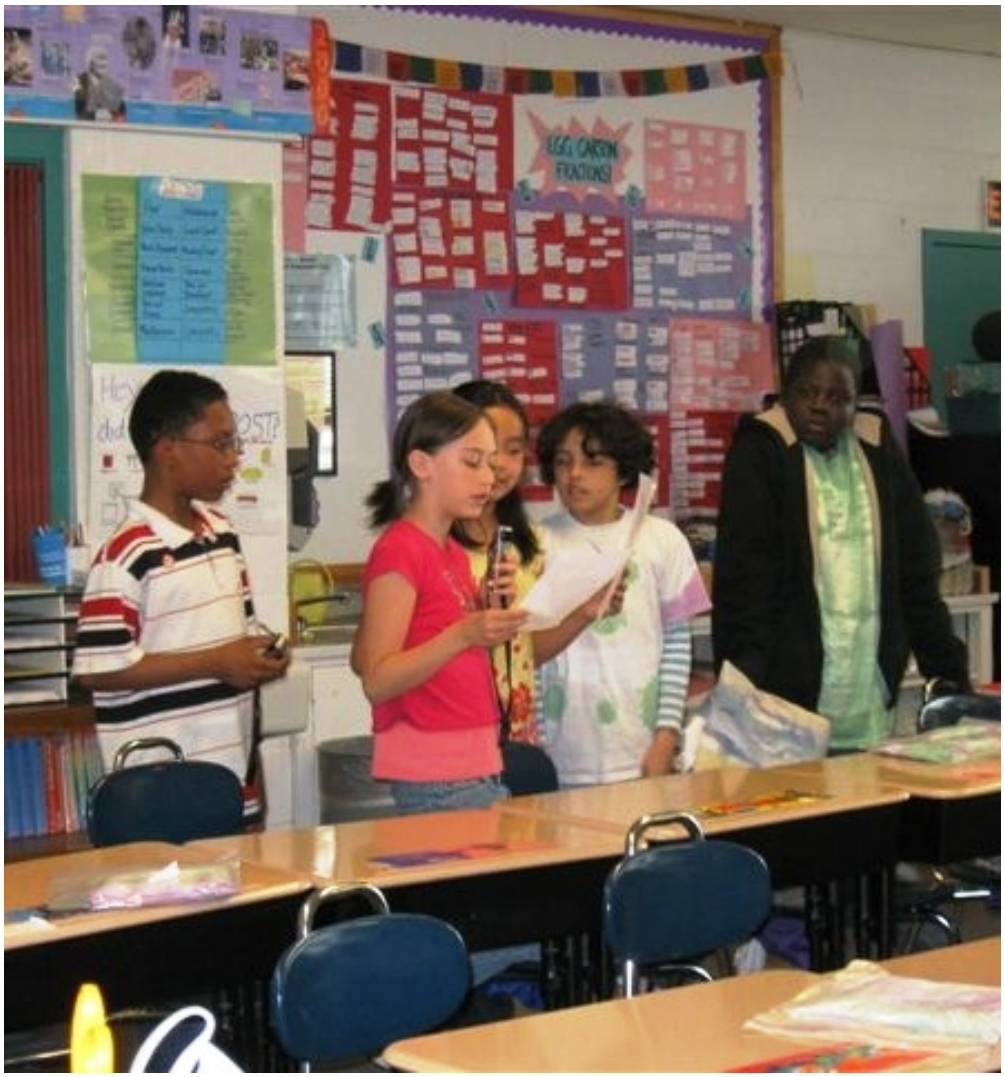
SUSTAINABLE ECONOMICS: THE TRIPLE BOTTOM LINE

A Unit for Grades 4-8

Developed by Aziza Malik of Champlain Elementary School, Kellie Smith of the Sustainability Academy at Lawrence Barnes, both in Burlington, VT, and Emily Hoyler & Sarah Kadden of Shelburne Farms' Sustainable Schools Project.



How do our decisions affect humans, the environment, and the economy?

Listing of Contents

INTRODUCTION

Sustainable Economics is an integrated, project based unit of study initially designed and piloted in a fourth/fifth grade classroom at the Sustainability Academy at Lawrence Barnes School. Economics becomes a living concept for students as they research decision making, their own impact on their community, and economic forces at play in their lives. Building deep understanding of social, economic, and environmental impacts of every day decisions, students work with local businesses and community members to research and develop a business model with positive impact on their community while reaching their financial goals.

This unit was designed using the lens of sustainability– that is, looking at the decisions consumers and producers make through the triples lens of the environment, the economy, and from an equity perspective. The first half of the unit focuses on our decisions as consumers. Students are introduced to the variety of factors that can be considered, including source, process, quality, and price, and delve further into the considerations of each of these factors. Students participate in lessons that explore the impacts of these factors on the environment, economy, and people. In the second phase of the unit, students switch gears and become producers as they applying their learning from phase one. Students brainstorm a product, conduct market research, develop a business plan, and then carry their plan into production.

A note on implementation: the lessons in phase one of this unit are designed to stand alone or be taught together, either in the order presented or in an order that meets your needs. A variety of assessment options are presented in lessons ten through twelve; one or more may be used. Depending on the time available, phase two can also be modified in a variety of ways to meet your needs.

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OVERVIEW

Grade level: Fourth through Eighth grade

Intended Outcome: Students will use their learning to be thoughtful consumers and producers.

Enduring Understandings:

- The economy, environment, and humans are composed of interconnected systems.
- Our decisions affect humans, the environment, and the economy.
- You vote with your wallet.

Essential Question: How do our decisions affect humans, the environment, and the economy?

Focusing Questions:

- How do our decisions affect humans, the environment and the economy?
- What are the factors to consider when purchasing a product (local, sustainable, price)?
- What are the steps from idea to production?
- Why is it important to create a product that considers both profit and the impact on community/ environment?
- How can I make the best choices as a consumer, given my circumstances?

Potential Partners: Local and national businesses, bankers or other business investors

Big Ideas of Sustainability:

- Interdependence
- Systems
- Ability to make a difference
- Equity

Skills: decision making, creating business planning, creating an annual report, identify and create a product or service that considers environmental and community needs, interview, persuasive writing, evaluating their choices as consumers

Common Core & Vermont State Standards

The following standards will be *assessed* in this unit:

Common Core State Standards for English/Language Arts:

College and Career Readiness Anchor Standards—see CCSS for grades 4-8 specifics
Writing:
W.CCR.1—Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence
W.CCR.2—Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately though the effective selection, organization, and analysis of content
W.CCR.6— Use technology, including the internet, to produce and publish writing and to interact and collaborate with others
Speaking & Listening:
W.SL.CCR.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
W.SL.CCR.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
W.SL.CCR.5—Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations

VT State Standards

3.9 Sustainability—Students make decisions that demonstrate understanding of natural and human communities, the ecological, economic, political, or social systems within them, and awareness of how their personal and collective actions affect the sustainability of these interrelated systems.

6.15 Economics—Students use the basic principals of economics to interpret local, state, national, and international economic activity.

6.16 Economics—Students evaluate the impact of economic systems on the needs and wants of all people and on the environment in various times in their local community, in Vermont, in the United States, and in various locations world wide.

Vermont Grade Expectations

H+SS :18 Students show an understanding of the interaction/interdependence between humans, the environment, and the economy by…

- Tracing the production, distribution, and consumption of goods
- Examining how producers in the U.S. have used natural, human, and capital resources to produce goods and services and describing long -term effects of these uses
- Describing the causes and effects of economic activities on the environment
- Explaining how goods and services around the world create economic interdependence between people in different places
- Examining how producers in the U.S. and/or world have used natural, human, and capital resources to produce goods and services, and predicting the long term effects of these uses
- Drawing conclusions about how choices within an economic system affect the environment

H&SS5-6:20 Students make economic decisions as a consumer, producer, saver, investor, and citizen by…

- ·Comparing price, quality, and features of goods and services.
- ·Analyzing factors involved in the production of a product or service

Education for Sustainability - Understanding by Design (UbD) Unit Template v2.1

Sustainable Economics Unit

Stage 1—Desired Results

Established Goal(s):

1. CCSS W.4-5.1: Opinion Writing
2. CCSS W4-5.2: Information Writing
3. CCSSW4-5.6 Using Technology to Collaboratively Write
4. CCSS SL.4-5.1 Collaboration
5. CCSS SL.4-5.4 Presentation
6. CCSS SL.4-5.5 Use of media in presentation
7. VT State Standard 3.9 Sustainability
8. VT State Standard 6.15 & 6.16 Economics, GES H+SS 3-6:18, 20

Students will have the opportunity to:

_x_ learn outside of their classroom
__ participate in service-learning
__ learn more about their place
__ engage in the inquiry process
_x_ work with a community partner
_x_ participate in a community event to share their learning

Meaning

BIG IDEAS OF SUSTAINABILITY:

A) Interdependence/Systems
B) Equity
C) Ability to make a difference

ENDURING UNDERSTANDINGS
Students will understand that…

- The economy, environment, and humans are composed of interconnected systems
- Our decisions affect humans, the environment, and the economy
- You vote with your wallet

ESSENTIAL QUESTIONS
Students will keep considering…

- How do our decisions affect humans, the environment, and the economy?

Acquisition

Students will know…

- Factors (source, process, quality, price) to consider when purchasing a product
- The process of creating and running a business (market research proposal, business writing, production, marketing)
- They can make a difference by making thoughtful choices

Students will be skilled at…

- Decoding product labels to learn more about the product and the company
- Weighing the pros and cons of purchasing goods
- Writing mission statements, business plans, annual reports
- Evaluating and comparing products

Transfer

Students will be able to independently use their learning to…

- **BE THOUGHTFUL CONSUMERS & PRODUCERS**
- As consumers, evaluate their choices to make informed decisions
- Describe the layered and interconnected systems that reach from the economy to the environment and to the human community
- Identify & explain cause & effect, and value & worth beyond the economic bottom line (the triple bottom line)

Lens of Sustainability:
Choose the most relevant

i. *Collaboration will happen through…*
Students will work in groups, connect to local businesses

ii. *Students will make a difference by…*
Running a business and donating profits to a student-chosen local non-profit

iii. *Students will address real-world issues through…*
Participating in the economic systems

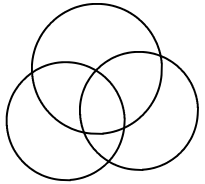
iv. *Students will use campus and community based learning sites when they…*
Visit local businesses: Seventh Generation, Ben & Jerry's, Lake Champlain Chocolates, Burton? Markey survey for their own business

Unit developed by Emily Hoyler, Shelburne Farms' Sustainable Schools Project, based on a unit written by Aziza Malik & Kellie Smith of Sustainability Academy
Adapted from the *Understanding by Design Guide to Creating High-Quality Units* by Grant Wiggins and Jay McTighe, 2011

Stage 2—Evidence

Code (link to Goals, Big Ideas and Lens)	**Evaluative Criteria**	
CCSS W.4-5.1: W4-5.2: W4-5.6 SL.4-5.1 SL.4-5.4 SL.4-5.5 VT State Standard 3.9, 6.15, 6.16	-Opinion Writing -Information Writing -Using Technology to Collaboratively Write -Collaboration -Presentation -Use of media in presentation	**PERFORMANCE TASK(S):** ***Students will show that they really understand by evidence of...*** **Phase 1: School Supply Purchasing Web 2.0 Project** Assess school supply school currently uses (paper, paperclips, pencils, etc), find out budget, current source, amount used. Then, students evaluate current choice, research alternatives, use tri-venn as analytical tool, submit findings and recommendations and advocate for choice with regard. Share findings and recommendations via Web 2.0 Project/Presentation with School Purchaser **Phase 2: Running a Business Service-Learning Project** Groups of 4-5 students will collaboratively conceive of a product, conduct a market survey, write a mission statement, business plan, and make a pitch/presentation to the class and investor, then the class as a whole will select one of the businesses and run it, write an annual report, and share the profits with a local non-profit of their choice
	Writing Rubrics Collaboration Rubrics	**OTHER EVIDENCE:** ***Students will show they have achieved Stage 1 goals by..*** Written portions of the projects above, Participation in class discussions & activities Exit tickets Open response prompts • Product process posters • Paper Towel Inquiry worksheets and short constructed paragraph • Comparison of two products: short constructed paragraph • Field Trip Worksheet • Business ideas: descriptive paragraph • Market Survey • Business Plan • Annual Report • Marketing materials .

Stage 3—Learning Plan

Code (link to Goals, Big Ideas and Lens)	***Pre-assessment* of driving knowledge, skill, understandings and attitudes using surveys and simulations** Tri-Venn : students will be asked to consider the last purchase they made, and try to see how it's connected to each of the 3 spheres *Progress Monitoring*
Interdependence Systems Interdep/Sys Systems Systems Systems Equity Equity Ability to make a difference	**Learning Events** ***Student success at transfer, meaning, and acquisition depends on...*** PHASE ONE: BUILDING THE FOUNDATION 1. Decision-making Activity 2. Where did my product come from (source, systems)? 3. Local store vs. non-local store (source, economy) 4. Food miles (source, environment) 5. Label Decoding (process) 6. What is Fair Trade (process/source. equity) 7. Cocoa Farmers Simulation (process/source, equity) 8. Paper Towel Inquiry (quality, decision making) 9. Ice Cream Product Comparison (quality/price, decision making) 10. Choices– Roll the Dice (synthesis– transfer, decision making 11. The Lorax– Literacy/Assessment 12. School Supplies– Web 2.0 Project PHASE TWO: CLASS BUSINESS 1. From Consumer to producer 2. Our Class Business 3. Market Survey & Results 4. Field Trips/Interviews 5. Mission Statements 6. Business Plan 7. Pitch to Investor 8. Starting the Business 9. Annual Report 10. Profits 11. Running the Business 12. Reflection & Closing 13. Celebrate & Share	 Students will reflect after each lesson, a complete exit tickets, and make contributions to learning wall. Students will regularly consider the following prompt in their reflections: -What? -So what? -Now what?

Unit developed by Emily Hoyler, Shelburne Farms' Sustainable Schools Project, based on a unit written by Aziza Malik & Kellie Smith of Sustainability Academy
Adapted from the *Understanding by Design Guide to Creating High-Quality Units* by Grant Wiggins and Jay McTighe, 2011

PART I: THOUGHTFUL CONSUMERS

Goal:
The goal of this phase of the unit is that students understand the impacts of their choices, and the interconnectedness of the environment, economy, and society. Students will be equipped with the knowledge to be thoughtful consumers who make informed choices under any circumstances.

Overview:
In this exploratory phase of the Sustainable Economics Unit, students will build an understanding of the impacts of their consumer choices on the environment, society, and the economy.

Students will learn about the various factors to consider in purchasing products, including source, process, quality, price. They will explore and discuss the distance food travels from farm to plate, fair trade and non-fair trade goods, and the economic and social impact of purchasing goods at locally-owned and non-locally owned businesses. Finally, students will practice decision making under a variety of circumstances, including limited money, access to resources, and access to transportation.

