

MICRO-LESSON: Ecuador and The Galápagos Islands

TITLE: Discovering Ecuador/Galápagos: New Places, New Ideas, New Experiences

CURRICULUM FOCUS: Social Studies, Science GRADE LEVEL: 6-8; 9-12

VIDEO SEGMENTS:

- ▶ Evolution of a New Species
- ▶ The Last Stop
- ▶ The Galápagos Islands and Argentina's Future
 - ▶ Geography and Regions
 - ▶ History and Culture
- ▶ Physical Features and the Equator
- ▶ Arriving at the Galápagos
- ▶ Darwin Develops a Non-Random Theory of Evolution: Natural Selection and Adaptation

PROGRAM DESCRIPTION:

These video chapters introduce Ecuador with a focus on the Galápagos Islands—"a wonderland suspended in time." Describing the Island as "a living laboratory of evolution," Jeff Corwin describes not only the evolution and survival of the Galápagos marine lizard but also the development and environment of a host of other island inhabitants. Once referred to by pre-Incan inhabitants as "middle of the world" because of its proximity to the equator, Ecuador possesses many distinctive physical and cultural features—all of which the video chapters explore.

Students will meet Ecuador's indigenous Andean society and explore the country's located four major regions, or "continental portion of Ecuador:" the Costa, Sierra, Oriente, and 600 miles west in the Pacific are the Galápagos Islands. Finally, students will understand a bit of the history of Ecuador that has made it a very unique country.

LEARNING OBJECTIVES:

After viewing this video students will be able to:

- Compare and analyze societal patterns for preserving and transmitting culture while adapting to environmental or social change
- Explain how language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding
- Examine, interpret, and analyze physical and cultural patterns and their interactions, such as land use, settlement patterns, cultural transmission of customs and ideas, and ecosystem changes
- Understand the historical perspectives
- Understand biological evolution

CLASSROOM CONNECTIONS:

- A. The native Indians who live in Ecuador speak both Spanish and Quechua languages. They retain their ancient culture through their knowledge and continued use of the

Quechua language, once spoken by the Inca. Often, a language reflects one's cultural heritage and even one's history. As a class, list the various languages spoken by class members. Be sure to include languages spoken by family members. Once you have made your lists, break into groups, selecting one or two languages. Next, research the origin of each language, research the people who spoke the language. Discuss whether these people continue to use their language today or whether the language and

part of the culture have been lost to time. To add some depth to your research, interview, if you can, individuals who speak the language you are researching and record it. Note how hearing the language makes you feel and whether you hear familiar sounds. Your group may wish to write a brief script for each person being interviewed to read or say—something common to everyday speech, i.e., How are you? What is your name? What time is it?

Present your findings to the class, along with your recordings.

- B.** Just as your way of dressing expresses who you are and how you identify with peers, the manner in which a culture dresses reveals much about its history, its beliefs, its traditions. As a class discuss the similarities of dress a visitor would see in your school; be sure to include not only clothes but also shoes, jewelry, hats/caps, and other ornaments. Discuss what message would be conveyed to the visitor about you and your school mates.

In a similar experiment, divide into four groups. Each group will take one week to record in a journal the diversity of dress they observe that reveal a culture. Use as resources not only school but also the community, the grocery store, shopping center, etc. Each group will discuss what it has learned and prepare an oral presentation about findings.

- C.** Writing Prompt: (Grade Band 9-12)

 [Darwin Develops a Non-Random Theory of Evolution: Natural Selection and Adaptat \(03:20\)](#)

One decade before Charles Darwin was born, Erasmus Darwin, his grandfather, wrote: “Nursed by warm sunbeams and primeval caves, organic life began beneath the waves. Hence without parent, by spontaneous birth rise the first specks of animated earth.” Charles Darwin, unlike his father or grandfather would focus his entire career on exploring and chronicling the outdoors. Eventually, his studies would take him to the Galápagos Islands where he would take his career firmly into the natural sciences. Essentially, his theory contained three elements two of which are 1) in the random shuffle of heredity, each individual is slightly different from all others and 2) an acknowledgement of the cruelty of nature, namely, in nature a struggle for survival exists. Some of those individuals inherited differences coupled with occasional random mutation, mutation which will give the organism or individual a better chance for survival. Hence, nature selects those individuals/organisms best likely to survive and reproduce, thereby continuing the species.

