

ACTIVITY MATRIX

FIVE E's	ACTIVITIES/TOPICS	ESSENTIALS	ECOLOGY NATURAL HISTORY	SCIENCE AND SOCIETY
Prerequisites	Micropipeting Skills (55 min)	•		
	Basic Electrophoresis Concepts (55 min)	•		
	SEP Dye Lab			
Engage	Scenario (20 min)	•		
	Video: "Wildlife Warriors" (25 min segment on poaching)	•		
	Video: "An Animal's World: African Elephant" Discovery Channel	•		
	Biographies and/or Articles: Kenine Comstock, Sam Wasser (20min)	•		
	Readings: Natural History of the Elephant		•	
	Readings: Bioethics, Societal Issues			•
Explore	Internet Research Assignment		•	•
	Paper RFLP Activity (55 min)	•		
	Additional Paper RFLP Activities (Elephant sentence version and "DNA Scissors" in <u>Recombinant DNA and Biotechnology</u>)		•	
	Lab: Gel Electrophoresis (~110 min)	•		
	Flow Chart (student generated)			
	Concept Questions: Part I (20 min)	•		
Explain	Concept Questions: Part II (20 min) Vocabulary (20 min)	•		
	Analysis of Comstock Data Comparison of RFLPs (55 min)	•		
	Semi-log Graphing			
	Analysis of Student Data Comparison of RFLPs (55 min)	•		
	Semi-log Graphing			
	Identification of Ivory Source (10 min)	•		
Elaborate	Discussion of Scenario Outcome -What happened to grandpa? (20 min)	•		
	Bioethical Extensions			
	Bioethical Questions			•
	Internet Research Results		•	•
	"Stakeholders" Model			•
	Why Conserve a Species?		•	•
Evaluate	Assessment: Whale Scenario (55 min)	•		
	Assessment: Designing and Performing independent research Lab			
	Application of Biotechnology to Other Areas of Research			•

