Topic/Objectives: 7-2 Marine Food Webs; (1) Construct a sample marine food web, (2) Describe the critical role of phytoplankton in marine food webs, (3) Make predictions about changes in food webs that result from natural disruptions and human activities, (4) Explain why nutrient cycling is critical within the Earth system	**Name:** **Date:** **Period:**

Essential Question: How does energy and nutrients move through marine communities?

Questions:	**Notes:**
	A marine ecosystem represents an intricate balance of life among all its organisms. ◦ _____ produce their own food through photosynthesis or chemosynthesis and provide a direct source of nourishment for all living things. ◦ _____ must eat other organisms for energy since they cannot make their own food. ◦ When organisms die, scavengers break down materials and make waste called detritus. ◦ _____, like brittle stars, break down the organisms returning nutrients to the soil.
	_____ _____ show the movement of energy through the trophic levels in a community. ◦ The _____ _____ of an organism indicates the position that the organism occupies in the food chain. ◦ Only about 10% of the energy from the lower trophic level is passed on to the next level (_____% _____). ◦ The order of trophic levels for consumers are primary consumer, secondary consumer, _____ consumer, quaternary consumer, etc.
	_____ _____ demonstrate the interconnecting nature of food chains of an ecosystem. ◦ Food webs describe the complex patterns of _____ _____ in an ecosystem by modeling who consumes whom or what. ◦ Most of the energy at a particular level is used by the _____ at that level for activities of the organism or is waste created by that organism. ◦ On average, about 10% (5-20%) of energy is transferred to the next level of the food chain, which is illustrated in a _____ _____ _____.

Summary: