

Storyboard for ICS-IAT Chapter9-A Voter for Ecology

Eco-Traveler Tour Guides	Eco1	Eco2	Eco3	Eco4	Eco5	Eco6	Eco7	Eco8	Eco9
Experimental Evidence Graphic Diagrams	Observation of living organisms (abiotic and biotic factors, biosphere) Human effects on biodiversity	Introduce food chain and food web to gain a sense of how dependent organisms are to each other..	Record and graph the temperature in three containers of water.	Examine the roles played by carrying capacity, doubling time, and the four rates that determine a population's size..	Observe the difference in the growth of plants. How they compete for space and nutrients.	Investigate the sequence of changes that take place in succession.	Water cycle game	Poster board/bio-geochemical cycles.	Poster board/bio-geochemical cycles.
Big Idea	Biodiversity	Food Chain/ Webs	Energy Flow in an Ecosystem. Energy is transferred and lost as heat.	Population Dynamic determined by rates of immigration, emigration, death rate, birth rate.	Competition among organisms in an ecosystem	Succession	Water Cycle	Carbon Cycle, Oxygen Cycle	Nitrogen And Phosphorous Cycles
CA Content Standard	6a	6e, 6f	6f	6c	6b	6b, 6g	6d	6d	6d
Tie to Chapter Challenge	Biodiversity of chosen National park and human impact on the park. Choose one organism that is similar to each organism encountered in the activity and discuss specialized characteristics	Identify food chains in National park and discuss impact of extinct species. Identify the biomass in the national park. Identify non-native impacts it will have or has had on biome. Include climatogram-projection given a different climatogram to determine implications of change in plant and animal life. Provide justification for what you predict will happen. Compare to biome w/similar climatogram.	Discuss the energy flow and loss in national park at different tropic levels. Include pyramid of matter in tour guide.	Identify large population of organisms in National Park and provide graph and growth rate of population and estimation of natural resource use and limiting factors.	Students can look at density of one major species of plants (ex tree) and consider reasons for plant dominance.				
Pages	502-513	514-521	522-528	529-537	538-545	546-552	553-560	561-566	567-575
Time	1hr20min	1hr 20min	1hr 20min	60min	60min	60min	60min	60min	60min

Storyboard for ICT-IAT Chapter10-A Highway through the Past

Eco-Traveler Tour Guides	Evol. 1	Evol. 2	Evol. 3	Evol. 4	Evol. 5
Experimental Evidence Graphic Diagrams	Observe photograph of different organisms showing different types adaptation	Observe how the absence of light might affect the color of the leaf of a tobacco plant.	Stimulate natural selection	Student make different types of fossil	Analyze graphs of fossil data.
Big Idea	Adaptation and the environment	Gene expression and the environment	Natural Selection	Fossil Record	Mass Extinction and adaptive radiation
CA Content Standard	8b	8a	8a	8e	8e
Tie to Chapter Challenge	Identify one plant and one animal in the national park and find information about how structural and behavior adaptations have contributed to their survival.	Identify plant genetic contributions.	Discuss how a population in the national park would be affected if there was an environmental change. Students choose what the environmental change is.	Identify one fossil that has been found in their national park and discuss its importance in the fossil record, identifying what geologic time period it came from, and its ecological niche.	Students should compare their national park biome and consider how their biome looked during the previous geologic time period.
Pages	580-589	590-596	597-606	607-616	617-623
Time	1hr 20min	60 min (ongoing)	1hr 20min	1hr 20min	1hr 20min