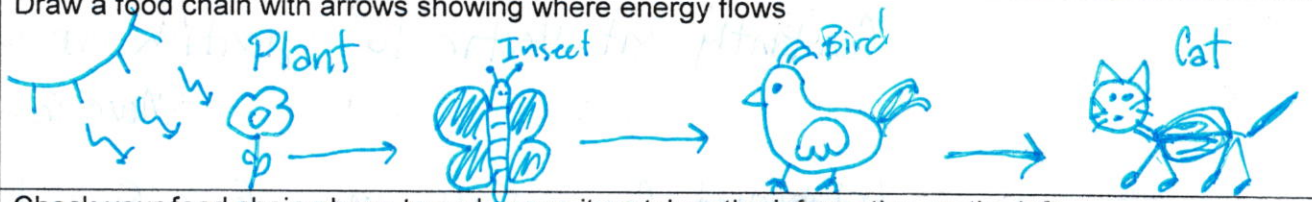
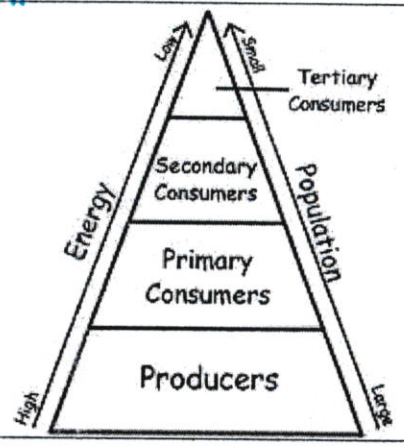
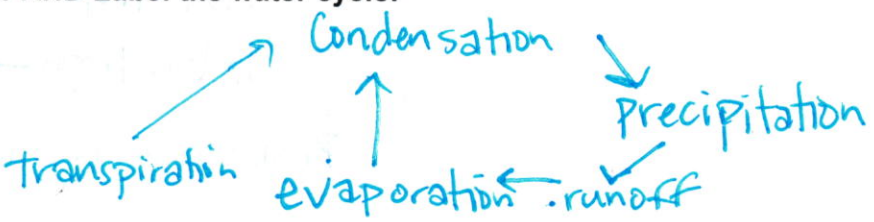
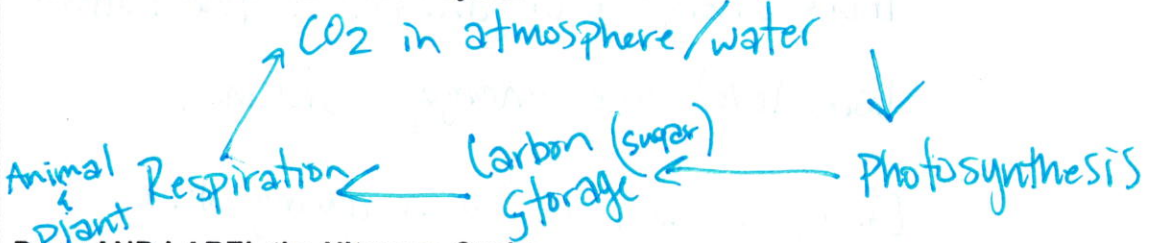
SAGE Review – Ecology (Standard 1)

Name _____ **Period** _____

Main Ideas	Demonstrate It:
Arrange components of a food chain according to energy flow.	Draw a food chain with arrows showing where energy flows 
Energy flows from the sun through producers to consumers. Decomposer capture the last amount of energy as th breakdown remains of living things.	Check your food chain above to make sure it matches the information on the left. Define and give an example of a producer: Autotroph — makes own food → Plant/Algae Define and give an example of a consumer: Heterotroph → Gets food from other source → Animal/Fungus Define and give an example of a decomposer: Breaks down Organic matter — Mushroom
Compare the quantity of energy in the steps of an energy pyramid.	Describe what this pyramid means. What is happening at the top vs. the bottom? More Energy & Organisms at the Bottom. Each level loses energy. & Organisms. Energy is lost as heat during work. Less energy @ a level = less organisms 
• Energy is lost from the lower levels of the energy pyramid to the upper levels.	How is stored energy lost from a lower level to a higher level? From Living/to stay alive Chemical energy is lost as what? It starts with an "H" Heat About how much energy is lost at each level in the pyramid? 90 % (10% passed on)
Describe strategies used by organisms balance the energy expended to obtain to the energy gained from the food	Examples of this might include: (Explain how this strategy works) Migration: Move to place w/ plentiful food/Helps balance energy loss/gain

	Switching type of prey: Switch to available prey when other becomes scarce Hibernation: Conserve energy when food is scarce. Dormancy: Seeds etc. don't grow/Conserve energy until conditions are good.
Compare the relative energy output expended by an organism in obtaining food to the er gained from the food	Describe how a hummingbird's behavior reflects this concept: Constantly eat Nectar to replenish energy lost flying to find food etc. Describe how birds migration reflects this concept: Move from area w/ ↓ Energy to ↑ Energy.
Food production in various parts of the world differs.	How does industry and fossil fuel play a role in food production? Established Countries use more fossil fuels to produce food. (Plant, harvest, Process etc.)
Use diagrams to trace the Movement of matter through a cycle in a variety o biological communities and ecosystems	**Draw AND Label the water cycle:**  **Draw AND LABEL the Carbon Cycle:**  **Draw AND LABEL the Nitrogen Cycle:**  **What is Nitrogen fixation and how does it happen?** Bacteria change Nitrogen Gas into Usable form.