Title: Rio Platano-Biosphere at Risk

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Overview: The objective of the lesson is to provide an in-depth study of Central America's most important biosphere- the Rio Platano Reserve and its necessity to the survival of both humans and wildlife. Using the essential and supporting questions, students will analyze the perspectives of major groups who seek to utilize the natural resources of the Rio Platano, followed by engagement in a simulated regional conference of stakeholders. A comparative micro-study of the impact of unsustainable use of the monarch butterfly's habitat in Mexico provides an optional enrichment opportunity for students. In addition, an extension mini-lesson provides an overall understanding of why wildlife preserves are established, how government policies attempt to protect species, and how individuals can be responsible stewards of their environments.

Essential Question:
Should the needs of people outweigh the protection of an environment and its wildlife?

Supporting Questions:

1. Why are natural wildlife preserves created?
2. How can consensual decision-making be an effective approach to meeting the needs of both humans and conserving the habitats of wildlife?

Grade Level: 6th; adaptable for High School World Geography

National Geography Standards:
1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
3. How to analyze the spatial organization of people, places, and environments on Earth's surface
14. How human actions modify the physical environment
17. How to apply geography to interpret the past
18. How to apply geography to interpret the present and plan for the future

Oklahoma Academic Standards for Social Studies:

2012 Oklahoma Academic Standards for Social Studies	**2019 Oklahoma Academic Standards for Social Studies**
Literacy Skills Standard 1: The student will develop and demonstrate Common Core Social Studies reading literacy skills.	Read Critically and Interpret Informational Sources: Students will engage in critical, active reading of grade-level appropriate primary and secondary sources related to key social studies concepts, including frequent analysis and interpretation of informational sources.
A. 1. Cite specific textual evidence to support analysis of primary and secondary sources.	4.A. Students will comprehend, evaluate, and synthesize textual sources to acquire and refine knowledge in the social studies.
Content Standard 1: The student will analyze data from a geographic perspective using the skills and tools of geography.	**6.1** The student will analyze data from a geographic perspective using the skills and tools of geography.
1 Cite specific geographic information to support analysis from primary and secondary sources located in texts, documents, newspapers, magazines, journals, political cartoons, and online news sources.	**6.1.1** Apply geographic information to support analysis from primary and secondary sources located in a variety of texts.
2 Integrate visual information, draw conclusions,	**6.1.3** Integrate visual information, draw conclusions,

and make predictions from geographic data and analyze spatial distribution and patterns by interpreting that data as displayed on globes, graphs, charts, satellite and other forms of visual imagery.	and make predictions from geographic data and analyze spatial distribution and patterns by interpreting that data as displayed on geographic tools.
5 Conduct short research projects by investigating contemporary events and issues from political, economic, social, and geographic perspectives.	**6.1.5** Describe and analyze the role of geographic factors on current events and issues.
<u>Content Standard 2</u>: The student will examine the cultural and physical characteristics of major regions of the Western Hemisphere.	**6.2** The student will analyze the physical systems of the major regions of the Western Hemisphere. **6.3** The student will identify the characteristics, distribution, and demographic patterns of human populations and systems of the Western Hemisphere.
1 Define the concept of region and identify major political, physical, and economic regions.	**6.1.4** Integrate visual information and develop the skill of mental mapping of the political and physical features of Earth's surface in order to organize information about people, places, and environments. **6.2.1** Use visual information to identify and describe on a physical map the landforms, bodies of water, climate and vegetation zones that are important to each region.
5 Cite specific textual and visual evidence in order to analyze reasons for conflict and cooperation among groups, societies, countries, and regions.	**6.5.2** Explain how cultural diffusion, both voluntary and forced, impacts societies of a region. **6.5.5** Analyze reasons for conflict and cooperation among and between groups, societies, nations, and regions.
<u>Content Standard 5:</u> The student will analyze the interactions of humans and their environment.	**6.4** The student will analyze the interactions of humans and their environment in the Western Hemisphere.
2 Evaluate the effects of human modification of and adaptation to the natural environment.	**6.4.1** Describe the commercial agriculture and industrial regions that support human development.
4 Analyze regional problems having spatial dimensions.	**6.4.2** Evaluate the effects of human modification on the natural environment through transformation caused by subsistence and commercial agriculture, industry, demand for energy, and urbanization. **2.B.6-8.1** Draw upon gathered information to analyze how a specific problem can manifest itself in local, regional, and global levels over time, evaluating options for individual and collective solutions.
5 Summarize the role of citizens as responsible stewards of natural resources and the environment.	**6.4.6** Describe the role of citizens as responsible stewards of natural resources and the environment.

