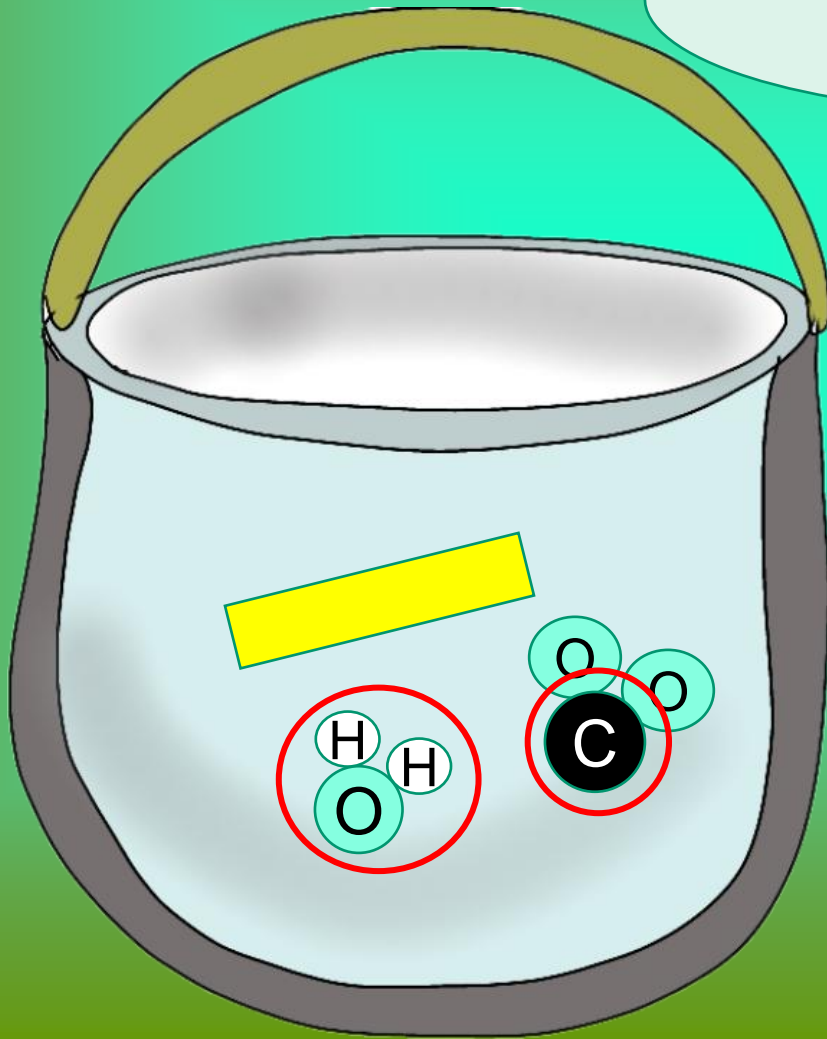
# COSTRUIAMO UN CARBOIDRATO

Itrato = acqua. Devo solo  
attaccare insieme Carbonio  
e Acqua