Assessment:
Two assessment options are included. The first is a literacy-based assessment, in which students apply their understanding of the concepts covered in this phase as they analyze a text using the "triple bottom line" lens. The second is a project-based assessment, where students research the current procurement of a particular school supply, assess this choice using their learning from the unit, and make a recommendation or proposal

Lessons:
Pre– Assessment: Decision-making & The Lens of Sustainability
1. Where Did This Product Come From?
2. Why Buy Locally?
3. Food Miles
4. Label Detectives
5. What is Fair Trade?
6. Cocoa Farmers Simulation
7. Paper Towel Inquiry I, II, III, IV
8. Apples to Apples? Product Comparison
9. Making The Best of It– My Choices
10. Literacy Analysis Assessment
11. School Supplies Project/Assessment

PRE-ASSESSMENT: Decision Making and the Lens of Sustainability

ESTABLISHED GOAL:
Students will consider how every day decisions they have made can be viewed from an environmental, economic, and social equity perspective.

FOCUSING QUESTION:
How do my decisions connect to the environment, the economy, and other humans?

MATERIALS & EQUIPMENT:
- Pens and pencils
- *Lens of Sustainability* Tri-Venn diagram (see Appendix)

1. Ask students to think about an everyday decision they have made recently. Have students think about how or why they made the decision they made. Tell students to share their decision and their reasons for making that decision with someone sitting near them (Pair Share).
2. After students have finished sharing, ask students what some of the factors involved in decision-making were. (For example, did you decide to wear your sweater because it was cold, or because you like the way it looked, etc.) Tell students that we make decisions all the time. Introduce this unit by explaining that we will be studying how sustainability and making decisions are connected, and our goal for this unit will be to become thoughtful decision makers.
3. Introduce the three circle Venn-diagram to explore the concept of sustainability. Ask students for their ideas on what this graphic represents.
4. Define the three circles: People/Social, Environmental, and Economic. Show how they overlap, and explain how the tri-Venn diagram works. (Where two areas overlap consider both perspectives, and the center, where all three intersect, represents the interconnections of all three and a "sustainability perspective".)
5. Give an example from your own life that fits into multiple categories, and ask students to brainstorm how your decision might look from each of these perspectives, and how and where each perspective overlaps.
6. Ask students to work with a partner as they consider their decision using the tri-Venn diagram. Where does their decision fit in? Does it affect people, the environment, or the economy? Circulate as students discuss and listen for understanding.
7. Next, tell students to now think about the last thing they bought (perhaps candy or food, or a purchase that their family made). Ask them if this was a decision (yes, it was!).
8. Ask students to work alone and fill in how their purchasing decision looks from each of these perspectives. Circulate and check for understanding.
9. Invite a couple of volunteers to share their thinking and their diagram. Ask students:
   - Do all decisions fit neatly into just one category?
   - Do all of our decisions have an effect on all three circles?

   Students should be able to see how almost all of our decisions have an effect on all three circles

Tip: Understanding the Tri-Venn Diagram
We often use the term "the lens of sustainability" to describe the center of the tri-venn, where the interconnections of these three spheres are apparent. So that students can better understand perspective, it can be useful discuss "lenses". Tell students to imagine they are looking through glasses with purple lenses, what would what they are seeing look like? Help students understand that they would see the same things, but in new ways, colored by the lenses. In the same way, when they look at the world through the "lens of sustainability" they are seeing the interconnectedness of the world.

Assessment:
Collect the tri-Venn diagrams from each student, and review them for the following:
- Where did students put their decisions?
- Could they connect the effect that their decision had on the environment, economy, or people?

Keep these diagrams for use later to measure student progress. Make note of any students who did not make the connections. Follow up with the students in a small group, and practice using the tri-Venn diagram.

Name:_____ Topic:_____

How does this look from an **environmental** perspective?

How does this look from an **human or social** perspective?

Interconnections

How does this look from an **economic** perspective?

LESSON ONE: Where Did this Product Come From?

ESTABLISHED GOAL:
Students will explore and become aware of the process that every day objects go through to get to them as a consumer.

FOCUSING QUESTION:
How did this product get here? Where does it go?

MATERIALS & EQUIPMENT:
- Can of peas (any brand)
- Pictures of the production chain
- Bag containing a variety of products with labels on them. Include a variety of products: organic (certified organic, organic ingredients), certified humane, conventional, food, non-grocery, sustainably produced, etc. (this bag of products will be reused in subsequent lessons)
- Poster Paper (1 per group of 4-5 students)
- Markers
- *Lens of Sustainability* tri-Venn ("Lens tri-Venn")
- Computer with internet access (2 students/ computer), *optional*

ADDITIONAL RESOURCES
Book: *The Story of Stuff: The Secret Life of Everyday Things,* John C. Ryan and Alan Thein Durning (1997)

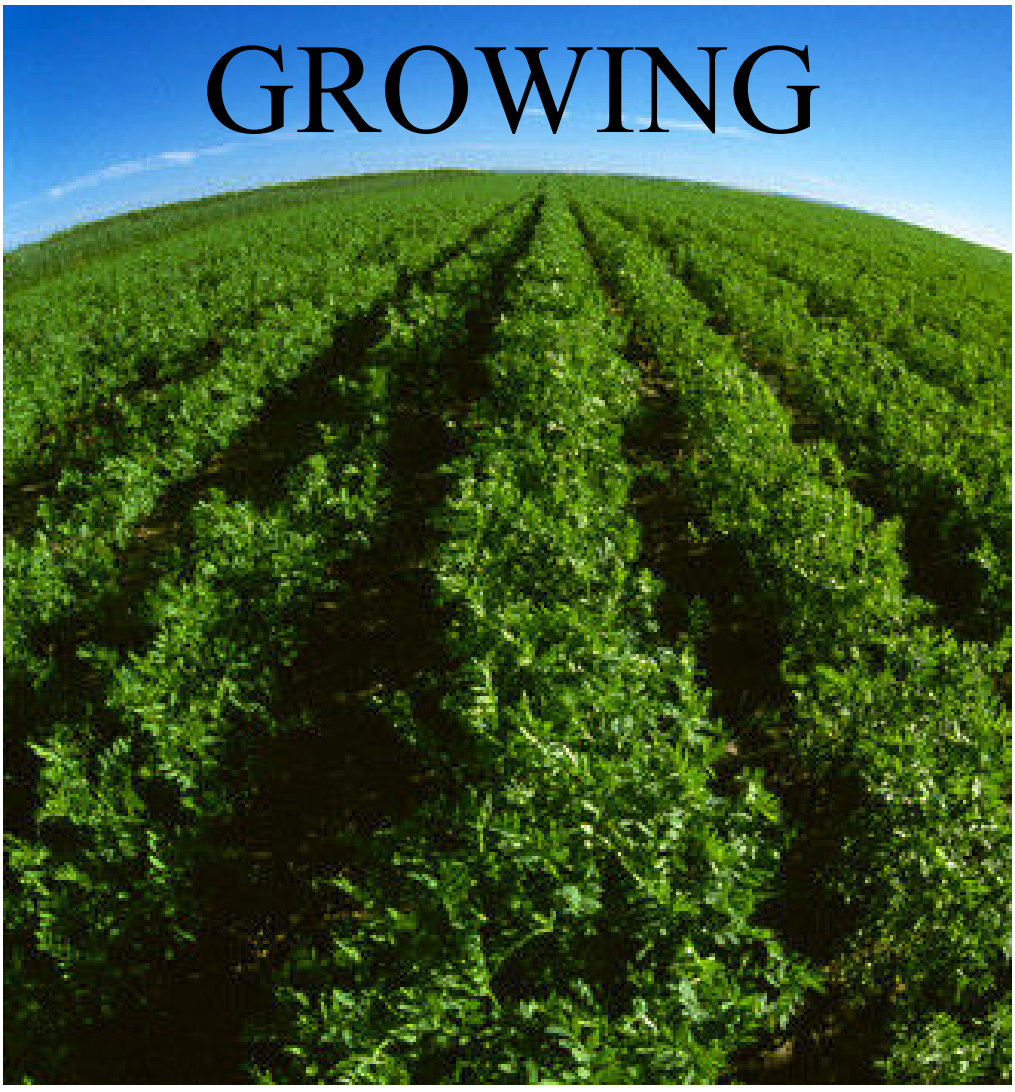
Video: *How It's Made* Visit Science.discovery.com to stream mini episodes of this poular TV show

1. Take out a can of peas and show it to students. Explain that it came out of your cupboard this morning. Ask students: How did it get there?
2. Encourage students respond and share their ideas. When students correctly identify a step in the process, take out a corresponding picture and attach it to your whiteboard. As students continue to contribute correct steps, add that picture to the board, making sure to put the steps in the correct order.
3. After tracing the product cycle the can of peas, ask the students what will happen to the product next. What will be leftover as waste? What will happen to the waste?
4. Tell students they will now trace another product in small groups. Put students in groups of 4-5 people.
5. Circulate with a bag full of every day objects and each group will pick one thing out of the bag to trace the process to production chain. If a product contains more than one ingredient, have students trace the production cycle of the first ingredient.
6. Students will brainstorm the process and check in with teachers about their ideas. (Optional- Allow access to a classroom computer for any needed additional research.)
7. Once students have identified the steps, they will create posters explaining this process. Posters can be displayed on the unit's Learning Wall upon completion.
8. Gather the students for a closing discussion. Ask: Are all products produced the same way? Are there more steps in certain products processes? Students should be able to see that some products are heavily processed and others are relatively simple.
9. How does it relate to sustainability?
10. Why should we as consumers should be interested in this process?

ASSESSMENT
- Use the Lens tri-Venn, ask students to consider how the can of peas looks through these lenses.
- Participation in class discussions.
- Participation in group creation of posters.
- Product process posters should be assessed for accuracy.

PLANTING

GROWING




HARVESTING


PREPARING


PROCESSING


CANNING

LABELING

TRANSPORTING

GROCERY STORE

PURCHASING

LESSON TWO: Why Buy Locally?

ESTABLISHED GOAL: .
Students will consider the economic and social impacts of purchasing locally versus purchasing at a non-locally owned business.

FOCUSING QUESTION:
Why buy locally?

MATERIALS & EQUIPMENT:
- Copies of *Where Your Dollars Go* graphic,
- Computer lab & access to internet
- Copies of the student worksheet

1. Introduce the lesson by asking students what "local" means. Discuss their answers. Then, ask students what it would mean to "buy locally". Discuss their responses.
2. Distribute the 'Where Your Dollars Go' graphic. Ask them what they notice about it. List observations on the board.
3. Ask students what questions they have, and what they are wondering about, and any comments they want to make. Note these on the board (alternatively, have students write their responses).
4. Tell students that you all will now explore a website that will give them more information about the economic systems at work when we purchase goods.
5. Have students navigate to: http://www.shoplocally.com/why/# and explore the page as they answer the questions on the student worksheet.
6. Review students' responses to the questions. Talk with students about the benefits and drawbacks of buying at locally owned businesses versus non-locally owned businesses. (It's important to explore both the benefits and drawbacks of each type of business, and be careful not to vilify or shame those who shop at Big Box stores.)

Assessment
Review student worksheets for understanding.

Why Buy Local? Student Worksheet

Name:

Explore the website: http://www.shoplocally.com/why/# Use the information there to answer the following questions.

1. Retell the story of Lisa, John, Peter, and Susan.

2. Retell the story of Susan's trip to the Big Box Store.

3. Which of these stories will help Susan's local community more? Why?

4. What reasons does the website give to "shop locally"?

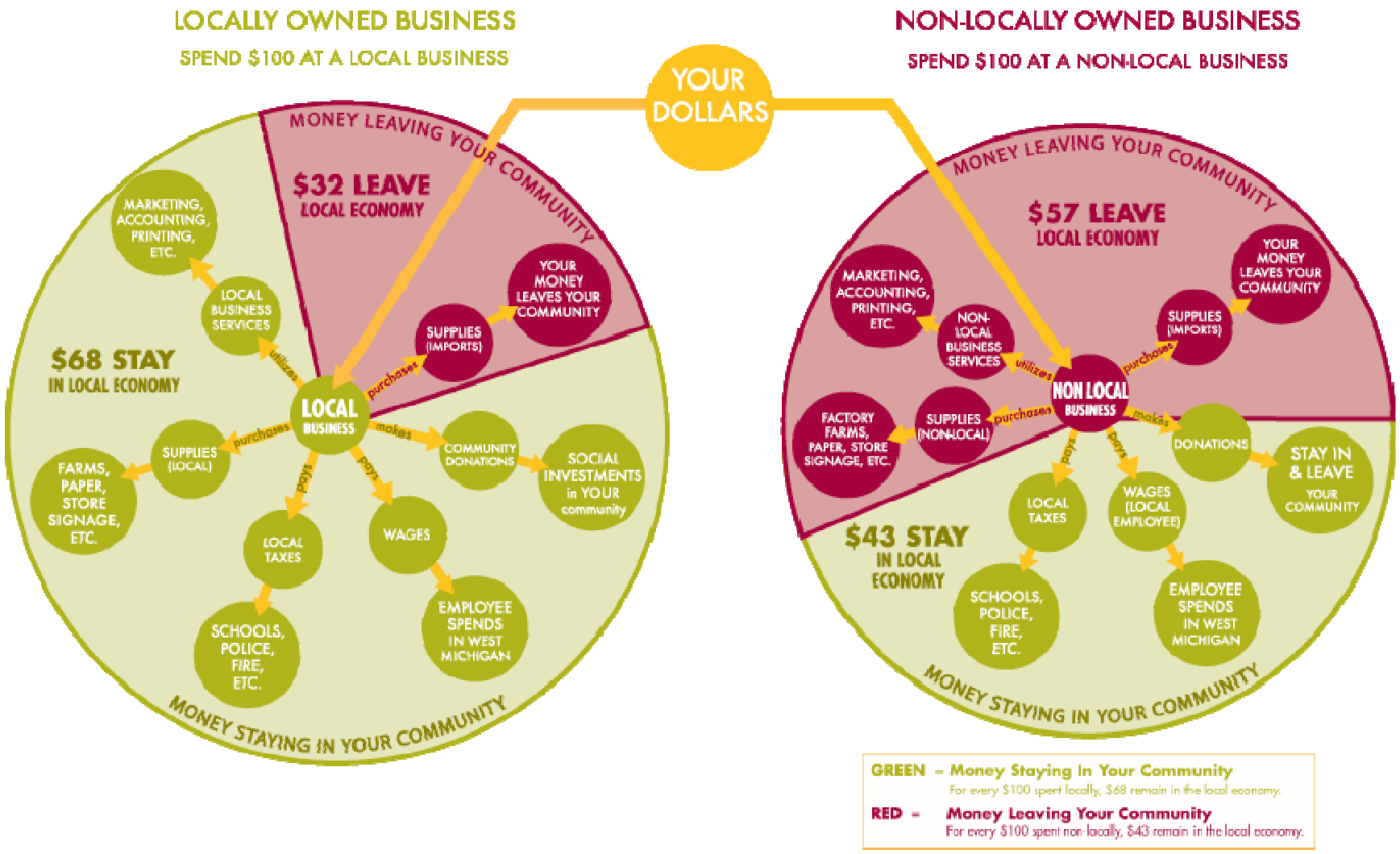
5. What is the "local multiplier effect"?

