

# Sunlight to Poster

	Self Check	Teacher Check
1) Sunlight is shining on a plant	_____	_____
2) The plant has a leaf	_____	_____
3) The leaf is shown to be made of mesophyll tissue	_____	_____
4) The mesophyll tissue is made of plant cells	_____	_____
5) The cell is shown to contain a chloroplast	_____	_____
6) The chloroplast has a grana stack	_____	_____
7) The grana stack is made of thylakoids	_____	_____
8) The chloroplast also has stroma	_____	_____
9) The stroma surrounds the thylakoids	_____	_____
10) Light is shining into the thylakoid	_____	_____
11) Light excites electrons in chlorophyll to a higher state	_____	_____
12) This chlorophyll is part of photosystem II	_____	_____
13) H <sub>2</sub> O is entering the thylakoid	_____	_____
14) An electron from water enters chlorophyll	_____	_____
15) O <sub>2</sub> is created after the electron from water is taken	_____	_____
16) H <sup>+</sup> ions enter the thylakoid space	_____	_____
17) H <sup>+</sup> gradient is created (more in thylakoid space)	_____	_____
18) ADP arrives at the thylakoid membrane (stroma side)	_____	_____
19) H <sup>+</sup> ions exit ATP synthase and create ATP	_____	_____
20) The ATP made at this step is photophosphorylation	_____	_____
21) The process shown in #16-19 is labeled chemiosmosis	_____	_____
22) Light excites electrons of chlorophyll in Photosystem I	_____	_____
23) This electron is replaced with the one from PS II	_____	_____
24) NADP <sup>+</sup> arrives at thylakoid membrane (stroma side)	_____	_____
25) NADPH is created by accepting electrons	_____	_____
26) Steps #11-25 are labeled non-cyclic electron flow	_____	_____
27) Cyclic electron flow only produces ATP (and is labeled)	_____	_____
28) The Calvin Cycle takes place in the stroma	_____	_____
29) <b>NADPH enters the Calvin Cycle (from light reactions)</b>	_____	_____
30) NADP <sup>+</sup> exits the Calvin Cycle	_____	_____
31) <b>ATP enters the Calvin Cycle (from light reactions)</b>	_____	_____
32) ADP exits the Calvin Cycle	_____	_____
33) CO <sub>2</sub> enters Calvin Cycle and is accepted by rubisco	_____	_____
34) Glucose is produced by the Calvin Cycle	_____	_____
35) <b>An animal eats the glucose</b>	_____	_____
36) The glucose enters the cells of the animal	_____	_____
37) Glycolysis takes place within the cytosol	_____	_____
38) Glycolysis shows that 2 ATP are used	_____	_____
39) Phosphofruktokinase transfers a phosphate group	_____	_____
40) Phosphofruktokinase is inhibited by citrate or ATP	_____	_____
41) Glycolysis shows that 2 NADH and 4 ATP are made	_____	_____
42) Glycolysis shows that glucose is split into 2 pyruvates	_____	_____
43) <b>The pyruvate enters the mitochondria</b>	_____	_____
44) The pyruvate loses a CO <sub>2</sub> and becomes Acetyl CoA	_____	_____
45) Acetyl CoA enters the Krebs Cycle	_____	_____
46) The Krebs cycle is in the mitochondria	_____	_____
47) The electron transport chain is in the mitochondria	_____	_____
48) NAD <sup>+</sup> enters the Krebs cycle	_____	_____
49) ADP enters the Krebs cycle	_____	_____

- 50) FAD enters the Kreb’s cycle \_\_\_\_\_
- 51) NADH is produced by the Kreb’s cycle \_\_\_\_\_
- 52) Dehydrogenase converts NAD<sup>+</sup> to NADH \_\_\_\_\_
- 53) ATP is produced by the Kreb’s cycle \_\_\_\_\_
- 54) FADH<sub>2</sub> is produced by the Kreb’s cycle \_\_\_\_\_
- 55) CO<sub>2</sub> is produced by the Kreb’s cycle \_\_\_\_\_
- 56) **CO<sub>2</sub> produced by Kreb’s cycle enters stomata of leaf** \_\_\_\_\_
- 57) **NADH from the Kreb’s cycle goes to the ETC** \_\_\_\_\_
- 58) **FADH<sub>2</sub> from the Kreb’s cycle goes to ETC** \_\_\_\_\_
- 59) NADH and FADH<sub>2</sub> release electrons into ETC \_\_\_\_\_
- 60) ETC pumps H<sup>+</sup> into the intermembrane space \_\_\_\_\_
- 61) H<sup>+</sup> flows through ATP synthase to make ATP \_\_\_\_\_
- 62) The electron transport chain produces ATP \_\_\_\_\_
- 63) O<sub>2</sub> is final electron acceptor of ETC \_\_\_\_\_
- 64) **The O<sub>2</sub> in the above # is from photosynthesis** \_\_\_\_\_
- 65) H<sup>+</sup> ions combine with O<sub>2</sub> to produce water \_\_\_\_\_
- 66) Glycolysis and Krebs = substrate level phosphorylation \_\_\_\_\_
- 67) ETC = oxidative phosphorylation \_\_\_\_\_
- 68) anaerobic respiration does not use O<sub>2</sub> \_\_\_\_\_
- 69) anaerobic respiration includes alcohol and lactic acid \_\_\_\_\_
- 70) alcohol fermentation produces ethanol + NAD<sup>+</sup> + CO<sub>2</sub> \_\_\_\_\_
- 71) lactic acid fermentation produces lactate + NAD<sup>+</sup> \_\_\_\_\_

<b>Content Score</b>	____/35	<b>TOTAL SCORE:</b>  <b>____/60</b>
<b>Poster Appearance</b>	____/10	
<b>Link Score</b> (making ALL connections between topics)	____/5	
<b>Explanation of Content</b> (MUST BE DONE <u>OR</u> SCORE GOES IN AS A ZERO!)	____/10	

**Team Feedback**

How well did your group members work together? List the members of your group, *including yourself*, and rate the effort that each member exhibited during this project on a scale of 1-4. A score of 1 is no effort, and a score of 4 is GREAT effort. (Please factor in whether you and your teammates completed their homework on time to contribute to the poster.)

<u>Group Member</u>	<u>Score</u>	<u>Group Member</u>	<u>Score</u>
1)		3)	
2)			

What did you enjoy about working on this project?

What could be improved in the future to make the project better? (other than more time)

Explain one specific idea that you learned from working on this project?