**Photosynthesis & Cellular Respiration Tic-Tac-Toe Selection Project**

**DUE:**

You will be designing your own project as an alternative to a Photosynthesis & Cellular Respiration Post Test. Your group must pick the center square, but the other two choices are up to your group as long as they make up a winning TIC-TAC-TOE line!

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| **Sculpture – Cellular Respiration**Create a model depicting Cellular Respiration. The model must…* 3-D (Clay, Styrofoam, etc.)
* Title Card
	+ subject
	+ media
	+ artist
	+ 1 sentence description of the sculpture
	+ Chemical Equation
	+ Word Equation
 | **Research – Encyclopedia**Create 2 Encyclopedia entries. Create 1 for a plant that undergoes photosynthesis & 1 for an animal that undergoes cellular respiration. Include the following…* Facts (name, habitat/location, size, color, lifespan, food)
* Label (producer, herbivore, omnivore or carnivore)
* Original illustration of the plant and animal

  | **Poster – Cellular Respiration**Create a model depicting Cellular Respiration that includes the following…* Title
* Labels
* Vocabulary Words
* Chemical Equation
* Word Equation
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| **Presentation – Compare & Contrast**Create a presentation comparing and contrasting Photosynthesis & Cellular Respiration* Slide(s) Describing photosynthesis (include both words and chemical equations, pictures, videos)
* Slide(s) describing cellular respiration (include both words and chemical equations, pictures, videos)
* Slide(s) comparing and contrasting the two
 | **D/ERC: Data/Evidence, Reasoning, Claim****Big Question:** Which biochemical pathway does your group believe is most important to life on Earth, Photosynthesis or Cellular Respiration?**Hypothesis:** If-Then – because statement* Example Hypothesis: If photosynthesis (or Cellular Respiration) is the most important biochemical pathway to life on Earth then without photosynthesis life would cease to exist because…….

**Evidence:** Observations(what you see, what you hear, what you feel): scientific facts/data* Example: Oxygen levels increased….

**Reasoning:** Supports or explains your evidence: put evidence into your own words and link it to your claim using “because”* Example: oxygen levels increased because the plants were undergoing photosynthesis and producing oxygen as a byproduct

**Claim (Scientific Explanation);** The answer to your “Big Question” that is supported with evidence* Example: We found that oxygen levels increased because the plants were undergoing photosynthesis and producing oxygen as a byproduct. This support the claim….
 | **Presentation – Compare & Contrast**Create a 3-panel display board comparing and contrasting Photosynthesis & Cellular Respiration* 1 panel describing Photosynthesis with pictures
* 1 panel describing Cellular Respiration with pictures
* 1 (middle) panel comparing and contrasting Photosynthesis & Cellular Respiration (must include chemical and word equations for both reactions)

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| **Poster - Photosynthesis**Create a model depicting Photosynthesis that includes the following…* Title
* Labels
* Vocabulary Words
* Chemical Equation
* Word Equation
 | **Research – Experiment**Create an experiment a scientist would follow in order test the rate at which photosynthesis occurs. The experiment should include…* Title
* Central Question
* Background information
* Hypothesis (If-Then Statement)
* Variable Clearly Labeled

  | **Sculpture - Photosynthesis**Create a model depicting Photosynthesis. The model must be…* 3-D (Clay, Styrofoam, etc.)
* Title Card
	+ subject
	+ media/artist
	+ 1 sentence description of the sculpture
	+ Chemical Equation
	+ Word Equation
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