6. In your opinion, what are some good reasons to shop locally?

7. In your opinion, what are some good reasons to shop at Big Box Stores?

8. In your opinion, is it better to shop locally? Why or why not?

WHERE YOUR DOLLARS GO



The Local Multiplier Effect

KEEP YOUR MONEY IN THE COMMUNITY

Buying local products at locally owned businesses keeps money circulating closer to where you live. This creates a ripple effect as those businesses and their employees in turn spend their money locally. Unfortunately, most corporate chains send most of your money out of town.

For every $1 spent at a local business...

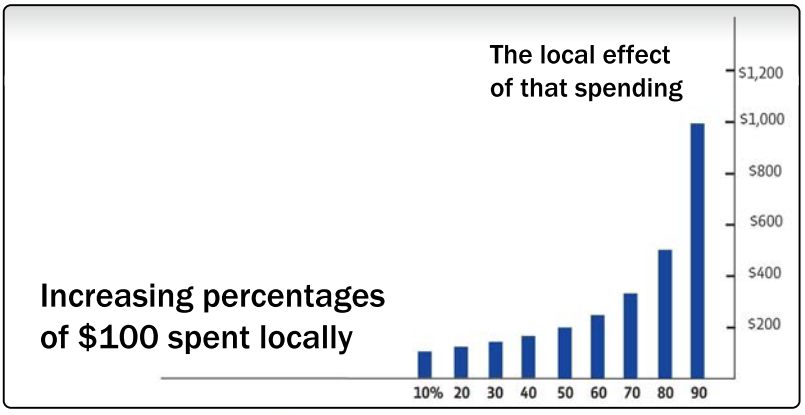
45 cents is reinvested locally

For every $1 spent at a corporate chain...

Only 15 cents is reinvested locally

MAKE YOUR MONEY WORK HARDER

If everyone in a community spends a greater percentage locally, the multiplier effect turns that into big bucks for the local economy. If you increase your spending with local businesses from 50% to 80% for example, the multiplier effect more than doubles those dollars. Therefore, $200 spent locally could have close to $500 in impact on the community.



Food Miles

Where does my food come from?

Lesson developed by Alice Froehlich of Zenger Farm, Portland, Oregon.
Adapted by Emily Hoyler, Shelburne Farms' Sustainable Schools Project, Shelburne, Vermont.
Used & adapted with permission.

In this active lesson, students will consider the sources of our food, and the distance food travels to reach our plates. Working in groups, students will trace the steps that a meal, either sourced locally or non-locally, took to reach the plate. Students will compile data and calculate the miles each meal traveled. The lesson concludes with an energizing activity where students expend their own energy to demonstrate how far each meal has traveled from farm to plate.

This lesson assumes that students have some understanding of carbon footprints, and the fact that the farther something travels, the more it contributes to carbon dioxide in the atmosphere. This lesson may generate many questions and could launch numerous other studies of food systems. Please let us know how you used this lesson!

Note: the data and information provided for each food item in this lesson is an approximation, based on research and estimation. Exact distances and transportation methods may vary.

Food Miles

60+ minutes

MATERIALS & EQUIPMENT:

- Meal menus (3 local, 3 non-local)
- Student clue cards, cut and sorted (1 set for each meal)
- Student worksheets (one set for each meal)
- Whiteboard & markers
- String miles prop (see table next page, choose one meal to represent with string)
- Meal transportation action chart

SET UP:

Assemble student materials (menu, clue cards, and student worksheets) for each of the six meals and place in envelopes

NOTES:

- The non-local meals take longer to calculate than the local meals, so assign to student groups accordingly.
- For younger students, or to accommodate a shorter time frame, it may be helpful for the instructor to complete the 'traveled to/from' sections of the student worksheets ahead of time.

1. Explain to students that you are going to talk about how food is transported from the farm to your plate. By the end of this hour students will have learned a little bit more about the different kinds of transportation used to move food, the steps involved in getting food from the farm to your plate, and the energy used to transport food.

2. Ask students to raise their hand if:
   - You ate a meal yesterday?
   - You know one of the foods that was used to make your meal?
   - You know at which store one of the foods for your meal was bought?
   - You know at least one food from your dinner was grown at a farm in the US?
   - You know at least one food from your dinner was grown at a farm in Vermont?

3. Demonstrate a national food system and a local food system by drawing each system on the whiteboard. A good example is milk to cheese. With a national system: first, the cows are milked, and the milk is collected and transported by tanker truck to a processing facility where it is pasteurized processed into dry milk. The dry milk is then transported by airplane and truck to a factory where it is made into cheese and packaged. The cheese is then transported in a refrigerated truck to a warehouse for distribution, and then again by truck from the distribution center to your local grocery store. Last, you go to the store to buy they cheese, then travel home. With a local system: Shelburne Farms raises cows, milks them, and then transports the milk by horse or tractor to the cheese-making facility, where it is made into cheese, aged, and packaged. It is then transported by truck to your local co-op or Farmers' Market, where you purchase it and transport it home. Ask students which system they think is better, and why?

3. Split students into 6 groups. Explain that each group will get an envelope containing: dinner menu, food clue cards, and ingredient transportation worksheet. Explain to students that the goal of this activity is find out the total miles that each different meal traveled. Show students how to fill out the charts. Answer any clarifying questions, then pass out the envelopes. (See note at left.)

Vocabulary:

Processing – to prepare, as in taking raw food and turning it into a food product

Distribution – to deliver, as in moving food from one place to another

Milling – to process in a mill, grinding grain (like wheat) into flour

Inspection – to examine, as in the examination of food for safety purposes

Pasteurization – heating food (often milk) to kill micro organisms.

Cargo - a vehicle for transporting goods, or the name for the goods themselves

Transport –to transfer from one place to another

Local - in this case the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 400 miles from the origin of the product (Source: http://thomas.loc.gov/cgi-bin/query/z?c110:h2419:)

5. While the students are working, draw the following table on the board.

Meal	Local	Non Local
Roast Chicken		
Spaghetti		
Hamburger		

6. As each group finishes, ask them to report their total miles traveled for their meal on the chart. If some groups finish early, extend the challenge to also report back the on number of states and countries their meal traveled to.

The totals are:

Meal	Local	Non Local
Roast Chicken	360	20,206
Spaghetti	290	24,062
Hamburger	365	28,506

7. Ask for student reactions to the data on the board. What do they notice? How do they feel about it? Are they surprised? What new questions do they have? Record their questions for further study, if desired.

8. Tell students that you did these calculations ahead of time, and have premeasured some string to represent the distance each meal traveled. Tell students that each inch of string represents 20 miles, and write the scale on the board. Invite each group to come up one group at a time to hold up their string for the class to see. Ask for comments.

String Length

Meal	Local	Non Local
Roast Chicken	18″	84′ 2.3″
Spaghetti	14.5″	100′ 3.1″
Hamburger	18.25″	118′ 9.3″

9. Ask students what is needed to transport all this food. Guide them to identify energy (fuel). Tell students that you want to try one more way to demonstrate how far each meal traveled. As a large group, they will use their bodies to demonstrate the energy used to transport a local meal and a national meal. It will be helpful list the totals for each movement on the board before you begin. Use the chart below, and share with students if there is interest. Alternatively, students could calculate the totals for each mode of transportation.

	Ship	Train (Rail)	Airplane	Truck	Home
Local Chicken	0	0	0	347	13
Non-local Chicken	0	3876	4738	11,558	34
Local Hamburger	0	0	0	348	17
Non-local Hamburger	0	4083	9351	15,306	36
Local Spaghetti	0	0	0	274	16
Non-local Spaghetti	6,275	5,513	0	10,626	32

Ship = one second stand on leg / 100 miles
Train = one second squat with arms moving at sides to simulate wheels moving / 100 miles
Truck = one jumping jack / 100 miles
Air = one push up or sit up / 100 miles
Home = students choose how they travel

So, for example, to represent the local chicken dinner, students would do 3 Jumping Jack,s and whatever motion they choose to represent the miles traveled home. For the non-local chicken dinner, students would do 39 squats, 47 push ups, and 115 Jumping Jacks, plus their miles home movement.

ASSESSMENT:

10. Ask students to return to their seats. Invite them to comment. Ask them which meals took the most energy to get to from farm to plate. Which took the least? What conclusions can they make from this? Ask student if the distance a meal travels is important, and why. Ask students to generate any new questions they have, and keep this list to launch future possible study. As an exit ticket, ask students to respond to the reflection prompt: What? So what? Now what?

Roast Chicken Dinner–Local Menu

Today you will be dining on a sumptuous dinner of
locally raised roast chicken,
local artisan bread,
fresh salad made of locally grown lettuce, tomatoes, and cucumbers,
a delicious ear of corn on the cob,
followed by a dish of locally produced ice cream.

Ingredient	**Miles traveled to your plate**
Chicken	
Wheat (Bread)	
Lettuce	
Tomato	
Cucumber	
Corn on the Cob	
Ice Cream	
Total miles your **meal** traveled	

Bon appétit!

Roast Chicken Dinner—Non-Local Menu

Today you will be dining on a sumptuous dinner of
roast chicken,
bread,
fresh salad made of lettuce, tomatoes, and cucumbers,
a delicious ear of corn on the cob,
followed by a dish of ice cream.

Ingredient	**Miles traveled to your plate**
Chicken	
Wheat (Bread)	
Lettuce	
Tomato	
Cucumber	
Corn on the Cob	
Ice Cream	
Total miles your **meal** traveled	

Bon appétit!

Spaghetti Dinner—Local Menu

Today you will be dining on a scrumptious dinner of
homemade spaghetti noodles
with a garden-fresh sauce of tomatoes, garlic, and broccoli
served with a glass of frothy local milk, and
followed by a dish of locally produced ice cream.

Ingredient	**Miles traveled to your plate**
Spaghetti Noodles (wheat)	
Tomato	
Garlic	
Broccoli	
Bread (wheat)	
Milk	
Ice Cream	
Total miles your **meal** traveled	

Bon appétit!

Spaghetti Dinner—Non-Local Menu

Today you will be dining on a scrumptious dinner of
spaghetti noodles
with a sauce of tomatoes, garlic, and broccoli
served with a glass of frothy milk, and
followed by a dish of ice cream.

Ingredient	**Miles traveled to your plate**
Spaghetti Noodles (wheat)	
Tomato	
Garlic	
Broccoli	
Bread (wheat)	
Milk	
Ice Cream	
Total miles your **meal** traveled	

Bon appétit!

Hamburger Dinner–Local Menu

Today you will be dining on a delectable dinner of
A locally raised beef hamburger
on a bun of native Vermont wheat,
topped with locally grown lettuce, onion, and cheese,
served with a side of hand-cut fries made from local potatoes,
followed by a dish of local strawberries with a glaze of honey.

Ingredient	**Miles traveled to your plate**
Hamburger (beef)	
Wheat (Bun)	
Lettuce	
Onion	
Cheese	
French Fries (potatoes)	
Strawberries	
Honey	
Total miles your **meal** traveled	

Bon appétit!

Hamburger Dinner—Non-Local Menu

Today you will be dining on a delectable dinner of
A beef hamburger on a bun ,
topped with lettuce, onion, and cheese,
served with a side of fries,
followed by a dish of strawberries with a glaze of honey.

Ingredient	**Miles traveled to your plate**
Hamburger (beef)	
Wheat (Bun)	
Lettuce	
Onion	
Cheese	
French Fries (potatoes)	
Strawberries	
Honey	
Total miles your **meal** traveled	

Bon appétit!

I am a chicken

* I was raised at Bread & Butter Farm in Shelburne, VT.

* First, I was transported 65 miles by truck to Craftsbury, VT to Masse Poultry Processing for processing.

* Next, I was transported 65 miles back to Shelburne by truck to be stored in a freezer until the Farmers' Market.

*Then, I was transported 7 miles to the Burlington Farmers' Market in Burlington, VT by truck for distribution.

*Last, I was transported 3 miles to your plate after you purchased me for dinner.

Local Chicken

I am bread

*I am made from wheat grown and milled into flour at Gleason's Grains in Bridport, VT.

* First, I was transported 58 miles to Middlesex, VT by truck to Red Hen Baking Company to be baked into bread.

*Next, I was transported 35 miles to City Market in Burlington, VT by truck for distribution.

*Last, I was transported 2 miles to your plate after you purchased me for dinner.

Local Chicken

I am ice cream

* I am made from cows' milk. The milk came from cows raised all over Vermont.

*First, the milk was transported an average of 20 miles by truck to the St. Albans Dairy Collaborative by truck where it was pasteurized and distributed.

* Next, I was transported 56 miles by truck to the Ben & Jerry's Factory in Waterbury, VT to be made into ice cream.

* Then, I was transported 27 miles to Hannaford's store in Burlington, VT by truck for distribution.

* Last I traveled 4 miles from Hannaford's to your plate after I was purchased for your dinner.

Local Chicken

I am lettuce

*I was grown in your neighbor's garden.

*I was picked and traveled 1 mile from your neighbor's garden to your plate.

Local Chicken

I am a tomato

*I was grown in your backyard garden.

* I was picked and traveled 0 miles from the vine to your plate.

Local Chicken

I am a cucumber

* I was grown at Full Moon Farm in Hinesburg, VT.

* First, I was picked and transported 14 miles to the Burlington Farmers' Market in Burlington, VT by truck for distribution.

*Last, I traveled 3 miles from the Farmers' Market to your plate after you purchased me for dinner.

Local Chicken

I am corn

*I was grown in your backyard garden.

* I was picked and traveled 0 miles from the vine to your plate.

Local Chicken

I am ice cream

*I am made from cows' milk. The cows were raised at an unknown farm in Watertown, WI.

*First, the milk transported 47 miles to Milwaukee, WI by truck for pasteurization.

*Next, the milk was transported 1,052 miles to Breyer's Ice Cream Processing Plant in Framingham, MA by truck, where it was made into ice cream, labeled, and packaged.

*Then, I was transported 23 miles to the Breyers Ice Cream Distribution Warehouse in Boston, MA by truck for distribution.

*After that, I was transported 216 miles to your local Hannaford's store by truck for distribution.

*Last, I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-Local Chicken

I am bread

*I am made from wheat grown at unknown farms in Three Forks, Montana and Harper, Kansas.

* First the wheat was transported 951 miles from Three Forks, Montana to Inland, Nebraska by rail car where it was milled into flour.

* Then, it was transported 1712 miles to LePage Bakery in Auburn, Maine by truck where it was baked into bread.

*After that, I was transported 202 miles by truck your local Hannaford's store in Burlington, VT for distribution.

* Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Chicken

I am a tomato

* I was grown at an unknown farm in San Joaquin, California.

*First, I was transported 20 miles to Sun Ripe Farms in Exeter, California by truck for washing and packaging.

* Next, I was transported 227 miles to West Coast Produce in Oakland, California by truck for distribution.

*Then, I was transported 2,925 miles to Price Chopper Distribution Center in Potsdam by rail for distribution.

*Then I was transported 114 miles by truck to Price Chopper in Burlington, VTf or distribution.

* Last I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local Chicken

I am lettuce

*I was grown at a farm owned by Foxy Produce Inc. in Castroville, California where I was picked and packaged.