Resources Needed:

Livebinder- optional online collection of all resources, accessible by teacher and students at http://www.livebinders.com/play/play?id=2500157
How Bad Can It Be (videoclip song from The Lorax) https://www.youtube.com/watch?v=BXlYuaycRbU
Rio Platano: Biosphere at Risk PowerPoint presentation
Five Themes of Geography note-taking guide (one copy per student)
Lungs of Central America reading (one copy per student; class set)
Conference ID Card (one per student; two printed per page)
Conference Policy Proposals chart (six copies, one per group)
Six classroom signs (to hang off front of desk or to be posted on classroom walls) labeled: migrant farmers, animal conservationists, loggers, poachers, government officials, cattle ranchers
A Promising Future reading (one copy per student; class set)
Tale of the Lorax (videoclip excerpt; start at 19:15 minutes, end at 25:53 minutes)
How Bad Can It Be? The Lorax song template (one per student)
Song Lyric Rubric (one per student)
Migrating Monarchs PowerPoint presentation
Monarchs on the Move reading (one copy per pair of students; optional for enrichment)
The Lost Monarch reading (one copy per pair of students; optional for enrichment)
Venn Diagram (one per pair of students; optional for enrichment)
Reservations Please PowerPoint presentation (optional for extension)
All About the Endangered Species Act pro/con chart (one per pair of students; optional)

Time Frame: 2-3 class periods

Procedures:
1. To introduce the lesson, ask students if they have read a book by Dr. Seuss, entitled *The Lorax.* What do they recall about the plot of the story, as well as the message the story sends? For those who are not familiar with the story, introduce them to one of the main characters, the Once-ler, and his identity as a entrepreneur who uses natural resources to make products that people want. Show the videoclip showing the Once-ler singing the song *How Bad Can It Be?* Ask students what they believe to be the meaning of the phrase "Survival of the Fittest" according to the Once-ler. Give students a copy of the song lyrics. According to the Once-ler, how does he justify uncontrolled use of natural resources? Display the essential question for the class to consider as focus for the lesson and provide time for each student to develop a written response to the essential question. Collect student responses and inform students that they will return to this question at the end of the lesson and measure whether their initial opinion has changed or not, and why.
2. Provide each student with a copy of the Five Themes of Geography note-taking guide and briefly review the Five Themes, if necessary. Inform students that they will be studying about a unique environment, known as the Rio Platano biosphere- the largest, protected natural habitat in Central America. Conduct a classroom discussion about the physical and human features of this biosphere using the PowerPoint

presentation, *Rio Platano: Biosphere at Risk*. During the presentation, instruct students to note information they learn into the appropriate categories of the Five Themes of Geography note-taking guide. Following the presentation, allow a brief time for students to share their learning.
3. Ask students if they know what they term "stakeholders" mean? Elicit ideas and provide a definition, if needed. Inform students that they will be engaged in a simulated conference of stakeholders. At this conference, they will be representing the perspectives and goals of one of the major stakeholders who desire to use the resources of the Rio Platano region. Divide students into six groups, identified as six major groups of stakeholders: migrant farmers, animal conservationists, loggers, poachers, government officials, and cattle ranchers. Provide each student with a Conference Identification Card. (The cards are printed two per page and will need to be cut apart prior to the lesson.) Allow time for students to reflect upon what they have learned from the PowerPoint presentation to complete the questions on their identification cards.
4. Provide each student with a copy of the reading, entitled *Lungs of Central America*. Read the passage aloud, looking to additional information which will clarify the views and motivations of each group of stakeholders.
5. Inform students that the conference will attempt to reach a consensus regarding future use of the Rio Platano by debating whether three policy proposals should be adopted as laws to govern the region. Give students approximately ten minutes to meet together in six groups to share ideas and information with their fellow members. Provide one copy of the *Conference Policy Proposals* chart to each group and assign a scribe to note the responses of the group to each policy. Instruct groups to prepare to debate each proposal at the conference.
6. Set up the classroom to provide seating for each of the six groups to face one another, posting signs to identify each group on the front of desks or on the classroom walls. (Option: Ask students to stand in six areas of the classroom with the fellow group members.) Select one or more of the policy options as the topic for the conference. Allow time for each group to express their views toward the proposal and encourage discussion, negotiation, and compromise among group members. Can a consensus be reached? Ask students what is the difference between a consensus and a decision made by majority will? Is one stronger and more effective than another? When interested, or stakeholders, compete for limited resources, can a consensus always be reached? Why or why not?
7. Provide each student with a copy of the reading entitled *A Promising Future* and read the passage aloud, pausing to address the following questions: Why are natural wildlife preserves created? How has the process of consensus been used to protect the Rio Platano's future? Are there situations in which the desires of one group of stakeholders be sacrificed for the benefit of the environment or its wildlife?

