

# Let Me Live!

Holly Bryk | Middle School Spanish

# **Unit Description**

In this unit designed for a World Language class, I will focus on conservation in the target language, specifically the conservation of the Amazon Rainforest, concentrating on deforestation and its global impact on climate change. Students will discover how consumer choices can affect the Amazon Rainforest and ultimately our planet and the implications those choices have for the future of our world. Students will learn how to read and interpret authentic texts in the target language using the Visual Thinking Strategies method. The same strategies that students employ for close reading of text are easily applied to the interpretation of infographics. Students will practice both strategies as they read about and research deforestation of La Selva Amazoníca.

## **Content Standards**

- Relating cultural practices to perspectives. (ACTFL Cultural Standard)
- 2. Presentational Communication (ACTFL Communication Standard)
- Integration of Knowledge and Ideas:
   Analyze various accounts of a subject told in different mediums, determining which details are emphasized in each account.

   (CCSSELA Literacy RI.9 10.7)

# **Objectives and Outcomes**

- Increase global awareness on the issue of climate change by exploring the connections between the deforestation of the Amazon Rainforest and climate change.
- 2. Identify the ways in which the deforestation of the Amazon Rainforest contributes to carbon emissions.
- 3. Explore ways to reduce carbon footprints through changes in consumer spending habits.

# **Supporting Material**

1. DTI 2022 Unit



#### Let Me Live!

### Holly Bryk

#### Introduction

"En un año absorbo 22kg de CO2. Lo único que les pido es ¡me dejen vivir!" Abracemos Tollocan. – In one year I absorb 22kg of CO2. The only thing that I ask of you, let me live!

In this unit designed for a World Language class, I will focus on conservation in the target language, specifically the conservation of the Amazon Rainforest, concentrating on deforestation and its global impact on climate change. Students will discover how consumer choices can affect the Amazon Rainforest and ultimately our planet and the implications those choices have for the future of our world. Students will learn how to read and interpret authentic texts in the target language using the Visual Thinking Strategies method.<sup>2</sup> The same strategies that students employ for close reading of text are easily applied to the interpretation of infographics. Students will practice both strategies as they read about and research deforestation of La Selva Amazoníca.

# Background

I currently teach at The John Dickinson School in Wilmington, Delaware in the International Baccalaureate Middle Years Programme, which has been in existence for six years. The middle school is located within the high school building in a wing of its own and was created as an extension to the International Baccalaureate Diploma Programme for grades 11 and 12. The Diploma Programme was initiated at Dickinson five years prior to the inception of the Middle Years Programme (MYP). MYP was implemented to encourage more students to participate in the Diploma Programme. In its first year, MYP

<sup>&</sup>lt;sup>1</sup> Abracemos Tollocan, "¡El medio ambiente nos necesita!," July 15, 2020, https://m.facebook.com/AbracemosTollocan/photos/a.456849571339563/1215023485522164/?type=3&source=48&\_\_tn\_\_=EHH-R

<sup>&</sup>lt;sup>2</sup> Kristina Robertson, "Visual Thinking Strategies for Improved Comprehension," Colorín Colorado, December 01, 2015, Kristina Robertson, "Visual Thinking Strategies for Improved Comprehension," Colorín Colorado, December 01, 2015, , accessed June 17, 2018, http://www.colorincolorado.org/article/visual-thinking-strategies-improved-comprehension., accessed June 17, 2018, http://www.colorincolorado.org/article/visual-thinking-strategies-improved-comprehension.

included grades six, seven, eight and this year will be expanding to include grades nine and ten. A continuous sixth through twelfth grade International Baccalaureate Programme will be established at Dickinson in the near future. Our Middle Years Programme is made up of just over 300 students.

Students must apply to participate in MYP. To be eligible, students must be motivated to learn. I am currently the only Spanish teacher in MYP teaching Spanish 1A (Grade 6), Spanish 1B (Grade 7), and Spanish 2 (Grade 8), meeting with my classes for ninety minutes every other day.

Open-mindedness is one of the ten attributes included in the IB Learner Profile. To be considered open-minded students, "critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience." Our school population is fairly diverse, but the students typically have a shallow understanding of various cultures not only from around the world, but also close to home. They need opportunities to immerse themselves culturally in order to appreciate the similarities in our human experiences that on the surface appear to be different. My plan is to use authentic Spanish language texts in order to present students with opportunities to immerse themselves in the Hispanic culture using authentic target language nonfiction writing; news articles, web pages, social media, and books, accompanied by culture rich realia such as infographics, charts, graphs, and maps. It is my intention to incorporate authentic texts and realia into this unit so that students can have exposure to Hispanic culture through the materials from the everyday life of native speakers. Authentic text exposes students to culture because it is written for native speakers, by native speakers and has clear context. Some authentic texts and realia have built in supports for language learners like pictures, graphs, and maps. Both can offer language in small chunks making it more manageable for students. The language included in such realia as infographics, charts, and maps is highly contextualized making it easy for students to acquire new vocabulary quickly. "Language expresses cultural reality."4

Incorporating authentic text and realia not only enriches students' vocabulary in the target language but it increases their understanding of the target language culture(s). Realia involves the senses in the learning process therefore fostering creativity and

<sup>&</sup>lt;sup>3</sup> "IB Learner Profile." International Baccalaureate Organization 2013. Accessed August 10, 2016.

<sup>&</sup>lt;sup>4</sup> Kramsch, Claire. *Language and Culture*. New York, NY: Oxford University Press, 2003.

stimulating the mind. Through realia, students are exposed to real discourses, which in turn engages and motivates them in the process of language learning and ensures they learn to use the target language in various contexts. Authentic materials keep students informed about what is happening in the world while increasing their global awareness. Bringing realia and authentic text into the World Language classroom creates opportunities for students to be active learners and teachers to be facilitators, allowing lessons to be more interactive and students more independent. Students feel more comfortable with authentic materials and realia, which increases student motivation. Increased motivation leads to increased language use which leads to improved proficiency.<sup>5</sup>

## **Content Objectives**

I am focused on three goals in the creation of this unit. First, I would like the students to increase their global awareness on the issue of climate change by exploring the connections between the deforestation of the Amazon Rainforest and climate change. Delving into the topic of climate change in the target language for first- and second-year students of the language will seem quite daunting and almost impossible initially. Hence a visual such as an infographic, can be a useful tool for teaching beginning language students, especially those who are visual learners. A graph, chart, or infographic can clarify meaning and may be a tension diffuser. It is my hope that with the use of a visual, the students will explore the deforestation of La Selva Amazónica and climate change connection in depth, spurring them on to make personal changes in their consumer choices.

Second, I would like students to identify the ways in which the deforestation of the Amazon Rainforest contributes to carbon emissions through the use of Movie Talk, a technique for language learning. In Movie Talk a short film or a short segment of a longer

<sup>&</sup>lt;sup>5</sup> Tasnubha Bably and Dil Nusrat, "Using Realia as an Effective Pedagogical Tool," *IOSR Journal Of Humanities And Social Science* 22,, no. 11 (November 2017): Tasnubha Bably and Dil Nusrat, "Using Realia as an Effective Pedagogical Tool," IOSR Journal Of Humanities And Social Science 22,, no. 11 (November 2017): , accessed May 19, 2019, <a href="http://www.iosrjournals.org/iosr-jhss/papers/Vol. 22 Issue11/Version-4/A2211040107.pdf">http://www.iosrjournals.org/iosr-jhss/papers/Vol. 22 Issue11/Version-4/A2211040107.pdf</a>. <sup>6</sup> McFall-Johnsen, Morgan. "Earth Is a Spaceship, and the Amazon Is a Crucial Part of Our Life-support System, Creating up to 20% of Our Oxygen. Here's Why We Need the World's Largest Rainforest." Business Insider. August 24, 2019. Accessed November 2, 2021. https://www.businessinsider.com/why-amazon-rainforest-is-important-life-support-is-burning-2019-8.

film related with little to no dialog is used. The film is to be watched not listened to. I plan to narrate the film in the target language as the students view it. In doing this, I can pause and play the film as needed describing everything in the target language while providing the students with the vocabulary they need. This also allows me the freedom to check for comprehension as needed. Again, I am using realia, a film created by a native speaker of the language for native speakers.

Lastly, I would like students to explore ways to reduce their carbon footprints through changes in their consumer spending habits. Using all of the information previously gathered about deforestation of La Selva Amazónica and the effects that our consumer choices have on the environment, I plan to have students create a personal consumer purchasing plan or guide in the target language, focusing on spending habits that support conservation of the environment, specifically the Amazon Rainforest.

As previously mentioned, authentic material and realia in the target language will enrich the vocabulary and improve the proficiency of my students. Both realia and authentic text provide comprehensible input because students are seeing images of what is being described, not written translations. Both can be used to provide differentiated instruction because students will pick up on whatever they are able to based on their current level of language ability.

#### Unit Overview

It is my goal to design a unit in which students will use authentic text and realia as a springboard to creating their consumer purchasing plan which includes items that that are both healthy for the body and healthy for the environment. The class will research consumer habits that support sustainability using the following learning strategies; vocabulary, close reading and visual thinking, and CAFE - check for understanding. Students will study the connections between deforestation of the Amazon Rainforest and climate change through the use of infographics. The class will explore the ways in which deforestation contributes to carbon emissions using the Movie Talk learning strategy. To conclude the unit, students will create a consumer purchasing plan, in the target language, that supports environmental sustainability.

# **Objectives**

This unit will be based on two IB MYP Objectives, two Delaware World-Readiness Standards for Learning Languages and one Common Core State Standard. I will focus on IB Language Acquisition Objective Criterion C: Comprehending Written Text requiring

the student to understand information and engage with the text by supporting opinion and personal response with evidence from the text. I will also evaluate Criterion D: Communicating in Written Form which expects the student to organize and express thoughts, feelings, ideas, opinions and information in writing, write for specific purposes, and develop accuracy when writing in the target language. The Delaware World Readiness Standards for Learning Languages are Standard 1.3 Presentational Communication: Learners present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics using appropriate media and adapting to various audiences of listeners, readers or viewers; and Standard 2.1 Relating Cultural Practices to Perspectives: Learners use the language to investigate, explain, and reflect on the relationship between the practices and perspectives of the culture studied. I will focus on the Common Core Standard CCSSELA – Literacy RI.9 – 10.7 Integration of Knowledge and Ideas: Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

#### **Background Content**

## Student Background Knowledge

Students will approach this unit with very limited prior knowledge about the life cycle of the Amazon Rainforest, specifically the effects of deforestation on global water cycles and carbon emissions. All of my students, in their Individuals and Societies classes, learn about climate change and its effects on the environment. Some will have a deeper understanding of climate change, such as the human causes of climate change and/or fossil fuels and how its combustion creates the greenhouse effect from study of the subject in their science and/or social studies classes in elementary school.

#### Importance of the Amazon Rainforest

"We're all on a spaceship hurtling through a vacuum. The Amazon rainforest is our spaceship's life-support system." For the purpose of this unit, I believe it helpful to become familiar with the importance of the Amazon rainforest to the Earth. To study the Amazon is valuable because it allows us to understand how it effects our world, which in turn helps us to understand the benefits it provides. This information will allow you to develop a framework of skills necessary for teaching this topic.

6

Covering more than two million miles of land, the Amazon rainforest is the world's largest rainforest. It reaches across nine South American countries including Ecuador, Columbia, Venezuela, Peru, Bolivia, Brazil, Guyana, Suriname, and French Guiana. A home to vast species of animals and plants, the Amazon is a hugely diverse ecosystem. It is able to create its own weather while influencing other climates around the planet. The Amazon is home to many of South America's Indigenous peoples. It is believed that around 500 Indigenous communities live in this rainforest.

The Amazon rainforest is the respiratory system of our planet. It plays a significant role in regulating the Earth's carbon and oxygen cycles. It produces about six percent of the planet's oxygen and acts as a carbon sink absorbing large quantities of carbon dioxide from the atmosphere.<sup>7</sup> This in turn helps to stabilize the world's climate. This living rainforest plays an important role in mitigating climate change.

Some of the world's most fascinating animals call the Amazon rainforest home. This rainforest is one of the most biodiverse ecosystems on the planet. According to the World Wildlife Fund, it is home to 10 percent of the world's species.<sup>8</sup> Approximately 1,300 species of birds live in the Amazon as do 3,000 species of fish and roughly 430 species of mammals. About 2.5 million insect species scurry amongst the leaf litter on the forest floor.<sup>9</sup> The animals of the rainforest are instrumental to its health. Important nutrients from food scraps, scat, and animal carcasses infiltrate into the rainforest floor helping the soil better store carbon rather than releasing it into the atmosphere.

Many amazing creatures can be found in the Amazon. For instance, a tropical viper, the Fer de Lance, has helped hundreds of millions of people suffering from high blood

<sup>&</sup>lt;sup>7</sup> Kaiser, Anna Jean. "AP Explains: Role of the Amazon in Global Climate Change." Associated Press News. August 27, 2019. Accessed October 2, 2021. https://apnews.com/article/latin-america-ap-top-news-brazil-international-news-climate-change-384fdb5ee7654667b53ddb49efce80.

<sup>&</sup>lt;sup>8</sup> "About the Amazon." WWF. Accessed October 2, 2021. https://wwf.panda.org/discover/knowledge\_hub/where\_we\_work/amazon/about\_the\_amazon/.