*First, I was transported 9 miles to Salinas, California by truck where I was put in cold storage.

*Next, I was transported 3,184 miles to the Hannaford's Distribution Center in Boston, MA by cargo plane for distribution.

*Then, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution.

*Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Chicken

I am chicken

*I was raised at an unknown farm in Albertville, Alabama where I was processed and packaged.

* First, I was transported 593 miles to the Tyson Chicken Company in Springdale, Arkansas by truck for distribution.

*Next, I was transported 1,554 miles to the Hannaford's Distribution Center in Boston, MA by cargo plane for distribution

* Then, I was transported 216 miles to your Hannaford's in Burlington, VT by truck for distribution.

* Last I traveled 4 miles from the Hannaford's to your plate after you purchased me for dinner.

Non-local Chicken

I am cucumber

* I was grown at an unknown farm in Hermosillo, Mexico.

*First, I was transported 175 miles to Nogales, Arizona by truck for packaging and distribution.

*Next, I was transported 551 miles to Coast Foods Los Angeles, California by truck for distribution.

* Then I was transported 2,815 miles to Price Chopper Distribution Center in Potsdam, NY by truck for distribution.

*After that, I was transported 114 miles to your local Price Chopper store in Burlington, VT by truck for distribution.

*Last I traveled 6 miles from the Price Chopper to your plate after you purchased me for dinner.

Non-local Chicken

I am corn

* I was grown at a farm owned by Foxy Produce Inc. in San Joaquin, California where I was picked and packaged.

* First, I was transported 124 miles to Salinas, California by truck for cold storage.

*Next, I was transported 3,018 miles to the Price Chopper Distribution Center in Potsdam, NY by truck for distribution.

*Then, I was sent 114 miles to your local Price Chopper store in Burlington, VT by truck for distribution.

* Last I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local Chicken

I am bread

*I am made from wheat grown and milled into flour at Gleason's Grains in Bridport, VT.

* First, I was transported 58 miles to Middlesex, VT by truck to Red Hen Baking Company to be baked into bread.

*After that, I was transported 35 miles to City Market in Burlington, VT by truck for distribution.

*Last, I was transported 2 miles to your plate after you purchased me for dinner

Local Hamburger

I am a strawberry

*I was grown at Adam's Berry Farm in Burlington, VT.

*First, I was picked and transported 2 miles to the Burlington Farmers' Market in Burlington, VT by truck for distribution.

* Last I traveled 2 miles from the Farmers' Market to your plate after you purchased me for dinner.

Local Hamburger

I am lettuce

*I was grown in your neighbor's garden.

*I was picked and traveled 1 mile from your neighbor's garden to your plate.

Local Hamburger

I am French fries

*I am from potatoes grown at Pete's Greens Farm in Craftsbury, Vermont.

*First, I was picked and transported 63 miles to City Market in Burlington, VT by truck for distribution.

*Last, I traveled 2 miles from City Market to your plate after you purchased me for dinner and turned me into French fries.

Local Hamburger

I am cheese

* I am made from cows' milk. The milk came from cows raised at Shelburne Farms in Shelburne, VT. First, the milk was made into cheese and packaged at Shelburne Farms.

* First, I was transported 7 miles to City Market in Burlington, VT by truck for distribution.

* Last I traveled 2 miles from City Market to your plate after I was purchased for your dinner.

Local Hamburger

I am a hamburger

*I am from a cow raised at Sweet Tree Farm in Dummerston, VT.

* First, I was transported 97 miles to Benson, VT by truck for slaughter and processing.

* Next, I was transported by truck 57 miles to City Market in Burlington, VT.

*Last, I was transported 2 miles to your plate after you purchased me for dinner.

Local Hamburger

I am honey

*I was made in hives at BeeHappy Vermont honey farm in Starksboro, VT, where I was harvested, bottled, and labeled.

* First, I was transported 26 miles to the Burlington Farmer's Market in Burlington, VT by truck for distribution.

* Last, I traveled 3 miles from the Farmer's Market to your plate after you purchased me for dinner.

Local Hamburger

I am an onion

* I was grown at Tamarack Hollow Farm in Burlington, VT where I was picked and dried.

* First, I was transported 3 miles to Burlington Farmer's Market in Burlington, VT by truck for distribution.

* Last traveled 3 miles from the Farmers' Market to your plate after you purchased me for dinner.

Local Hamburger

I am cheese

*I am made from cows' milk. The cows were raised at an unknown farm in Lancaster, California.

*First, the milk was transported 89 miles to California Dairies Inc. in Artesia, California by truck for pasteurization and processing into dry milk.

*Next, the dry milk was transported 1,152 miles to Kraft Cheese in Bremerton, Washington by air cargo where it was processed into cheese, labeled, and packaged.

*Then, I was transported 2,921 miles to the Prince Chopper Distribution Center in Potsdam, NY by truck for distribution.

*After that, I was transported 114 miles to your local Price Chopper store in Burlington, VT by truck for distribution.

*Last I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local Hamburger

I am a hamburger

*I am from a cow raised at unknown farm in Nacogdoches, Texas.

*First, I was transported 42 miles to Texas Meat Packer in Henderson, Texas by truck for processing, packaging, and inspection.

*Next, I was transported 134 miles to the Dallas Airport by truck for distribution.

*Then, I was transported 871 miles to Kroger's Inc. in Cincinnati, Ohio by air cargo for re-packaging and labeling.

*After that, I was transported 711 miles by truck to the Price Chopper Distribution Center in Potsdam, NY for distribution.

*After that I was transported 114 miles to your local Price Chopper store Burlington, VT by truck for distribution.

* Last, I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local Hamburger

I am honey

* I was made in bee hives at an unknown farm somewhere near San Luis Obispo, California.

*First, I was transported 226 miles to the Sue Bee Honey Factory in Anaheim, California by truck where I was bottled and labeled for distribution.

Next, I was transported 3,006 miles to the Hannaford's Distribution Center in Boston, MA by cargo plane for distribution.

* Then, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution

*Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner

Non-local Hamburger

I am a strawberry

*I was grown at Las Adoberas Farm in Jocotepec, Mexico.

*First I was transported 39 miles to the airport in Guadalajara, Mexico by truck for distribution to the United States.

* Next, I was transported 1,310 miles by air cargo to Los Angeles, California for distribution in the United States.

*Then, I was transported 3,012 miles to the airport in Boston, MA for by air cargo for distribution.

*After that, I was transported 14 miles to the Hannaford's Distribution Center in Boston, MA by truck for distribution.

*After that, I was transported 216 miles to your local Hannaford's store by truck for distribution.

*Last, I traveled 4 miles from the Hannaford's to your plate after you purchased me for dinner.

Non-local Hamburger

I am lettuce

*I was grown at a farm owned by Foxy Produce Inc. in Castroville, California where I was picked and packaged

*First, I was transported 9 miles to Salinas, California by truck where I was put in cold storage.

*Next, I was transported 3,184 miles to the Hannaford's Distribution Center in Boston, MA by truck for distribution.

*Then, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution.

*Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Hamburger

I am French fries

* I am made from potatoes. I was grown at Amstad Produce in Hermiston, Oregon.

*First, I was transported 202 miles to Amstad Produce location in Sherwood, Oregon by truck for packaging and distribution.

*Next, I was transported 3,132 miles to the Hannaford's Distribution Center in Boston, MA by rail for distribution.

*Then, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution.

* Last, I traveled 4 miles from the Hannaford's to your plate after you purchased me for dinner

Non-local Hamburger

I am an onion

*I was grown at a farm owned by Adams Produce Inc. in Hatch New, Mexico.

* First I was transported 1,121 to West Coast Produce in Oakland, California miles by truck for distribution.

*Next, I was transported 3,122 miles the Hannaford's Distribution Center in Boston, MA by truck for distribution.

*Then, I was transported 216 miles your local Hannaford's store in Burlington, VT by truck for distribution.

* Last I traveled 4 miles from the Hannaford's to your plate after you purchased me for dinner

Non-local Hamburger

I am bread

*I am made from wheat grown at unknown farms in Three Forks, Montana.

* First the wheat was transported 951 miles from Three Forks, Montana to Inland, Nebraska by rail car where it was milled into flour.

* Then, it was transported 1,712 miles to LePage Bakery in Auburn, Maine by truck where it was baked into bread.

*After that, I was transported 202 miles by truck your local Hannaford's store in Burlington, VT for distribution.

* Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Hamburger

I am milk

*I am from cows raised at Monument Farms Dairy in Weybridge, VT where the cows were milked, and the milk was pasteurized, bottled, labeled.

* First, I was transported 35 miles to Hannaford's in Burlington, VT by truck for distribution.

*Last, I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Local Spaghetti

I am a tomato

*I was grown in your backyard garden.

* I was picked and traveled 0 miles from the vine to your plate.

Local Spaghetti

I am ice cream

* I am made from cows' milk. The milk came from cows raised all over Vermont.

*First, the milk was transported an average of 20 miles by truck to the St. Albans Dairy Collaborative by truck where it was pasteurized and distributed.

* Next, I was transported 56 miles by truck to the Ben & Jerry's Factory in Waterbury, VT to be made into ice cream.

* Then, I was transported 27 miles to Hannaford's store in Burlington, VT by truck for distribution.

* Last I traveled 4 miles from Hannaford's to your plate after I was purchased for your dinner.

Local Spaghetti

I am bread

*I am made from wheat grown and milled into flour at Gleason's Grains in Bridport, VT.

* First, I was transported 58 miles to Middlesex, VT by truck to Red Hen Baking Company to be baked into bread.

*After that, I was transported 35 miles to City Market in Burlington, VT by truck for distribution.

*Last, I was transported 2 miles to your plate after you purchased me for dinner

Local Spaghetti

I am garlic

*I was grown at the Intervale Community Farm in Burlington, VT.

* First, I was picked, dried and transported 3 miles to City Market in Burlington, VT by truck for distribution.

*Last, I traveled 2 miles from City Market to your plate after you purchased me for dinner.

Local Spaghetti

I am spaghetti noodles

*I am made from wheat grown and milled into flour at Gleason's Grains in Bridport, VT.

* First, the flour was transported 37 miles to City Market in Burlington, VT by truck for distribution

*Last, the flour traveled 2 miles from City Market to your home after you purchased it for dinner. You used the flour to make homemade spaghetti.

Local Spaghetti

I am Broccoli

*I was grown the Intervale Community Farm.

* First, I was transported 3 miles to City Market in Burlington, VT by truck for distribution.

*Last, I traveled 2 miles from City Market to your plate after you purchased me for dinner.

Local Spaghetti

I am garlic

*I was grown at an unknown farm in Jinxiang, Shandong, China.

*First, I was transported 334 miles to Qingdao, China by truck for distribution.

* Next, I was transported 6,275 miles to West Coast Produce in Oakland, California by cargo ship where I was inspected for distribution in the United States.

*Then, I was transported 3,122 miles to the Hannaford's Distribution Center in Boston, MA by truck for distribution.

*After that, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution.

*Last I traveled 2 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local spaghetti

I am bread

*I am made from wheat grown at unknown farms in Three Forks, Montana and Harper, Kansas.

* First the wheat was transported 951 miles from Three Forks, Montana to Inland, Nebraska by rail car where it was milled into flour.

* Then, it was transported 1712 miles to LePage Bakery in Auburn, Maine by truck where it was baked into bread.

*After that, I was transported 202 miles by truck your local Hannaford's store in Burlington, VT for distribution.

* Last I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Spaghetti

I am spaghetti noodles

*I am made from wheat grown at two different farms in Farmington, Iowa and Harper, Kansas.

*First, some of the wheat was transported 175 miles from Farmington, Iowa to Ames, Iowa by rail car where it where it was milled, processed into spaghetti noodles, labeled, and packaged.

*Next, more wheat was transported 476 miles from Harper, Kansas to Ames, Iowa. by rail car where it where it was milled, processed into spaghetti noodles, labeled, and packaged.

*Then, I was sent 1,156 miles to the Price Chopper Distribution Center in Potsdam, NY by truck for distribution.

*After that, I was transported 114 miles to your local Price Chopper store by truck for distribution.

* Last, I traveled 6 miles from the Price Chopper to your plate after you purchased me for dinner.

Non-local spaghetti

I am a tomato

* I was grown at an unknown farm in San Joaquin, California.

*First, I was transported 20 miles to Sun Ripe Farms in Exeter, California by truck for washing and packaging.

* Next, I was transported 227 miles to West Coast Produce in Oakland, California by truck for distribution around the world.

*Then, I was transported 2,925 miles to Price Chopper Distribution Center in Potsdam by rail for distribution.

*Then I was transported 114 miles by truck to Price Chopper in Burlington, VT.

* Last I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local spaghetti

I am ice cream

*I am made from cows' milk. The cows were raised at an unknown farm in Watertown, WI.

*First, the milk transported 47 miles to Milwaukee, WI by truck for pasteurization.

*Next, the milk was transported 1,052 miles to Breyer's Ice Cream Processing Plant in Framingham, MA by truck where it was made into ice cream, labeled, and packaged.

*Then, I was transported 23 miles to the Breyers Ice Cream Distribution Warehouse in Boston, MA by truck for distribution.

*After that, I was transported 216 miles to your local Hannaford's store by truck for distribution.

*Last, I traveled 4 miles from Hannaford's to your plate after you purchased me for dinner.

Non-local Spaghetti

I am milk

*I am from a cow raised at a farm owned by Inter-American Products in Horse Cave, Kentucky.

*First, I was transported 130 miles to Murfreesboro, Tennessee by truck for pasteurization, bottling, labeling, and distribution.

*Next, I was transported 34 miles to Nashville, Tennessee by truck for distribution across the country.

*Then, I was transported 986 miles to the Price Chopper Distribution Center in Potsdam, NY by rail car for distribution.

*After that, I was transported 114 miles to your local Price Chopper store in Burlington, VT by truck for distribution.

*Last I traveled 6 miles from Price Chopper to your plate after you purchased me for dinner.

Non-local Spaghetti

I am broccoli

*I was grown at a farm owned by Foxy Produce Inc. in Castroville, California.

* First, I was transported 9 miles to Salinas, California by truck where I was put in cold storage.

*Next, I was transported 3,184 miles to the Hannaford's Distribution Center in Boston, MA by truck for distribution.

*Then, I was transported 216 miles to your local Hannaford's store in Burlington, VT by truck for distribution.

*Last, I traveled 4 miles from the store to your plate after you purchased me for dinner.

Non-local spaghetti

Local Chicken

It was raised by_____ in_____.
The chicken took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Local Bread

It was made from_____grown at_____in_____.
The wheat/bread took three trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
				Total Miles Traveled	

Local Lettuce

It was grown at_____in_____.
The lettuce took one trip to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
				Total Miles Traveled	

Local Ice Cream

It was made from_____ that came from_____.

The milk/ice cream took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Local Cucumber

It was grown at_____in_____.

The cucumber took two trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Tomato

It was grown at_____in_____.

The tomato took one trip to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
				Total Miles Traveled	

Local Corn

It was grown in_____.

The tomato took one trip to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
				Total Miles Traveled	

Non-Local Chicken

It was raised by_____ in_____.

