

SDG 12: Responsible Consumption & Production

This module focuses on SDG 12 which aims to “ensure sustainable consumption and production patterns.” The stories focus on the cacao plantations specifically in West Africa and include topics on improved producer (farmer) income, and the need to eliminate child and forced labor. Activities include in depth supply chain analysis, independent research, and planning ways of engaging the topic through the creation of a Public Service Announcement.

Link to Subjects	Biology, Civics, Economics, Government		
Link to Indiana High School Core	NGSS: Ecosystems: Energy, Interactions and Dynamics: https://bit.ly/4exnrva E.2.6 Employability 9-10.SE.4	Link to International Baccalaureate	TBD
Story	Story #1: Cacao in West Africa Story #2: Ghana: Palm oil Story #3: Peppers in Mexico		
Activities	Activity #1: The production of Cacao	Activity #2: Fair Trade and Child Labor	Activity #3: What can you do?
Type of Activity	Lecture and Note Taking	Research	Civic Action
Time of Activity	1 class	1 class	2 classes

Key Questions & Terms

Key Questions	Key Terms
What biotic and abiotic factors contribute to the success (or failure) of a cacao plantation?	Agroforestry Agronomy Child Labor Biotic/Abiotic Value Chain
What is the value chain of cacao and how it relates to SDG 12?	
How are children affected by agricultural practices?	

Story Summaries

Story #1: Cacao in West Africa

Fifteen-year-old Amadou and his little brother, eight-year-old Seydou, work without pay on a cacao plantation in Ivory Coast, Africa. Amadou's only focus each day is survival: They must maintain the plantation, harvest cacao pods and meet quota to avoid a beating. To make matters worse, hunger prevails. One day, a girl named Khadija comes to the farm. The only girl there, she quickly earns the nickname "wildcat" because of her fiery spirit and constant escape attempts. When she tricks Seydou into helping her escape, Amadou takes the blame for his mistake and helps one of the bosses, Moussa, recapture her. As a punishment, Amadou is badly beaten and is not allowed to work in the fields the next day, meaning Seydou will not have the protection of his older brother. When the boys return from the fields at dusk, they are carrying Seydou, a giant gash through his arm.

Khadija helps Amadou by watching over Seydou at the camp while Amadou works in the fields. Seydou's injury worsens and becomes infected. The next day, Amadou returns from the fields to find that Moussa has amputated Seydou's arm. Amadou resolves to escape with Seydou and joins forces with Khadija. Through a series of fires, hidden truck rides, masterful manipulation and sheer luck, they make it to Khadija's house, where she is reunited with her mother, Mrs. Kablan. Mrs. Kablan is a journalist writing an article, exposing the child labor trade that occurs on cacao plantations. Up to this point, Amadou didn't even know what he was harvesting as cacao is not part of West African society. When he learns that cacao is used for chocolate, a sweet treat for wealthy people world wide, he is sick; his brother lost his arm, he suffered immeasurable pain and hunger, and he nearly lost his life for a sweet treat for Europeans.

Story #2: Ghana: Palm oil

Felicia started working at the age of 13. One of 18 children, her family could not afford her school fees and needed their children's labor to put food on the table. Felicia joined her siblings in the intensive and hazardous work of planting, harvesting, and selling cocoa and palm fruit. On many small farms, like the one on which Felicia toiled, children engaging in agricultural work carry heavy loads, use sharp tools, burn fields, and handle dangerous agrochemicals, all of which can harm their development and health. "I thought harvesting palm fruit was a normal thing until I got my legs twisted after I fell from a palm tree," Felicia recalls. In Ghana, where she lives, the average girl only receives 4 years of education and is vulnerable to child labor, especially on smallholder farms in the country's cocoa supply chain. Ghanaian girls make up more than half of the child laborers engaged in cocoa production. These challenges, along with early pregnancy and violence, hinder opportunities for girls between the ages of 10 and 19.

Story #3: Peppers in Mexico

Original story: Marosi, R. (2015). A child's burden. *LA Times*. Retrieved from <https://bit.ly/4ewjSoL>.