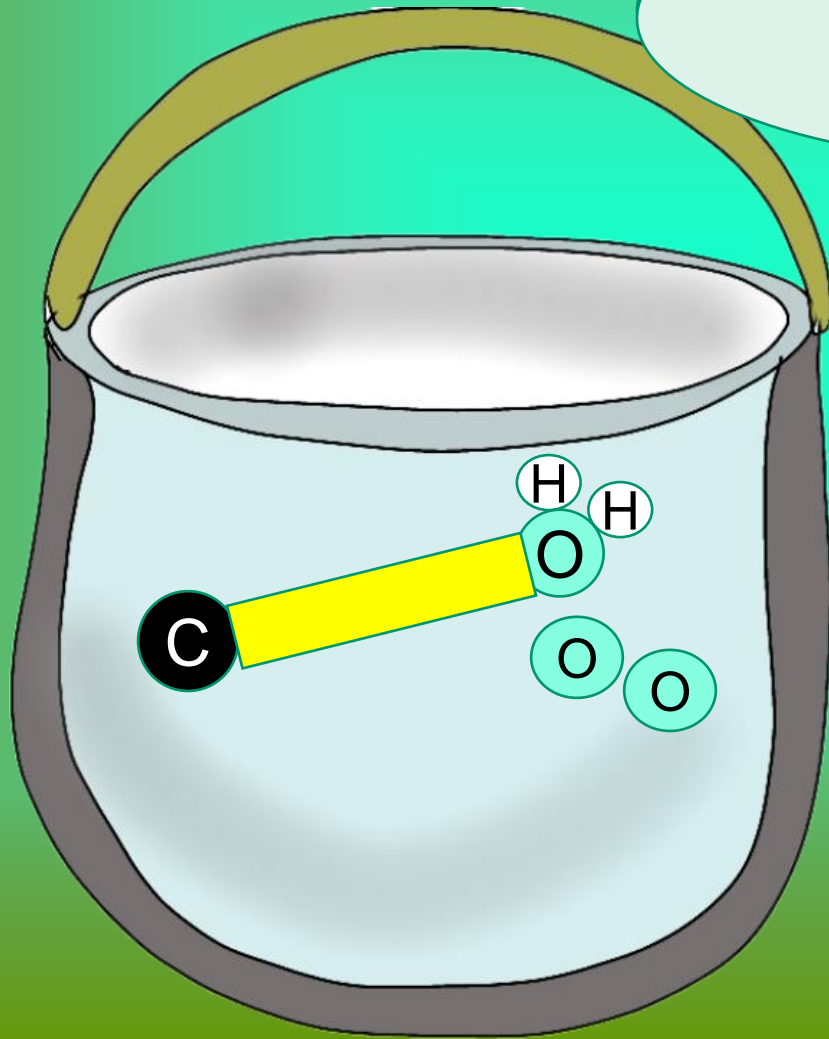


# COSTRUIAMO UN CARBOIDRATO

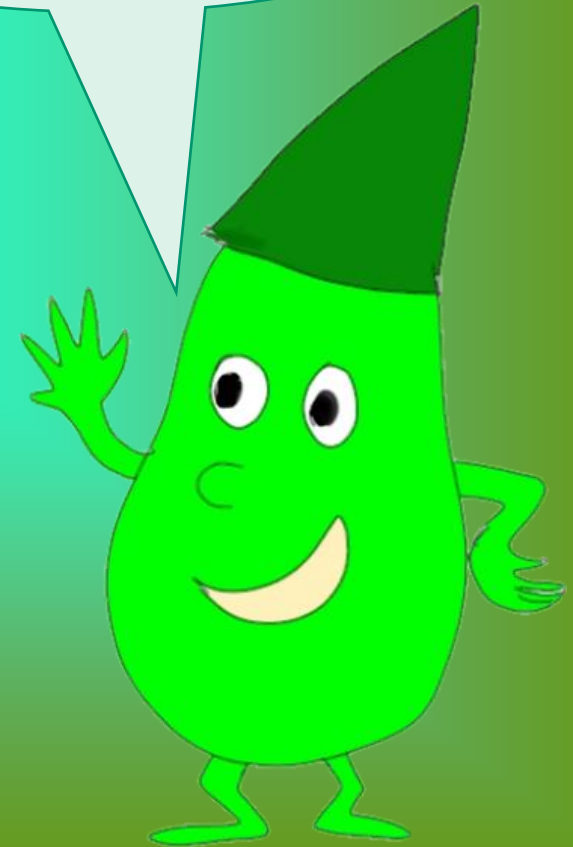
Ecco la parola magica:  
**FOTOSINTESI  
CLOROFILLIANA**



