

Name: _____

Unit 6: Cellular Respiration REVIEW SHEET
Chapter 9 in the Miller & Levine *Biology* Textbook

Vocabulary Terms:

calorie	aerobic
glycolysis	Krebs cycle
cellular respiration	electron transport chain
fast-twitch muscle fibers	FADH ₂
slow-twitch muscle fibers	NADH
fermentation	ATP
anaerobic	ATP synthase

Lab Activity:

Measuring CO₂ Produced in Humans

- What is phenolphthalein? How does it work?
- Do all humans exhale the same amount of CO₂? Explain.
- What cellular process is responsible for CO₂ being exhaled?
- After exercise would you expect the amount of CO₂ exhaled per minute to be the same as the amount of CO₂ exhaled per minute at rest? Explain.

Some Thought Questions:

1. How is glucose changed during glycolysis? What products are produced as a result of glycolysis?
2. What are the two pathways that might follow glycolysis? What factor can determine which of those pathways a cell might follow?
3. Use formulas to write a chemical equation for cellular respiration. Label the formulas with the names of the compounds.
4. Draw and label a mitochondrion surrounded by cytoplasm. Indicate where glycolysis, the Krebs cycle, and the electron transport chain occur.
5. How is NAD⁺ involved in the products of glycolysis? What happens to a cell's NAD⁺ when large numbers of high-energy electrons are produced in a short time?