

Environmental Sustainability and Fair Trade



FAIR TRADE SCHOOLS

Differentiated Lesson Plans for Grades 6-12



Overview of Lesson Series

Fair Trade Schools is a recognition program for schools, grades K-12, demonstrating their commitment to Fair Trade. Through this program, we seek to engage future generations in making a difference through their purchases and understanding Fair Trade within larger global issues. In our globally connected world, the concepts of environmental and economic justice, as well as fair treatment of those less fortunate, are imperative for students to learn.

Fair Trade Campaigns is a powerful grassroots movement mobilizing thousands of conscious consumers and Fair Trade advocates on campuses and in communities across the U.S. We are part of a global effort to normalize Fair Trade as an institutional practice and consumer preference across 24 countries and on 6 continents.

These lessons were developed in partnership with, and incorporate original content developed by, Creative Change Educational Solutions.



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Table of Contents and Lesson Sequence

Activity	Description	Time
A) Making Connections: My Community and the World	Using a regional and global map, students locate the resources needed for everyday items (e.g., coffee) and the final destination of common wastes (e.g., emissions). A short follow-up activity explains the principles of human-environmental interactions supported with examples students provide.	30 minutes
B) The Story of Two Coffees	A poem in the 'voices' of two coffee beans grown in different ways introduces students to environmentally sustainable practices. Analysis questions are provided.	45 minutes
C) Reading selection	A reading selection explains the relationships among Fair Trade environmental standards and the added income Fair Trade farmers receive.	30 minutes
D) What Does the Label Mean?	Students research environmental claims on food labels (e.g. 'natural' and 'organic') to determine whether these claims are based on verifiable standards. Students then rate the product based on the validity of the claims.	45 minutes

Document Structure

This document contains Teacher Notes followed by complete student materials for all activities. You can print and copy the student pages as desired.

For greatest impact, we suggest using the complete document in sequence. If you have less time, here are some strategies for selecting activities:

- Use Activity A as a 'hook' to engage students in the topic, and then continue with your relevant course materials.
- Use the reading selection to supplement your textbook and introduce different perspectives.
- Use the culminating activities as the basis of projects – assuming students have the background knowledge.

Regardless of your strategy, ensure you allow adequate time for debriefing, assessment, and closure. For additional guidance, please see *An Educator's Guide to Fair Trade*.

Topics/Concepts

Ecosystems, the environment as a source of all goods and the final 'sink' for all wastes, environmental standards and verification, sustainability, community development

See *An Educator's Guide to Fair Trade* for a Master Vocabulary List with terms you may want to introduce or review.

Subject Areas

Geography, social studies, environmental science

Teacher Notes

Guiding Questions:

- Where do things I use each day come from?
- Where does my waste go?
- How is coffee grown? What are the environmental impacts?
- How does the Fair Trade model for growing coffee affect farmers, the community, and the environment?
- How do I know if claims about food products are true?

Background and prerequisite learning:

Students should have a basic understanding of environmental concepts including ecosystems, biodiversity, and water quality. The lesson explores how the environment is impacted by coffee production, and how specific growing practices can lessen the impact and benefit the community.

It's important to keep in mind that many farms use sustainable practices even if they are not certified Fair Trade. Emphasize to students that there is a spectrum of practices, steps towards sustainability are incremental, and that non-Fair Trade farms are not 'bad'.

In terms of consumer awareness, the lesson also addresses environmental claims and labels found on food items (e.g., 'all natural'). As students will discover in Activity D, only some labels (including Fair Trade) have specific meanings based on verifiable standards. For example, the US Department of Agriculture sets standards for the organic label. The standards prohibit synthetic pesticides, fertilizers, sewage sludge, irradiation, or genetic engineering. To earn the label, a product must contain at least 95 percent organic ingredients. "Made with organic ingredients" means the product contains at least 70 percent organic ingredients. These products do not qualify for the label.

In contrast, the terms ‘natural,’ ‘green,’ and ‘eco-friendly’ have no defined meaning. Manufacturers can label a product ‘natural’ without meeting any requirements. With no real definition, ingredients such as crude oil or lead are all natural.