<sup>&</sup>lt;sup>9</sup> "10 Amazing Amazon Facts!" National Geographic Kids. October 02, 2020. Accessed October 2, 2021. https://www.natgeokids.com/uk/discover/geography/physical-geography/amazon-facts/.

pressure stay healthy. <sup>10</sup> The Hercules beetle, able to carry up to 850 times its own body weight, is the strongest creature on the planet. About 1,307 butterfly species, twice the number found in the United States, have been identified in Manu National Park of Peru. It is estimated that there are 15,000 jaguars, a near threatened species, alive today in the wild of the Amazon. These examples just scratch the surface of the diverse animal life of the Amazon rainforest.

The Amazon is home to a wide variety of plant life. Over 40,000 species of plants can be found in this rainforest. Numerous plants are in the food that we consume or have medicinal properties. Chocolate, cinnamon, coffee, pepper, and vanilla all grow in the rainforest. A tacky white latex sap that is produced by the rubber tree is used today in the modern processing of rubber and is a source of income for Indigenous communities of the Amazon.

The plant life of the Amazon rainforest actively regulates the ecosystem. They generate their own weather during the process of photosynthesis. As the plants transpire, they release water vapor from pores on the underside of their leaves. The moisture released during this process seeds thick bands of clouds that keep water secured in the rainforest. About 50 to 80 percent of this moisture remains in the ecosystem's water cycle. This water finds its way into the rivers that supply downstream communities. This occurrence has far-reaching effects. When is rains over the Amazon, warm air rises up into the atmosphere which pulls moisture in from the ocean thousands of miles away.<sup>11</sup> Moisture created in the Amazon falls as rain in as far away as Texas.<sup>12</sup> This amazing hydrological cycle allows the Amazon to generate at least half of its rainfall and influence

<sup>&</sup>lt;sup>10</sup> "Why Should You Care?" Amazon Aid Foundation. June 19, 2020. Accessed September 15, 2021. https://amazonaid.org/why-should-you-care/.

<sup>&</sup>lt;sup>11</sup> Leman, Jennifer. "4 Reasons Why We Desperately Need the Amazon Rainforest." Popular Mechanics. November 02, 2021. Accessed September 15, 2021. https://www.popularmechanics.com/science/environment/a28910396/amazon-rainforest-importance/.

<sup>&</sup>lt;sup>12</sup> Butler, Rhett A. "Rainforests Help Maintain the Water Cycle." Mongabay. July 16, 2020. Accessed September 15, 2021. https://rainforests.mongabay.com/kids/elementary/404.html.

rainfall in agricultural regions halfway around the planet, including Britain and the Midwestern United States. <sup>13</sup>

Next to the Nile, the Amazon River is the second longest river on earth. It moves the largest volume of water and carries 20 percent of the planet's freshwater to the sea. 14 According to the U. S. Geological Survey, the winding waterways of the Amazon River are about 4,000 miles long and cover 2,720,000 square miles and include more than 1,100 tributaries. This river, which originates high in the Andes Mountains and flows east through Peru, Colombia, and Brazil, and its surrounding wetlands are abundantly rich in biodiversity. Many species live in and along the Amazon River; the anaconda, one of the largest snakes in the world, black caiman crocodiles, pancake stingrays, and the "boto", or the critically endangered pink river dolphin just to name a few. According to a recent study supported by the Sao Paulo Research Foundation – FAPESP, the wetlands in the Amazon contain over 53 percent of the more than 6,727 tree species accounted for in the Amazon, making these wetland forests the most diverse in terms of species richness. 15

#### Threats to the Amazon Rainforest

"We must protect the forests for our children, grandchildren and children yet to be born. We must protect the forests for those who can't speak for themselves such as birds, animals, fish and trees." For the purpose of this unit, it is important to familiarize yourself with the threats facing the Amazon rainforest. Becoming educated about the threats facing the Amazon allows us to understand how these threats affect our planet, which in turn helps us to understand what we need to change in order to reverse the effects of these threats. This information will allow you to develop a framework of information necessary for teaching this topic.

<sup>&</sup>lt;sup>13</sup> "Why Should You Care?" Amazon Aid Foundation. June 19, 2020. Accessed September 15, 2021. https://amazonaid.org/why-should-you-care/.

<sup>&</sup>lt;sup>14</sup> Melina, Remy. "What's the World's Longest River?" LiveScience. May 21, 2010. Accessed November 1, 2021. https://www.livescience.com/32600-what-is-the-worlds-longest-river.html.

<sup>&</sup>lt;sup>15</sup> AgenciaFAPESP. "Tree Species Richness in Amazonian Wetlands Is Three times Greater than Expected." EurekAlert! August 24, 2018. Accessed November 1, 2021. https://www.eurekalert.org/news-releases/667877.

<sup>&</sup>lt;sup>16</sup> "9 Inspiring Quotes About Forests." Amazon Aid Foundation. August 14, 2017. Accessed September 15, 2021. https://amazonaid.org/9-inspiring-quotes-forests/.

It is important to understand the definition of deforestation for the purpose of this unit. According to National Geographic "Deforestation is the purposeful clearing of forested land." Sarah Derouin in her article "Deforestation: Facts, Causes & Effects" defines deforestation as the permanent removal of trees to make room for something besides forest. This includes but is not limited to clearing the land for fuel, farming and animal grazing, construction or manufacturing. The removal of all or most of the trees in a forested area can lead to soil erosion, contribute to desertification and pollution of waterways, and decrease the biodiversity of the area through the destruction of habitat.

Currently, cattle ranching is the culprit for 80 percent of deforestation in the Amazon, according to Dr. Daniel Nepstad, president and founder of Earth Innovation Institute. The equivalent of 3.4 percent of current global emissions, some 340 million tons of carbon is released into the atmosphere every year. <sup>19</sup> In addition, run-off from the cattle pastures contaminates nearby rivers. Fires used to manage fields frequently spread into the surrounding forests. Cattle ranching and activities related to livestock are the largest contributors to deforestation.

Another driver of Amazon rainforest destruction is the hunger for timber products. This demand leads to illegal logging. Illegal logging is widespread through Amazon countries. Illegal logging operations are set up in remote forest areas, use forged permits, cut more than the authorized quota, cut species protected by law, and steal from protected areas and indigenous lands. These logging practices can result in unintended loss of surrounding trees which may be damaged or brought down inadvertently. Without trees in the area to support it, the soil erodes and washes away into the nearby rivers and streams and suffocates the fish which are a main source of food and income for many Amazonian people.

<sup>&</sup>lt;sup>17</sup> National Geographic Society. "Deforestation." National Geographic Society. July 15, 2019. Accessed September 16, 2021. https://www.nationalgeographic.org/encyclopedia/deforestation/#:~:text=Deforestation is the purposeful clearing, altered landscapes around the world.

<sup>&</sup>lt;sup>18</sup> Derouin, Sarah. "Deforestation: Facts, Causes & Effects." LiveScience. November 06, 2019. Accessed September 16, 2021. https://www.livescience.com/27692-deforestation.html.