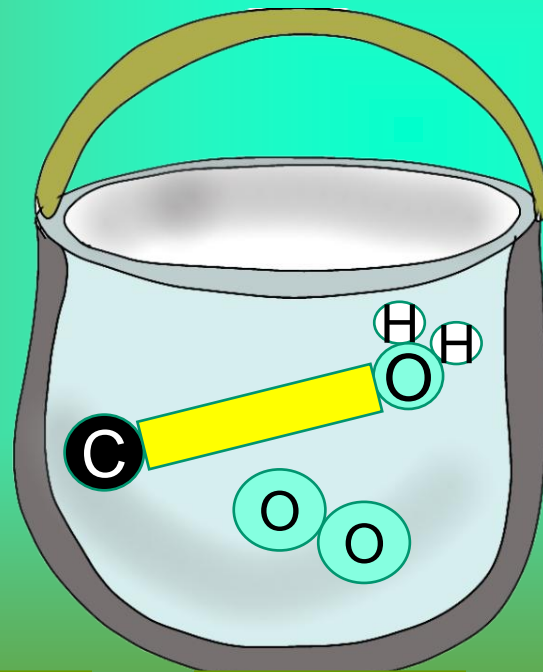
# COSTRUIAMO UN CARBOIDRATO



Ed ecco pronto lo zucchero  
o Carbo-Itrato, che  
contiene l'energia del



# COSTRUIAMO UN CARBOIDRATO

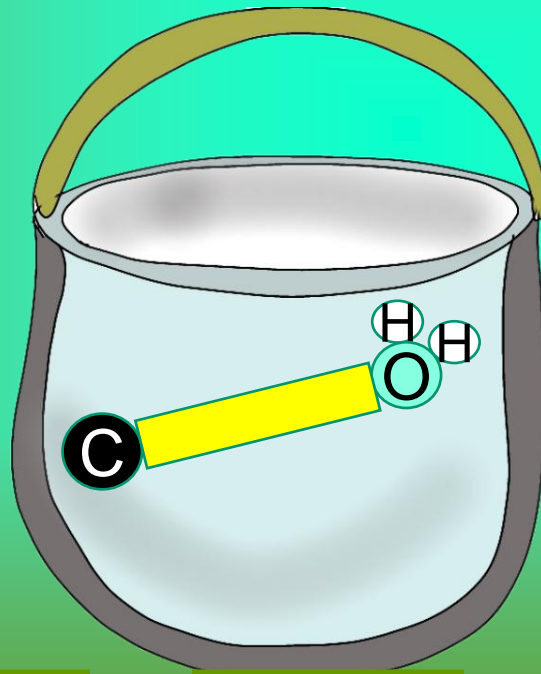


Mi avanza l'Ossigeno, che me ne faccio?

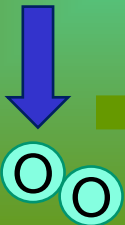
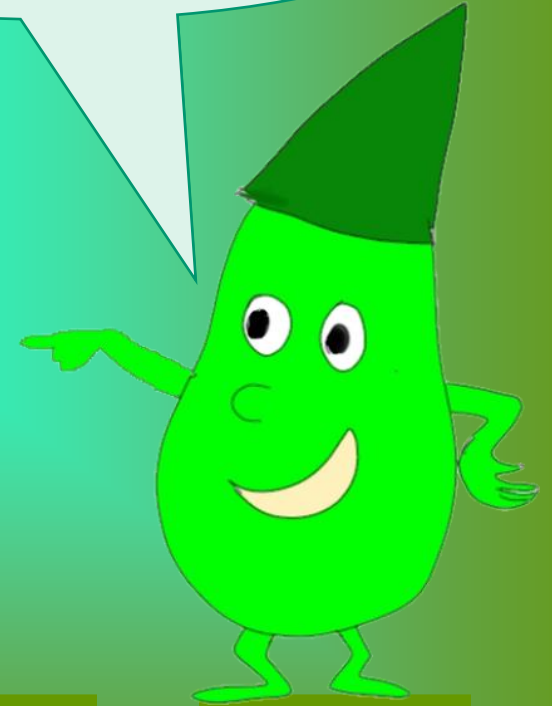