Outcomes	Assessment/Activities
<p>Students will understand that</p> <ul style="list-style-type: none"> • The environment is the source of all we use and the final receptacle (sink) for all wastes. • Soil and water are non-renewable resources. Fertile soils and clean and available water are important for the sustainability of the production system. • The ability of the land to support farmers’ livelihoods is directly linked to the long-term environmental sustainability of farming practices. • These practices secure water quality, protecting the health and quality of life of farmers, workers, their families, and their communities. • Fair Trade helps farmers earn additional money with every sale, enabling them to invest in environmentally sustainable practices. 	<p>Students demonstrate their knowledge as they</p> <ul style="list-style-type: none"> • Locate and map local-global connections involving everyday needs and activities. (Activity A, B, C) • Describe how wastes travel, but do not disappear. (Activity A, B, C) • Compare and contrast the differences between conventional and Fair Trade coffee farmers through questions and discussion. (Activity B) • Analyze how humans and the environment are interdependent, and assess how Fair Trade impacts these relationships. (Activity B, C) • Research and evaluate the environmental claims on a certain food product. (Activity D)

Common Core English Language Arts Anchor Standards

ELA Reading Grades 6-12

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. (Activity B)
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. (Activity B)
3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text. (Activity B)

Research to Build and Present Knowledge

9. Draw evidence from literary or informational texts to support analysis, reflection, and research. (Activity C)

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently. (Activities B and C)

Writing Grades 6-12

Text Types and Purposes

2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (Activity D)

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation. (Activity D)

Speaking and Listening Grades 6-12

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively. (Activity A, C)

2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally. (Activity A, C)

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task purpose and audience. (Activity C)

National Geography Standards

Environment and Society

The geographically informed person knows and understands:

- Standard 14: How human actions modify the physical environment. (Activity A, B)
- Standard 16: The changes that occur in the meaning, use, distribution, and importance of resources (Activity A, B)

The World in Spatial Terms

Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective. (Activity A)

Materials and Preparation

For Activity A, copy and cut apart the statements into strips. (You will distribute some or all of the strips to students to attach to a map.) You will also need a local/regional and global map. (Use walls maps or digital maps you project.)

The gas at my local station comes from _____

When the rainwater runs off the street, it flows into _____

When fertilizer is put on the school lawn and it rains, the excess flows into _____

The coffee or tea or cocoa at my favorite café comes from _____

The fuel source for my electricity comes from _____

The emissions from our school or community's energy use go _____

The water in my school comes from _____

After being treated, the sewage from our school goes to _____

Activity Procedures

Self-explanatory directions for each activity are provided within the student pages. This section contains additional guidance for each activity.

Activity A: My Community and the World

Directions:

- Copy and cut out the strips as noted in Materials/Preparations. Each strip has an incomplete statement about where a common need (such as water) comes from or where every day wastes (such as sewage) go.
- Have students complete each statement to the best of their abilities.
- After the activity, lead a discussion using the questions provided.

Activity B: The Story of Two Coffees

Directions:

- Either assign two students to read the poem aloud (one student will be Coffee A and the other Coffee B) or have students read the poem on their own.
- Have students ‘talk to the text’ using your preferred method. For example, students can note similarities and differences between the two coffees. (See *An Educator’s Guide to Fair Trade* for literacy strategies.)
- Continue with the follow-up questions provided in the student pages. Suggestions:
 - Assign specific questions to pairs or groups of students, who then report out their answers.
 - Use the diagram to show cause-effect relationships, and have students identify lines in the poem that describe those connections.
- Here are the questions with suggested responses in italics:
 1. Who are the characters in the poem? *Coffee A, Coffee B, Farmer A, Farmer B*
 2. What traits do Coffee A and Coffee B share? *Coffee A and B are both grown in the same climate. Both have a farmer tending to them. Both have waste involved in growing. Both are eventually grown and sold.*
 3. What is different about the way Coffee A and B are treated after harvest? *Coffee A goes through a chain of hands until it is sold. Coffee B is sold more directly.*
 4. What wastes do the coffees create? Why is it a problem? *The coffee bean husks are a waste product. This waste contaminated the water surrounding Coffee A.*
 5. How would you describe Farmer A’s thoughts about his or her future? What about Farmer B? *Farmer A does not receive a lot for his/her crop and is contemplating moving into the city. Farmer B is optimistic about his/her future, receives adequate payment, and is committed to his/her community.*

6. What advantages does Farmer B have that may affect his or her view on the future? *Farmer B is not worried about their income. Farmer B has a healthy crop moving forward.*

Activity C: Reading Selection: Fair Trade and the Environment

Directions:

