

Review Sheet

Biology 2

Cellular Respiration and Photosynthesis

Key Terms:

Cellular respiration	Photosynthesis
Glycolysis	light dependent reactions
Alcoholic fermentation	chloroplast
Lactic acid fermentation	Calvin cycle
ATP	thylakoid membrane
ADP	stroma
Electron carriers	
Krebs (citric acid) Cycle	
Electron transport chain	

Objectives

- 1) Write the overall equations for both cellular respiration and photosynthesis and explain how they are related to each other (see your pink handout with the table)
- 2) Explain the difference between anaerobic and aerobic respiration
- 3) Describe the conditions under which both types of fermentation (lactic acid and alcoholic) occur. Which one happens during exercise? Which one happens only in some types of microorganisms?
- 4) Describe the structure of an ATP molecule and explain how it can store and release energy
- 5) Describe the three main processes involved in aerobic cellular respiration and what is produced during each process (*watch video on bio 2 wiki for help with this*)
- 6) What is the importance of the electron carrier molecules NADH and FADH₂ that are produced during the Krebs cycle?
- 7) Why does chlorophyll appear green?
- 8) List some factors that affect the rate of photosynthesis.
- 9) List the products of both the light dependent reactions and the Calvin cycle as well as where in the chloroplast each process takes place.
- 10) Describe what happens in the Calvin cycle and explain why the Calvin cycle depends on the light dependent reactions