# COSTRUIAMO UN CARBOIDRATO



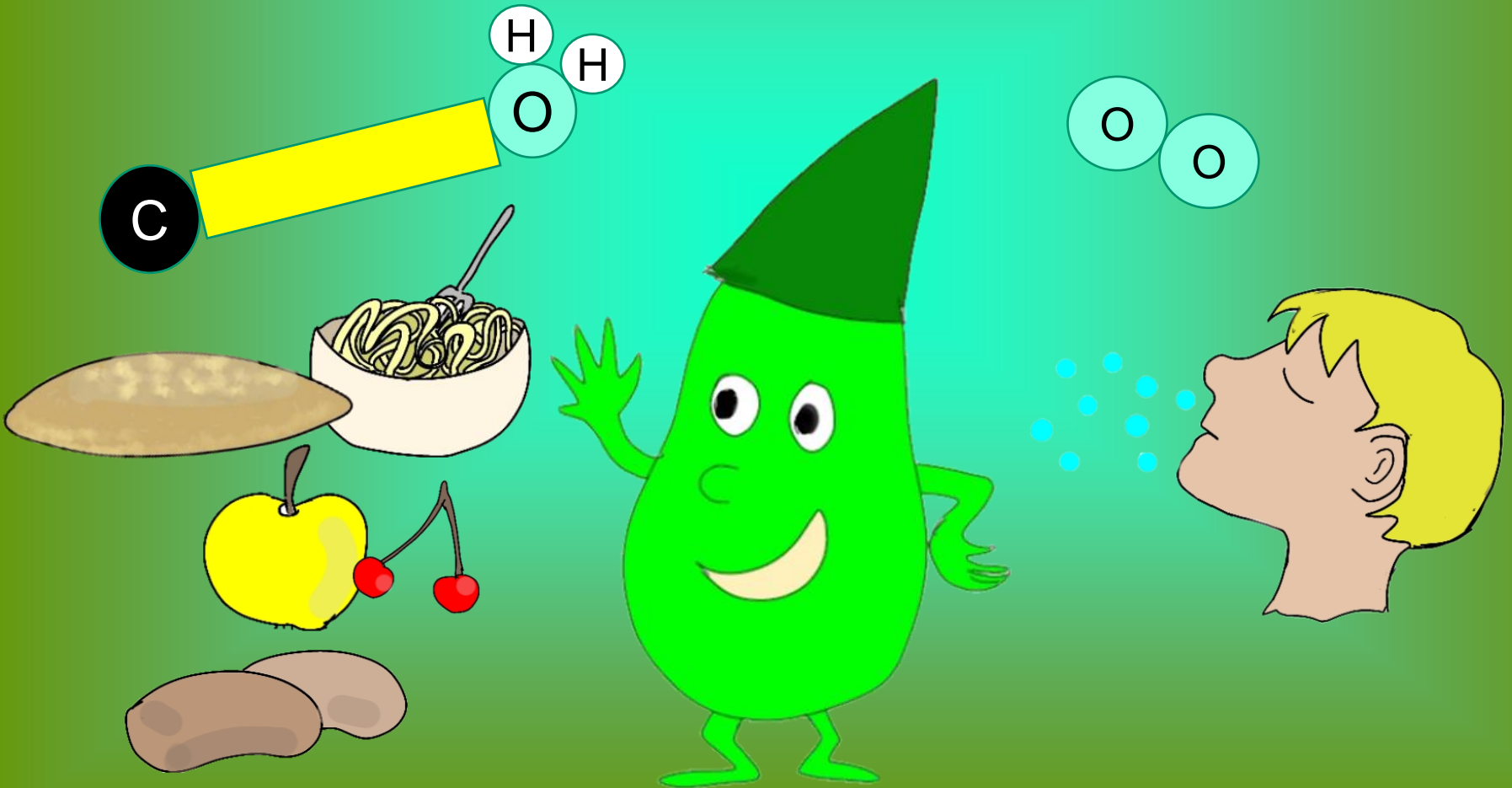
Idea! Lo butto fuori dagli stomi



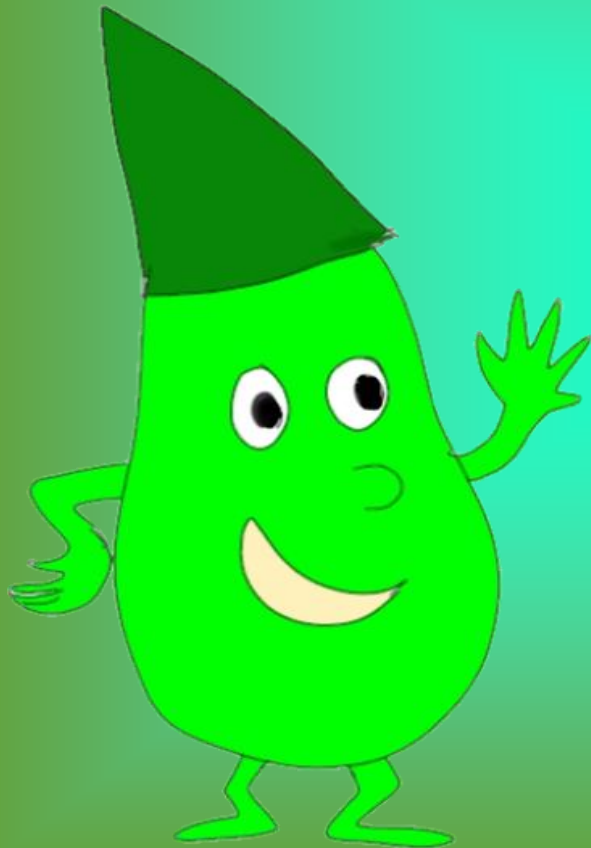
# LA MAGIA DELLE MAGHE CLOROFILLA:

