

Photosynthesis Quiz KEY

All of the following are products of the light dependent reactions EXCEPT*

- ☒ ATP
- ☐ NADPH
- ☐ glucose
- ☐ oxygen

The light independent reactions are also known as the _____ cycle.*

Plants use both water and carbon dioxide during photosynthesis. Which of these is the source of the oxygen plants give off?*

- ☐ carbon dioxide
- ☐ water

The hydrogen ion gradient that forms during the light dependent reactions is the direct result of*

- ☐ the passing of NADPH to the Calvin cycle
- ☐ the fixation of carbon dioxide to make glucose
- ☐ the electron transport chain proteins acting as proton pumps
- ☐ the energizing of chlorophyll by sunlight

Plants switch to CYCLIC photophosphorylation because*

- ☐ water molecules need to be phosphorylated before they can split
- ☐ there is no need to produce ATP or NADPH
- ☐ there is no sunlight
- ☐ they need to change into CAM plants

The final electron acceptor at the end of the ETC is _____*

- ☐ oxygen
- ☐ NADP⁺
- ☐ cytochrome
- ☐ ATP synthase

Which molecule acts as the donor to replace the electrons lost when chlorophyll is energized by sunlight?*

- ☐ oxygen
- ☐ carbon dioxide
- ☒ water
- ☐ glucose

Where do H^+ ions build up during the light dependent reactions?*

- ☐ stroma
- ☒ thylakoid lumen
- ☐ outside the grana membranes
- ☐ in the stomata

Where are the enzymes involved in the light independent reactions located?*

- ☐ thylakoid space (lumen)
- ☒ stroma
- ☐ cytoplasm
- ☐ Golgi bodies

The movement of _____ down an electrochemical gradient through ATP synthase provide the energy for the phosphorylation of ADP.*

- ☐ water molecules
- ☐ chlorophyll molecules
- ☒ hydrogen ions
- ☐ NADPH