

Interactive Biology
Cellular Respiration

1. What is cellular respiration?
2. Where do heterotrophs get glucose? Where do plants get glucose?
3. What are the three phases of cellular respiration?
4. How are the three phases of cellular respiration related?
5. Glycolysis is a series of chemical reactions in the _____ of a cell that breaks down _____ into two molecules of _____ acid. Four molecules of _____ are produced in this process but it takes _____ ATP molecules to start the process.
6. Overall, glycolysis produces _____ molecules of pyruvic acid, _____ molecules of ATP and _____ molecules of NADH.
7. What two things happen to pyruvic acid during the intermediate stage of cellular respiration?
8. What chemical begins the citric acid (Krebs) cycle?
9. The citric acid (Kreb's) cycle is a series of reactions that breaks down _____ to form _____ molecule of ATP, _____ molecules of NADH, _____ molecule of FADH₂ and _____ as a waste product.
10. Where is the electron transport chain located in the cell?

11. What two molecules carry electrons to the electron transport chain? What molecule is the final electron acceptor?

12. What are the two products of the electron transport chain?

13. Fermentation is the process that follows _____ when _____ is NOT present. The two types of fermentation are _____ and _____ fermentation.

14. The term anaerobic means _____ oxygen.

15. After heavy exercise, what two things cause your muscles to “burn”?

16. In lactic acid fermentation, two molecules of _____ uses _____ to produce two molecules of _____ acid. The NADH becomes _____ that goes back to keep the _____ process going. This process also produces _____ molecules of ATP for energy.

17. Alcoholic fermentation produces _____ gas and _____ alcohol as well as _____ molecules of ATP.

18. Why doesn't baked bread taste like alcohol?