

Check your standards. How can you chunk these together? In what order will you teach these? (An example has been added in italics.)

Semester	Week(s)	Standards:	How will you introduce the material?	What activities will help students process this material? (What resources are available?)	Notes: What worked? What didn't?
1	2-3	<i>S.ENV.1: Compare and contrast the rate elements cycle through the ecosphere, describing natural and human influences on reaction rates:</i> ▪ Carbon ▪ Nitrogen ▪ Phosphorus ▪ Oxygen ▪ Sulfur <i>S.ENV.2: Explain how the chemical components of biological and physical processes fit in the overall process of biogeochemical cycling such as photosynthesis, respiration, nitrogen fixation, or decomposition.</i> <i>S.ENV.5: Differentiate various means of generating electricity in terms of the transformation of energy among forms, the relationship of matter and energy, and efficiency/production of heat energy.</i>	<i>Lecture with focused notetaking on the following essential questions:</i> • What are systems? • How do feedback loops affect systems? • Explain the importance of nitrogen, oxygen, carbon and hydrogen to life. • What are the first and second laws of thermodynamics? • Explain the processes of photosynthesis and respiration. • What do ecologists mean when they say there is no "away" to throw things to, and that everything in the universe tends to slow down and fall apart? • Why are big, fierce animals rare? • What qualities make water so unique and essential for life as we know it? • How why do elements such as carbon, nitrogen,	<i>Lab: Pellet Dissection</i> <i>Lab: Construct a Food Web (Modeling)</i> <i>Lab: Investigate Habitat Size and Species Diversity</i> <i>Gallery Walks on Carbon/Oxygen, Nitrogen, Phosphate, and Sulfur Cycle including Crosscutting Concepts on Analyzing Instability</i> <i>Optional Homework:</i> • 3.1 #s 1-3 • 3.2 #s 1-3 • 3.3 #s 1-2 • 3.4 #s 1-3, 1-3, Math Connections on Food Webs, 1-2 • 3.5 #s 1-3 <i>Collaborative Chapter Assessment: 1-7, 1-5, 1-4</i>	<i>This took longer than 2 weeks. Constructing a Food Web can be assigned as mandatory homework which allows for the additional time needed for the gallery walk.</i> <i>Half of the class took advantage of the optional homework opportunity. The collaborative chapter assessment worked well for this class. Students finished this in a timely manner and had wonderful discussions. (Students with allergies struggled with the pellet dissection/ alternative assignment may be needed for students with severe allergies.)</i>

[illegible]