



(a) Sunflowers (plants)



(b) Giant kelp (algae)



(c) Cyanobacteria (bacteria)



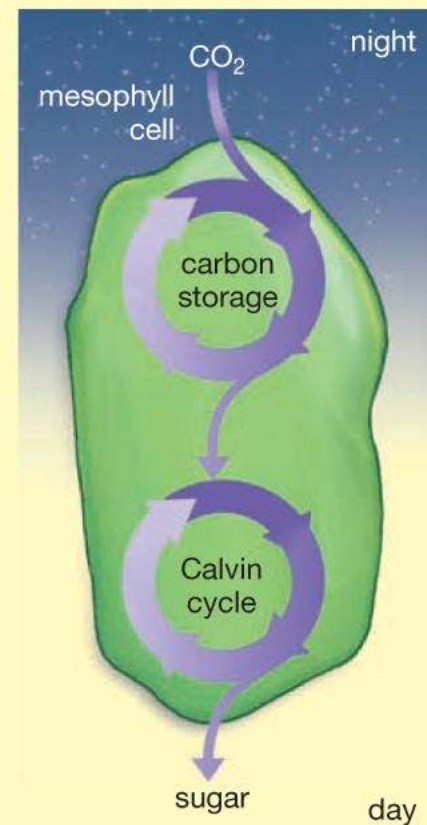
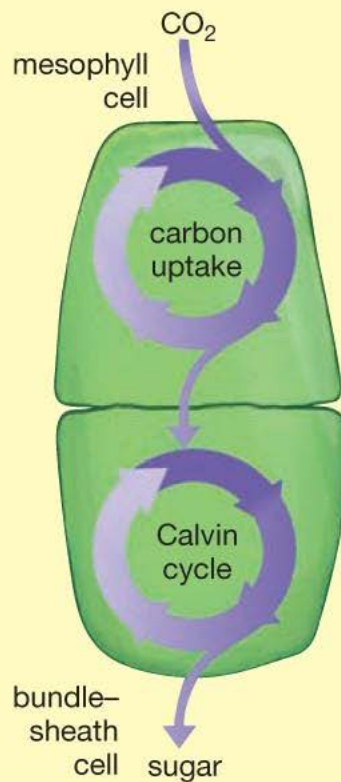
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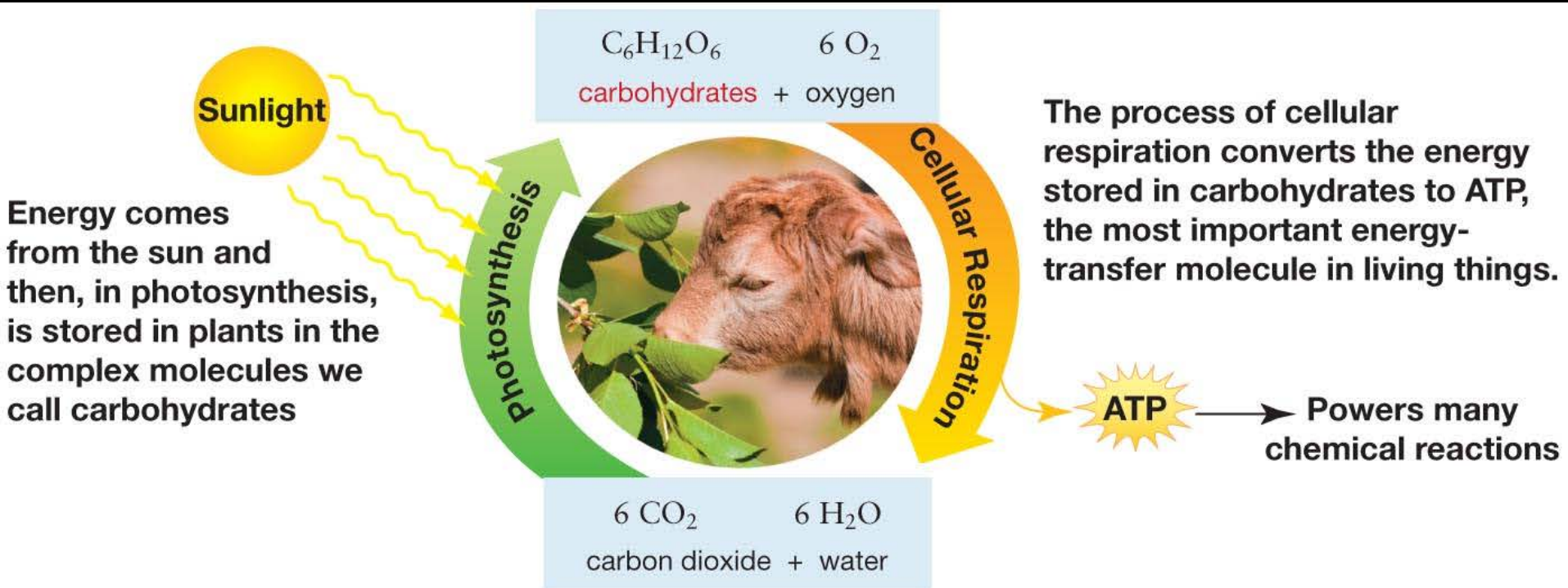
Table 8.1