Assessment:
1. Use the videoclip of the cartoon version of the tale of the Lorax (start at 19:15 minutes, end at 25:53 minutes). If the videoclip is not available, remind students of the end of the story. What do they believe is the meaning of the message the Lorax left on the stone- the single word "unless"? Conduct a brief classroom discussion to elicit possible answers. Some students may suggest that humans must serve as stewards of the environment to protect animals who have no voice in decision-making. Use such responses as a springboard to discuss what role individuals and groups play in preserving wildlife and their habitats.
2. Return to each student their response to the essential question from the introduction to this lesson. Ask students to silently read their writings and consider the question again. Have their changed their views? If so how? If not, how have their initial views been reinforced by analysis of the Rio Platano region? Conduct a brief classroom discussion to allow time for students to share their thoughts.
3. Inform students that they will be assuming the role of songwriters for a new ending to the musical film, The Lorax. Provide each student with a template (or digital form provided in this lesson) and review the

instructions. Students will be rewriting the lyrics of the Once-ler's song used in the lesson's introduction through the viewpoint of the Lorax. Read together the revised chorus in the template for the new song. Instruct students to compose two verses of four lines each in the spaces provided on the template. Students must include details and information to demonstrate their understanding of conditions and challenges of the Rio Platano region. How would the Lorax respond to the Once-ler's concept of "survival of the fittest"? Encourage volunteers to share their verses with the class, if time permits. Use the rubric in this lesson for evaluation, which includes the opportunity for students to evaluate their own work, as well.

Enrichment:

1. Students are encouraged to pursue a brief investigation into the current conditions of the monarch butterfly's natural habitats and the impact these changing habitats have had on the species. Ask students if they can identify a monarch butterfly by its unique colors and wing patterns. Do they see many in the spring or summer in their communities? Ask students to interview their parents and grandparents, investigating whether they can identify this species? Do older people recall seeing many more monarch butterflies in the community than recently? What could be the reason behind a decline in sightings?
2. Use the PowerPoint presentation entitled *Migrating Monarchs* to introduce students to the monarch butterfly, in case they are not familiar with this species. Pause to discuss where the monarch's natural habitats can be found? Why does it require migration from one country to another annually? What has impacted its migration patterns? Draw special attention to changes in the habitats as viewed through landsat satellite imagery found in the PowerPoint presentation.
3. Divide students into pairs and provide each partnership with one copy of the readings, *Lost Monarch* and *Monarchs on the Move*. Provide time for each partner to silently read their respective reading. Allow 5 minutes for partners to make a list of facts about the monarch and its habitats found in both readings. Conduct a classroom discussion to elicit reasons why the monarch population is declining. Point out factors that originate from both human processes and natural processes. How do these factors compare to the events challenging the sustainable use of the Rio Platano biosphere?
4. Remind students that many species depend upon more than one natural habitat for survival due to annual migrating patterns. For example, the Snow Goose, which is becoming more prevalent in the southern portion of the Great Plains in recent years, is altering its migration pattern due to loss of its habitat in Canada. Encourage interested students to create a Venn diagram in order to draw comparisons between the monarch butterfly and the Snow Goose by studying the environmental changes using satellite imagery at https://earthshots.usgs.gov/earthshots/node/41#ad-image-0-0.