<sup>&</sup>lt;sup>19</sup> "Unsustainable Cattle Ranching." WWF. Accessed September 16, 2021. https://wwf.panda.org/discover/knowledge\_hub/where\_we\_work/amazon/amazon\_threats/unsustainable\_cattle\_ranching/.

In recent years, the increase in the price of gold has propelled artisanal and small-scale mining in the Amazon region. Artisanal and small-scale mining is a major source of income for the poor and marginalized, its effects on the environment and society are disastrous and many leading to mercury pollution, increase in deforestation, abuses of human rights, criminal activities, and disruption of indigenous communities. Many artisanal and small-scale miners in the Amazon work illegally in areas where mining is prohibited. Because gold can be easily smuggled and is in high demand mining of this precious metal attracts criminal groups that exploit the miners sometimes requiring them to pay a vacuna, or a fee in order to mine, often under the threat of torture or death. Violence, sex trafficking, and forced labor are widespread.

In the Amazon, alluvial gold is the preferred gold from which to mine. Alluvial gold deposits are found on land and in rivers and streams. Miners create a mining pit by clearing forest cover and then using machinery and high-pressure hoses to remove the topsoil. This leaves a mixture called "slurry" which is made up of soil bearing gold and water. The slurry passes down a sluice system. In this system the heavier gold and sediment are trapped. Barges are also employed in the mining of alluvial gold. Dredges are used sucking up sediment and water directly from the bottom of the body of water using hoses. The gold is processed right on the barge using sluices or other equipment.<sup>20</sup>

Mercury is typically used to separate the gold. This process forms a mercury-gold amalgam. An amalgam is a mixture or a blend of different elements.<sup>21</sup> The popular use of mercury in gold mining in the Amazon is concentrate amalgamation. In this process miners apply mercury after refining the ore. The less popular use of mercury in gold mining is whole-ore amalgamation. In this process, miners apply larger amounts of mercury without prior concentration. Once mercury is mixed with gold-bearing sediment, the amalgam is heated to burn off the mercury and purify the gold. "The use of mercury in this process exposes miners and the surrounding communities to harmful mercury vapor."<sup>22</sup>

<sup>&</sup>lt;sup>20</sup> "Gold Mining in the Amazon." Amazon Aid Foundation. September 19, 2021. Accessed October 2, 2021. https://amazonaid.org/threats-to-the-amazon/gold-mining/.

<sup>&</sup>lt;sup>21</sup> "Amalgam Definition & Meaning." Merriam-Webster. Accessed October 2, 2021. https://www.merriam-webster.com/dictionary/amalgam.

<sup>&</sup>lt;sup>22</sup> "Gold Mining in the Amazon." Amazon Aid Foundation. September 19, 2021. Accessed October 2, 2021. https://amazonaid.org/threats-to-the-amazon/gold-mining/.

The effects of gold mining in the Amazon are considered to be worse than the effects of cattle ranching and agriculture even though these constitute more total deforestation in the Amazon. Gold mining significantly depletes the soil of its nutrients, greatly deteriorates water quality, and changes the formation of waterways. With the use of pumps and high-pressure hoses, miners disrupt water flow patterns and increase sediment- loads in rivers. No other land use activity depletes the water quality as severely.<sup>23</sup> It estimated that the slow regeneration of forests deteriorated by artisanal and small-scale mining practices releases about 21,000 tons of carbon per year, more than other land-use activities in the Amazon.<sup>24</sup>

#### **Teaching Strategies**

## Vocabulary

In this unit the students will be exposed to a large amount of new vocabulary. In order to prepare them, before delving into each activity, I will use a Knowledge Rating Scale to conduct a knowledge rating of the significant vocabulary in the activity. I will use a rating scale that is Spanish to English since the language of the activities is Spanish. Students will be given a list of words from the activity and will be asked to rate how well they know each one. Rating scales help students activate prior knowledge and make them aware of the new vocabulary, exposing them to it before engaging it in context. Having students identify the vocabulary terms with which they are unfamiliar helps the teacher to be able to better prepare them to engage with the information presented in each activity. The students will be better prepared to read, listen to, discuss and write about the text. In

<sup>&</sup>lt;sup>23</sup> Lobo, Felipe De Lucia, Evlyn Márcia Leão De Moraes Novo, Kevin Hutchings Telmer, and M. P. F. Costa. "Distribution of Artisanal and Small-Scale Gold Mining in the Tapajós River Basin (Brazilian Amazon) over the Past 40 Years and Relationship with Water Siltation." *Researchgate*, July 2016. Accessed October 2, 202`1. https://www.researchgate.net/publication/

<sup>305217336</sup>\_Distribution\_of\_Artisanal\_and\_Small\_Scale\_Gold\_Mining\_in\_the\_Tapajos\_River\_Basin\_Brazilian\_Amazon\_over\_the\_Past\_40\_Years\_and\_Relationship\_with\_Wate r\_Siltation.

<sup>&</sup>lt;sup>24</sup> Kalamandeen, Michelle, Emanuel Gloor, Isaac Johnson, Shenelle Agard, Martin Katow, Ashmore Vanbrooke, David Ashley, Sarah A. Batterman, Guy Ziv, Kaslyn Holder-Collins, Oliver L. Phillips, Eduardo S. Brondizio, Ima Vieira, and David Galbraith. "Limited Biomass Recovery from Gold Mining in Amazonian Forests." *British Ecological Society*, June 28, 2020. Accessed October 3, 2021. https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13669.

using formative assessments like rating scales, the teacher is better able to assess the students' prior knowledge. The Knowledge Rating Scale is a graphic organizer that contains each new vocabulary term in Spanish for that activity. The rating categories included are "Have No Clue," "Have Seen It or Heard It," "I Think It Means," "Know It Well," and "Definition."

Before beginning each activity, the activity vocabulary will be pre-taught. This will be done to help the students understand what they are reading or hearing and to ensure that they understand the discussions that we are having in the classroom about what they are reading or hearing, especially when unfamiliar and new vocabulary is being used. For the actual vocabulary instruction, the students will use a different graphic organizer to write the term in Spanish, the definition/meaning in English, write a sentence in Spanish using the term and draw an example. The vocabulary chart will be revisited throughout the unit as students refine their understanding of the vocabulary.<sup>25</sup>

## **Close Reading**

The Delaware Department of Education - World Languages current focus is connecting proficiency and the Common Core State Standards for ELA with a focus on Reading and Writing. Close reading is a technique used to teach students to carefully study a piece of writing by reading it several times, each time looking for a different bit of information. The process can begin with a pre-reading question, or a "hook" with the teacher asking the class a question or providing some background information. Then the teacher will have the students identify the text feature of the reading. The first reading is done aloud by the teacher as students follow along circling any words they do not know and annotating any sentence(s) or paragraph(s) they do not understand with a question mark. After the first reading, using a graphic organizer for learning and reflection, students will write a Learning/About statement, a statement telling about what they just read, a brief summary. The students complete the second reading independently. As the students read, they underline details in the text that support their Learning/About statements. Next, the students, using the same graphic organizer from the first read, write a reflection. The reflection can be guestions they still have about the text, predictions, or a personal connection that they have to that particular part of the story. With a shoulder partner, each student discusses the details they selected from the text and how they support their