The chicken took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Bread

It was made from_____grown at_____in_____.

The wheat/bread took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Lettuce

It was grown at_____in_____.

The lettuce took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Tomato

It was grown at_____ in_____.

The tomato took five trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Corn

It was grown at_____in_____.

The corn took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Cucumber

It was grown at_____ in_____.

The cucumber took five trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Ice Cream

It was made from_____ from cows raised at_____in_____.

The ice cream took five trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Local Hamburger

It was made from _____was raised by_____ in_____.
The hamburger took three trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
				Total Miles Traveled	

Local Cheese

It was made from_____raised at_____in_____.
The cheese took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Onion It was grown at_____in_____.
The onion took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Lettuce It was grown at_____in_____.
The lettuce took one trip to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
				Total Miles Traveled	

Local Bread (Bun)

It was made from_____grown at_____in_____.
The wheat/bread took three trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
				Total Miles Traveled	

Local French Fries

It was made from _____grown at_____in_____.
The French fries took two trips to get to your plate. Find out how many miles they traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Strawberry

It was grown at_____in_____.
The strawberries took two trips to get to your plate. How many miles did ithey travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Honey

It came from_____raised at_____ in_____.
The honey took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Non-Local Hamburger

It made from _____was raised by_____ in_____.
The hamburger took six trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
6					
				Total Miles Traveled	

Non-Local Cheese

It was made from_____raised at_____in_____.
The cheese took five trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Strawberry

It was grown at_____in_____.

The strawberries took six trips to get to your plate. How many miles did they travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
6					
				Total Miles Traveled	

Non-Local Honey

It came from_____raised at_____ in_____.

The honey took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local French Fries

It came from_____grown at_____ in_____.

The French fries/potatoes took four trips to get to your plate. How many miles did they travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Bread (Bun)

It was made from_____grown at_____in_____.
The wheat/bread took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Lettuce

It was grown at_____in_____.
The lettuce took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Onion

It was grown at_____in_____.
The onion took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Local Bread (wheat)

It was made from _____was grown by_____ in_____.
The bread took three trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
				Total Miles Traveled	

Local Spaghetti (wheat)

It was made from_____grown at_____in_____.
The spaghetti took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Garlic It was grown at_____in_____.

The garlic took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Tomato It was grown in_____.

The tomato took one trip to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
				Total Miles Traveled	

Local Ice Cream

It was made from _____raised in_____.
The ice cream took four trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Local Milk

It came from_____ raised at_____in_____.
The milk took two trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Local Broccoli

It was grown at_____in_____.
The broccoli took two trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
				Total Miles Traveled	

Non-Local Spaghetti Noodles

It was made from_____grown at_____in_____.
The spaghetti noodles took five trips to get to your plate. How many miles did they travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Broccoli

It was grown at_____ in_____.
The broccoli took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Bread

It came from_____grown at_____ in_____.
The bread took four trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
				Total Miles Traveled	

Non-Local Tomato

It was grown at_____ in_____.

The tomato took five trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Garlic

It was grown at_____in_____.

The garlic took five trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Milk

It was came from_____ raised at_____in_____.
The milk took five trips to get to your plate. Find out how many miles it traveled and why it went to each place.

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

Non-Local Ice Cream

It was made from_____ from cows raised at_____in_____.
The ice cream took five trips to get to your plate. How many miles did it travel and why?

Trip	Traveled from	Traveled to	Traveled by	Reason for travel	Miles traveled
1					
2					
3					
4					
5					
				Total Miles Traveled	

LESSON FOUR: Label Detectives

ESTABLISHED GOAL:
Students will explore and become aware of the labels on products and what that can tell them about a product.

FOCUSING QUESTION:
How can labels can inform us as decision makers?

MATERIALS & EQUIPMENT:
- Bag with a variety of products with labels on them. Include a variety of products: organic (certified organic, organic ingredients), certified humane, conventional, food, non-grocery, sustainably produced, etc. (from lesson 1)
- Label Decoding Worksheet
- *Lens of Sustainability* tri-Venn worksheet, one per student
- Optional: *Tom's of Maine* sample product label

1. Introduce the lesson by asking students to recall what they have been exploring so far. Remind students of the earlier lesson when they mapped a food production chain. Show students the can of peas and ask students : What were some strategies you used to figure out information about your product? Students should identify labels. Explain that today we will further explore how labels can inform us as decision makers.
2. Take out the bag of products again. Each group of 4-5 students grabs one product out of the bag. Tell students that time we will use labels and packaging as clues to learn more about our product. Pass out Label Decoding sheets
3. Instruct students to use the product's label to answer the following questions: Where is your product from? What is in it/What is it made of? Other information? Other claims?
4. Share what each group came up with as label detectives. What did you see? What does it mean? Do you have any questions about what anything means?
5. Ask student how labels might be helpful to them , as consumers. Ask students what information they might look for. Explain that labels can be used as tools to help us decide whether we want to purchase a product or not. They can give us clues about how they were produced, what they can do, and what they are made of. The more informed we are about a product, the better decisions we can make about whether we want to purchase it.

EXTENSION:
Have students research some commonly seen food labels and slogan (all natural, sustainably harvested, etc.) Look at the *Tom's of Maine "Goodness Label"* and discuss and apply the Lens tri-Venn.

Assessment:
As a group or individually, have students fill out the *Lens of Sustainability* tri-Venn diagram for their product.

LESSON FOUR: Label Detectives

Name:

LABEL DECODING

Where is your product from?

What is in it/What is it made of?

Other information?

Other claims?

What makes a product good? At Tom's, it includes how we make it.

No animal testing or animal ingredients.

We share every **ingredient**, its **purpose**, and its **source** at www.tomsofmaine.com.

Sustainable practices are a priority in every aspect of our business.

No artificial colors, flavors, fragrance, or preservatives.

We strive to maximize recycled content and **recyclability** of our packaging.

5% (12 days) of employee time to volunteering. **10%** of profits to human and environmental goodness.

LESSON FIVE: What is Fair Trade?

ESTABLISHED GOAL:
Students will better understand the meaning and concept of the terms "Fair" and "Trade" and will be able to communicate this understanding orally and mathematically.

FOCUSING QUESTION:
What is a fair trade?

MATERIALS & EQUIPMENT:
- Sheet 8: Scenarios: Fair or Not Fair?
- Sheet 9: Coin Exchange Activity
- Student Copies of Sheet 9: Coin Exchange Activity (Optional)
- Coin Manipulatives
- Chart paper

This lesson is adapted, with permission, from Global Exchange's *Sweet Smarts Fair Trade Cocoa* curriculum unit, available for free download from http://www.globalexchange.org/sites/default/files/ChocolateCurriculum.pdf

Large Group Activity: Discussion

1. Write the word "fair" on a piece of chart paper.
2. Ask the students "What do you think fair means? "and write responses on the chart paper. From the students' responses develop a definition of "fair" and write it on the chart paper. Encourage the understanding that fair is (1) something right and just and (2) something that does not unjustly favor one person over another.
3. •Ask the students: What is the opposite of fair? (unfair/not fair) After they respond, as the students to share a story of something that happened to them that they thought was unfair? How did that make you feel? (Optionally, the students could do a "Pair Share" and then share with the group.)

Large Group Activity: Scenarios

1. Tell the students you are going to explore the concept of fair further with some scenarios, or things that could happen in real life. Options to present the scenarios include: (1) read the scenarios aloud to the group, (2) students read the scenarios aloud to the group, or (3) students role-play the scenarios for the group. After each scenario is presented, ask students to shout out either "Fair!" or "Not Fair!" and subsequently, ask students to explain why they think the scenario is fair or unfair/not fair. Optionally, you can take a vote on whether the scenario was "fair" or "not fair" and discuss the results.
2. After you are finished with the scenarios, ask students if there is anything they want to add to the chart paper about what fair means.

Large Group Activity: Coin Exchanges.

1. Write the word "trade" on a piece of chart paper.
2. Ask the students and write responses on chart paper: What do you think trade means? What is a trade? (Encourage the understanding that "trade" is an exchange of one thing for another.) Optionally, the students could do a "Pair Share" and then share with the group.
3. Show students five dimes. Tell the students you need to trade or exchange the dimes for quarters because you are playing an arcade game that takes only quarters. Ask: "How many quarters should I get for my dimes? What would be a fair trade? What if I were given one quarter? Would that be a fair trade or an unfair trade? Why?"

LESSON FIVE: What is Fair Trade? Continued p2

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4. Show students different examples of fair and unfair trades/exchanges. Adapt the values in the examples according to the grade and skill level of the students.

Partner Activity: Coin Exchange Activity

1. Students work in pairs to complete Sheet 9: Coin Exchange Activity. One student fills out the sheet first, and then the students trade roles.

Large Group Activity: Discussion

1. Tell students that the coin exchanges were one example of a trade.
2. Ask students: What was a "fair trade" in the coin exchanges performed? (Encourage the understanding that the equal coin trades during the lesson are one example of a fair trade, because they are equal.)
3. Demonstrate some trades/exchanges using objects. For example, ask one student if they would trade an apple in their lunchbox for an orange.
4. Ask the students: "If we trade one thing for a completely different thing, how do we know if that trade is fair? If we trade money for a different thing, how do we know if that trade is fair?"
5. Refer students to the chart paper with their definition of fairness. Encourage the understanding that, if you are exchanging one thing for a different thing or money for a thing, whether a trade is fair depends on whether we think it is the right thing to do and whether it is just, as in the scenarios.
6. Ask students and write responses on a n exit ticket: What do you think is a fair trade? Post the best student responses to the learning wall.

Sheet 8: Scenarios - Fair or Not Fair?

❑ Fair
❑ Not Fair

You are watching television and your brother comes in and changes the channel. He will not change it back, so you ask your mom for help. She says that you are only allowed to watch your show for five more minutes and then your brother can watch his show for an hour.

❑ Fair
❑ Not Fair

You and your sister both want to play with the same toy. Your dad says that you can play with it for ten minutes and then your sister can play with it for ten minutes. He sets a timer to keep track of the time.

❑ Fair
❑ Not Fair

Your mom is really busy, but you want her to take you to the pool. She says that if you help her do some chores at home in the morning, she will take you to the pool in the afternoon.

❑ Fair
❑ Not Fair

You and your friend are collecting stickers. She tells you that if you give her three of your animal stickers, she will give you three of her animal stickers.

❑ Fair
❑ Not Fair

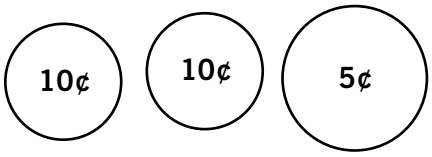
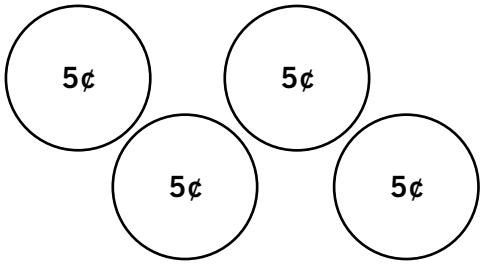
You notice that your friend has some baseball cards that you like. You ask if you can buy one for a dollar. He says you would have to pay two dollars, but then he sells it to another friend for a dollar.

❑ Fair
❑ Not Fair

You and your friends are playing foursquare on the playground. When you hit the ball out of the lines, they say you have to go out. When they do the same thing, they say they can stay in the game.

Sheet 9: Coin Exchange Activity

Directions: Show your partner a group of coins, with a value of $1.00 or less. Record your coins in the first column below. Then tell your partner you want to make a trade or an exchange. Your partner should give you a new set of coins. It could be a group of coins that makes the same or equal value but with a different combination of coins, which would be a fair trade. Or it could be a group of coins with a value that is not equal to/less than what you made, which would be an unfair trade. Record these coins in the second column below. Then decide whether you thought your partner gave you a fair trade or an unfair trade and check the correct box to the right.

Your Coins	Trade or Exchange	Fair	Unfair
Example: 25¢ 		❑	❑
1.		❑	❑
2.		❑	❑
3.		❑	❑

Your Coins	Trade or Exchange	Fair	Unfair
4.		❑	❑
5.		❑	❑
6.		❑	❑
7.		❑	❑
8.		❑	❑

LESSON SIX: Cocoa Farmers Simulation

ESTABLISHED GOAL
Students will gain further insight into how Fair Trade and non-Fair Trade practices impact the lives of cocoa farmers.

FOCUSING QUESTION:
What is fair trade?

MATERIALS & EQUIPMENT:
- Brown modeling clay or construction paper and
- Copies of Sheet 10: Dollar bill manipulatives, cut (enough for each pair of students to have 20)
- Copies of Sheet 11: Farmer Checklist, enough for each pair of students
- Multiple copies of Sheet 12: Needs Cards, cut out and separated
- Copy of Sheet 13: Station Signs, cut out
- Copies of Sheet 14: Fair Trade Farmer Labels, cut, enough for
- each student
- Tape to attach Fair Trade Farmer Labels to students
- Lens Tri-Venn, one per student

This lesson is adapted, with permission, from Global Exchange's *Sweet Smarts* Fair Trade Cocoa curriculum unit, available for free download from http://www.globalexchange.org/sites/default/files/ChocolateCurriculum.pdf

Partner Activity: Simulation

Part One: Growing Beans.

1. Tell students: "You are going to experience what happens to cocoa farmers when they are paid for their cocoa beans. You will do the activity twice. During the first round you will be non-Fair Trade farmers and during the second round you will be Fair Trade farmers. First, you will "grow" your cocoa beans by making them either out of clay or paper. You will have five minutes to make the beans and you should try to make at least 25 beans. (Five minutes assumes that the students are cutting the beans out of paper, but less time may be required if they are making the beans out of clay. A little more time may be necessary for lower grades.)
2. Stop the students when the time is finished. You may want to mention that farmers' harvests are often different, just like the students have completed different numbers of beans in the time allotted, because of different conditions such as weather, pests, farming methods, etc.
3. Pair up the students, have each pair pool their beans and then distribute beans so that each pair has 50. Tell the students they now have their harvest and these are the beans they will be selling to earn money.
4. Remind students that it is actually very hard work to produce cocoa beans, and it takes a long time. Review the steps cocoa farmers take to produce beans (growing, harvesting, fermenting, drying).

Part Two: Selling Beans/Earning Money

1. Write this on the board: Non-Fair Trade Cocoa Beans = Earn $1 for 5 beans, Fair Trade Cocoa Beans = Earn $2 for 5 beans
2. Tell students you are the trader, who will buy cocoa beans from the farmers for chocolate companies. The money they will earn is written on the board. Each pair of students will put their beans in groups of 5 to sell you their beans. Ideally, students should be seated so they can view the transactions (A circle is probably optimal, if class size allows.)
3. Explain to the students that these are not the actual amounts that farmers earn, but it will help give them an idea of what it means to farmers to earn a higher price for their cocoa beans.
4. Go around to each pair to buy their beans and say, "You are earning the non-Fair Trade price for your beans. You have 50 beans, so your pay is 10 dollars total. If desired, have them help you figure out their pay.