Extension:
1. Further extension of the lesson might include an overview of the purpose and goals of wildlife reserves. Use the PowerPoint presentation entitled *Reservations Please* to make connections between threatened or endangered species found in other regions of the earth, as well as introduce students to some of the more news-worthy wildlife conservation organizations.
2. Ask students what they might know about our government's efforts to preserve threatened or endangered species? Provide students with a copy of the *All About the Endangered Species Act* pro/con chart. Review the manor arguments students may hear in the news and public debate regarding the impact of this act on local economies and growth. After reviewing both "pro" and "con" points of view, allow time for students to silently write one paragraph using following statement as a paragraph "starter":
It is (or is not) the duty of governments to protect wildlife at the cost to human needs and growth.

Sources:

The Lorax, by Dr. Seuss
Mapping a Biosphere, World Neighbors in the Classroom magazine
UNESCO World Heritage Center
World Heritage Outlook & Database
World Atlas.com
Oregon State University (Landsat imagery)
Geography in the News, online newsletter by Neal Linebeck
Earthshots, United States Geological Survey
JourneyNorth.org
Resources for the Future and the American Institute of Biological Sciences, Public Policy Report, 2018
National Geographic Society

How Bad Can It Be?
A Tale of the Once-ler and the Lorax

How ba-a-a-ad can I be? I'm just doin' what comes naturally,
How ba-a-a-ad can I be? I'm just following my destiny.
How ba-a-a-ad can I be? I'm just doin' what comes naturally.
How ba-a-a-ad can I be? How bad can I possibly be?

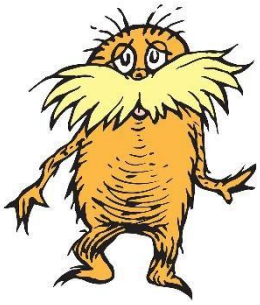
Well, there's a principal of nature that almost every creature knows,
Called survival of the fittest, and check it this is how it goes:
The animal that is has got to scratch and bite and claw and bite and punch
And the animal that doesn't winds up someone else's lunch! (I'm just saying')

How ba-a-a-ad can I be? I'm just doin' what comes naturally,
How ba-a-a-ad can I be? I'm just following my destiny.
How ba-a-a-ad can I be? I'm just doin' what comes naturally.
How ba-a-a-ad can I be? How bad can I possibly be?

Well, there's a principal of business and everybody knows his sound.
He says the people with the money makes the money-lovin' world go 'round!
So I bigger in my company, I bigger in my factory, I bigger in my corporate size!
Everybody out there take care of yours and me?
I'll take care of mine, mine, mine, mine, mine! (Shake that bottom line!)

Let me hear you say 'smogulous smoke' (smogulous smoke)
Schloppity schlop (schloppity schlop)
Complain all you want, it's never ever, ever, ever gonna stop.
Come on how bad can I possibly be?

How ba-a-a-ad can I be? I'm just building the economy.
How ba-a-a-ad can I be? Just look at me pettin' this puppy.
How ba-a-a-ad can I be? A portion of proceeds goes to charity!
How ba-a-a-ad can I be? How bad can I possibly be? Let's see!
All the customers are flying!



(How ba-a-a-ad can I be?) All the money's multiplying!
(How ba-a-a-ad can I be?) And the PR people are lying!
(How ba-a-a-ad can I be?) And the lawyers are denying!
(How ba-a-a-ad can I be?) Who cares if a few trees are dying?
(How ba-a-a-ad can I be?) This is oh so gratifying!
How bad? How bad can this possibly be?

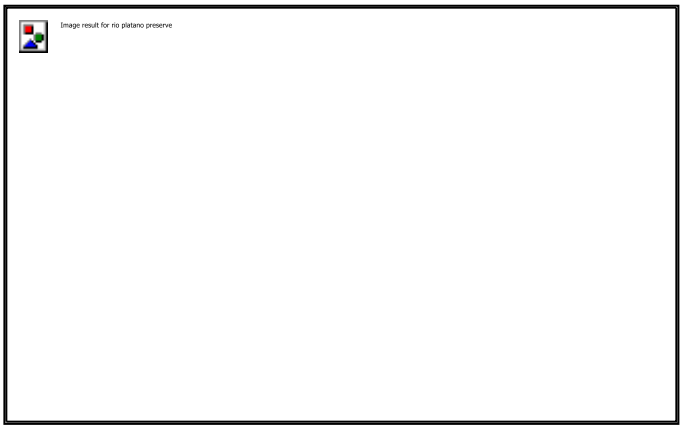
Song by Ed Helms, Kool Kojak

Five Themes of Geography:
Note-taking Guide

Location: *Identify the relative location where the events in the reading are taking place.*