- Assign the reading using your preferred method. Suggestions:
 - Assign pairs of students with specific parts of the reading.
 - Have students underline passages that correlate with specific lines of the poem.
 - Have students underline passages that describe the connections in the diagram.
- After the reading, continue analysis of the diagram. This serves as a formative assessment.
- Here are the questions with suggested responses in italics:
 1. According to diagram A, what are three impacts of clearing trees? Do you think these impacts help the environment or harm it? *Three impact are a decrease in biodiversity, and increased soil erosion and run-off. These impacts harm the environment.*
 2. In diagram B, what happens to trees? What are the impacts? *Responses are the opposite of those in question 1.*
 3. Based on your answers to questions 2 and 3, what conclusions can you draw about the role of trees in a healthy and biodiverse ecosystem? Consider multiple aspects of the ecosystem, including soil and water. *Answers will vary. To provide scaffolding, have students describe cause-effect relationships using verbs such as 'results in', 'leads to,' 'creates,' etc.*
 4. The bottom of diagram B shows that practices above it lead to an intact environment and a healthier crop yield. Follow the arrow on the left. Where does it lead to? How would you explain this connection? *Responses should include the idea that a healthy environment (noted at the bottom of the diagram) means the cycle can start again. Maintaining healthy ecosystems is an essential part of sustainability.*

Activity D: What Does the Label Mean?

Directions:

- Have students read the introduction, and ask them to generate examples of terms or claims they commonly see on food labels. Examples might include 'whole grain,' 'natural', etc.
- Review the rest of the introduction, which emphasizes that only certain labels are based on actual, verifiable standards.
- Review the directions for the activity as listed in the Student Pages. Point out the criteria in the rubric.
- After students complete their research, have them share their results in small groups or via a 'gallery walk' in which students display their findings on a wall.
- You can extend the activity by having students share their findings using some of the suggested methods (blog, presentation, etc.).

Student materials follow.

Activity A: Making Connections: My Community and the World

Directions:

1. Your teacher will provide you with statements about where some of your basic needs come from and where wastes go. The statements are not complete; you must fill in the locations the best you can.
2. When you are done, discuss or write about these questions after the activity as directed by your teacher.
 - What statements were easiest to answer? Why?
 - Which were most difficult? Why?
 - Give an example of a connection you had not considered before.
 - Did anything surprise you?
 - If we rely so much on these everyday things, why do we know so little about them?



Follow-up reading: Human-environmental Interdependence

The production of food (and any other human need) requires materials (inputs) and produces wastes (outputs). **But where do all the inputs come from? Where do all the outputs go? The answer is *the environment*. The environment consists of** all living and non-living things found naturally on earth. Humans are part of the environment and we live within it. Here are three key ideas:

1. The environment serves as the ultimate source of all inputs: Everything needed to produce food and other necessities comes from the living or non-living materials in the **environment**, including soil, water, trees, solar energy, and pastures for animals. The people who provide labor for food production also depend on the environment.

Apply the idea to another need: What materials are your clothes made from? Consider materials such as cotton, polyester or nylon (which is made from petroleum). List the material and its source for three items of clothing.

Item	Source

2. Meeting our needs involves transforming and processing natural materials: For example, coal is burned to make electricity to heat our homes and cook our food. Trees are transformed into paper. This requires labor and energy (often, fossil fuels).

Describe at least three transformations involved in making your favorite snack. For example, what are the original ingredients? How were they grown, processed, or transported?

1.

2.

3.

3. These transformations create wastes, and the environment is the "sink" into which all wastes go. Packages go into landfills. Fertilizer and other wastes run off the land and go into rivers.

Describe three types of waste that you produced today and describe the paths they took as they traveled through the environment.

1.

2.

3.

Activity B: The Story of Two Coffees

You find coffee at a cafe, in your kitchen, or in bags at the store. Coffee is a major part of the global economy. But where was coffee before it reaches a cup? In this activity, you will explore the 'life story' behind coffee grown in different ways.



Directions:

1. Following your teacher's instructions, you will either read the poem on your own or two people will read the poem aloud, with one person reading the lines for Coffee A, the other for Coffee B.
2. As you read or listen, note differences in the stories of the coffees.
3. After the poem, complete the questions and follow-up reading as directed by your teacher.

Coffee A	Coffee B (Fair Trade)
I was born on sun-bathed land in Costa Rica.	I was born on sun-bathed land in Costa Rica.
I was born in a corner of land with a farmer begging me to grow.	I was born in a corner of land with a farmer allowing me to grow tall.
I grew up with many other trees just like me, silently gazing back at me under the sun.	I grew up in the shade, under a canopy of trees. I had helpful neighbors of every kind, from birds to insects to other plants.
When I grew up, I had to shed my husk. My farmer left my waste trailing on the ground and by the river. They didn't know what else to do.	When I grew up, I had to shed my husk. My farmer kept my home clean and placed my husk in compost.
The waste then entered the river, creating pollution.	I recycled my waste into the soil, and there was a bounty of nutrients. The river stayed clean.
My farmer sold me and I got sold and resold and resold. I lost track of how many hands I passed through.	My farmer sent me smoothly from farm to roaster to store.
When I was sold I saw that I left my brothers and sisters behind. My farmer could not replace us.	I moved on and was joyful that my farmer was able to afford to replant.
My farmer searched for payment.	My farmer knew where their income was coming.
My farmer struggled. We struggled.	My farmer thrived. We were content.
Today, my farmer is thinking about tomorrow. <i>"How will I ever make it? Should I leave my farm and move to the city to find work?"</i>	Today, my farmer is thinking about next year. <i>"How can I invest in my farm and help my community?"</i>

Questions:

Answer the following questions based on what is stated in the text.