LESSON SIX: Cocoa Farmers Simulation continued p2

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Part Three: Acquiring Basic Needs.

1. Ask the students: "What are people's most basic needs?" Have them share their ideas and guide them to the agreement that basic needs are food, shelter, clothing, education/school and healthcare/doctor visits.
2. Put out station signs with corresponding cards at five separate stations. Give each pair of students Sheet 11: Farmer Checklist. Tell students that they will now work with their partner to use the money they have earned to try to purchase the things they need to take care of themselves and and their families. Read and explain the directions on the checklist sheet.
3. Pairs will go to stations and pay for needs cards, while you supervise the stations. Pairs should take cards purchased back to their seats and fill out the checklist. They should keep the cards together on one side of their work space. After completing the sheet, students can discuss the questions on the sheet with their partners. Options: Have each pair of students discuss the questions with another pair of students and/or have students write responses to the questions.

Partner Activity:

Round Two, Simulation

1. Repeat parts two and three above with same partners. This time students will be Fair Trade farmers and receive the Fair Trade price for their beans. The teacher is the Fair Trade cooperative, which buys beans from Fair Trade farmers. Give each student a Fair Trade Farmer label to wear.
2. When you buy the beans from the students during this round, say: "You are earning the Fair Trade price for your beans. You have 50 beans, so you will earn 20 dollars total." If desired, have them help you figure out what they have earned. Pairs purchase cards, fill out checklists and discuss questions as they did in the first round. Have them put the cards from this round together on the other side of their work space.

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Class Activity: Discussion/Reflection

1. Bring students back together as a whole group. Students should be able to refer to their checklists and the two sets of cards they purchased. They can compare the cards they purchased during the first round with the cards they got during the second. Facilitate a discussion using the questions on the checklist sheet as a guide.
2. Remind the students of the different prices/costs of the chocolate bars they tasted. Refer back to their ideas about why the chocolate bars had different prices. Ask them if they have any new ideas now. Encourage the understanding that when companies pay more for cocoa beans to make chocolate, their products may become more expensive. Confirm that students understand that Fair Trade farmers earn more.
3. Help them make the connection between what they thought a fair trade was and what fair trade farmers earn for their beans: Fair trade is fair because the farmers receive the a fair price for their cocoa, which enables them to better provide for themselves and their families.
4. Ask students: Would you prefer to be Fair Trade farmers or non-Fair Trade farmers? Why?
5. Ask students to reflect filing in a Lens tri-Venn, each pair of students completes one fore a fair trade and one for the non fair trade chocolate.

Sheet 10: Dollar Bill Manipulatives

Names_____

In order to provide for yourself and your family, you need to get the things on the list below. You must have shelter and food for your family first, then clothing, before you can visit the doctor or send children to school. Go to the different stations in order to buy these things for your family. At the station, pay the money required and then take the cards you paid for. Then fill out the form below, circling yes or no. Think about the questions below and discuss them with your partner.

Round One: Non-Fair Trade Farmer

Could you provide this basic need?

	Food*	❑ YES	❑ NO
	Shelter*	❑ YES	❑ NO
	Clothing*	❑ YES	❑ NO
	Doctor Visit*	❑ YES	❑ NO
	School*	❑ YES	❑ NO

Questions to think about:

- Did you provide all the things your family needed?
- If not, which things could you provide and which things couldn't you provide?
- Why did that happen?
- What was the experience like for you?What did you learn about what it's like to be a cocoa farmer?

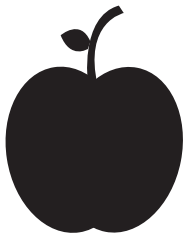
Round Two: Fair Trade Farmer

Could you provide this basic need?

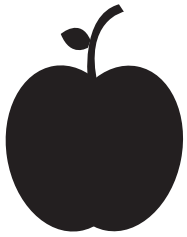
	Food*	❑ YES	❑ NO
	Shelter*	❑ YES	❑ NO
	Clothing*	❑ YES	❑ NO
	Doctor Visit*	❑ YES	❑ NO
	School*	❑ YES	❑ NO

Questions to think about:

- Did you provide all the things your family needed?
- If not, which things could you provide and which things couldn't you provide?
- Why did that happen?
- What was the experience like for you?
- What did you learn about what it's like to be a cocoa farmer?



Food
$4.00



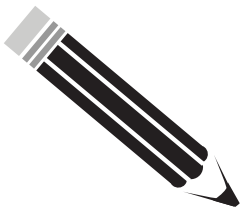
Food
$4.00

Clothing
$3.00

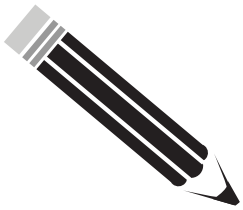
Clothing
$3.00

Shelter
$3.00

Shelter
$3.00



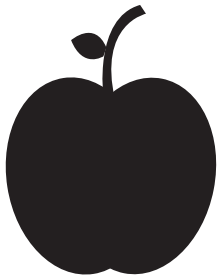
School
$5.00



School
$5.00

Doctor Visit
$5.00

Doctor Visit
$5.00



Food

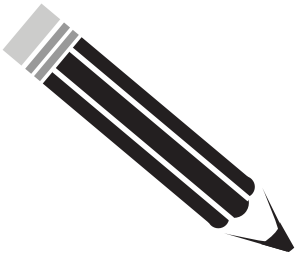
$4.00

Clothing

$3.00

Shelter

$3.00



School

$5.00

Doctor Visit

$5.00


FAIR TRADE
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LESSON SEVEN: Paper Towel Inquiry—I Planning

ESTABLISHED GOAL:
Students will explore the differences between multiple brands of the same type of product. Using inquiry skills, they will be able to test claims on packaging to see if they are accurate. They will learn to compare different products to assess which is the better to purchase.

PREREQUISITE:
This lesson will draw on students' inquiry and scientific method skills.

FOCUSING QUESTION:
How can I determine the quality and value of a product?

MATERIALS & EQUIPMENT:
- 4 brands of paper towels (ideally include at least one recycled/ "green" brand– eg. Seventh Generation, a name brand, and a store brand)
- White board/Markers
- Poster of Scientific Method/Inquiry Process
- Experiment Planning graphic organizer, like: http://barnett.nebo.edu/sites/barnett.nebo.edu/files/Scientific%20Method%20Graphic%20Organizer.pdf

NOTE: These lessons are based on the GEMS *Paper Towel Testing* book, available at: http://lhsgems.org/GEM230.html

1. Introduce the activity by recalling with students the ways they get information about products (labels) and the factors they might consider in purchasing decisions (local vs. non-local, distance the product has traveled, fair trade). Use this opening discussion to engage in a reflective review of what students have learned so far, and make note of any areas that students need more time to explore and understand.
2. Ask students if they can think of any other factors to consider when deciding to purchase a project.
3. Tell students that the next few lessons will explore the quality of a products– how well does it live up to the claims on the package, and what makes a product "good quality." Discuss the meaning of *quality* and *value*. Explain that through a series of inquiry experiments, students will determine which is the best type of paper towel to buy.
4. Ask students: What are some of the qualities you might look for in a paper towel? (Strength, Absorbency, Recycled, Price, Softness, Looks.)
5. Display the four, unopened, paper towel packages. Ask students to call on their label detective skills: What can we learn just from looking at the product? Pass the rolls out and tell students to look at labels. List the label claims for each product on the board. Ask students: How do we know that these claims are accurate? What can we do to find out? (We can conduct experiments.)
6. Divide students into groups of 4-5 students. Explain that each group will conduct an experiment to test two of the claims: absorbency and strength.
7. Use the remainder of this lesson to review the scientific method. Ask students to remind you of the steps, and the important information about each step. Discuss the of specifics of the different types of data that they could collect, which types of data will yield results that will address their question, how to measure the data. Discuss the concept of a fair test, meaning that all products must be treated equally. Also discuss the concept of variables and controls, using examples. Ask students if they feel ready to design their experiments?
8. Ask each group to meet and brainstorm. Each group should complete the following experiment planning tool, planning an absorbency test, up through the procedure section.
9. Collect each group's experiment plan and review and follow up with groups before the next phase.

LESSON SEVEN: Paper Towel Inquiry II—Absorbency

ESTABLISHED GOAL:
Students will carry out an experiment comparing the absorbency of different paper towel brands, using the inquiry method.

FOCUSING QUESTIONS:
- How do I determine the quality of a product?
- How do I carry out a fair test experiment?

MATERIALS & EQUIPMENT:
- 4 brands of paper towels
- Materials students needed for tests (see students' materials lists: water, towels, timers, plastic tubs, measuring cups, etc…)
- Students' experiment proposals
- Absorbency Test Sheet, one per group

VOCABULARY:
Quality—degree of value or excellence
Value— the worth of good or service
Absorbency—ability to soak up liquid or moisture

NOTE: These lessons are based on the GEMS *Paper Towel Testing* book, available at: http://lhsgems.org/GEM230.html

Prior to beginning this session, review students' proposed experiments, and consult with students groups where necessary to ensure sound experiment design. If necessary, give groups additional time to revise their experiment plan. Assemble the materials students requested for their experiments.

1. Introduce today's "lab" by telling students that today they will have a chance to carry out some experiments testing the absorbency of the paper towels. Remind them that as scientists they need to conduct themselves accordingly.
2. Return the students' proposed experiment worksheets to each group. Ask students to review their plan and materials list, so that they are refreshed and ready to go.
3. Distribute the Absorbency Test Sheet and review it with students. Remind students of importance of note taking and data collection in their experiment.
4. Instruct students to gather their materials and begin their experiments. Assist with experiments as needed.
5. When students have completed their experiments, give them a few minutes to clean up and prepare to share their results.
6. Reconvene as a whole class and share out each groups' results.. It can be helpful to compile similar data on a chart on the board. Discuss the results with students by asking: Did people get the same results, or was it varied? Were the experiments different? How do you know it was a fair test? Which paper towel performed the best?

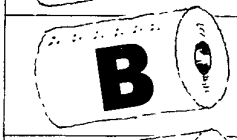
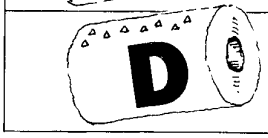
ASSESSMENT:
- Students participation during the lab, collaboration with group member, and contributions to class discussion can be used to gauge their performance.
- If you choose to assess more formally, students can write a lab report outlining the experiment they've just completed.

Tip: Often students use paper towels, plastic tubs, water, timers, and measuring cups. Various experiments will be designed, for example a timed soaking the paper towels ,and then squeezing out the towel into the measuring cup, or measuring the amount of water left in the basin.

NAME _____

Absorbency Test Results

Draw and describe your test for absorbency.

	RESULTS OF TESTS	POINTS
		
		
		
		

most absorbent ..... 4 points
second most absorbent ..... 3 points
third most absorbent ..... 2 points
least absorbent ..... 1 point

LESSON SEVEN: Paper Towel Inquiry—Ill Strength

ESTABLISHED GOAL:
Students will design and carry out an experiment to test the wet strength of a paper towel.

FOCUSING QUESTIONS:
- How do I determine the quality of a product?
- How do I carry out a fair test experiment?

MATERIALS & EQUIPMENT:
- 4 brands of paper towels
- Materials needed for testing (weights, cups, water, etc…)
- Experiment Planning graphic organizer
- Wet Strength Test Sheets

NOTE: These lessons are based on the GEMS *Paper Towel Testing* book, available at: http://lhsgems.org/GEM230.html

1. Introduce the activity by asking student to recall what you did in the last 'Paper Towel Lab' (carried out tests of absorbency in 4 different brands of paper towels). Tell students that today they will design and carry out experiments to test another quality- strength.
2. Review the experiment design process with students, making sure to highlight fair tests and data collection. Distribute the Experiment Planning graphic organizer to each group. Tell each group what materials you have available for today's testing (material may be laid out on a table for students to browse). Instruct each group to plan their experiment using the planning tool, up through the procedure section. When they think they are ready, they should come get your approval on their plan, and then get their materials.
3. As you approve experiment designs, students begin work. Assist with experiment planning and process where needed.
4. When students have completed their experiments, give them a few minutes to clean up and prepare to share their results.
5. Reconvene as a whole class and share out each groups' results.. It can be helpful to compile similar data on a chart on the board. Discuss the results with students by asking: Did people get the same results? Or was it varied? Were the experiments different? How do you know it was a fair test? Which paper towel performed the best?

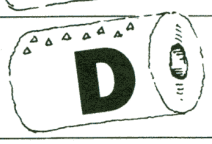
ASSESSMENT:
- Students participation during the lab, collaboration with group member, and contributions to class discussion can be used to gauge their performance.
- If you choose to assess more formally, students can write a lab report outlining the experiment they've just completed.

Tip: Materials frequently used are plastic tubs, cups, rubber bands, weights, water, and timers. Many experiment will be designed. A common design is often a timed soaking the paper towels, then wrapping the paper towel around a cup with a rubber band and stacking weights on top of the towel.

NAME _____

Wet Strength Test Results

Draw and describe your test for wet strength.

	RESULTS OF TESTS	POINTS
		
		
		
		

strongest when wet ..... 4 points
second strongest when wet ..... 3 points
third strongest when wet ..... 2 points
weakest when wet ..... 1 point

LESSON SEVEN: Paper Towel Inquiry—IV Other Factors

ESTABLISHED GOAL:
Students will compile their data from earlier experiments, and consider additional factors that might influence the decision about which paper towel brand to purchase. Finally, students will reflect back on the previous experiments, and synthesize their conclusions as they make a final decision on which paper towel they would purchase.

FOCUSING QUESTIONS:
- How do I determine the quality of a product?
- How do I carry out a fair test experiment?
- Which factors are most important to me in making a purchasing decision?

MATERIALS & EQUIPMENT:
- 4 brands of paper towels
- Absorbency/Wet Strength Sheets
- Price Comparison Sheets
- Other Factor Sheets
- Paper Towel Decision Sheets
- Lens Tri-Venn

NOTE: These lessons are based on the GEMS *Paper Towel Testing* book, available at: http://lhsgems.org/GEM230.html

1. Introduce the activity by recalling with students the previous experiment on testing strength of 4 different brands of paper towels. Ask students to retell the inquiries you have completed so far. Ask students if they recall the list of things to consider when purchasing that they brainstormed earlier (price, production process, production location, appearance).
2. Pass out worksheets and compile the data from the earlier experiments. As a class, go through each brand and add information to the worksheets. Have a discussion of each quality factor as you compile the data— Why would we care where it was made? How it was produced?
3. Once the data is compiled, students will rate which brand they would chose to purchase. (Show sample of information and paragraph as a model and analyze the response with students. Then create a checklist of requirement for their written response. Release students to write their independent response. Note: this could be extended to a more formal opinion with supporting evidence constructed writing piece).
4. Gather the group for a final discussion. Ask students to share their choice and their supporting reasons for their decision.
   - Who picked what towel?
   - Why? What influenced your decision?
   - What factors were the most important to you? Why?

ASSESSMENT:
- As an exit ticket, or homework assignment, ask students to complete a tri-Venn diagram, looking at paper towels from the three overlapping perspectives.
- To assess transfer/enduring understanding, suggest a new product for students to consider using the same factors (food item, personal care product, toy).