<sup>&</sup>lt;sup>25</sup> "Vocabulary Rating Comprehension Strategy Teaching Tools." Vocabulary Rating Comprehension Strategy Teaching Tools. 2016 Accessed December 22,2016 http://education.ky.gov/curriculum/conpro/engla/Documents/vocabulary rating comprehension strategy teaching%20tools.pdf

Learning/About statement. Reflections are also shared. The teacher then conducts a whole class discussion regarding the details of the text in order to check for understanding. In addition, the teacher addresses student questions about the reading. This discussion is followed up with a series of text dependent questions. Students work through these questions in pairs. The teacher continues the close process with a whole class discussion of the questions and the text in order to check for accuracy.<sup>26</sup>

### CAFE – Check for Understanding

CAFE consists of learning strategies to check for students' Comprehension (I understand what I read), Accuracy (I can read the words), Fluency (I can read accurately, with expression, and understand what I read), and Expanded lists the various strategies. The teaching strategies are used to assess the students' understanding of a concept, determine if the students can transfer the lesson objectives to a new situation, emphasize the key points of the lesson, or extend the lesson's content. The strategy used is usually brief and is typically used as a formative assessment, helping the instructor to determine a course of action for the learning activities that will be implemented in the near future.<sup>27</sup>

#### **Classroom Activities**

Activity 1: Introduction

The first activity is designed as a hook to get the students to engage with the themes that will be covered throughout the unit. This activity consists of two parts: Access Prior Knowledge, and Review Sustainability.

Step 1: Access Prior Knowledge – Deforestation and the Water Cycle

To assess what the students already know I will present the students with questions in the target language like "What do you know about deforestation?" "What do you remember from your Individuals and Societies class about deforestation and the water cycle?" "How would you describe what happens to bodies of water when all of the surrounding trees and plants are destroyed?" Students will record their responses on paper in the target language. They will share their responses aloud with a shoulder partner. I anticipate that some students will mention that the water level in the bodies of water decreased when surrounding vegetation was destroyed. I also expect that some of my students will be

<sup>&</sup>lt;sup>26</sup> Allens, Ms. "Close Reading in Foreign Language (French)." You Tube. November 14, 2013. Accessed December 22, 2016. https://www.youtube.com/watch? v=tZkjBP4eink&t=1s

<sup>&</sup>lt;sup>27</sup> Boushey, Gail, and Joan Moser. "Check for Understanding–Ready Reference Guide." Check for Understanding–Ready Reference Guide - The Daily Cafe. 2016. Accessed December 23, 2016. https://www.thedailycafe.com/articles/check-for-understandingready-reference-guide.

able to name parts of the stages of the water cycle such as evaporation, condensation, precipitation, and infiltration.

After the students share their responses with a shoulder partner, I will direct a whole class discussion related to the questions. I suggest conducting a class poll related to the questions having the students create a bar graph or a pie chart of the results. This will give students visual data indicating the various responses, similar and differing, of classmates.

Step 2: Review of Deforestation and Its Effects on Our Planet

The next part of this lesson will extend and refine student understanding of deforestation and its effects on our ecosystems through the use of a video in the target language. This type of media works well in my curriculum as a large percentage of my students acquire information visually, from charts, illustrations, photographs and videos. Before delving into this topic, I suggest using photographs or a video to review the definition of deforestation to provide the students some context. There is an informative short educational video for children on YouTube titled "Deforestación: Tala de los árboles" (Deforestation: Tree Felling), featuring a Capuchin monkey named Milo, which explains deforestation and its effects in a manner that my first- and second-year language learners will be able to understand.<sup>28</sup> This video also addresses the implications of deforestation for future generations. Using visuals, such as videos and pictures, is especially helpful for students with special needs as they assist these students in acquiring background knowledge and putting the elements of the lesson into context. After watching the video, or as students look at photographs, I will ask questions in the target language such as "What is deforestation?" "What are some of the causes of deforestation?" "What are some short-term effects of deforestation?" "What are some long-term effects of deforestation?" "What are possible solutions?" "What evidence from the video led you to these conclusions?" and "Did you like the video?"

Activity 2: Study of Deforestation in the Amazon

For the purpose of this unit, I suggest dividing the study of Deforestation in the Amazon into three sections: Part 1 – Introduction; A general overview of the Amazon, Part 2 – Amazonian Deforestation: Current deforestation practices in the Amazon, and Part 3 – Peruvian Deforestation: Current deforestation practices in the Amazon regions of Peru. These sections, in progression, provide the students with some information and statistics about deforestation in the Amazon. It is my hope that my students will develop a greater appreciation for the Spanish language through the study of Amazonian deforestation and

<sup>&</sup>lt;sup>28</sup> DEFORESTACIÓN | Tala De Los árboles | Videos Educativos Para Niños. YouTube/#cienciasnaturales DEFORESTACIÓN | Tala De Los árboles. November 26, 2020. Accessed November 1, 2021. https://www.youtube.com/watch? v=FpLPkwA WZU&t=197s.

that they will incorporate the information in these learning episodes into the culminating activity of this unit.

#### Part 1: Introduction; A general overview of the Amazon

#### Vocabulary – Access Prior Knowledge

To get the lesson started I will provide each student with a knowledge rating scale chart, prior to any instruction of the terms. The chart will have a list of ten or so vocabulary words in the target language related to rainforests and the Amazon. My students will rate themselves on their level of familiarity with each term by placing a check in a column under one of the following headings: "Have No Clue," "Have Seen or Heard," and "I Know It Well." I will instruct the students to provide the English meaning of the word in another column labeled "Definition" if they know a word on the list enough to provide their own definition. If a student has seen or heard a vocabulary term from the list I will direct them to write an educated guess as to the meaning of the word in the column labeled "I Think It Means." It is important to encourage them to be honest, as their responses will determine how much time will be devoted to the instruction of each vocabulary term.

## *Vocabulary – Direct Instruction*

After the students reflect on their knowledge of the target language vocabulary, I will use a vocabulary chart made up of two columns, one with the vocabulary terms and the other with their English meanings, to clearly teach the vocabulary. Using this chart makes certain that all students have the needed vocabulary to participate in class discussions and activities. Students use the definitions to complete a graphic organizer based on the vocabulary terms in the target language by writing a definition or meaning of the word in English, writing a sentence in the target language using the term in context, and sketching the vocabulary word. Initially I will instruct the students to complete each section of the graphic organizer for every term with the end goal in mind of each student determining which option; definition, sentence, or sketch is the most effective tool for him/her to learn and remember the vocabulary.