Three Modes of Photosynthesis

	C₃	C₄	CAM
Used by:	Majority of plants	Corn, sugarcane (warm environments)	Cactus, pineapple, orchid (dry environments)
Benefits:	Efficient use of ATP	Less photorespiration	Less water loss
Problems:	Photorespiration	Uses up more ATP	Uses up more ATP; hard to "bank" enough CO ₂

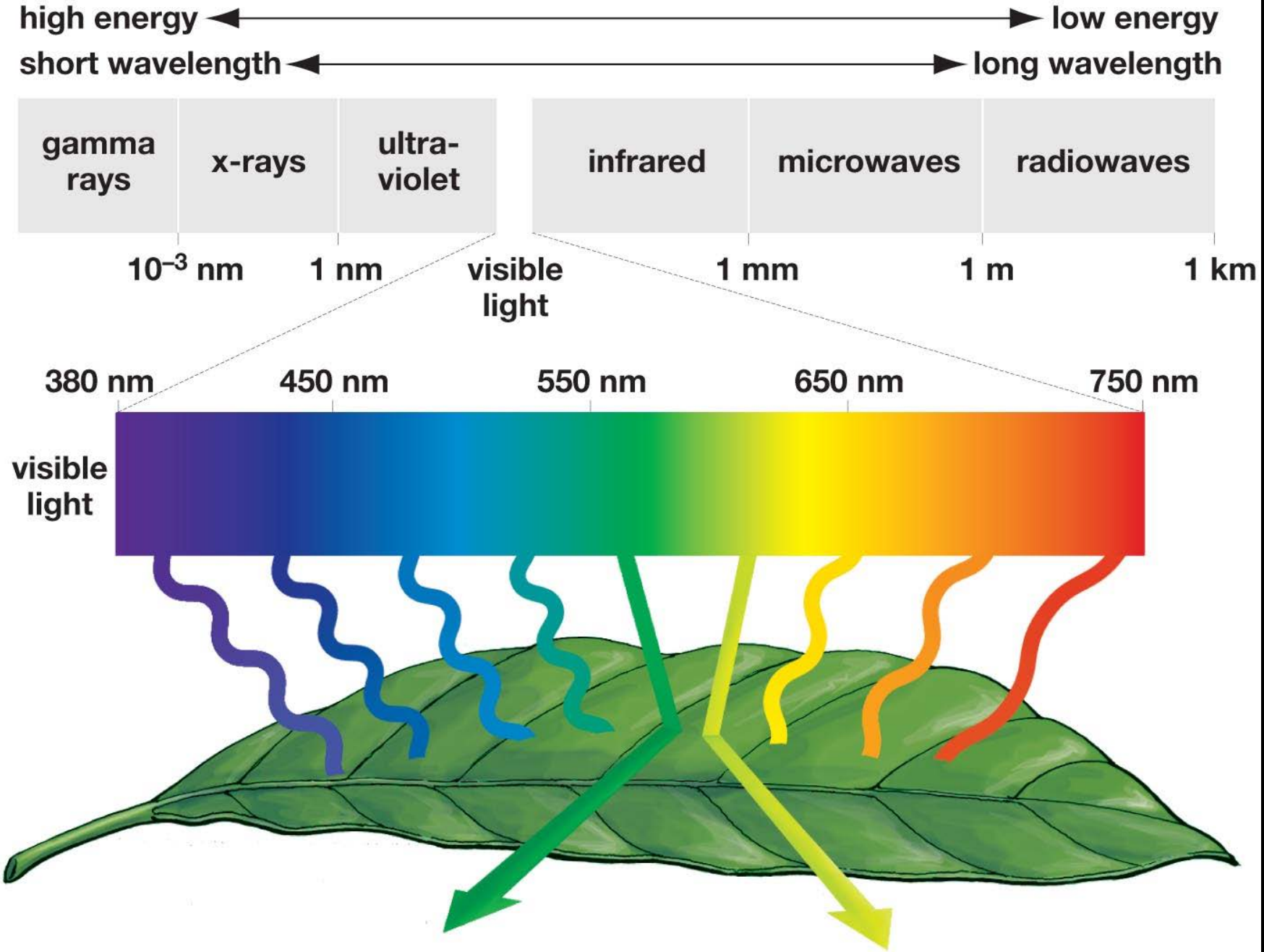
How It Works





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Fig. 8.2



Spectra From Common Sources of Visible Light

