

MAP 2 MASTERY Unit 8: Ecology

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

A. Introduction to Ecology and Ecosystems	RESOURCES THAT MAY SUPPORT MY LEARNING:	RESULTS/SCORES FROM LEARNING ASSESSMENTS	MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?) 1 ON 1 : Most effective <u>DURING</u> instruction... HELP do not wait until the end of the unit!
<ul style="list-style-type: none"> What is ecology? Explain the levels of ecological organization (species → population → community → ecosystem → biosphere) What is an ecosystem? Give examples What is the difference between abiotic and biotic factors? Explain the differences between the following: autotroph, heterotroph, producer, consumer, herbivore, carnivore, omnivore, detritivores and decomposers 	<ul style="list-style-type: none"> Sect 1.3 Sect. 2.9 Sect 28.1 2nd (or) 29.1 3rd <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. Movement of Energy and Nutrients in Ecosystems	RESOURCES THAT MAY SUPPORT MY LEARNING:	RESULTS/SCORES FROM LEARNING ASSESSMENTS	MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?) 1 ON 1 : Most effective <u>DURING</u> instruction... HELP do not wait until the end of the unit!
<ul style="list-style-type: none"> Explain how energy flows through an ecosystem, while nutrients recycle Identify the different trophic levels and how energy flows through them - producer-primary consumer-secondary consumer-tertiary consumer. Explain the 10% rule and be able to explain why trophic levels can't go on indefinitely in regards to energy Be able to identify and construct food chains and food webs and explain energy flow Interpret the different ecological pyramids: Pyramid of numbers Pyramid of biomass Pyramid of energy Be able to recognize common nutrient cycles. 	<ul style="list-style-type: none"> Sect. 2.10 Sect 28.1-28.7 2nd (or) 29.1 – 29.7 3rd <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>	

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

D. Coevolution and Symbiosis	RESOURCES THAT MAY SUPPORT MY LEARNING:	RESULTS/SCORES FROM LEARNING ASSESSMENTS	MASTERY REFLECTION: WHAT DO I STILL NEED TO MASTER BEFORE THE EXAM? (What is your strategy for <u>improvement</u>?) 1 ON 1 : Most effective <u>DURING</u> instruction... HELP do not wait until the end of the unit!
<ul style="list-style-type: none"> • 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"> 1. Symbiosis/Coevolution <ul style="list-style-type: none"> • Commensalism • Mutualism • Parasitism 2. Competition 3. Predator/Prey 4. Cooperation • What affect does predation have on competition? • Describe niche and describe its role in competition • Describe exponential and logistical growth models for populations 	<ul style="list-style-type: none"> • Sect 29.9-29.12 2nd (or) 30.9 – 30.12 3rd • Sect 29.15 2nd (or) 30.15 3rd <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>	