

Paleobiology (PBIO) CTY Course Syllabus

Week 1		WHAT (skill goals/knowledge goals, concepts/readings)	HOW (labs/activities/lecture)
Sunday	Morning:	 	
	Afternoon:	 	
	Evening:	Pre-assessment Exam Ice-breaker	Quiz
Monday	Morning:	What is Paleobiology? Paleobiology as a science.	Scientific Method: Design own experiment.
	Afternoon:	Rocks and Minerals	Lab: Rocks and Minerals
	Evening:	Reading for tomorrow's activities	Stanley, <i>Earth System History (ESH)</i> , Ch. 2 and Ch. 8
Tuesday	Morning:	Principles of Geology	Activities: Plate Tectonics and Biostratigraphy
	Afternoon:	Geologic Time and Dating	Activity: Making a Geologic Time Scale Lab: Radiometric Dating
	Evening:	Finish up activities and reading	Stanley, <i>ESH</i> , Ch. 3 and Ch. 7, Handouts
Wednesday	Morning:	Fossilization and Taphonomy	Lab: Students examine different types of fossils and preservation
	Afternoon:	Introduction to Cladistics	Lab: Cladistics
	Evening:	Finish up activities and reading	Zimmer, <i>Evolution</i> Ch. 1-3
Thursday	Morning:	Evolution	DVD: "Arms Race" Activity: Identifying Homologous Structures
	Afternoon:	Natural Selection	Activity: Beaks of Finches Writing Activity: Modes of Evolution
	Evening:	Finish up activities and reading	Handouts & Stanley, <i>ESH</i> , Ch. 11-12 Zimmer, <i>Evolution</i> , Ch. 4-5
Friday	Morning:	Origins of Life	Lecture Activity: Creative Writing
	Afternoon:	Modes of Evolution and Variation	Activity: Brachiopod Diversity
	Evening:	 	

Week 3		WHAT (skill goals/knowledge goals, concepts/readings)	HOW (activities)
Sunday	Morning:	 	
	Afternoon:	 	
	Evening:	Finish up activities and reading	Writing: Morphospace Readings: Dinosaur handout
Monday	Morning:	Dinosaur Biology	Dinosaur fossil lab
	Afternoon:	Evolution of Birds	Lab: Dinosaur Running Students learn to estimate running speed
	Evening:	Finish up Dinosaur Labs and Reading	Stanley, <i>ESH</i> , Ch. 16, 17. Journal Discussion
Tuesday	Morning:	Mammals	Lecture. Lab covers mammal teeth
	Afternoon:	Mammal Ecology and Anatomy	Students dissect owl pellet
	Evening:	Finish up Mammal Labs and Reading	Stanley, Ch. 18, 19 Journal Discussion
Wednesday	Morning:	Field Trip	North Museum of Natural History
	Afternoon:	Looking at Your Fossils	Students make up their own lab based on fossils they found at Swatara Gap
	Evening:	Reading	Stanley, <i>ESH</i> , Ch. 20 Zimmer, <i>Evolution</i>
Thursday	Morning:	Human Evolution	Lecture and Discussion: Has human evolution stopped?
	Afternoon:	Primate Lab	With Game Theory Class, detailing evolutionary stable strategies in primates
	Evening:	Posttest and clean up	Students take post assessment and clean-up room.
Friday	Morning:	Special Video	Students find problems, within video
	Afternoon:	Class Party	Paleobaseball triva!
	Evening:	 	