## FABBRICARE CIBO

## E OSSIGENO



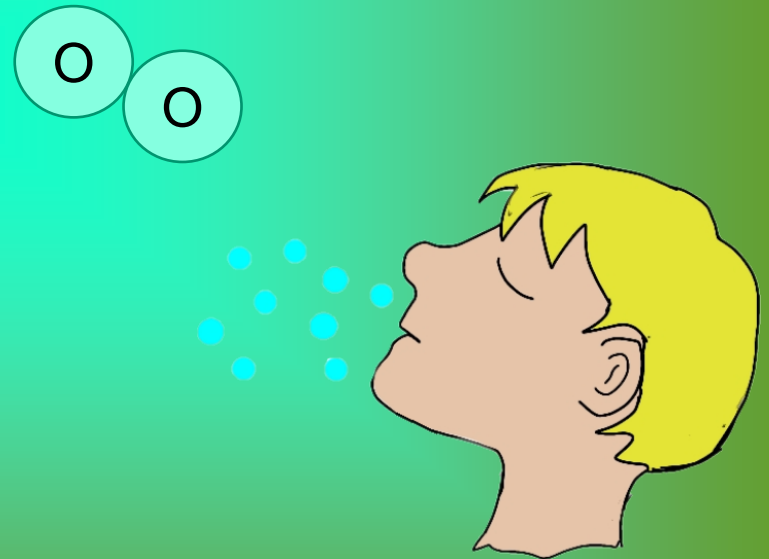
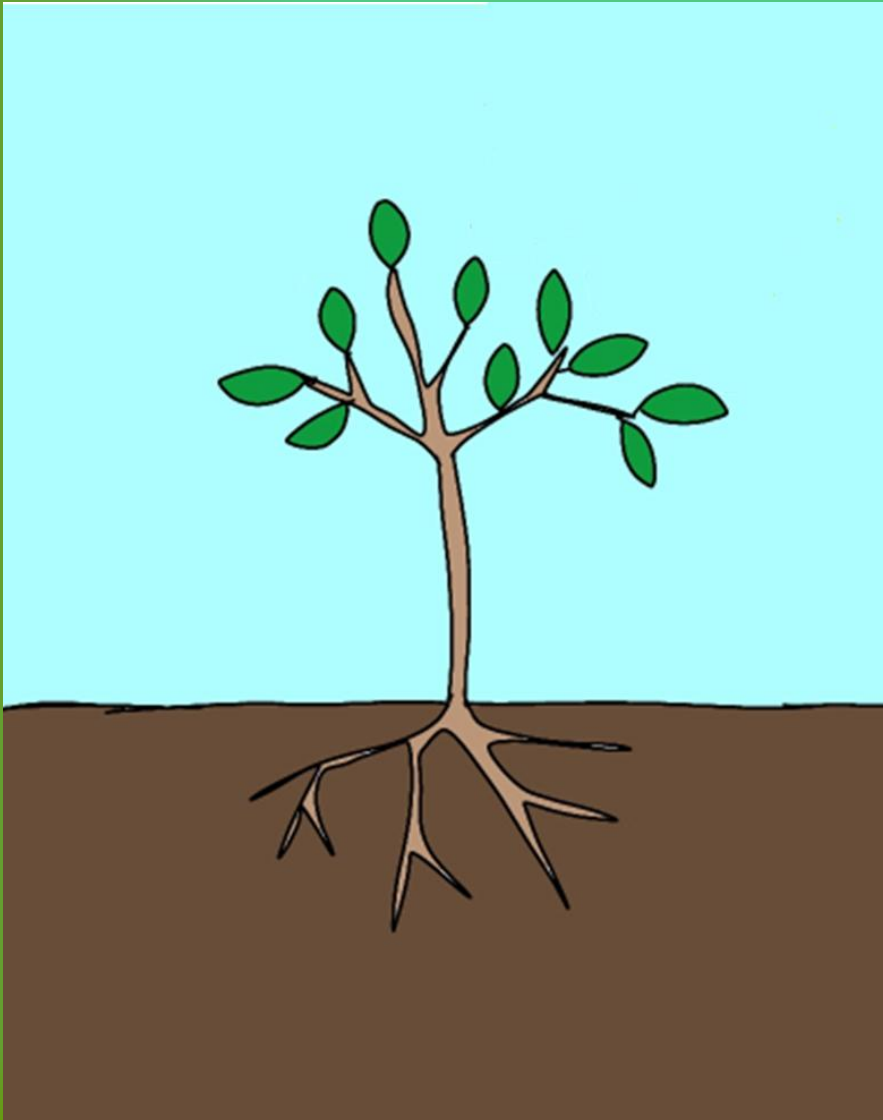
## E I SALI MINERALI ?



