**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 |
| **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) |
| **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 |