PAPER TOWEL TESTS

Question: How was this paper towel made (recycled? bleached?)? Then give points (4=best 1=worst) based on your opinion of the answers.

A:

B:

C:

D:

Question: Where was this paper towel made? Then give points (4=best 1=worst) based on your opinion of the answers.

A:

B:

C:

D:

Question: What do these towels look like? Then give points (4=best 1=worst) based on your opinion of the answers.

A:

B:

C:

D:

PAPER TOWEL DECISION

Name:

In YOUR own opinion, rank from most important (6) to least important (1):

_____Absorbency

_____Strength

_____Cost

_____What it is made out of

_____Where it was made

_____What it looks like

I picked brand _____ _____of paper towel which was made by _____.

The chose this paper towel because…

Name: _____

ABSORBENCY

	Group 1	Group 2	Group 3	Group 4	Group 5	total	avg.
A							
B							
C							
D							

WET STRENGTH

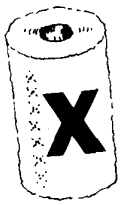
	Group 1	Group 2	Group 3	Group 4	Group 5	total	avg.
A							
B							
C							
D							

NAME _____

Cost Per Sheet

When you clean up a spill, you must tear off at least one paper towel sheet. How much does that one sheet cost?

EXAMPLE: Suppose brand X costs 67¢ per roll. The package says there are 91 sheets in one roll. To find the cost per sheet:



Cost per Sheet $= \frac{\text{cost per roll}}{\text{sheets per roll}} = \frac{67\ ¢}{91\ \text{sheets}} = 0.7\ ¢$ per sheet

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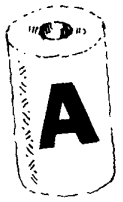
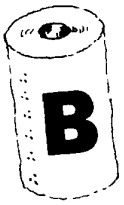


Cost per Sheet $= \frac{\text{cost per roll}}{\text{sheets per roll}} = \frac{\square\ ¢}{\square\ \text{sheets}} = \square\ ¢$ per sheet



Cost per Sheet $= \frac{\text{cost per roll}}{\text{sheets per roll}} = \frac{\square\ ¢}{\square\ \text{sheets}} = \square\ ¢$ per sheet

Cost per Sheet $= \frac{\text{cost per roll}}{\text{sheets per roll}} = \frac{\square\ ¢}{\square\ \text{sheets}} = \square\ ¢$ per sheet

Cost per Sheet $= \frac{\text{cost per roll}}{\text{sheets per roll}} = \frac{\square\ ¢}{\square\ \text{sheets}} = \square\ ¢$ per sheet

LESSON EIGHT: Product Comparison

ESTABLISHED GOAL: Students will compare use their knowledge of how to compare two products to decide which of two brands of ice cream they would buy. They will create a short constructed paragraph using evidence and their opinions to decide which ice cream to purchase.

FOCUSING QUESTION:
How do I decide which product to purchase?

MATERIALS & EQUIPMENT:

- Seventh Generation cleaning product (Empty bottle or photo copy of labels)
- Formula 409 cleaning product (Empty bottle or photocopies of labels)
- Ice cream– two brands (Ben & Jerry's, store brand)
- Photocopies of the ice cream labels
- Cups/bowls, spoons, napkins
- Paper for constructed responses
- Lens Tri-Venn diagram, one for each student

1. Introduce the activity by telling students that they will now have a chance to test the inquiry skills they practiced with the paper towel. Review with students the factors that they considered when evaluating which paper towel brand to purchase (strength, absorbency, price, content, manufacturing process).
2. Explain that students will now use the same process to evaluate two other products. The first—cleaning spray -will be done together. Ask students to brainstorm qualities and factors to consider. As students suggest ideas, look at the information for each factor for each product and list on the board.
3. Once all the factors have been listed on the board, have students vote for which product is better in respect to each factor. Ask for a student from each side to explain their thinking. Put a star by the one that received the most votes. Evaluate stars to see which product is the best choice. Explain to the students that they will do this same process for another product—ice cream! They will compare two brands of ice-cream: a store brand and Ben and Jerry's. Tell students they will look for important information, form their opinion, and then create a short constructed paragraph stating their decision and evidence to support their choice.
4. Distribute copies of the labels from the two different brands of ice-cream. Students will identify important information on their own and compare each ice cream in this category based on their own opinion.
5. Give students a sample of both kinds of ice cream. Let them complete a taste test. Once they've finished, they should review all of factors and then decide which ice cream they would purchase, then create their short constructed paragraph. (Leave time to review elements of the paragraph, if necessary).
6. Once students have completed their writing, have them share their results.
    - Who picked what ice cream?
    - Why? What influenced your decision?
    - What factors were the most important to you? Why?

ASSESSMENT:

- Participation in class discussions.
- Students can reflect using the Lens Tri-Venn
- Each student should have their own product comparison chart with ratings.
- Each student should have a short constructed paragraph with their choice clearly stated and evidence to support that choice.

LESSON NINE: Making the Best Of It—My Choices

ESTABLISHED GOAL:
Students will synthesize their learning from the unit as they practice making consumer decisions under a variety of circumstances.

FOCUSING QUESTION:
What is the best choice I can make given these circumstances?

MATERIALS & EQUIPMENT:
- Sets of 3 different colored six-sided dice, one set per group of 3-5 students
- Lens Tri-Venn, 1 per student

1. Now that students have completed the previous lessons, they should have a sense of how to evaluate some of their choices as consumers. If we have unlimited means, resources, and access, most of us would make the "least unsustainable" choices possible. However, this is usually not the case, and as consumers we need to learn how to make the best choice given our resources. We make different choices under different circumstances. Discuss this with students.
2. Review with students the topics covered in earlier lessons:
    - Where Did This Product Come From? (production system)
    - Why Buy Locally? (local versus "Big Box" stores)
    - Food Miles (distance from farm to plate)
    - Label Detectives (advertising, ingredients, "value-added")
    - What is Fair Trade? (equity for workers)
    - Paper Towel Inquiry (assessing quality, value, worth)
    - Product Comparison (making choices)

    Talk about how students can apply what they learned in these lessons to this game (AND to being consumers in real life!)
3. Discuss with students our other options when we need something: Do we always have to buy something new at a store? What are the alternatives? (Thrift/consignment stores, libraries, borrowing from a friend, making do with what we already have, et cetera). Brainstorm with students creative solutions to meeting their needs.
4. Explain to students that they will now play a game that will allow them to creatively problem-solve and practice making choices as consumers. Make sure students understand that there is not a "right" and "wrong" choice, there is only "their" choice given a certain set of circumstances, and two students under the same circumstances may make different decisions. Explain the game to students: each of the different colored dice represent different variable (listed below)- post the list on the board or overhead. Students will take turns and roll the dice to determine their circumstances, and then figure out how they will meet their needs and make the "least unsustainable" choice given their circumstances. Remind students to consider the "Lens Tri-Venn" perspectives as they make their choices, and urge them to make the best possible choice given their circumstances.
5. Roll the dice and provide students with an example. Use the Lens Tri-Venn to discuss your choice. Tell students to be thoughtful and creative with their solutions.

Three different colored dice:

Die ONE: FUNDS	Die TWO: TRANSPORTATION	Die THREE: WHAT YOU NEED
1. no money	1. walking	1. book
2. $5.00	2. city bus	2. winter coat
3. $10.00	3. car	3. chocolate bar
4. $2.00	4. city bus	4. dinner for your family
5. $20.00	5. walking	5. present for care-giver
6. $50.00	6. car	6. DVD

ASSESSMENT:
Once all students have had a chance to play , explain that students will now select one of their sets of circumstances and use the Lens Tri-Venn tool to explain their choices. Distribute the tri-Venn. Students can write out their response if you choose.

EXTENSION:
Students can create additional scenarios to pose to each other. Alternatively, students can think of a choice they have made in real life and write about how they made the "best choice" given their circumstances.

LESSON TEN: Literacy-Based Assessment

This lesson may be used to help students synthesize the concepts they have explored through class discussion and analysis of the text and students understanding of the concepts. Alternatively, this lesson may be used as a written assessment

ESTABLISHED GOAL: Students will analyze a text using the skills they have gained thus far in the unit.

FOCUSING QUESTION:

- How can economic development impact the environment?
- Whose responsibility is it to protect the environment?
- How are living things, the environment, and the economy connected?

MATERIALS & EQUIPMENT:

- Lens tri-Venn diagram, one for each student

Suggested Text:

- *The Lorax* by Dr. Seuss (prompts provided)

Engaging students in literary analysis can be used to assess students' understanding of the concepts covered in phase one of this unit. If you choose to use this lesson as an assessment, decide how much class discussion you want to allow before giving students an opportunity to respond independently.

Note on text selection

This assessment was originally conceived using Dr. Seuss' *The Lorax*. Prompts are provided on the following page for *The Lorax*. However, this text is most appropriate for younger students. Students can apply this thinking to analyze a variety of texts more appropriate for their grade or reading level. Current events, news articles, as well as works of literature can be analyzed using this lens.

Product	Process	Skills & Understanding Assessment
Lens tri-Venn	Collaboratively	Students' collaborative understanding
Lens tri-Venn	Independently	Students' independent understanding of sustainable economics & triple bottom line
Lens tri-Venn Written Analysis	Collaboratively, Independently	Students' collaborative understanding of sustainable economics, and students' independent writing skills
Lens tri-Venn Written Analysis	Independently, Independently	Students' independent understanding of sustainable economics and students' writing skills

Assessment

Part I: Analysis:

Students read and then analyze the text. First by identifying the story elements as they relate to the three spheres on the Lens tri-Venn. Students then use this graphic organizer to write an analysis of the text using the "lens of sustainability".

Part II: Creative Problem-Solving

Students responses could be in the form or a written response or artistic representation. Students may work independently or in groups. Ask students to respond to the prompts:

- How could you rewrite this story with a more sustainable outcome?
- What different choices could have been with respect to the environment, equity, and the economy?

The Lorax— Literary Analysis

The following questions could guide students as they analyze Dr. Seuss's *The Lorax*.

- In the story, how did the thneed industry affect the physical environment?
- How did these environmental conditions affect local plants and animals?
- How did thneed production affect Once-lers and people?
- Based on your observations from this story, was this method of manufacturing thneeds sustainable?
- How would you define the phrase "sustainable development?"
- How could the Once-ler have manufactured thneeds in a more sustainable manner?
- Whose responsibility is it to protect the environment and ensure sustainable practices?
- What federal, state, and local agencies exist to protect the environment?

Activities

- Ask students to draw a diagram showing the flow of material(s) and energy used to produce a thneed.
- Ask students to pick a character from the book and write a speech advocating for or against environmental
- regulations in the Land of the Truffula Trees.
- Inform students that they are to imagine they are members of a local environmental regulation agency and must determine how they would address the environmental concerns in the Land of the Truffula Trees.
- Ask students to assess the sustainability of another product or service.
- Ask students to locate a news article that describes how the environment is being impacted by economic development.

Adapted from: http://www.ie.unc.edu/erp/resources/Lorax_and_Sustainable_Development.pdf

LESSON ELEVEN:
Putting It All Together– School Supply Purchasing Project

ESTABLISHED GOAL:
Students will explore, assess and make recommendations for school supply purchasing.

FOCUSING QUESTION:
How can apply our learning and meet our needs for school supplies in the best way?

MATERIALS & EQUIPMENT:
- Access to internet
- Lens Tri-Venn
- *Optional: Healthy Neighborhoods/Healthy Kids Guide*

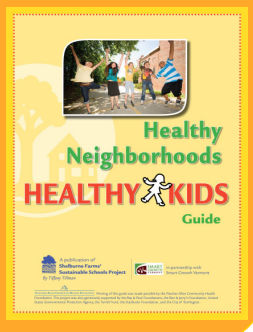
NOTE: Before starting students on this project its advisable to investigate school purchasing policy, and connect with your school's purchaser to enlist his/her help and/or support for this project. The intent is that students work *with* the school staff in a collaborative manner.

In this project students will apply their learning from part one the unit as the investigate school supply purchasing and make recommendations for future purchasing. This is a great opportunity to assess what students have learned over the course of the previous lessons. This project can also be a good ending point if time is limited and part two can not be completed.

1. Discuss with students all that they have learned about being thoughtful consumers. Tell students they will now have an opportunity to apply what they've learned and make a difference at their school. Students will be investigating school supply purchasing. To accommodate larger numbers of students, it can be helpful to brainstorm together different types of purchases the school makes, and assigning groups to these different types of purchases. Students may also express interest in working with food service staff to explore food purchasing. More resources to support food service change can be found at the Vermont FEED (Food Education Every Day) website: http://www.vtfeed.org/tools
2. Explore with students ideal criteria for purchasing school supplies– create a "report card" (see *Healthy Neighborhoods/Healthy Kids Guide* sections on 'Quality of Life' and 'Report Card'). Help students create a 'report card' against which to measure current school purchases.
3. Help students identify who makes the purchases in your school. Brainstorm with students questions to ask in the investigation process:
    - Who makes the purchases?
    - What guidelines do they have to follow?
    - Where are supplies currently purchased? Why?
    - What is the purchasing budget?

    It may be helpful for students to first share what they've learned with the school purchasing officer and to explain their project (see note in sidebar).
4. Students should then collect data on current school purchasing. Once the data is collected, students can use the report card they generate to assess the current school purchases. Students should use the Lens Tri-Venn to analyze these current purchases, and generate some initial ideas for improvement.

This project is based on the ***Healthy Neighborhoods/ Healthy Kids Guide*** *(HN/HK)*. HN/HK is a service-learning and civic engagement curriculum framework that is easily adaptable to a variety of student investigations and service projects. Download a copy of the full guide from the Sustainable Schools Project's website: http://www.sustainableschoolsproject.org/tools-resources/hnhk



5. Once students have a sense of current purchasing, they can begin an investigation of alternatives. Have students use the internet to explore options. This is a great opportunity for some media literacy lessons as well, as students learn to evaluate online purchases, paying attention to details such as shipping, source, and other considerations. Students will want to evaluate local purchasing options as well, so access to a local phone book, or even a visit to a local office supply store may be useful. (Note: this is a good opportunity to reiterate the difference between a locally-owned, independent business and a chain store located nearby.)
6. Once students have identified ways to improve school supply purchasing, have them use the Lens Tri-Venn to elaborate on their ideas. Note that students may find that the current purchasing is the best choice, they may find alternative sources for purchasing, or they may suggest other means of improvement, like using less supplies. What is key is that students can explain their reasoning.
7. Students should formalize their recommendations by drafting a proposal that outlines their suggestions and reasoning.
8. Finally, students should share their recommendations back with school purchasing staff and see what emerges from the conversation– purchasing changes may be made due to their recommendations!

LESSON ELEVEN:
Putting It All Together– School Supply Purchasing Project

ESTABLISHED GOAL:
Students will explore, assess and make recommendations for school supply purchasing.

FOCUSING QUESTION:
How can apply our learning and meet our needs for school supplies in the best way?