By comparing and contrasting both Erasmus' and Charles' stances, write an analysis of the validity of either statement. Be sure to provide specific examples to support your analysis.

INTERACTIVE TARGET VOCABULARY:

As you begin your exploration and research into Ecuador and the Galápagos Islands, create in your Digital Adventure Journal a section for Vocabulary. This compilation of vocabulary will not be the traditional seek and find definitions. You will collect images, parts of articles, video images, brochures, or any other helpful resources that define each of these terms not only to you but also to your classmates.

Darwin:** Charles Robert 1809–1882 English naturalist; published *Origin of the Species* (1859)

Marine Iguana: a shore-dwelling seaweed-eating iguana (*Amblyrhynchus cristatus*) of the Galápagos Islands that often feeds in the sea

Natural Selection: a natural process that results in the survival and reproductive success of individuals or groups best adjusted to their environment and that leads to the perpetuation of genetic qualities best suited to that particular environment

Simon Bolivar:**a visionary who sought a united Spanish America; secured independence for Quito in 1822

Quito:** capital of Ecuador; Quechua language of the Inca yet spoken, along with Spanish

Mestizos: a person of mixed blood ; specifically : a person of mixed European and American Indian ancestry

Juntas: a council or committee for political or governmental purposes ; especially : a group of persons controlling a government especially after a revolutionary seizure of power

Galapagos Islands: island group Ecuador in the Pacific W of mainland on San Cristóbal Island area 3093 square miles (8010 square kilometers), population 9785

All definitions from Merriam Webster Dictionary Online

** Definitions are from video

ASSESSMENT RUBRIC:

This rubric is on a four-point scale and uses as references *The Skillful Teacher* by Jon Saphier and Robert Gower and *Thinking Like a Historian: Rethinking History and Instruction* by Nikki Mandell and Bobbie Malone.

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QUESTIONS	<ol style="list-style-type: none">1. Consistent use of multiple historical facts, perspectives, evidence2. Uses variety of methods for supporting evidence3. Relies on identification, evaluation, and comparison/contrast4. Relies on historical context and change	<ol style="list-style-type: none">1. Relies on multiple historical facts, perspectives, evidence2. Use of supporting evidence3. Use of differentiation between and among statements	<ol style="list-style-type: none">1. Uses one historical fact or evidence2. Limited support3. Limited use of the historical context	<ol style="list-style-type: none">1. States facts w/no support2. Little or no use of the historical context
EVIDENCE	<ol style="list-style-type: none">1. Relies heavily on primary and secondary sources from a variety of resources2. Uses deftly research skills in documenting authorities and their impact on work/project3. Uses analysis, evaluation, synthesis throughout the work/project4. Uses comparison/contrast to weigh impact of sources on work/project	<ol style="list-style-type: none">1. Uses some primary/secondary sources2. Uses limited number of other resources3. Uses research skills on work/project with limited assessment of evaluation of source4. Uses identification and explanation from the sources on work/project	<ol style="list-style-type: none">1. Uses very limited secondary sources—one or two2. Uses very limited or no primary sources3. No attention to research skills evaluating authorities and their impact on work/project	<ol style="list-style-type: none">1. If secondary sources are used, they are traditional: encyclopedia, for example, and very limited use2. One or no primary sources3. No evaluation of credibility of sources
INTERPRETATION	<ol style="list-style-type: none">1. Uses analysis and synthesis of evidence completely supported from variety of sources and resources2. Relies on explication of context for historical changes3. Provides rationale for using multiple sources and resources to accomplish work/project4. Evaluates and explains intricate connections between people, events, and ideas—both past and present	<ol style="list-style-type: none">1. Addresses the essential questions: who, what, why, when, where<ol style="list-style-type: none">1. Will present one or two historical perspectives or historical events/timelines that are different to chart similarities2. Uses limited multiple sources and resources to accomplish work/project3. Does not evaluate and explain intricate connections between people, events, and ideas—both past and present4. Presents in generalities, thereby avoiding any specificity or proof of thesis for work/project	<ol style="list-style-type: none">1. Addresses in limited and cursory fashion the essential questions: who, what, why, when, where2. Uses only identification and description3. Little to no use of supporting evidence	<ol style="list-style-type: none">1. No addressing of the essential questions: who, what, why, when, where2. No use of supporting evidence
CAUSE & EFFECT	<ol style="list-style-type: none">1. Identifies, evaluates, and analyzes multiple causes/effects—both stated and inferred—intended/unintended—short term/long term2. Differentiates and evaluates how different groups act differently and why	<ol style="list-style-type: none">1. Identifies multiple causes/effects—both stated and inferred—intended/unintended—short term/long term2. Identifies how different groups act differently and why	<ol style="list-style-type: none">1. Addresses multiple causes/effects2. Addresses only short term/long term causes/effects	<ol style="list-style-type: none">1. Addresses only one or two causes and/or effects2. Addresses only short term causes/effects that are obvious or intended