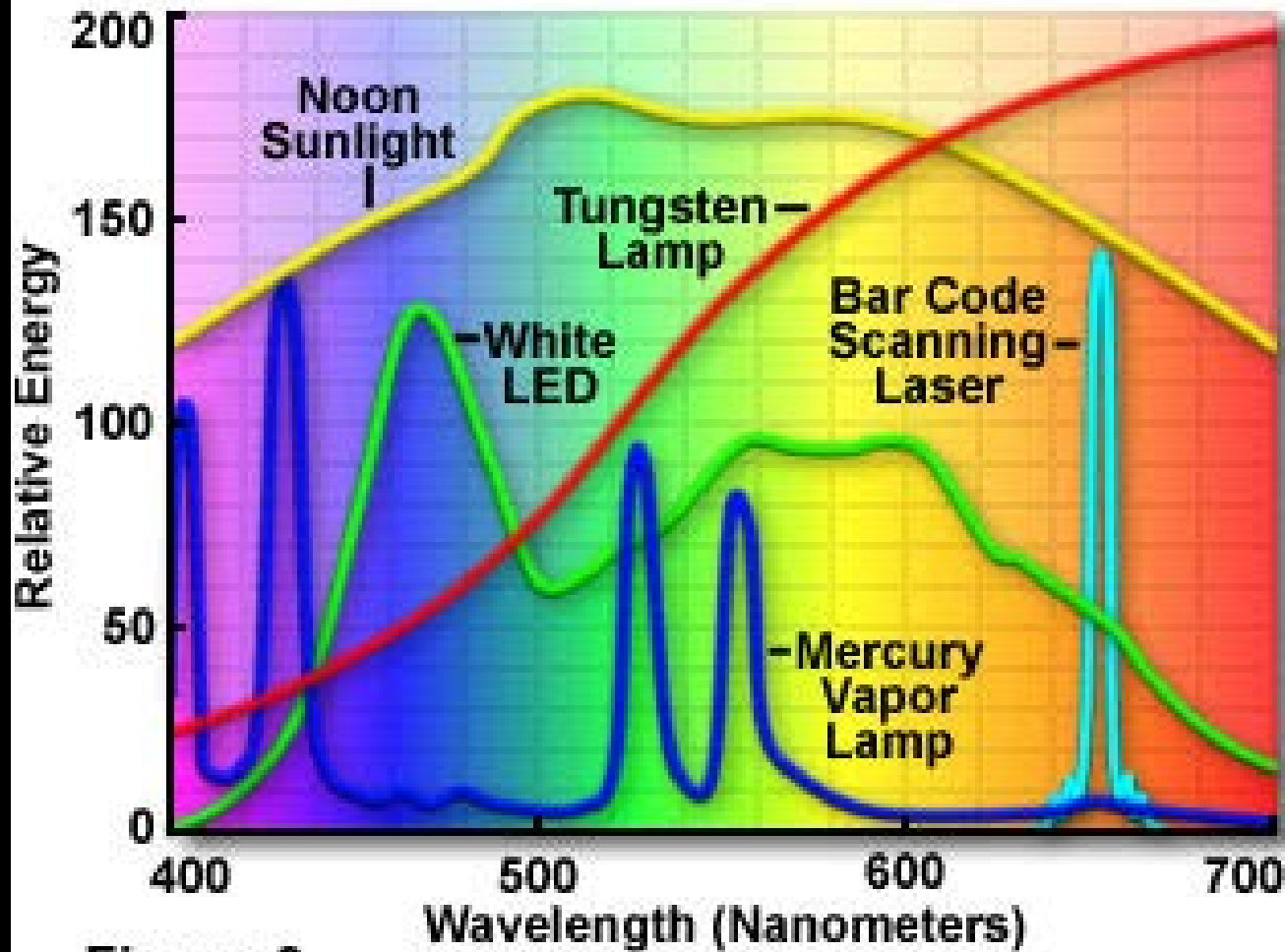
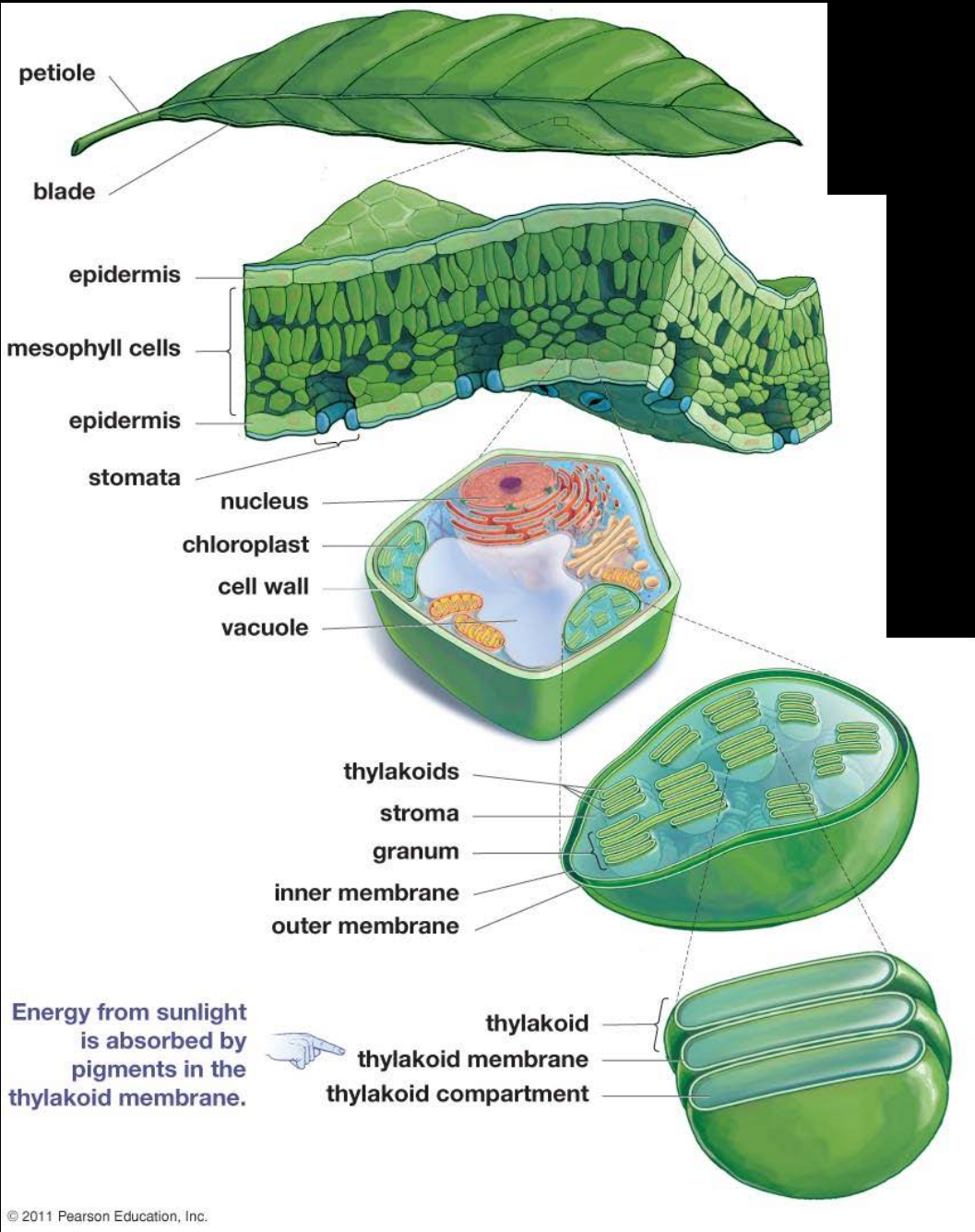
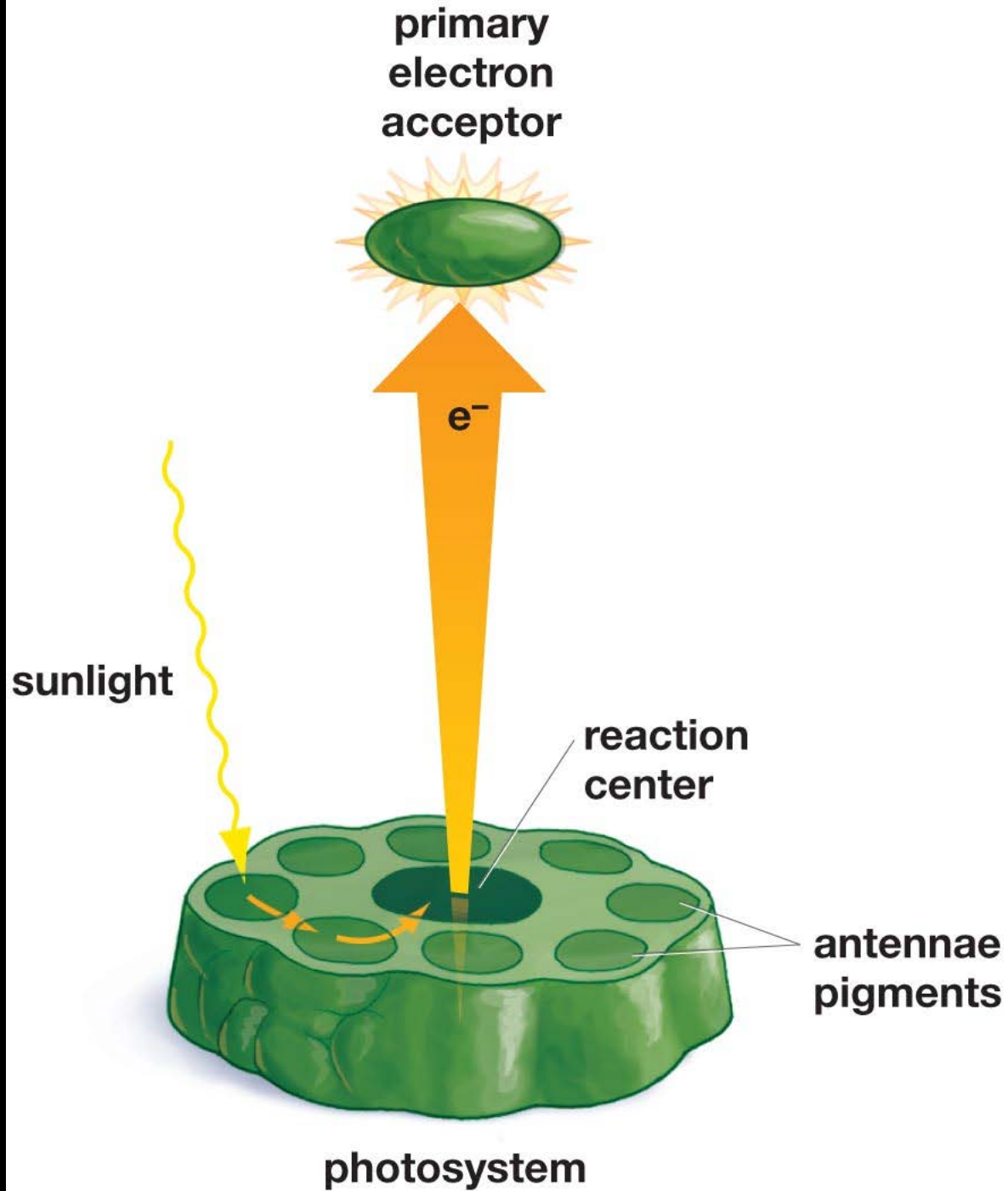