## Close Reading

I will provide each student with the infograph titled Una Amazonía (An Amazon).<sup>29</sup> An infograph is a combination of written information and pictures/graphics that combines data into design. According to The Best Practices Foundation, using infographs in the classroom may improve students' learning up to 400%. Vision trumps all other human senses when it comes to learning as the average learner can recall 65% of visual information 10 days later but only 10% of what they heard. The majority of students (close to 65%) are visual learners.<sup>30</sup> Incorporating visual media into my lessons has proven to increase student engagement with the material being taught and student motivation to learn. In addition, in the World Language classroom infographs provide clarification of content being taught as well as enhance vocabulary comprehension due to the visual clues included in the infograph. As previously stated, the use visuals is especially helpful for students with special needs as they assist these students in acquiring background knowledge and putting the elements of the lesson into context.

The infograph Una Amazonía contains an area map of the Amazon region along with various details about its biological diversity such as number of countries, number of species of fish, number of Indigenous groups, and percentage of fresh water. As the students prepare to view the infograph I will explain to them that they will be using a strategy called Close Reading, working both independently and collaboratively to closely analyze the infograph. I will further explain that they will read the infograph a couple of times, each time focusing on a different aspect of it. I suggest that the infograph to be studied be divided into three separate viewings. In the first reading, I will ask the students to view the infograph in silence for a minute or two and think about what they see. After a minute or two I will ask the entire class, in the target language, "What do you observe in the infograph?" I anticipate the students to respond with the obvious — "Water is included three separate times. There is information about CO2. The information included in the infograph is color coded." When a student provides an answer, I will ask her/him to supply more information. "You said it has information about CO2. What makes you say that?" The students will justify their answers by providing evidence from the work. They may say, "One of the graphics includes a gray cloud that is labeled CO2." Next, I will encourage the students to share differing opinions and provide justification for their opinions, this will deepen the conversation and allow for a wider variety in the student interpretations of the various elements of the infograph. One student may say, "This infograph is about the plants and animals of the Amazon because the map of the

<sup>&</sup>lt;sup>29</sup> Ovacen. "Selva; Tipos, Fauna, Flora Y Sus Características." OVACEN. June 21, 2021. Accessed November 1, 2021. https://ecosistemas.ovacen.com/bioma/selva/.

<sup>&</sup>lt;sup>30</sup> Krauss, Jon. "Vision: Brain Rules |." Vision | Brain Rules |. Pear Press, 2018. http://www.brainrules.net/vision.

infograph is surrounded by graphics of different types of plants and animals." I would then ask if everyone agrees with the statement. Another student might say that s/he doesn't agree because even though the map of the infograph is surrounded by graphics of different types of plants and animals, the infograph also includes graphics that depict water and houses. I will summarize what the students said. After the discussion, the students will use a graphic organizer; a one-page paper divided in half with the first half labeled Learning and the other half labeled Reflection, to write a Learning/About statement and a brief summary.

The second reading is reading with purpose. Students will study the infograph independently noting in writing details of the infograph that support their learning statements. Using the above graphic organizer, students reflect upon what they just read. I will explain to the students that the reflection can include questions they still have about the work, observations, or a personal connection that they have to a particular part of the infograph. With a shoulder partner, each student will discuss the details they selected from the infograph and how they support their Learning/About statement. Reflections are also shared. I will then conduct a whole class discussion regarding the details of the text in order to check for understanding. In addition, I will address student questions about the infograph.

The next step in the close process is a series of text-dependent questions. I will model for the students the process of answering these questions by working through the first question with them. The process requires the students to begin by reviewing the infograph. Next, they will review the completed graphic organizer. Then they will seek the answer to the question and discuss the question with a partner checking for accuracy and clarification. The final step is where the students write their best possible answer using all of the information that they have gathered to adequately answer the question.

To end the close reading process I will lead a whole class discussion of the questions and the work in order to check for accuracy and address any inaccurate responses.

#### Check for Understanding

This check for understanding for the introduction to Amazon portion of the unit can be used to assess students' comprehension of the infograph. I will provide each student with a paper copy of the infograph, which they will glue or tape onto a loose-leaf sheet of paper. I will direct the students to write six sentences in the target language about the infograph. The sentences can be statements or questions. Students will share their sentences with the class. This allows the students to have a visual with their own notes to

remind them of what they are learning and thinking, and it provides for me a quick check for understanding of their comprehension of the work.

Part 2: Amazonian Deforestation: Current deforestation practices in the Amazon *Vocabulary* 

The vocabulary introduced in this theme will be related to deforestation terms and vocabulary specific to the current practices/causes of Amazonian deforestation, agriculture, farming, pastures, crops, gold mining, hydroelectricity, wood, and highways. In order to provide consistency throughout the unit, I will use the same procedures for accessing prior knowledge and direct instruction of vocabulary as in the previous lesson with the exception of the completion of a graphic organizer for vocabulary definitions. Instead of using the graphic organizer I will have students create digital flashcards using the website Quizlet or a similar site. On sites such as Quizlet students can create their personalized study stack of vocabulary terms allowing the students to be active participants in the learning process. Digital media works well in my curriculum because it has multisensory appeal and will engage my visual, auditory, and kinesthetic learners.

#### Close Reading

In order to maintain consistency, I will employ the same close reading processes used in the previous lesson when reading about the Amazon. Some examples of realia that could be used for this activity are "Amazonas" a recent article found on the Greenpeace España website, "Deforestación de la Amazonia: Casi 2 millones de hectáreas de bosques perdidos," an infograph found on the Actual Ambiental website, and "Causas de la deforestación Amazónica," a short, animated video in the target language by Juanita Peña, María Fernanda González, and Valeria Neira which can be found on YouTube. I will have my students read the text a couple of times, each time focusing on a different aspect of it. The first read of the article is read aloud by the teacher. Students follow along circling any words they do not know and annotating any text they do not understand with a question mark. After this first read students will use a graphic organizer, a one-page paper divided in half with the first half labeled Learning and the other half labeled Reflection, to write a Learning/About statement and a brief summary.

The second reading is reading with purpose. Students read independently underlining details in the article that support their learning statements. Using the above graphic organizer, students reflect upon what they just read. I will explain that the reflection can be questions they still have related to the article. With a shoulder partner, each student will discuss the details they selected from the text and how they support their Learning/ About statement. Reflections are also shared. I will then conduct a whole class discussion

regarding the details of the text in order to check for understanding. In addition, I will address student questions about the article.

The next step in the close process is a series of text-dependent questions. I will model for the students the process of answering these questions by working through the first question with them. The students will be reminded of the close reading process. The students will begin by reading the section of the article again. Next, they will take notes to help better understand the section of the text. They will discuss the question with a partner. To finish they will write their best possible answer using all of the information that they have gathered to the question.