CHANGE & CONTINUITY

1. Understands that change and continuity are inextricably linked to specific events and/or developments	1. Understands that change and continuity are inextricably linked to specific events and/or developments	1. Links change and continuity to one event or series of developments	1. Addresses change or continuity but not both
2. Evaluates change and continuity from variety of perspectives, including but not limited to social, political, economic, cultural levels	2. Addresses change and continuity in terms of trends and patterns	2. Limited discussion and exploration of one of the following: social, political, economic, cultural levels	2. Relationship between change or continuity to an event or series of developments not clearly developed or supported
3. Includes in the analysis trends, movement, patterns	3. May address one of the following perspectives: social, political, economic, cultural levels		

USING THE PAST

1. Distinguishes, analyzes, synthesizes elements and patterns in historical periods that compare and contrast to the present	1. Chronicles the developmental relationship throughout time and space between patterns and contemporary events	1. Makes linear connections between past event and modern issues	1. Sees and therefore cannot make any connections between the past and the present
2. Uses knowledge of a past event or period to infer and thereby draw conclusions about a modern event or period	2. Identifies which factors contributed to historical changes over time	2. May see similarities and/or differences	
		3. Will not address the import of these connections	

ACADEMIC STANDARDS

The following standards are from Washington State Learning Standards:

http://www.k12.wa.us/CurriculumInstruct/EALR_GLE.aspx

In addition, this Micro-Lesson includes national standards from The National Council for the Social Studies (NCSS), the National Council of Teachers of English (NCTE), and National Science Teachers Association (NSTA). NCSS and NCTE have developed national standards to provide guidance for teaching social studies and English/Language Arts. The National Research Council created the standards for NSTA:

<http://www.nsta.org/publications/nses.aspx>

- Understands and applies knowledge of historical thinking, chronology, eras, turning points, major ideas, individuals, and themes in local, Washington State, tribal, United States, and world history in order to evaluate how history shapes the present and future —(middle school)
- Understands and applies knowledge of historical thinking, chronology, eras, turning points, major ideas, individuals, and themes in local, Washington State, tribal, United States, and world history in order to evaluate how history shapes the present and future —(high school)
- Understands and applies reasoning skills to conduct research, deliberate, form, and evaluate positions through the processes of reading, writing, and communicating— (middle school /high school)
- Uses listening and observation skills and strategies to gain understanding. —(middle school)
- The student uses communication skills and strategies to interact/work effectively with others. —(middle school/ high school)
- Uses communication skills and strategies to effectively present ideas and one's self in a variety of situations. —(middle school/ high school)
- Understands and applies reasoning skills to conduct research, deliberate, form, and evaluate positions through the processes of reading, writing, and communicating —(middle school/high school)

NCSS

- Understand and experience the study of culture and cultural diversity
- Explain the origins and continuing influence of key ideals of the democratic republican form of government, such as individual human dignity, liberty, justice, equality, and the rule of law
- Understand how people create and change structure of power, authority, and governance

- Describe and compare how people create places that reflect culture, human needs, government policy, and current values and ideals as they design and build specialized buildings, neighborhoods, shopping centers, urban centers, industrial parks, and the like

NCTE:

- Students read and view a wider range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
- Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features.
- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g. print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
- Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities

NSTA:

- Appreciate that for some needs, the cultural backgrounds and beliefs of different groups can affect the criteria for a suitable group
- Understand that scientific investigations require the contributions of individuals from different disciplines, including engineering
- Understand that science and technology are pursued for different purposes—scientific inquiry driven by the desire to understand the natural world and technology design driven by the need to meet human needs and solve human problems. Technology, by its nature, has a more direct effect on society than science because its purpose is to solve human problems, help humans