Alejandrina Castillo swept back her long black hair and reached elbow-deep into the chile pepper plants. She palmed and plucked the fat serranos, dropping handful after tiny handful into a bucket. The container filled rapidly. She stopped however, well before the pepper pile reached the brim. She was 12, and it was hard for her to lift a full 15-pound load.

One row over was her brother Fidel, 13, who couldn't keep up with her. He was daydreaming as usual. Their 10-year-old cousin, Jesus, was trying harder but falling behind too. Alejandrina looked in the distance for the food truck. It was almost noon, five hours since she had a tortilla for breakfast. The sky was cloudless. It would be another 90-degree day in the palm-lined coastal farmland of southern Sinaloa. "I wish I was home with my baby brother," she said.

As Alejandro grew older, her family's financial burdens compelled her to continue working, sacrificing her education in the process. Despite dreams of becoming a veterinarian, Alejandro's reality was defined by the cyclical nature of poverty and exploitation that trapped many migrant families in the agricultural sector. Her story serves as a sobering reminder of the systemic injustices as a result of a supply chain that prioritizes profit over the well-being of its most vulnerable workers.

Opening discussion

1. Ask students to read Story #1 and share how they would connect the story to the ideas of “consumption”, “production”, and “sustainability”.
2. Watch the video introducing SDG 12 to students: <https://youtu.be/cKlPNGZBrtI> and ask students to connect the story to this global goal (SDG 12).
3. If time allows, ask the students to connect the story to specific indicators for SDG 12 by reviewing the “Targets and Indicators” tab available here: <https://sdgs.un.org/goals/goal12>

Activity #1: The production of Cacao

Each agricultural product has a specific set of growing conditions. From rain and humidity, to shade and soil nutrient value, the final crop is only as good as its growing conditions. Cacao is grown in 3 primary locations on the planet: South America/Caribbean, Asia, and parts of Africa. In this activity, students will be asked to discover the fundamental biotic and abiotic factors of a cacao plantation and look at practices that promote sustainable biodiversity.

Activity Learning Objectives

1. Students will explore the biogeography of and ecological requirements for growing a successful cacao plantation.
2. Students will understand the growing conditions needed, the threat of disease and/or monocropping and why forests are being cleared in Ghana and Cote d'Ivoire.
3. Students will learn to organize information gathered from internet research.
 - a. Be prepared to share and discuss with the class.

Teacher preparation

1. Each of the activities require the following:
 - a. A preview of the video/link and identification of the teachers desired information
 - b. Creation and/or use of graphic organizer
2. Additional resources
 - a. Parts of cacao that can be used for sustainable practices: <https://bit.ly/4eyczwO>
 - b. Read and condense NCBI article: <https://bit.ly/3XweBb1>
 - c. Ext: Circular Carbon: <https://bit.ly/3xBdj3H>
 - d. Modelez International: <https://bit.ly/3RBELW5>
 - e. Project against child labor funded by the US Department of Labor: <https://bit.ly/4cARGzg>

Lesson Flow

1. Use the following website to explore the fundamental biotic and abiotic needs of a cacao plantation. <https://bit.ly/45FwBSb>

2. Use the following website to learn about sustainable ecological practices related to cacao. <https://bit.ly/3zdyuch>
3. Create a graphic organizer to visually represent the information gathered above.
4. Compare graphic organizers with other student groups to facilitate a discussion.

Possible Enrichment

Reach out to the extension chapter of any land-grant institute. Connect with an extension agent who could share about sustainable production and consumption of local crop commodity(s) in your local community. You can find land-grant institutes and then look for their extension activities from the National Institute of Food and Agriculture: <https://bit.ly/3Xxw6Yn>

Activity #2: Fair Trade and Child Labor

At the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, sustainable consumption and production was identified as essential to fostering sustainable development. In this activity students will assess the value chain, the concept of fair trade, the role child labor plays in cacao production/consumption.

Activity Learning Objectives

1. Understand the concept of fair trade and how it relates to them as the consumer.
2. Explore elements of the cocoa value chain and how it relates to child labor, fair trade, and earning a living wage. .
3. Explore a community in West Africa to observe the daily life of cocoa farmers.