To end the close reading process, I will lead a whole class discussion of the questions and the text in order to check for accuracy.

## Check for Understanding

To assess the students' understanding of the current deforestation practices in the Amazon we will play the Marker Game. Students form two lines facing one another. They may be seated in chairs or on the floor. A marker is placed upright in between each pair of students. I will read a true/false question about a deforestation practice. For my visual learners, each question is projected on a slide. If the statement is true, each pair of students attempts to grab the marker first. The team (line) with the most markers in hand earns a point. If the statement is false, students do not touch or grab the marker. Both teams (lines) have the opportunity to earn a point if no one touches a marker. If both teams have markers in hand, the one with the most loses a point. If a student grabs a marker and then puts/throws it down the student sitting opposite silently stands up. The team (line) with the student who threw the marker loses two points. This game provides me with a quick and easy check of understanding of all of my students and it provides them with a fun review of the material learned.

Part 3: Deforestation in the Amazon regions of Peru

#### *Vocabulary*

The vocabulary introduced in this theme will be related to items specific to the Movie Talk activity and vocabulary specific to deforestation and its effects in the Amazon regions of Peru. In order to maintain consistency throughout the unit, I will employ the same learning strategy of direct vocabulary instruction from a previous learning episode. I will use a vocabulary chart made up of two columns, one with the vocabulary terms and

the other with their English meanings, to clearly teach the vocabulary. Using this chart makes certain that all students have the needed vocabulary to participate in class discussions and activities. Students use the definitions to complete a graphic organizer based on the vocabulary terms in the target language by writing a definition or meaning of the word in English, writing a sentence in the target language using the term in context, and sketching the vocabulary word. Initially I will instruct the students to complete each section of the graphic organizer for every term with the end goal in mind of each student determining which option; definition, sentence, or sketch is the most effective tool for him/her to learn and remember the vocabulary. *Movie Talk* 

In order to use Movie Talk effectively in this unit, I have chosen a video from YouTube titled ¿Conoces los riesgos de la deforestación en el Perú? (Do you know the risks of deforestation in Peru?). I selected this particular video because it can be easily driven by visuals and not by the dialogue. The visuals included in this video relate the causes and effects of deforestation in the Amazon regions of Peru. In addition, they illustrate some solutions. With what dialogue there is muted, I will narrate to my students what is being viewed using target language that they are able to comprehend. The video is approximately five minutes in length. I will include about three minutes of the video in the Movie Talk which allows for rich comprehensible input without requiring a great deal of repetition in order for my students to comprehend the language. I will select parts of the video including detailed images which will provide greater comprehension of the text for my students.

In Movie Talk there are three steps: establish meaning, ask the story, read and discuss. In order to establish meaning, before I begin the Movie Talk I will consider which two to four words I will use most often when narrating the video, and I will provide the translations to the students of these words. For this Movie Talk my guide words/phrases are bosques (forests), deforestación (deforestation), agricultura (agriculture), and conservación (conservation), which I will write on a piece of chart paper with their English translations beside them and make readily visible for my students. I will reference these guide words every time that I use them in my narration by pointing to them on the chart paper. Then students will begin watching the video. After narrating the introductory portion of the video in the target language, explaining to the students using generalities what they can expect to view in the video, I will pause the video at the visual of the Amazon regions of Peru and describe to the students in the target language everything that is visible and what has been included up to that point. I will then resume playing the video and pause it at the next visual of deforestation. This cycle of playing the

video, pausing it, and then describing what is seen continues until the entire video has been viewed. This is where asking the story comes into play.

There are three key skills that are essential in providing Movie Talk input that is comprehensible and compelling for our students: circling, personalization, and checking for comprehension. In circling with my students, I will begin by making a statement in the target language that contains one of my new guiding words/phrases while the rest of my statement will consist of previously acquired vocabulary, cognates, and proper nouns making the statement completely comprehensible to my students. I will follow up my statement with yes/no, either/or, and open-ended question in the target language, and then I will restate/recast the original statement after the answer to each question is given. Personalizing the narration of the video/movie clip will allow me to make the target language input that much more comprehensible and compelling for my students as they will now have some type of personal connection to what they are viewing and hearing. In order to achieve personalization, I will ask my students questions in the target language that connect them to the story. To perform a quick check for student comprehension I will have my students complete an Up/Down Listening Assessment in which they will put their heads down, and I will ask true/false questions about the video/movie clip. To indicate that a statement is true, students will put their thumbs up; to indicate that the statement is false they will put their thumbs down. Once I have evidence of comprehension from my students, we can then advance to the read and discuss phase.

Using the key skill of read and discuss, I will read the Movie Talk story in its entirety with my students. In order to do this, I will project the story and have my students read it aloud with me stopping frequently to ask circling, personalization, and comprehension questions about what we just read. This allows me to further circle guide words that students have not yet acquired, personalized the content even more, and get an even more accurate read on my students' comprehension of the story. After reading the story together in its entirety, we will begin activities.

#### Popcorn Read

To perform a popcorn read, students pair up and take turns reading and translating the text, assisting one another when they get stuck on a word or a phrase. It is an excellent activity to check for students' comprehension of a text as well as a good way to review what was read. For this activity I will randomly assign a partner to each student using pairs of rows (five students per row, two rows beside each other, three pairs of rows equals 30 students). I will provide each student with a copy of the Movie Talk text in the target language. Next, I will set a timer for three minutes. Then I will instruct the

youngest student of each pair to begin the popcorn read by reading aloud the first sentence in the target language. Next, I will direct the other partner to translate that sentence aloud into English and to read the next sentence of the text aloud in the target language. The first partner translates that aloud into English and reads the third sentence aloud in the target language. This popcorn read continues until the three minutes have passed at which time the students change partners and each new pair determines at what point in the text to continue the popcorn read by where they left off with the previous partner. I will encourage them to begin at the spot that is the least – farthest along. I will reset the timer and continue the popcorn read process until all students have finished the text. As students are performing the popcorn read, I will circulate around the room listening in on various pairs. This allows me to spot check individual student comprehension and to address any student questions about the text. If I feel the need for an additional check for comprehension of the text once the students have completed the popcorn read, I could direct each student to take out a loose – leaf sheet of paper and with his/her current partner work to write out an English translation of the text. I then collect the written translations. Reading through the translations provides me with a detailed picture of individual student comprehension.

Part 4: Developing a Personal Consumer Plan to Aid in the Conservation of the Amazon

#### Vocabulary

The vocabulary introduced in this theme will be related to conservation terms and vocabulary specific to the current conservation practices related to Amazonian deforestation, agriculture, farming, pastures, crops, gold mining, hydroelectricity, wood, and highways. In order to provide consistency throughout the unit, I will use the same procedures for accessing prior knowledge and direct instruction of vocabulary as in the previous lessons. Instead of specifically using a graphic organizer or digital flashcards, my students will have the option to choose between the vocabulary graphic organizer and using the website Quizlet or a similar site. This allows my students to choose the learning method that works best for them. By giving my students a choice, I have greater buy in from them in learning the material. They take ownership of their own learning.

