

Chapter 14 – Introduction to Metabolism

Objective	In-text reading	Pre-class materials/activities	In-class materials/activities	Practice problems from text
1. Predict the effect of a pathway rate determining step (rds) on the accumulation of pathway intermediates.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S21 – Understanding the Rate Determining Step in a Metabolic Pathway	4 th Ed: #7 S-21 Post Activity
2. Analyze and describe the flow of metabolic intermediates through a pathway and apply this concept to future problems.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S21 – Understanding the Rate Determining Step in a Metabolic Pathway	4 th Ed: # 9 S-21 Post Activity
3. Communicate information about metabolic pathways using pathway diagrams.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S21 – Understanding the Rate Determining Step in a Metabolic Pathway	4 th Ed: #27 S-21 Post Activity
4. Identify features common to metabolic pathways and locate these features within a given pathway.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S23 – Understanding metabolically far from equilibrium reactions	S-23 Post Activity
5. Distinguish between a far from equilibrium and a near equilibrium reaction.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S23 – Understanding metabolically far from equilibrium reactions	S-23 Post Activity
6. Distinguish between kinetic control and thermodynamic control of a reaction.	14.1	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S23 – Understanding metabolically far from equilibrium reactions	S-23 Post Activity
7. Be able to discuss cellular energy using correct terminology	14.2	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S24 – High Energy Compounds	
8. Be able to describe where the energy comes from.	14.2	Ch. 14 Introduction to Metabolism (Hayden Lecture)	S24 – High Energy Compounds	4 th Ed: #13, 15, 17
9. Develop the ability to think critically about your assumptions.	14.2		S24 – High Energy Compounds	

Note – We will revisit concepts covered in 14.3 when we discuss the Electron Transport Chain in Chapter 18; and we will utilize concepts covered in 14.4 throughout various activities on specific metabolic pathways. While both of these sections are not addressed directly in this unit, it may be work reading over them.