1. Who are the characters in the poem?
2. What traits do Coffee A and Coffee B share?
3. What is different about the way Coffee A and B are treated after harvest?
4. What wastes do the coffees create? Why is it a problem?
5. How would you describe Farmer A's thoughts about his or her future? What about Farmer B?
6. What advantages does Farmer B have that may affect his or her view on the future?

Activity C: Reading Selection

The ability of the land to support livelihoods for farmers and farmworkers is directly linked to the long-term environmental sustainability of farming practices. These practices include protecting biodiversity, maintaining soil productivity, conserving fresh water and energy, minimizing the use of harmful chemicals, and properly managing waste. While these practices contribute to health and community wellbeing, they can also take more time or cost more money.

Fair Trade is a global trade model and certification that allows shoppers to quickly identify products that were produced in a manner that supports the well-being of people and planet. Fair Trade includes environmental standards that support the long-term sustainability of the farm, protect the surrounding environment, and protect workers from exposure to toxic chemicals.



Here are some examples:

Standards for how water is used:

- Water is used efficiently.
- Only clean water is used for irrigation.
- Wastewater is discharged in a manner that does not have a negative impact on water quality, soil fertility or food safety.

Standards for biodiversity:

- Farms take steps to not degrade the forest. This protects biodiversity. (**Biodiversity** is the variety of life in the world or in a particular habitat or ecosystem. A bio-diverse ecosystem contains many species that ‘work together’ to maintain the health of the ecosystem.)
- Farmers minimize the use of chemicals by using other methods, such as crop rotation, composting, removing infested plants, and fighting unwanted pests with ‘friendly’ insects or fungus. (The biodiversity creates habitat for these organisms.)
- Waste is disposed of in a manner (such as composting) that protects human and ecosystem health. These measures can improve soil fertility. (Soil fertility means the ability level of **soil** to grow and support plant life. **Fertile soil** contains minerals and nutrients needed for plants to grow.)

Farmers live off the land and know how important the environment is. However, learning about and using environmentally sustainable approaches can take more time or cost more money. Some farmers cannot afford this.

One reason is that some coffee farmers receive a very small portion of the price you pay for the coffee. As you read in the poem, Coffee A traveled through many people (distributors, wholesalers, stores), with each person taking part of the price the consumer paid. (This is called a ‘supply chain.’) Coffee Farmer A was at the bottom of this chain and gets very little income. Without this income, farmers can’t invest in environmentally sustainable methods, even if they want to. They have to focus on meeting basic needs.

In contrast, Fair Trade ensures that farmers receive a minimum price for coffee. Fair Trade also pays farmers a premium. With these funds, farmers can invest in sustainable practices and get the education they need to learn about new techniques.

The following questions are about Diagrams A and B (see page 17). Diagram A is a representation of Coffee A; diagram B represents Coffee B. As you view the diagrams, keep in mind that the arrows show how one thing leads to another. To help you read the diagram, you could say 'leads to' as you look at the arrow.

1. According to diagram A, what are three impacts of clearing trees? Do you think these impacts help or harm the environment?
2. In diagram B, what happens to trees? What are the impacts? Do you think these impacts help or harm the environment?
3. Based on your answers to questions 2 and 3, what conclusions can you draw about the role of trees in a healthy and biodiverse ecosystem? Consider multiple aspects of the ecosystem, including soil and water.
4. The bottom of diagram B shows that practices above it lead to an intact environment and a healthier crop yield. Follow the arrow on the left. Where does it lead to? How would you explain this connection?