Place:	Human-Environment-Interaction:
Describe the physical and human features of this place.	*Explain how humans are adapting or modifying this place.*
Movement:	Region:
Describe the movement of people, resources, products, wildlife, ideas, or technology.	*Explain how this place is physically, culturally or economically similar to other places.*

The Lungs of Central America



Thousands of migrant farmers have left depleted farms in southern Honduras for the rich soil of the rain forest. For them, the shrinking biosphere is an agricultural frontier that offers hope of a better life. “Everyone here is a migrant,” said one resident. “We didn’t come here to be poorer. We came to get rich. We have lots of aspirations. We want to get ahead.”

Powerful outside interests have long-targeted the Rio Platano Biosphere- often called the “lungs of Central America”- for illegal logging of mahogany and other wood and exotic animal poaching. With little state or local law enforcement, a “Wild West” atmosphere has prevailed. Lawlessness and guns abound, and people protect their interests with intimidation and violence.

Amidst the multiple, often opposing interests of environmentalists, government agencies, peasant farmers, cattle ranchers, logging companies, and non-profit organization decisions are being made which will greatly impact the region.

Some groups seek to stem the tide of migration into the forest by introducing techniques to increase crop yields on land already in use. They also work to raise awareness among residents of the importance of protecting the reserve from misuse and further colonization. Poverty is driving the advance into the reserve. If people know how to better use the land they already are living on, the drive to settle new land is lessened.

The Honduran government has also supported the formation of an agroforestry cooperative. Many people in the zone, as well as outsiders, exploit the natural resources for short-term economic gain. A number of cooperatives have been created with a vision of conservation and sustainable use of the biosphere’s resources.

Income-generating cooperatives tap the resin from pine trees for sale. This cooperative project provides income for local residents and a sustainable use of natural resources, thus lessening the pressure to make illegal use of the forest.

This is a “consensual process”. In each of the areas, leaders collect information about the community’s needs. There is a lot of discussion about how the forest is used and why. After the information is gathered, the communities then come together to discuss and develop rules for the use of their part of the biosphere. They are willing to restrict themselves and to accept the notion there will be hunting seasons and restrictions on land use.

Many years of environmental regulation of the biosphere has not brought about significant change in colonization and illegal use of resources in the southern part of the biosphere. Some see a consensual management plan as the last, best hope.

Source: *Mapping a Biospehere*, World Neighbors in the Classroom magazine

CONFERENCE IDENTIFICATION CARD

My name is_____.
I represent_____.

Our current uses of the Rio Platano Reserve are:

Our opinion about how the reserve should be used in the future:

CONFERENCE IDENTIFICATION CARD

My name is_____.
I represent_____.

Our current uses of the Rio Platano Reserve are:

Our opinion about how the reserve should be used in the future:

Biosphere at Risk: Rio Platano

Policy Proposals

Group Identification: *(circle)*

Migrant Farmers	Loggers	Government Officials
Animal Conservationists	Poachers	Cattle Ranchers

Directions:

Discuss the following proposals for policies to protect the Rio Platano biosphere. From the perspective of your group, determine whether you will support each proposal or not. Summarize the reason(s) for your decision in the last column.

1. No lumber or wildlife will be removed from within the boundaries of the preserve.	◯ **Support** ◯ **Oppose**	
2. All cattle ranching operations will be strictly regulated by government agents.	◯ **Support** ◯ **Oppose**	
3. Farmers will be relocated to lands outside the boundaries of the preserve within the next five years.	◯ **Support** ◯ **Oppose**	

A Promising Future for Rio Platano

In the Mosquitia region in north-east Honduras is a place whose natural and cultural wealth can rarely be seen elsewhere in the world. But the future of this exceptional richness, in a country torn by conflict, poverty and adverse socio-economic conditions, strongly depends on the readiness of its authorities to manage and conserve it, working together with the area's local and indigenous communities.