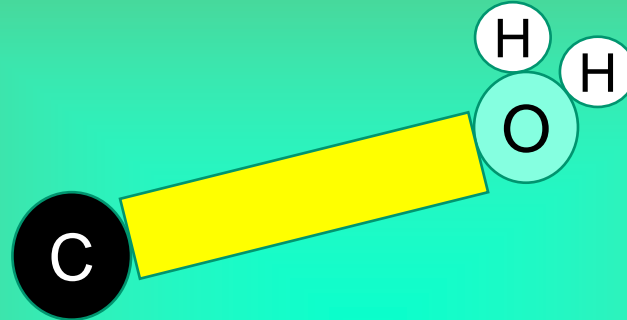
A me non servono per fare il carboidrato, ma la pianta li usa per costruire proteine, vitamine e altre sostanze vitali

# LA RESPIRAZIONE:

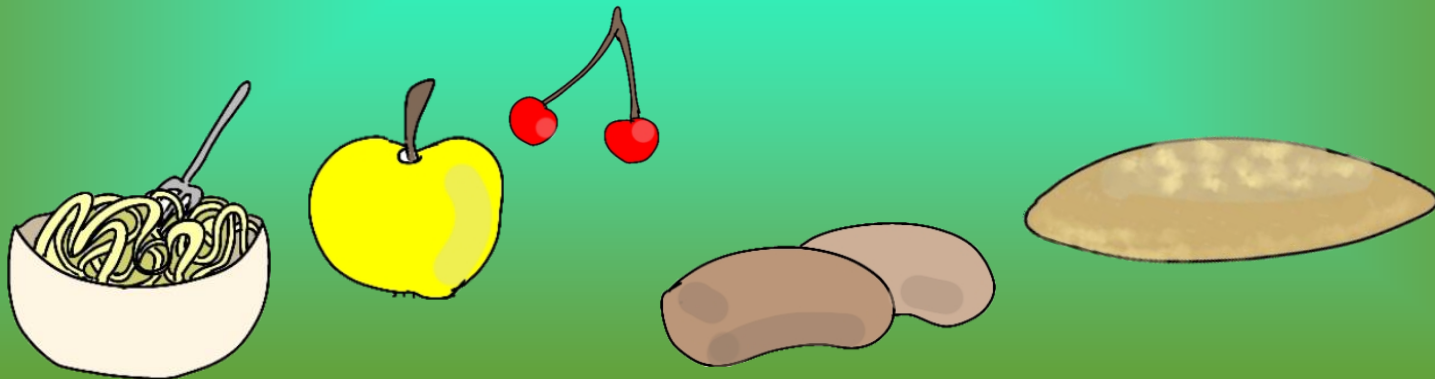
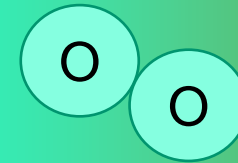
**SIA NOI CHE LE  
PIANTE RESPIRIAMO  
OSSIGENO**



