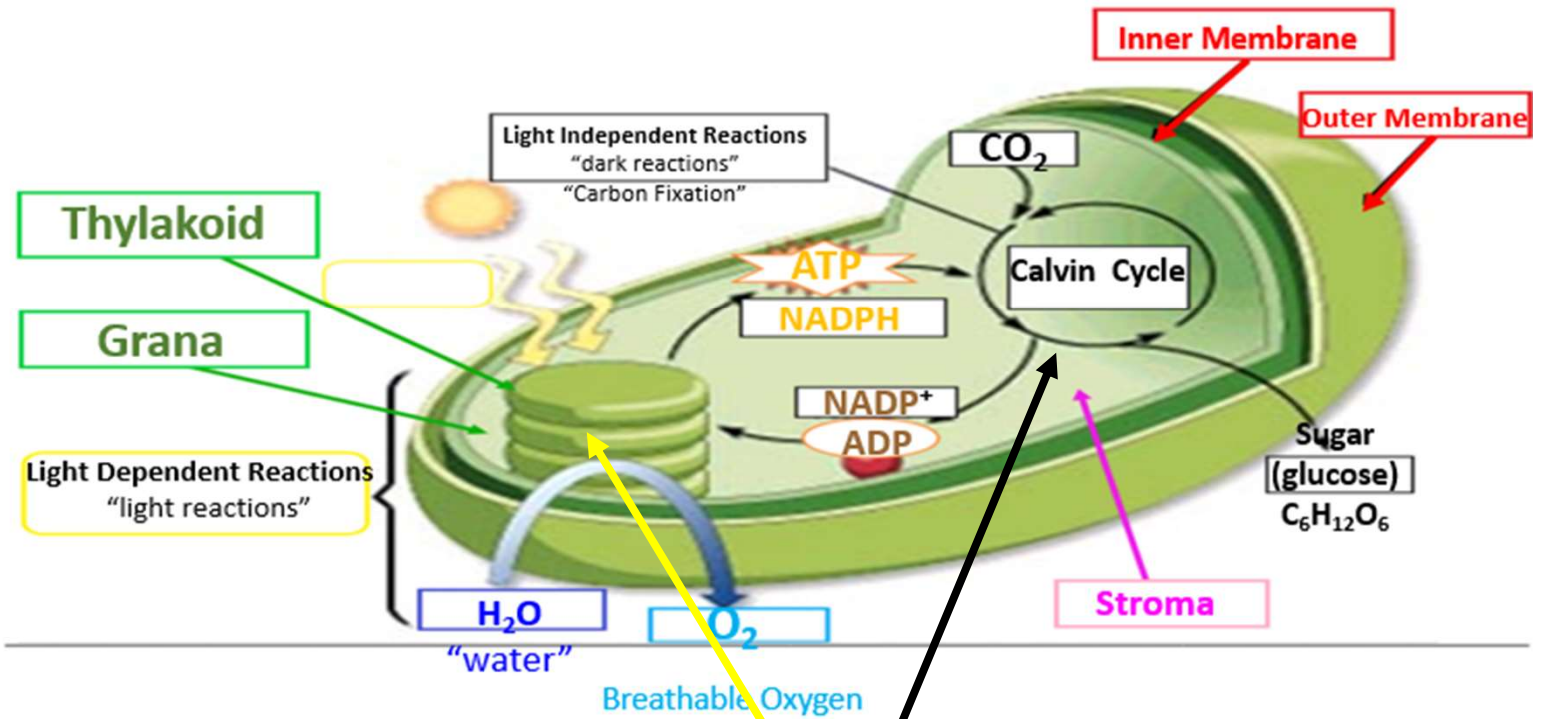


# PHOTOSYNTHESIS

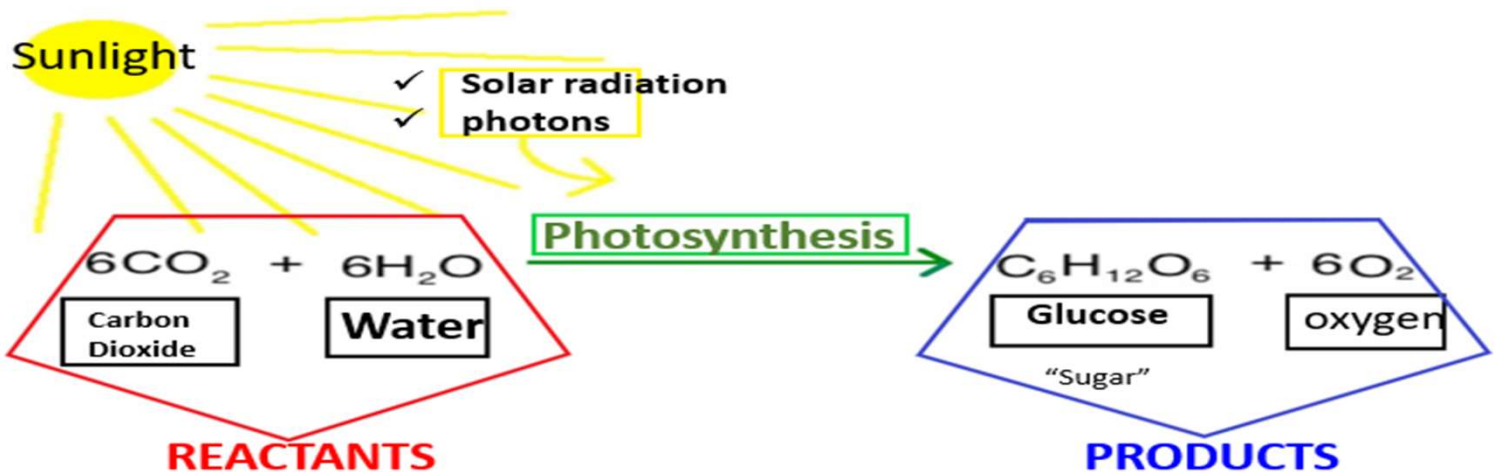


## LIGHT REACTIONS:

- ⊙ Water enters the thylakoid.
- ⊙ The ENERGY captured from the sun is used to split water and power up  $NADP^+$  and  $ADP$
- ⊙  $ADP \rightarrow ATP$  and  $NADP^+ \rightarrow NADPH$
- ⊙ Oxygen ( $O_2$ ) is released as a byproduct.

## Dark Reactions: (carbon fixation)

- ⊕ Inorganic Carbon in the form of  $CO_2$  is "fixed" to a useable organic form we call glucose ( $C_6H_{12}O_6$ )
- ⊕ Energy from  $NADPH$  &  $ATP$  is used to convert  $CO_2 \rightarrow C_6H_{12}O_6$  in a series of steps called the Calving Cycle



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- ⊙ Water enters the thylakoid.
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- ⊙  $\text{ADP} \rightarrow \text{ATP}$  and  $\text{NADP}^+ \rightarrow \text{NADPH}$
- ⊙ Oxygen ( $\text{O}_2$ ) is released as a byproduct.

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- ⊕ Inorganic Carbon in the form of  $\text{CO}_2$  is “fixed” to a useable organic form we call glucose ( $\text{C}_6\text{H}_{12}\text{O}_6$ )
- ⊕ Energy from NADPH & ATP is used to convert  $\text{CO}_2 \rightarrow \text{C}_6\text{H}_{12}\text{O}_6$  in a series of steps called the Calvin Cycle