Rio Platano is a gem of global importance due to its largely intact forests and other habitats but also the variety of indigenous and local cultures that live in and around it. Unfortunately, the harsh socio-economic reality of the region has been putting its natural and cultural wealth at constant risk for decades.

Honduras is one of the poorest countries in Latin America. Almost 60% of its population lives below the poverty line and almost 40% lives in extreme poverty. A recent controversial plan to build a series of dams along the Patuca River, which will strongly affect both the river and the indigenous people, causing grave concerns on local and international levels. Although the dams would not be situated inside the nature reserve itself, they will be built within the Mosquitia region, a protected conservation complex also known as the Mesoamerican Biological Corridor.

Given the poverty of the region, the situation is often seen as a trade-off between development and conservation. Priority tends to be given to development. But short-sighted and large-scale development projects risk putting local residents in an even more vulnerable situation, threatening the very environment those people depend on for water, food, and income.

But all is not lost. In response to studies by UNESCO, the Honduran government has recently reaffirmed its commitment to improve the management of the area and to request inclusion of the reserve on the List of World Heritage Sites in Danger. This is a very promising development for the future of Rio Platano. In an area with such a difficult socio-economic reality and limited governmental presence, political commitment is an essential starting point for any conservation action.

Source: Tilman Jaeger, IUCN's World Heritage Program, June, 2011

The Lorax's Song: Survival of the Fittest

How ba-a-a-ad can it be? Folks just doin' what comes naturally, *How ba-a-a-ad can it be? I just wonder what we all can do.* *How ba-a-a-ad can it be? Folks just doin' what comes naturally.* *How ba-a-a-ad can it be? What now can we possibly do?*
Verse:
How ba-a-a-ad can it be? Folks just doin' what comes naturally, *How ba-a-a-ad can it be? I just wonder what we all can do.* *How ba-a-a-ad can it be? Folks just doin' what comes naturally.* *How ba-a-a-ad can it be? What now can we possibly do?*
Verse:

MONARCHS on the MOVE

Near the end of February, monarch butterfly colonies at their wintering sites in Central Mexico begin “breaking up.” Tens of thousands of butterflies clustered together on single trees prepare for their lengthy spring migration from Mexico to the United States.

Probably the best known of all North American butterflies, the monarch, lays its eggs on milkweed plants on which their larvae (caterpillars) exclusively feed. A few days after caterpillars emerge from their eggs, they begin to eat the poisonous milkweed leaves, acquiring a toxin that can repel predators.

Monarchs are also found in South America, Europe, Russia, and Australia. They are migratory on all continents but have the longest routes across North America. The annual two-way migration of monarchs is truly amazing. When the fall migration begins, the monarch population in the United States travels up to 3,000 miles averaging 50 miles per day. Their destinations are specific areas in the Sierra Madre Range of Central Mexico. The butterflies winter in the same mountain spots every year at elevations of 10,000 feet. Millions hibernate in large clusters in the mountains’ fir trees. These sites are now protected as important bio-reserves.

In March, toward the end of their wintering, the butterflies begin their northward migration, laying eggs on milkweeds as they go. Though only one generation migrates south, it takes 3-4 generations each year to return north by summer. Scientists are trying to determine exactly how monarch butterflies manage to return to the same wintering spots over a gap of several generations. It appears the butterflies inherit the flight patterns, based on the magnetic pull of the earth and the position of the sun in the sky. Whatever the exact causes, the journey of the monarch butterfly is an incredible geographic and biologic story.

Source: Neal Linebeck, *Geography in the News*

The Lost Monarch?

The epic 3,000-mile monarch butterfly migration may become a thing of the past. The 2018 Western Monarch count found that the number of west-coast monarchs spending the winter in California had plunged to only 20,000 butterflies- a drop of 86 percent since last year- a total decline of more than 80 percent over the past 20 years, according to the National Wildlife Federation.

The twin forces of human-caused climate change and habitat loss are now threatening North American monarch butterflies with extinction. Increasing carbon dioxide levels may be making milkweed—the only food monarch caterpillars will eat—too toxic for the monarchs to tolerate. And higher temperatures may also be driving summer breeding areas further north. That means the monarchs' migration routes will get longer and therefore more difficult. A lot of environmental threats can pile up on top of each other and the consequences can be hard to predict.