Diagram A

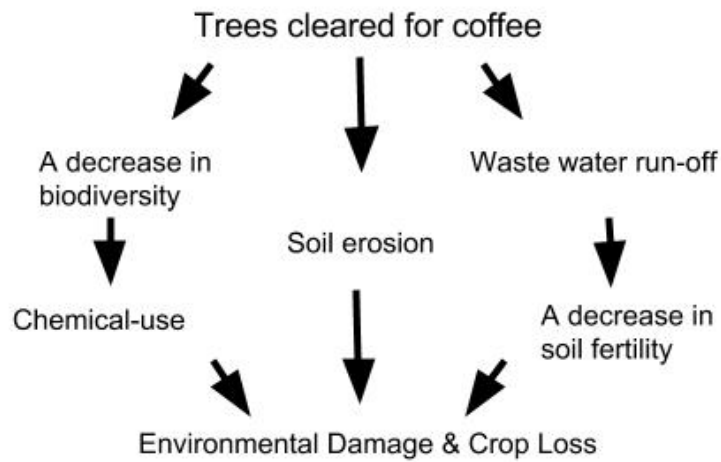
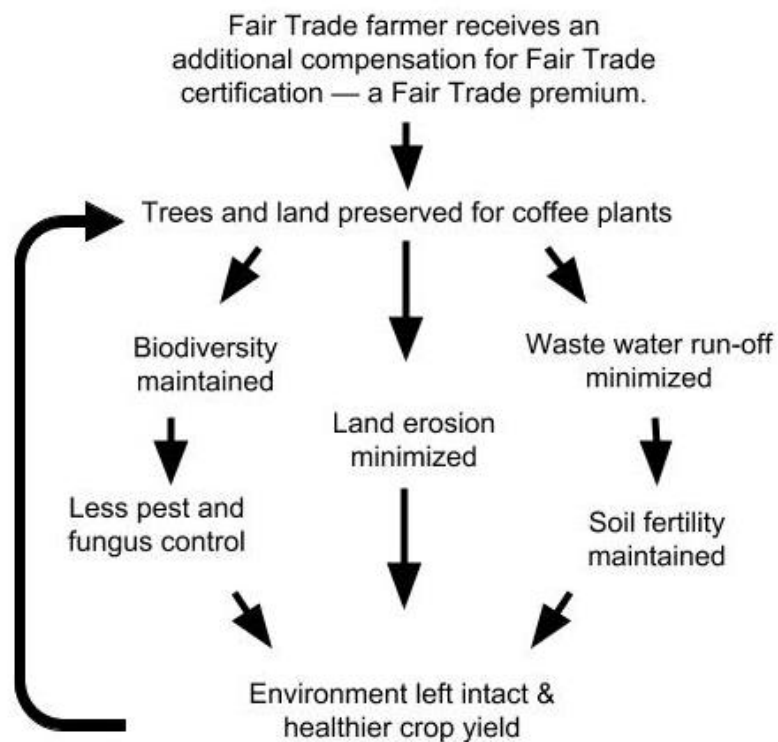


Diagram B



Activity D: What Does the Label Mean?

Introduction:

When shopping for food, many consumers want to know where the food came from and how it was grown. Look around a grocery store and you'll see labels and claims of 'organic,' 'eco-friendly,' or 'all natural.' What do these terms mean? How do you know if the claim is true?

While there are many types of claims, only some have specific definitions based on standards that can be verified (proven true). For example, the Fair Trade label means the products were produced according to rigorous social and environmental standards. To be labeled Fair Trade, producers must demonstrate that they meet the standards. Products that do so receive a certification. These certifications are defined and monitored by a group of organizations from around the world, including Fair Trade USA, Fairtrade International, IMO (Institute for Marketecology), and the World Fair Trade Organization.



Other common labels and claims include eco-friendly, all natural, or green. In this activity, you will investigate these types of claims to determine if they are based on defined, verifiable standards.

Directions:

1. Choose a food item review with an environmental claim, such as eco-friendly, recyclable, organic, etc.
2. Write a description of the claim. What terms or symbols are used? What does the claim apply to? The product, the packaging, or both?
3. Research the claim to determine if it is based on any defined standards. For example, does a food producer have to follow specific guidelines to be labeled 'organic'? What about 'natural'?

Use these questions to guide your research:

- Is the claim based on standards?
- Are the standards defined by a credible organization?
- Can the claim be verified?
- Is there evidence to support the claim?

4. Based on your research, rate your product's claim on a scale of 1-5, with 1 meaning the claim is false or deceptive, and 5 meaning the claim is based on real standards.
5. As directed by your teacher, review other students' results. Do you see overall patterns? What are common labels that are misleading? Which are verifiable?
6. Think about an audience that would benefit from knowing this information, such as your friends, family, consumers, or the company making the claims. How could you share your results? Examples could include a blog, a series of social media posts, a presentation, or an informational brochure.

Your research and final product should meet these criteria:

	Yes!	Getting there.	Not so much.
I provide a description of the product or package.			
I describe the claim and include specific terms or symbols used.			
If applicable, I identify the agency or organization that certifies or defines the term or symbol.			
I support my analysis with clear, convincing evidence.			

