

**MAP 2 MASTERY**    Unit 8: Ecology

THESE ARE THE IMPORTANT CONCEPTUAL UNDERSTANDINGS I NEED TO MASTER FOR THIS UNIT:

<b>A. Introduction to Ecology and Ecosystems</b>	<b>RESOURCES THAT MAY SUPPORT MY LEARNING:</b>	<b>RESULTS/SCORES FROM LEARNING ASSESSMENTS</b>	<b>MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?)</b> <b>1 ON 1 :    Most effective <u>DURING</u> instruction...  HELP            do not wait until the end of the unit!</b>
<ul style="list-style-type: none"> <li>What is ecology?</li> <li>Explain the levels of ecological organization (species → population → community → ecosystem → biosphere)</li> <li>What is an ecosystem? Give examples</li> <li>What is the difference between abiotic and biotic factors?</li> <li>Explain the differences between the following: autotroph, heterotroph, producer, consumer, herbivore, carnivore, omnivore, detritivores and decomposers</li> </ul>	<ul style="list-style-type: none"> <li>Sect 1.3</li> <li>Sect. 2.9</li> <li>Sect 28.1 2<sup>nd</sup> (or) 29.1 3<sup>rd</sup></li> </ul> <p>Essential Study Partner: Unit: Ecology Topic: Ecosystems (Introduction)</p> <p>* other documents and links posted on weebly/edline and/or discussed in class. (notes)</p>	<p>SELF ASSESSMENT(s)</p> <hr/> <p>MASTERY CHECK(s)</p> <hr/> <p>Carbon cycle game</p>	

<b>B. Movement of Energy and Nutrients in Ecosystems</b>	<b>RESOURCES THAT MAY SUPPORT MY LEARNING:</b>	<b>RESULTS/SCORES FROM LEARNING ASSESSMENTS</b>	<b>MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?)</b> <b>1 ON 1 :    Most effective <u>DURING</u> instruction...  HELP            do not wait until the end of the unit!</b>
<ul style="list-style-type: none"> <li>Explain how energy <b>flows</b> through an ecosystem, while nutrients <b>recycle</b></li> <li>Identify the different trophic levels and how energy flows through them - producer-primary consumer-secondary consumer-tertiary consumer.</li> <li>Explain the 10% rule and be able to explain why trophic levels can't go on indefinitely in regards to energy</li> <li>Be able to identify and construct food chains and food webs and explain energy flow</li> <li>Interpret the different ecological pyramids: Pyramid of numbers Pyramid of biomass Pyramid of energy</li> <li>Be able to recognize common nutrient cycles.</li> </ul>	<ul style="list-style-type: none"> <li>Sect. 2.10</li> <li>Sect 28.1-28.7 2<sup>nd</sup> (or) 29.1 – 29.7 3<sup>rd</sup></li> </ul> <p>Essential Study Partner: Unit: Ecology Topics: Ecosystems (Energy Flow, Nutrient Cycles)</p> <p>* other documents and links posted on weebly/edline and/or discussed in class. (notes)</p>	<p>SELF ASSESSMENT(s)</p> <hr/> <p>MASTERY CHECK(s)</p> <hr/> <p>Illinois Ecosystem/ Biome Food Web and Pyramid</p>	

<b>C. Populations and Communities</b>	<b>RESOURCES THAT MAY SUPPORT MY LEARNING:</b>	<b>RESULTS/SCORES FROM LEARNING ASSESSMENTS</b>	<b>MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?)</b> <b>1 ON 1 : Most effective <u>DURING</u> instruction... HELP do not wait until the end of the unit!</b>
<ul style="list-style-type: none"> <li>Explain the importance of population size, population density, population dispersion and population growth to the characteristics of a population</li> <li>Explain exponential growth, give examples, and identify conditions that allow for this kind of growth</li> <li>Explain logistic growth, give examples, and identify conditions that allow for this kind of growth</li> <li>What is a J curve? S curve? How do these relate to population growth?</li> <li>What is the carrying capacity of an ecosystem?</li> <li>What factors influence population growth? <ul style="list-style-type: none"> <li>Differentiate between Density-independent factors and Density-dependent factors</li> <li>Provide examples of each of the above</li> </ul> </li> <li>What is a niche? Give examples</li> <li>Explain the difference between interspecific and intraspecific competition</li> </ul>	<ul style="list-style-type: none"> <li>Section 2.11-2.12</li> <li>Sect 29.1-29.3 2<sup>nd</sup> (or) 30.1 – 30.3 3<sup>rd</sup></li> <li>Sect 29.5-29.8 2<sup>nd</sup> (or) 30.5 – 30.8 3<sup>rd</sup></li> </ul> <p>Essential Study Partner: Unit: Ecology Topic: Population (All subsections)</p> <p>* other documents and links posted on weebly/edline and/or discussed in class. (notes)</p>	<p>SELF ASSESSMENT(s)</p> <hr/> <p>MASTERY CHECK(s)</p>	

<b>D. Coevolution and Symbiosis</b>	<b>RESOURCES THAT MAY SUPPORT MY LEARNING:</b>	<b>RESULTS/SCORES FROM LEARNING ASSESSMENTS</b>	<b>MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?)</b> <b>1 ON 1 : Most effective <u>DURING</u> instruction... HELP do not wait until the end of the unit!</b>
<ul style="list-style-type: none"> <li>Be able to give examples and recognize each of the ecological relationships studied in this class and their various forms: <ol style="list-style-type: none"> <li>Symbiosis/Coevolution <ul style="list-style-type: none"> <li>Commensalism</li> <li>Mutualism</li> <li>Parasitism</li> </ul> </li> <li>Competition</li> <li>Predator/Prey</li> <li>Cooperation</li> </ol> </li> <li>What affect does predation have on competition?</li> <li>Describe niche and describe its role in competition</li> <li>Describe exponential and logistical growth models for populations</li> </ul>	<ul style="list-style-type: none"> <li>Sect 29.9-29.12 2<sup>nd</sup> (or) 30.9 – 30.12 3<sup>rd</sup></li> <li>Sect 29.15 2<sup>nd</sup> (or) 30.15 3<sup>rd</sup></li> </ul> <p>Essential Study Partner: Unit: Ecology Topic: Communities (Introduction, Organization)</p> <p>*other documents and links posted on weebly/edline and/or discussed in class. (notes)</p>	<p>SELF ASSESSMENT(s)</p> <hr/> <p>MASTERY CHECK(s)</p>	