

Biology Unit Schedule: Weeks 22-24

Unit	Chapter(s)	Essential Questions:
Photosynthesis and Respiration	8,9	-How do the processes of photosynthesis and respiration function? -How do they compliment each other? -Why are they important to life processes and how do they affect our daily lives?
Cell Division, Mendelian Genetics, DNA, Protein Synthesis	10,11,12	-Why are the processes of cell division, genetic recombination, and protein synthesis important to organisms? -What are the steps present in each of the processes? -How are these processes important in sustaining life on earth?

Timeline:

<u>Date</u>	<u>In Class</u>	<u>Activities</u>	<u>Homework</u>
Week 22	Chapter 8 Pretest Discuss Chapter 8	Correct ?'s #1-5 p.203, 1-5 p.207, 1-5 p.214 Do ?'s #1-20 p. 217	Read Chapter 8 and take notes Do ?'s #1-5 p.203, 1-5 p.207, 1-5 p.214 Study for Chapter 8 Pretest Do ?'s #1-20 p. 217 Read Lab: "Investigating Photosynthesis" p. 215 in textbook and write procedure
Week 23	Chapter 8 Test Correct ?'s #1-6 p. 225, 1-5 p. 232 Chapter 9 Pretest	Do ?'s #21-30 p. 217-218 Lab: "Investigating Photosynthesis" p. 215 in textbook "Chapter 8 Vocabulary Review Wkst" p. 22-23 Biology Wkst packet	Do ?'s #21-30 p. 217-218 "Chapter 8 Vocabulary Review Wkst" p. 22-23 Biology Wkst packet Study for Chapter 8 Test Read Chapter 9 and take notes Do ?'s #1-6 p. 225, 1-5 p. 232 Study for Chapter 9 Pretest
Week 24	Chapter 9 Test	Biology Respiration Lab Do ?'s #1-22 p. 237	Read Biology Respiration Lab and write procedure Do ?'s #1-22 p. 237 Study for Chapter 9 Test Read Chapter 10 and take notes

Biology Unit Schedule: Weeks 22-24 p.2

			Do #'s #1-5 p. 243, 1-6 p.249, 1-5 p.252 Study for Chapter 10 Pretest
Week 25	Correct #'s #1-5 p. 243, 1-6 p.249, 1-5 p.252 Chapter 10 Pretest Discuss Chapter 10		

Biology Respiration Lab

Purpose

To investigate anaerobic and aerobic respiration.

Materials

- ASA rock climbing wall
- 1 harness per climber
- 1 grigri per climbing pair
- 1 watch or stopwatch per climbing pair

Procedure

1. Climbers should climb a route on the climbing wall that they can do relatively easily several times. Each time they climb it, they should climb as fast as they can to the top.
2. Each climbing pair should mark the time that the climber takes to climb, rest time between climbs, heart rate and breathing rate. This information should be recorded in the table below.

Trial	Climb Time (minutes)	Rest Time Between Trials (minutes)	Heart Rate (beats/minute)	Breathing Rate (breaths/minute)
1		5		
2		5		
3		2		
4		2		
5		.5		
6		.5		

3. Make the following graphs:
 - Climb Time vs. Rest Time
 - Rest Time vs. Heart Rate
 - Rest Time vs. Breathing Rate
4. Answer the questions below.

Discussion Questions

1. What does your research show? How does **Rest Time** affect **Climb Time**?
2. Where during the trials did the climber switch from **aerobic respiration** to **anaerobic respiration**?
3. Was **lactic acid buildup** a factor that affected the climber's times? Explain.
4. Where did the climber experience **oxygen debt**?
5. How would the climber be affected if the rest times were longer? What if the rest times were shorter?
6. What types of training could the climber do to make his or her times more even throughout the trials (ie: the climber would climb the route in close to the same time (**even splits, or negative splits**))?