Teacher preparation

1. Each of the activities require the following:
 - a. A preview of the video/link and identification of the teachers desired information
 - b. Creation and/or use of graphic organizer <https://bit.ly/4eFsLg6>
2. If students do not have access to the internet to do research during class, you will need to provide the information on values changes for shoes and cocoa via handouts.
3. You may find the following video on SDG 12 useful (this is the same video as in the opening discussion): <https://youtu.be/cKIPNGZBrtI>

Lesson Flow

1. Introduce the concept of a value chain by assessing this or another simplistic image of the value chain: <https://bit.ly/4b6AbWE>
2. Have students create a value change graphic for one of their favorite shoe brands.
3. Next, use the website below to assess the value chain of cocoa. There is one for Cote d'Ivoire and one for Ghana.
 - a. Discuss what you see and predict where and why child labor would be part of the supply chain. <https://bit.ly/45v75Pz>
4. Next, watch this 9:00 news story to demonstrate the summative reality of the value chain, fair trade and child labor. <https://youtu.be/g6a6o10ouZ0>. Optional read on the "Early Days of Fair Trade": <https://bit.ly/4evKvKE>
5. Tour the 'day in the life'.
 - a. Write down observations of production and consumption identified in the video: <https://youtu.be/Hy0-Llz36xg>

Possible Enrichment

Watch this short TedEd to understand the historical relevance of cacao as a currency in the times of the Aztec. This historical journey provides context for the delicacy that chocolate is known for today. History of Chocolate: <https://youtu.be/ibjUpk9lagk>

Consider the relationship between community needs and the chocolate supply chain through watching the trailer of the full film of *Setting the Bar*. <https://youtu.be/ZJTnhvezgFI>

Activity #3: What can you do?

In this activity, students will work in groups to create a Public Service Announcement (PSA) about a particular product (currently designed for chocolate, but could be adapted to another produce). Students will research the product, create the PSA, and disseminate it.

Activity Learning Objectives

1. Students will take their knowledge of sustainably producing chocolate, the supply chain, fair trade and child labor to create a Public Service Announcement (PSA) targeted to raise awareness about the bitter side of chocolate.
2. Ideally, these can be shared on their social media platforms and/or school-wide.

Teacher preparation

1. Each of the activities require the following:
 - a. A preview of the video/link and identification of the teachers desired information
 - b. Creation and/or use of graphic organizer
 - c. Generate facilitating questions
2. Students will need access to the internet to complete this activity.

Student preparation

1. Ideally, students should have completed Activity #1 and Activity #2, or be familiar with the key concepts covered in this activity.

Lesson Flow

1. Provide a brief overview of the concepts of SDG 12, international supply chains, and the injustices that can emerge through international supply chains.
2. Organize the students into groups of 3 to 5 students and distribute a piece of chocolate from any major chocolate company to each group.
3. Ask each group to research the following questions for their piece of chocolate:
 - a. Traceability: Where does the company source their chocolate? Find the country and particular location of that country if possible.
 - b. Fair Wages: What are their farmers paid? Is this a liveable wage?
 - c. Are children involved in the process? If so, do they have access to education? Are they hungry? Beaten? Etc.
4. When researching the questions above, students might look into fair trade organizations, human rights organizations, local co-operatives of farmers, and reports by entities such as the International Labour Organization's International Programme on the Elimination of Child Labour and Forced Labour (IPEC+), and the United States Bureau of International Labor Affairs reports on Child Labour to identify the existence of good or bad practices.

- a. For lists of countries in which child labor is potential used in cocoa production see the list produced by the US Bureau of International Labor Affairs: <https://bit.ly/3z8EOSS>
 - b. For an evaluation of the supply chains of different companies you can use KnowTheChain: <https://bit.ly/3VTPCmr>
 - c. Students can also look up information on the chocolate supply chain through the data and reports of Uncommon Cacao: <https://bit.ly/3zkJ2GQ>
5. Create a public service announcement to present to the rest of the class.

Possible Enrichment

Students can also create a video using their favorite video making app to make their PSA and share it more broadly than the class.

References

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