

**Differentiate between aerobic respiration, anaerobic respiration, and fermentation.**

**Write the overall chemical equation for aerobic respiration and note what gets oxidized and what gets reduced.**

**List and describe the 4 general types of reactions in aerobic respiration.**

**Fill out aerobic respiration chart (class activity).**

PROCESS	Where?	(carbon) compounds in	(carbon) compounds out	Net ATP made	Net NADH made	Net FADH <sub>2</sub> made	Other notable items
glycolysis							
acetyl-CoA formation							
citric acid cycle							
oxidative phosphorylation							
TOTAL							

**Describe the use of proteins as an energy source. Include discussion of relative energy provision, pathway entry point(s), and key terms (amino acid, deamination).**

**Describe the use of triacylglycerol lipids as an energy source. Include discussion of relative energy provision, pathway entry point(s), and key terms (glycerol, fatty acid, G3P,  $\beta$  oxidation).**

**Differentiate between anaerobic respiration, alcohol fermentation, and lactic acid fermentation. Include comparisons to aerobic respiration in terms of process and energy yield; where these processes are found in nature; key terms and products (NAD<sup>+</sup> regeneration, ethanol, CO<sub>2</sub>, lactic acid); and human uses of these processes.**