#### Close Reading

In order to maintain consistency, I will employ the same close reading process used in previous lessons. I will provide each student with access to the article 10 acciones para

conserver la Amazonia (10 Actions to Conserve the Amazon).<sup>31</sup> To get started, I will explain to students that they will be reading the text a couple of times, each time focusing on a different aspect of it. The first read of the article is read aloud by the teacher. Students follow along circling any words they do not know and annotating any text they do not understand with a question mark. After this first read students use a graphic organizer, a one-page paper divided in half with the first half labeled Learning and the other half labeled Reflection, to write a Learning/About statement and a brief summary.

The second reading is reading with purpose. Students read independently underlining details in the article that support their learning statements. Using the above graphic organizer, students reflect upon what they just read. I will explain that the reflection can be questions they still have related to the article. With a shoulder partner, each student will discuss the details they selected from the text and how they support their Learning/ About statement. Reflections are also shared. I will then conduct a whole class discussion regarding the details of the text in order to check for understanding. In addition, I will address student questions about the article.

The next step in the close process is a series of text-dependent questions. I will model for the students the process of answering these questions by working through the first question with them. The students will be reminded of the close reading process. The students will begin by reading the section of the article again. Next, they will take notes to help better understand the section of the text. They will discuss the question with a partner. To finish they will write their best possible answer using all the information that they have gathered to the question.

To end the close reading process, I will lead a whole class discussion of the questions and the text in order to check for accuracy.

#### Modeling

In order to prepare the students to create their own personal consumer plan to reduce their carbon footprint and support the conservation of the Amazon Forest. I will employ the teaching strategy of modeling. Using the information that we gathered together as a class from our discussions about the supporting conservation of the Amazon in Activity 3, I

<sup>&</sup>lt;sup>31</sup> "10 Acciones Para Conservar La Amazonía." Canalipe.tv. April 21, 2020. Accessed November 1, 2021. https://www.canalipe.tv/noticias/ecologia/10-acciones-paraconservar-amazonia.

will model for my students how to create a personal consumer purchasing guide that supports the conservation of the Amazon Forest. I will begin by using a Think Aloud by verbalizing my thoughts about what actions that we discussed as both sustainable and doable would be the most practical to include as part of a personal consumer purchasing guide. I may pose the question, "What is a good alternative to purchasing products made of wood?" or "What is an alternate source of animal protein that is appealing, sustainable, and healthy?" The use of Think Aloud is an effective way for me to model thinking skills for my students. This strategy will give my students a framework for conducting the activity on their own

Once we as a class have determined appropriate consumer choices, we can confirm the sustainability of each choice by employing La calculadora de la Sexta hace un cómputo global de nuestras actividades diarias (La Sexta calculator makes a global calculation of our daily activities) which can be found on the Teachers for Future Spain website. I will model how to use this calculator by selecting the Secondary carbon footprint calculator tab and providing the estimated amount of money I spend on each category per week; paper-based products for example. The calculator will then provide the following information based on an individual's weekly spending habits: the total secondary carbon footprint measured in metric tons of CO2e which is carbon dioxide equivalent, a standard unit of measure for carbon footprints. I will demonstrate how to adjust my weekly spending in each category in order to lower my carbon footprint. This will be a very useful tool for students to explore as they create their eco-friendly consumer spending guide. The calculator also provides the weekly carbon footprint for each category. The calculator includes the options to calculate everyone's secondary carbon footprint monthly and annually based on each one's spending habits. This will be a very useful tool for students to explore as they create their eco-friendly consumer spending guide.

## Eco-Friendly Consumer Guide

After experimentation with adjusting weekly consumer spending, my students will create an eco-friendly consumer guide that supports conservation of the Amazon Forest. I will remind the students to review the graphic organizers about what they completed throughout the unit as they begin to create their guides.

Once students have selected consumer categories to include in their guide, I will encourage them to employ the carbon footprint found on the Teachers for Future Spain website and to experiment by reducing or increasing spending in different categories in order to discover the most eco-friendly and healthy consumer guide. I anticipate that most

of my students will focus on the consumer options that are personally appealing over some others that are more sustainable and/or healthy because these options are familiar and comfortable, and the students will be less likely to waste these items; for example, meat products over plant-based products. I will instruct my students to follow the same share out process that we completed previously in the Check for Understanding portion of the unit. The students will peer edit each other's guides while sharing in pairs.

Each student will share the final draft of his/her weekly consumer guide on
Schoology, the learning management system used by our district. I will instruct my
students to view each other's works and provide, in the Comments section, three
statement; one statement will be a positive comment about the menu, the second
statement will discuss something that the commenter noticed about the guide that is
unique, and the third statement will be an inquiry about the guide. I will provide students
with the following sentence frames to facilitate and standardize the commenting process:
'I really likeabout your guide because," or "My favorite part of
your guide isbecause" "I noticed about your guide
which made me think," or "I think that makes your guide unique
because" "I wonder about this consumer choice," or "I would
ike to know more about"

#### **Appendix A: Standards**

This unit will implement two IB MYP Objectives, two Delaware World-Readiness Standards for Learning Languages and one Common Core State Standard. I will focus on IB Language Acquisition Objective Criterion C: Comprehending Written Text requiring the student to understand information and engage with the text by supporting opinion and personal response with evidence from the text. I will also evaluate Criterion D: Communicating in Written Form which expects the student to organize and express thoughts, feelings, ideas, opinions and information in writing, write for specific purposes, and develop accuracy when writing in the target language. The Delaware World Readiness Standards for Learning Languages are Standard 1.3 Presentational Communication: Learners present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics using appropriate media and adapting to various audiences of listeners, readers or viewers; and Standard 2.1 Relating Cultural Practices to Perspectives: Learners use the language to investigate, explain, and reflect on the relationship between the practices and perspectives of the culture studied. I will focus

on the Common Core Standard CCSSELA – Literacy RI.9 – 10.7 Integration of Knowledge and Ideas: Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

#### Appendix B

#### **Multi-Media Resources**

I adapted a slideshow *Afternoon on the Amazon*, created by Delaware Teachers Insitute Fellow Merry Ostheimer that includes images from the Amazon rainforest in Peru. In my adaptation, we as a class visit the rainforest together, *Una Vistia en La Selva Amazónica*. The slideshow narrative is written entirely in Spanish.

*Una Vistia en La Selva Amazónica* has also been adapted for a Movie Talk/Picture Talk with the script written entirely in Spanish which is included in the speaker notes of the slideshow with detailed instructions.

Los Niveles de la Selva Tropical is a video created for a Movie Talk illustrating the various levels of the rainforest. Included is a corresponding Movie Talk script written in Spanish at a comprehensible level for first and second year language learners.

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