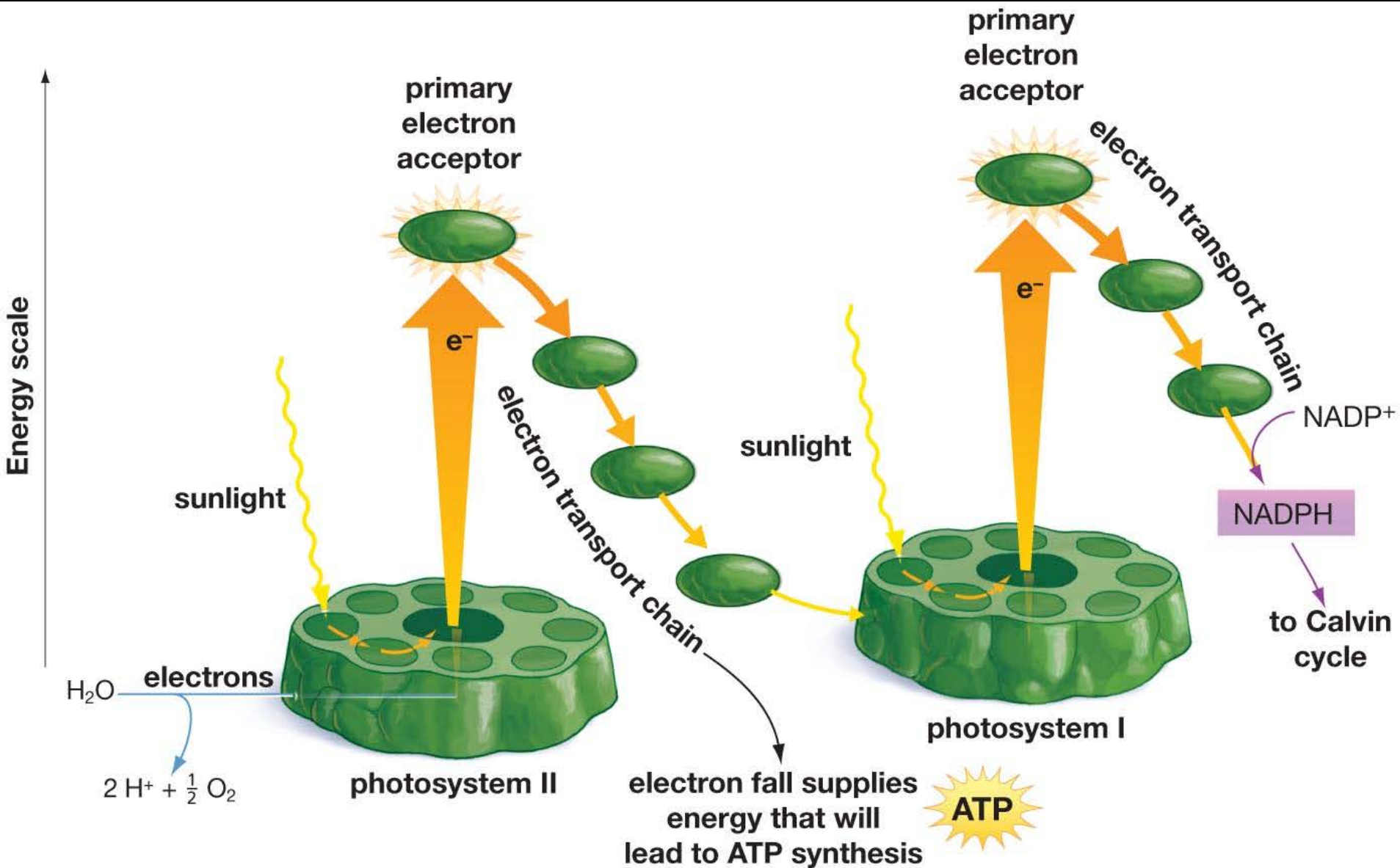
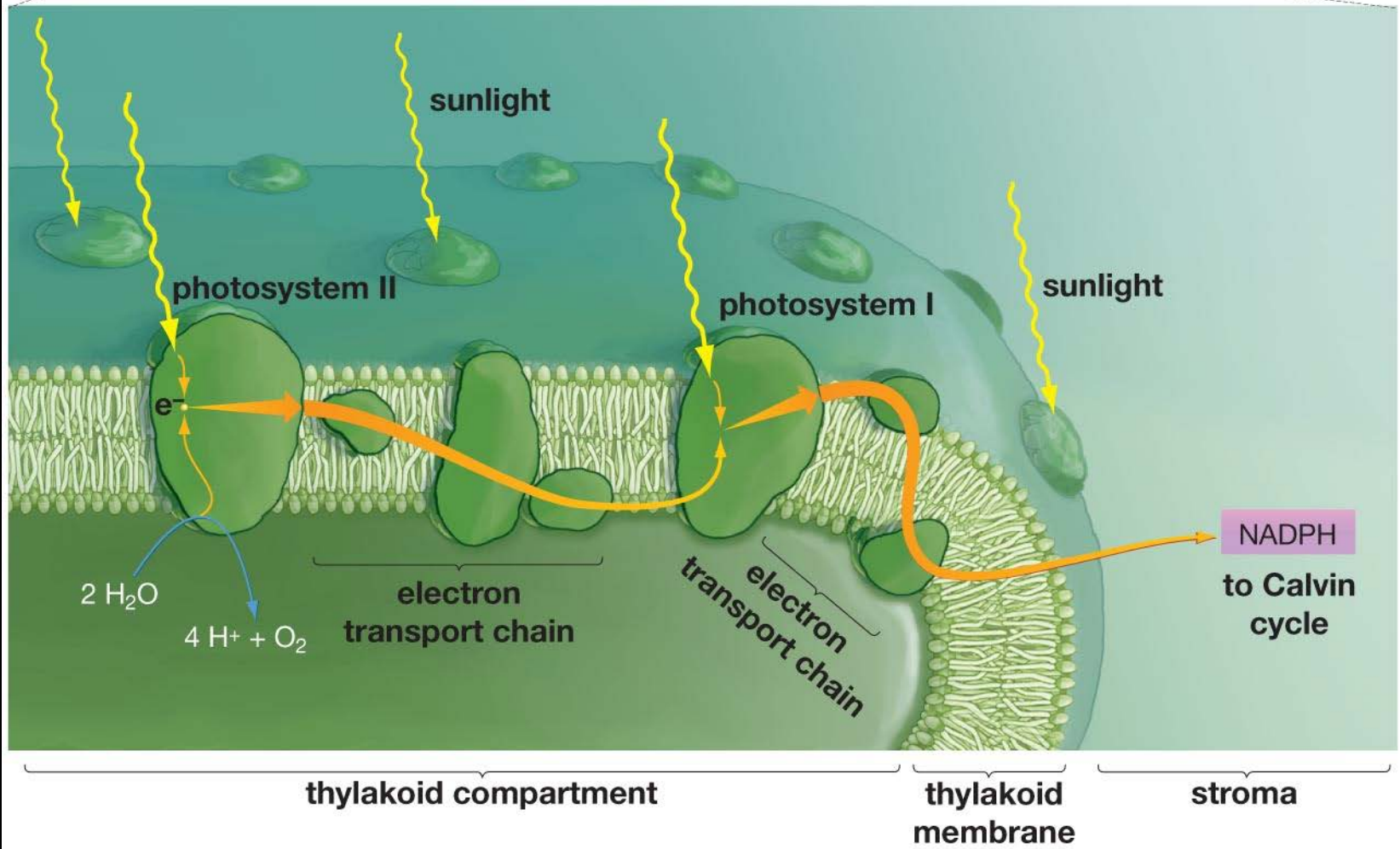
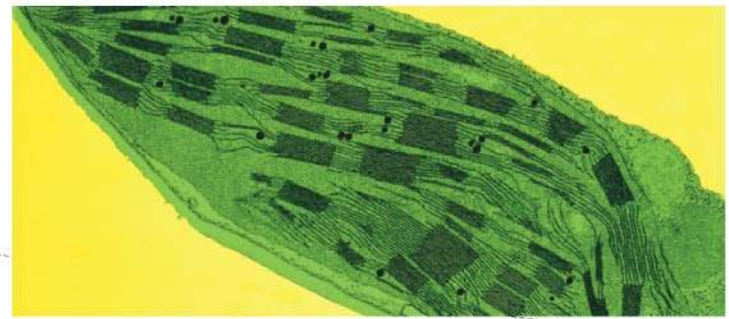
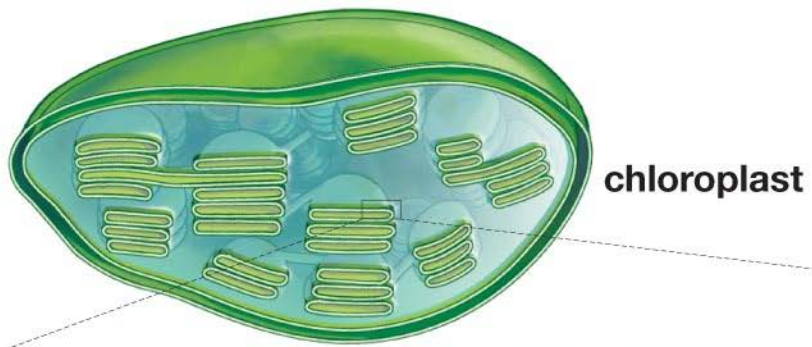