# LA RESPIRAZIONE: PER USARE L'ENERGIA DEL CIBO

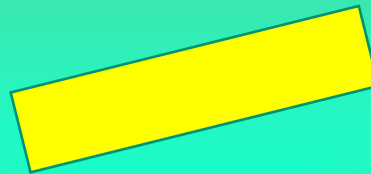


**SERVE OSSIGENO**

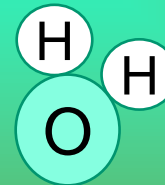
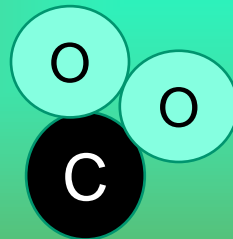




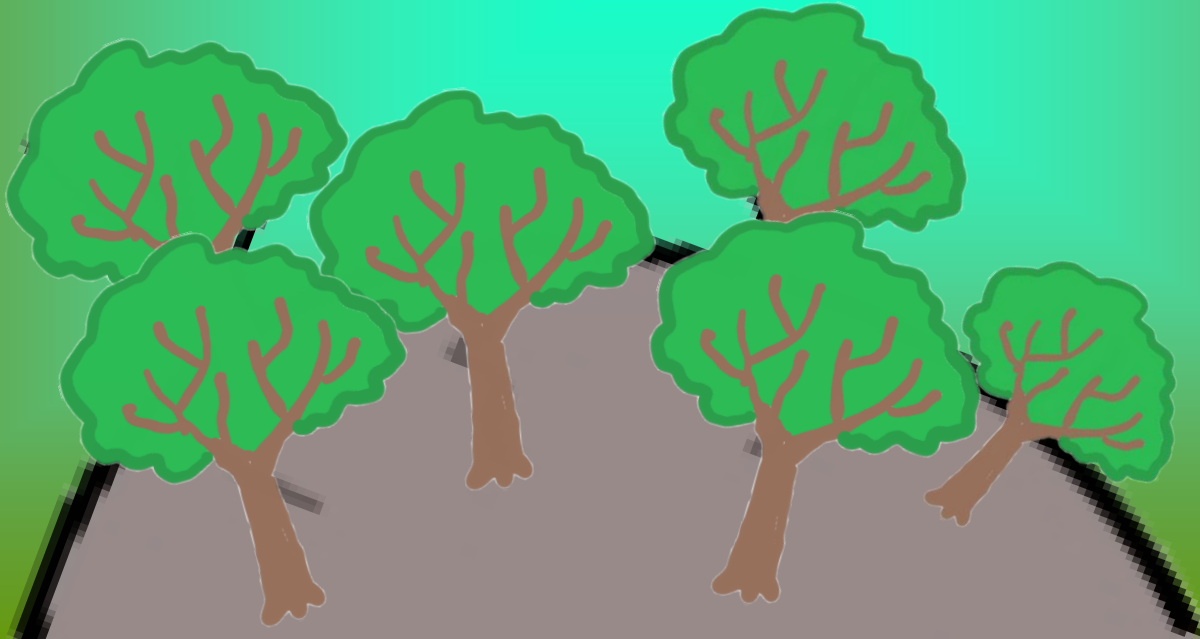
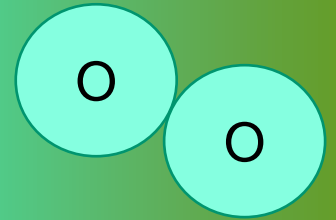
# **LA RESPIRAZIONE:** **PER USARE L'ENERGIA DEL CIBO**



**SI RIFORMANO ACQUA E ARIA**



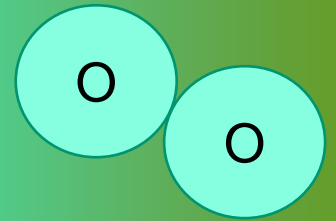
# SENZA LE PIANTE NON POSSIAMO VIVERE



**SENZA LE PIANTE NON POSSIAMO  
VIVERE**



**PROTEGGILE!**







**Parco Pineta**  
Il cuore verde della Lombardia

# FOTOSINTESI

**ENERGIA CHE DA' VITA**

Fine 3° parte

FOTOGRAFIE E DISEGNI: PAOLA CASALE