It's not too late to save them, but it's a question of whether we make the effort, scientists say. Creating new monarch habitat by planting native milkweed species may provide crucial fuel and rest stops for the traveling butterflies, as will taking more action to address climate change.

How can individual citizens help? Plant milkweed that's native to your area for monarchs to lay eggs on and for monarch caterpillars to eat. Even just a pot or two helps. Also, provide native nectar-rich plants for monarch butterflies to feed on. Or become a citizen scientist; there are lots of opportunities to participate in tracking monarch migration. Encourage others to learn and get involved.

Source: "We're losing monarchs fast—here's why" by Carrie Arnold, National Geographic Society, December, 2018

ALL ABOUT the ENDANGERED SPECIES ACT

√ The ESA, enacted in 1973 and signed into law by President Nixon, is among several environmental laws passed in the 1970s to protect species in danger of extinction across the United States. It is administered primarily by the Fish and Wildlife Service. The stated purpose of the Endangered Species Act is to protect species and also "the ecosystems upon which they depend."

√ Under the ESA, more than 1,800 species of plants and animals have been identified as either endangered or threatened. Proper identification helps in understanding the risk of extinction of the species' habitat. More than half of the habitats for listed species is on non-federal property, owned by citizens, states, local governments, tribal governments and private organizations.

√ Penalties for harming or killing any species on the endangered list can be a maximum fine of up to $50,000 or imprisonment for one year, or both.

√ As of 2012, fifty-six species has been delisted or are recovering, including the bald eagle and the brown pelican. There are still about 2,000 species on the threatened and endangered lists.

√ Legal funding for the ESA ended on October 1, 1992, but Congress continues to fund many of its projects.

Pros of the Endangered Species Act	Cons of the Endangered Species Act
• ***It protects the environment.*** Humans are the most intelligent species, making other species vulnerable to destructive human activities. The ESA is just one of the laws that guide humans to act with consideration of other species, specifically those at the brink of extinction. • ***It raises awareness****.* Identification of threatened species educates people of the different kinds of animals and plants that need utmost protection. Not many people recognize that some species are in fact about to go extinct. • ***It maintains ecological balance.*** The ESA helps to restore ecological balance by imposing heavy penalties on violators. Endangered species can then start to thrive and multiply.	• *It interferes with progress*. Because the ESA can halt construction and building in areas identified as natural habitats for endangered species, it prevents the development of land needed by people to survive. • ***It is very expensive.*** Researchers, land surveys, and efforts to protect habitats all require a hefty sum of money. Congress continues to funnel taxpayer money into projects, without guarantees of success. • ***It threatens private property ownership.*** The ESA mandates everyone to avoid doing any harm to endangered species. This is opposed by owners of private lands who need to sweep their property clean from aggressive or destructive wild animals such as venomous snakes and insects.

What do you think?

The ESA is no doubt a controversial topic. Although its goal is to protect species, it seems to overlook the rights of humans to social and economic progress, and to an extent, survival. Humans, plants and animals all live under a single, unified habitat. The ESA may have been a good start for humans to do their part in protecting the Earth, but it is far from perfect. By looking at the pros and cons of the Endangered Species Act, you may agree that it may need reform before it can ultimately become an effective tool for protecting not just the rights of certain species, but also, ultimately, those of humans.

Source: *Resources for the Future and the American Institute of Biological Sciences, Public Policy Report, 2018*

Song Lyrics RUBRIC

Student Name:_____

	Satisfactory 0-14 points	**Excellent: 15-20 Points**	**Superior 21-25 points**	**Self Evaluation**	**Teacher Evaluation**
Basic Requirements	Follows most of the directions.	All directions are followed and the song is complete.	Follows all directions; original ideas and creative.		
Content: Facts and Details	Includes few facts or details; shows lack of understanding	Includes at least two facts or details to shows good understanding.	Includes outstanding use of two or more facts or details: shows excellent understanding.		
Content: Point of View	Unclear.	Appropriate and clear.	Consistent; Clear; Shows insight.		
Overall	Some difficulty communicating ideas; or incomplete work.	Overall, a good and accurate job.	Overall excellent work; Communicates accurate ideas effectively.		
Total Points:					