



East Africa Climate Change Curriculum

The objective of this unit is for students to develop an understanding of human-climate interactions using data from a study of climate change in East Africa, the EACLIPSE project.

Guiding questions include: How does human activity affect climate change? How does climate change affect the environment? How do changes in the environment affect people living in that environment?

BACKGROUND	SCIENCE MODULE	SOCIAL STUDIES MODULE
<p>Introduction to Unit EACLIPSE Project Unit Objectives Background Material Climate Change Africa Project Websites A Note on Teaching Young People about Climate Change</p> <p>Lesson 1: Introduction to Climate Change in East Africa Part 1: Students are provided background information about the EACLIPSE project and climate change in East Africa. Part 2: Students learn to use a systems model to analyze climate change in East Africa and make predictions based on the model. Suppl. 1a: PowerPoint Suppl. 1b: Movie Clip</p> <p>Standards: Chart of Michigan and national middle and high school standards met or addressed by each lesson in the unit</p> <p>Additional Materials: Meet the EACLIPSE Researchers Careers Related to Climate Change: Student Activity Take Action: Resources for Students and Teachers</p>	<p>Lesson 2: Changing Temperatures Students graph and compare the rate of temperature change in two different ecosystems in East Africa.</p> <p>Lesson 3: Changing Rainfall and Water Availability Students learn about the factors that contribute to variations in rainfall and use their understanding of the water cycle to compare water availability in two different ecosystems in East Africa. Suppl. 3a: PowerPoint Suppl. 3b: Movie Clip</p> <p>Lesson 4: Changing Vegetation Students use their understanding of changing temperatures and water availability to examine their effects on vegetation in East Africa. Suppl. 4a: PowerPoint</p> <p>Lesson 5: Changing Land Use Students examine changes in land use and vegetation over time in Michigan and learn how scientists analyze and predict changes in land use and vegetation over time in East Africa. Suppl. 5a: PowerPoint</p>	<p>Lesson 6: Analyzing Human-Environment Interaction using the Kite Framework Students learn to use a framework that examines social-cultural, political, and environmental factors over time to understand the complexities of human-environment interaction.</p> <p>Lesson 7: Adapting to Climate Change in the East African Savanna Students discuss the factors that affect how people adapt to climate change and develop research questions that could help uncover the strategies people use to adapt to climate change in East Africa.</p> <p>Lesson 8: Convention on Water Use in the Savanna Students synthesize and apply what they have learned in the unit by participating in a role-play where they represent the viewpoints of different stakeholders on water use in East Africa.</p> <p>Supplemental Lessons: <u>Crops and Vegetation 1:</u> Physical and Agricultural Geography of Kenya <u>Crops and Vegetation 2:</u> Exploring the Biogeography and Agricultural Geography near Mt. Kenya <u>Simulation Game:</u> Herder-Farmer Interaction http://www.clip.msu.edu/</p>