Figure 3









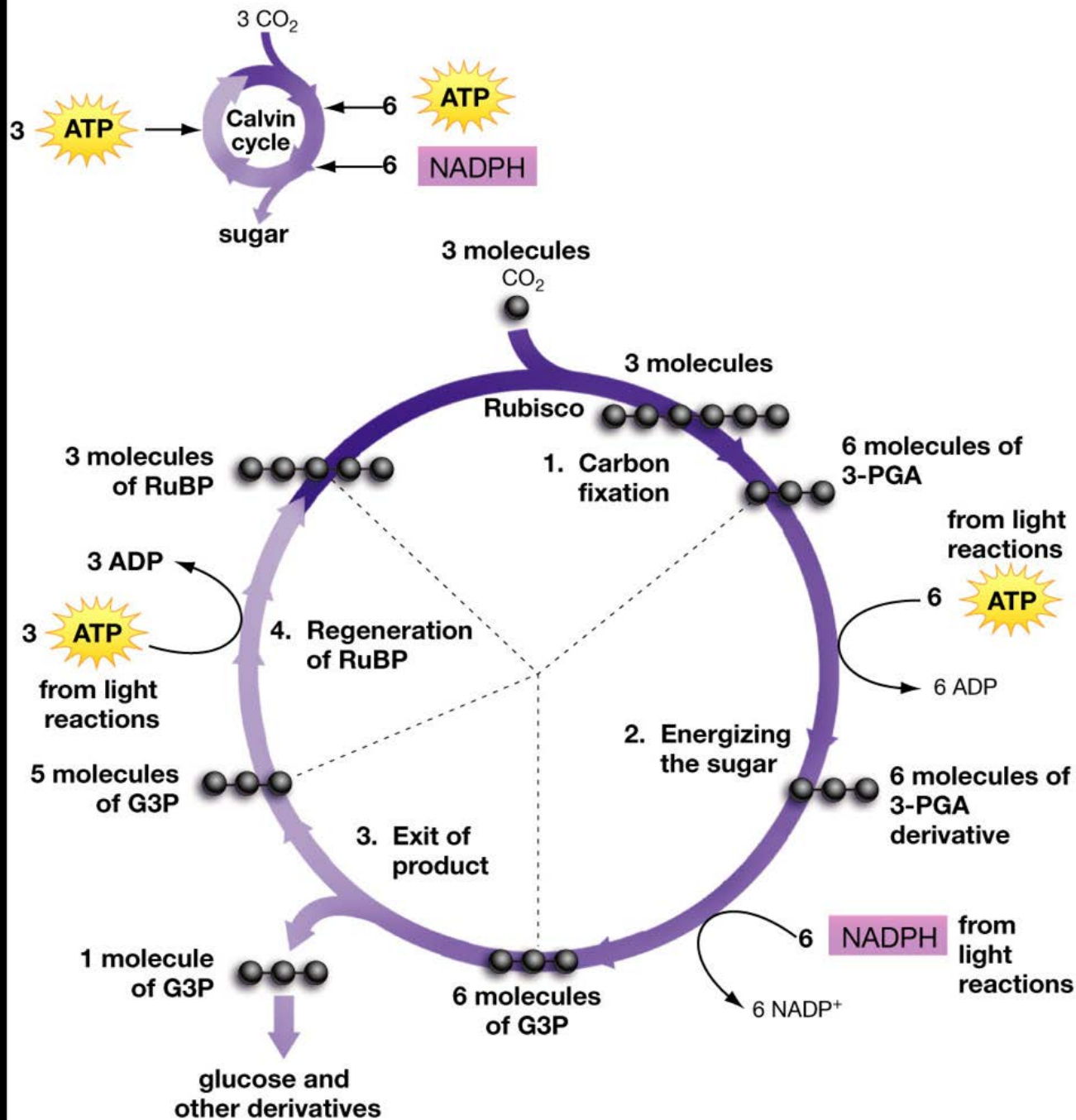
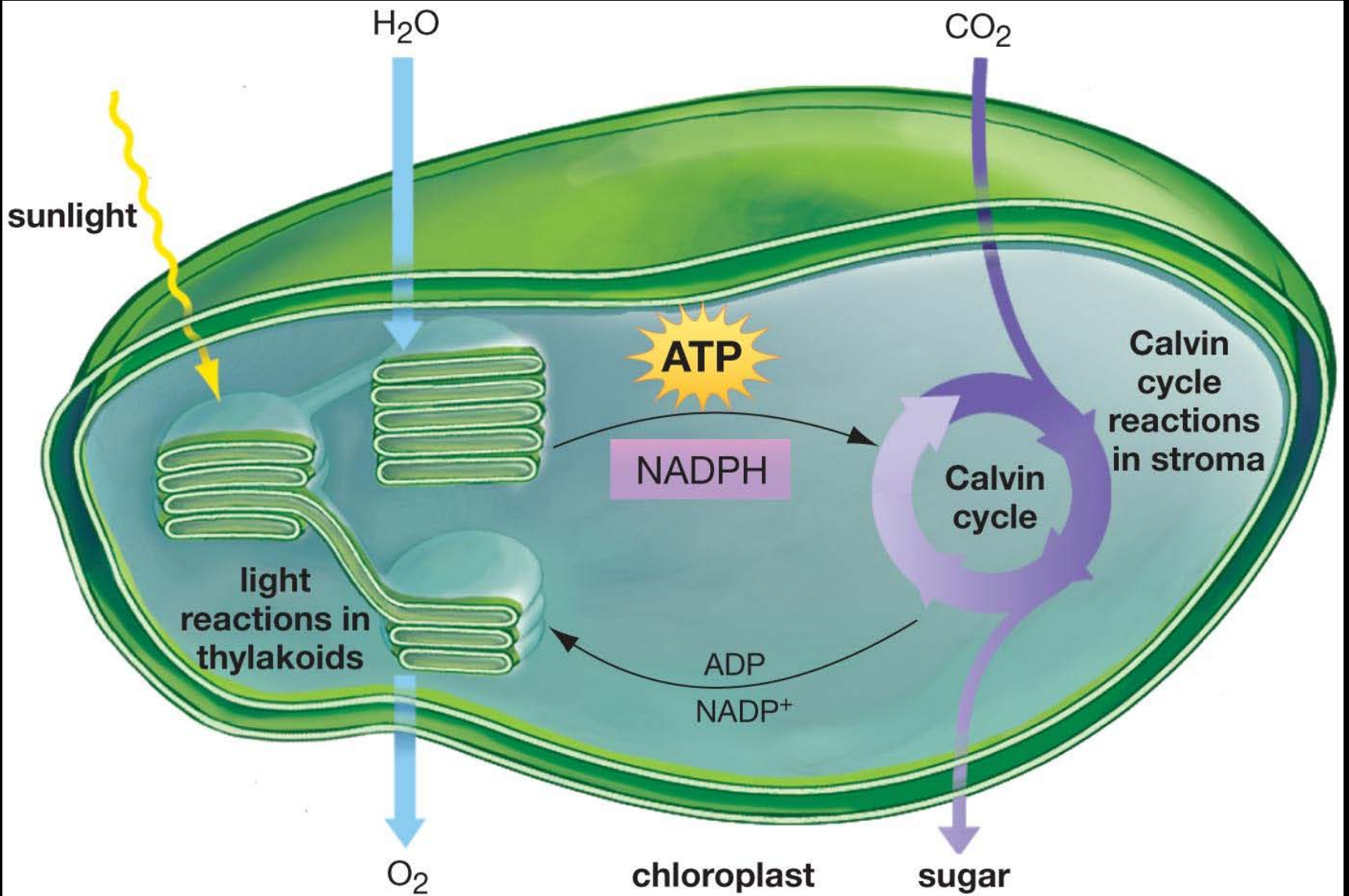


Fig. 8.8



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Fig. 8.9

Atmospheric CO₂ at Mauna Loa Observatory