MATERIALS & EQUIPMENT:
- Access to internet
- Lens Tri-Venn
- *Optional: Healthy Neighborhoods/Healthy Kids Guide*

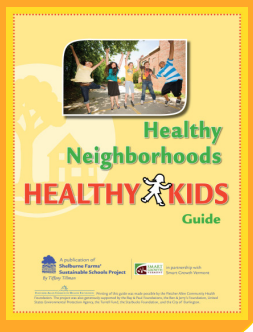
NOTE: Before starting students on this project its advisable to investigate school purchasing policy, and connect with your school's purchaser to enlist his/her help and/or support for this project. The intent is that students work *with* the school staff in a collaborative manner.

In this project students will apply their learning from part one the unit as the investigate school supply purchasing and make recommendations for future purchasing. This is a great opportunity to assess what students have learned over the course of the previous lessons. This project can also be a good ending point if time is limited and part two can not be completed.

1. Discuss with students all that they have learned about being thoughtful consumers. Tell students they will now have an opportunity to apply what they've learned and make a difference at their school. Students will be investigating school supply purchasing. To accommodate larger numbers of students, it can be helpful to brainstorm together different types of purchases the school makes, and assigning groups to these different types of purchases. Students may also express interest in working with food service staff to explore food purchasing. More resources to support food service change can be found at the Vermont FEED (Food Education Every Day) website: http://www.vtfeed.org/tools
2. Explore with students ideal criteria for purchasing school supplies– create a "report card" (see *Healthy Neighborhoods/Healthy Kids Guide* sections on 'Quality of Life' and 'Report Card'). Help students create a 'report card' against which to measure current school purchases.
3. Help students identify who makes the purchases in your school. Brainstorm with students questions to ask in the investigation process:
    - Who makes the purchases?
    - What guidelines do they have to follow?
    - Where are supplies currently purchased? Why?
    - What is the purchasing budget?

    It may be helpful for students to first share what they've learned with the school purchasing officer and to explain their project (see note in sidebar).
4. Students should then collect data on current school purchasing. Once the data is collected, students can use the report card they generate to assess the current school purchases. Students should use the Lens Tri-Venn to analyze these current purchases, and generate some initial ideas for improvement.

This project is based on the ***Healthy Neighborhoods/ Healthy Kids Guide*** *(HN/HK)*. HN/HK is a service-learning and civic engagement curriculum framework that is easily adaptable to a variety of student investigations and service projects. Download a copy of the full guide from the Sustainable Schools Project's website: http://www.sustainableschoolsproject.org/tools-resources/hnhk



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7. Students should formalize their recommendations by drafting a proposal that outlines their suggestions and reasoning.
8. Finally, students should share their recommendations back with school purchasing staff and see what emerges from the conversation– purchasing changes may be made due to their recommendations!

LESSON ONE: From Consumer to Producer/Market Research

ESTABLISHED GOAL: Students will begin to switch their thinking from consumer to producer. They will be introduced to our class business project, and explore the story of other sustainable businesses.

FOCUSING QUESTION:
What makes a business sustainable?

MATERIALS & EQUIPMENT:
- Access to computer lab
- Market Research worksheets, 1 per group
- Lens tri-Venn

Sustainable Businesses:
Ben & Jerry's Ice Cream
http://www.benjerry.com/company/

Tom's of Maine
http://www.tomsofmaine.com/business-practices

Seventh Generation
http://www.seventhgeneration.com/seventh-generation-mission

Hope for Women
http://www.hopeforwomen.com/lifestyle/about/

Ten Thousand Villages
http://www.tenthousandvillages.com/about-us/

Green Mountain Coffee
http://www.greenmountaincoffee.com/Our-Story

City Market
http://www.citymarket.coop/about

1. Introduce this phase of the unit to students by reflecting on the consumer phase of the unit. Ask students what the key qualities or considerations were in making a decision to purchase a product. Ask students if part one has had an impact on their thinking when they decide to make a purchase. Explain that in part two of the unit, they will be switching their thinking from being a consumer who buys products to being a producer who creates and sells products. They will use everything they know about what consumers are looking for to create a product they will purchase.
2. Explain the process of creating a class business by providing an overview of the steps and process: Students will work in groups and brainstorm possible products they can create, conduct a market survey, and then write a mission statement, business plan, and pitch to an investor for their groups' proposed business. Together with the investor ,the class will select one groups' idea, and then begin the business. Ask for questions and clarify the process where needed.
3. (In Computer Lab) Tell the students that we can look to some other businesses for inspiration. Divide students into groups of 3-4 students (these might be the groups they remain in for the business development portion of the unit). Assign each group a different business to explore. If necessary, spend some time modeling how to navigate around the website. (These businesses include, but are not limited to, the sustainable businesses listed on left.)
4. Ask each group to explore the company's website and complete their worksheet and/or the lens tri-Venn diagram. Review group work skills if necessary.
5. Once students have completed their worksheets, gather the group back together. Ask a representative from each group to share what they learned about each company.
6. Ask students what insights we can gain from these story? How did they incorporate sustainability into their product?
7. Wrap up the lesson by reviewing with students the requirements to run a sustainable business (It must help the economy, environment, and people. It also must be something people want or need. In other words, our customers must want to purchase it.

Market Research

Names:

Name of business:

Product(s) they sell:

Business' Mission:

Sustainability:
Environmentally:

Economically:

Socially:

Other Important Details or Facts:

LESSON TWO: Product Brainstorm

ESTABLISHED GOAL: Students will brainstorm ideas for a business. They will then share their ideas with their small group. Each group will select one product idea. Groups will then collaboratively begin to develop their product proposal.

FOCUSING QUESTION:
What sustainable product should we create and sell?

MATERIALS & EQUIPMENT:
- Individual Product Planning Worksheets
- Group Product Description Checklist

Note: In Part Two, the product description paragraphs can be done by hand, or using a collaborative writing program, such as GoogleDocs, or another found at: http://go2web20.net/
This approach would take more time, but would provide students with the opportunity to use collaborative Web 2.0 writing tools. Collaborative Web 2.0 writing tools allow students to see what other group members are writing as they develop their own parts of a common documnet.

Part One:

1. Explain to students that today they will begin to brainstorm with their group the possible products for our class business. Remind students that each group will eventually present their product idea, and finally one group's product will be selected to bring to production.
2. Ask students what the components of a sustainable business are: It must help the economy, environment, and people. It also must be something people want or need. In other words, our customers must want to purchase it. Tell students to use what they know about what consumers look for in a product to create something they will want to purchase.
3. List for students the other requirements of the business:
    - It also has to be done during school hours and be able to be completed by the end of the school year.
    - It needs to be realistic, it can't be something that will be so complicated or expensive that we cannot produce it.
4. Tell students that they will now brainstorm independently. Distribute one worksheet to each student, and explain that they should brainstorm as many ideas as they can think of. For each idea, students will fill out a new worksheet that includes a description of your product and a checklist of all of the requirements.
5. Conclude by asking students to share a few ideas.

Part Two:

1. Explain that students will now be sharing their ideas with their small groups. Each group will decide together on one idea, and will then write a product description. The idea chosen must meet all of the requirements. Ask students to discuss how to best present ideas, and how best to judge ideas. Review collaboration, team work, and decision-making strategies, if necessary.
2. Break students into groups and have them begin to share their ideas. Circulate as groups share and jump in as necessary.
3. Ask student to decide together which idea they will select to move forward. Help facilitate this process in each group as needed.
4. Debrief with students by asking: How did it go? Did you decide? Share ideas briefly.

Part Three:

1. Once students have decided on a product, distribute the Group Product Description Checklist. Students should develop their product description collaboratively, according to the checklist. See note in sidebar on options for collaborative writing.
2. Explain that groups will be describing their product as if you were selling it to your customers. Ask, Why would we want to do this?
   Ask students to brainstorm as a group all of the elements on the checklist. Then take elements and create paragraphs, revise and edit their work as necessary.

Individual Product Planning Sheet

Name:

1. What is your product?

2. How is it sustainable?
-Economic

-Social

-Environmental

3. Will people want or need this product? Why?

4. Can it be accomplished during school hours?

5. Is this product realistic? Is it too complicated or too expensive to make?

Group Product Planning Sheet

Names:

As a group, write a description of your product in paragraphs or essay format. Include the following in your description:

Paragraph 1:

- ☐ What is your product or service?
- ☐ What is its purpose?

Paragraph 2:

- ☐ What will it look like?
- ☐ How much will it cost?
- ☐ Why would your customers want it?
- ☐ Anything else your customer will care about?

Paragraph 3:

- ☐ What is your product made of or what materials will you use to perform your service?
- ☐ When and how will it be available?

Paragraph 4:

- ☐ What makes your product or service sustainable (economic, environmental, social)?

Final Check: Read your paragraphs. Ask yourselves:

- Was it clear?
- Did it make you want to buy it?
- Did it fit the requirements?

LESSON THREE: Market Survey I

ESTABLISHED GOAL: Students will learn about the purposes and formats of a market survey. They will identify potential customers and collaboratively create and distribute a market survey.

FOCUSING QUESTION:
How will we know if customers would be interested in our product?

MATERIALS & EQUIPMENT:
- Examples of Product Descriptions
- Product Description Checklist
- Groups' Product Description paragraphs (from previous lesson)

Part One

1. Introduce the activity by explaining to students that now that they have developed their product ideas, they will now learn how to use their potential customers to help support their product proposal. Remind students that one of the requirements for a business' product is that customers have to want or need it. Ask students if they have any ideas on how can they might figure out if customers might need or want their product? (***Ask*** our potential customers!)
2. Tell students that they will now learn how to create a *market survey*. Explain that a market survey is a survey that asks potential customers about their interest in a product. Today each group will create their own market survey. What they learn from their market survey will be included in their business proposal.
3. Ask students:
    - Who are our potential customers?
    - What do we want to know from them?
    - How will we ask them these questions?
    - What type of instructions does our survey need?
    - How will we distribute our survey?
    - When will we need it by?

    As they respond, take notes on the board.
4. Tell students that their next task as a group is to write one paragraph describing their product for potential customers. Show examples, and ask students to identify the elements in the examples. What makes a description persuasive?
5. Distribute product description checklists. Instruct groups to create their product description, using the checklist and the product description paragraphs they wrote earlier.
6. When groups finish, ask for groups to share their descriptions. Collect product descriptions. Tell students that you will compile their descriptions into a market survey. (Alternatively, students could be responsible for creating the survey.)

Part Two:

(Prior to Part Two, compile & create the Market Survey using groups' product descriptions).

1. Distribute the collective market survey to each student, and review it together. Discuss data collection, and error. Ask students what would happen to the results if we collected answers from the same people. Ask student how they might minimize error. Ask students to keep in mind they are collecting data from potential customers, not just peers and friends.
2. Tell students that their homework between now and the Market Survey II class (identify date for students) is to talk to as many potential customer as they can and collect data on the Market Surveys.

Recycled Toys

Our product is toys made out of recycled material we are going to sell toys for $3.00 and the toys will be dolls, puzzles, morocco, drums, and guitars. The price will be affordable if you want a toy it will be inexpensive, the purpose of our product is to help people who can't afford expensive toys. We'll help people who don't have any thing to play with. It will be available in early may. Our customers will get a money back guarantee if they are not satisfied.

T-Shirt Making

Our business is t-shirt making. We will use sustainable color dyes and you may choose from a variety of sayings that advertise sustainability and Lawrence Barnes sustainable school. The prices will be between $10 and $15 dollars for a shirt. You will receive your t-shirt one week after ordering it. You can choose one color and one saying per t-shirt. You will see a prototype of your t-shirt before you buy it to make sure you are content with it.

Car Wash

Our service is a car wash. Our purpose is raising money and washing cars. Our customers would want it because they want clean cars. We will use soap that is friendly to our earth. Our price is a good price so people will be willing to pay for it. The area will be in the back playground. We will limit the water and be careful of how much water we use. We will start this service when there is good weather and when there is dirty cars. The price for the wash is $5.00 for small cars and $10.00 for big cars. We will use half of our money for supplies and the other half will go back to our community. People will come with dirty cars and leave with a clean car and a smile on their face.

Bake Sale

Our service is a bake sale. In our bake sale we'll have brownies, cookies, and for refreshments we will have lemonade and water. We will try to use as much local ingredients as we can and we will use organic ingredients. The price of the product will not be cheap but won't be expensive either. We would like to sell foods and refreshments because if people are hungry or thirsty they could buy food. We think it helps the environment because we will compost the left over food, and we think it helps people because people enjoy eating good food, and it helps the economy because people might buy it. We will use recyclable paper bags. One cup of lemonade will be 75 cents, one cup of water will be 25 cents, one cookie is 75 cents, 1 brownie will also be 75 cents, 1 bag of cookies will have eight cookies in it, and that will be $5.25, in one bag of cookies there are going to have 6 cookies, and that will cost $4.00.

Photographs

Our product is selling photographs of people and nature. Our purpose is to take pictures and give the money to our community. Customers would want it to hang on their walls and make their house beautiful. Some materials we will use white paper, ink, a printer and a digital camera. What makes our product sustainable is we're looking forward to using recycled paper, another thing that makes it sustainable is the money we get from the photographs will go back to our community. We can take pictures of lakes, flowers, schools, fields, playgrounds, people, animals and insects. It will cost $4.00 to $15.00 depending on the size and it will cost an extra dollar for colored pictures. We hope you will buy our photographs!!

Market Survey —Product Description Checklist:

☐ Who are your customers?

☐ Do they need/want your product?

☐ How much will they pay for your product/service?

☐ How often will they want it?

☐ Do your customers care about what materials/ingredients you will use?

☐ What are other things your customers might care about when thinking about buying your product?

Market Survey —Survey Example:

Note: *This is an example of a survey that students could use to survey fellow students & teacher in school*

April 8, 2009

Dear Teachers,
We are in the process of starting a sustainable business. We have come up with 5 ideas and we need you and your students help to decide which one will be our business. Please help our class by taking this MARKET SURVEY. Read through the description of each possible product or service and have students vote YES if they think would buy this product if it was available or NO if they don't think they would buy this product if it was available. They don't have to choose their favorite, they can vote YES for as many of the products as they are interested in. Please tally the number of YES and NO votes for each and then return to Ms. Smith and Ms. Malik's class by Monday April 13, 2009. Thanks for your help!

Sincerely,
Ms. Smith and Ms. Malik's 4/5 grade

Recycled Toys

Our product is toys made out of recycled material we are going to sell toys for $3.00 and the toys will be dolls, puzzles, morocco, drums, and guitars. The price will be affordable if you want a toy it will be inexpensive, the purpose of our product is to help people who can't afford expensive toys. We'll help people who don't have any thing to play with. It will be available in early may. Our customers will get a money back guarantee if they are not satisfied.

_____ Number of **YES** votes

_____ Number of **NO** votes

T-Shirt Making

Our business is t-shirt making. We will use sustainable color dyes and you may choose from a variety of sayings that advertise sustainability and Lawrence Barnes sustainable school. The prices will be between $10 and $15 dollars for a shirt. You will receive your t-shirt one week after ordering it. You can choose one color and one saying per t-shirt. You will see a prototype of your t-shirt before you buy it to make sure you are content with it.

_____ Number of **YES** votes

_____ Number of **NO** votes

Car Wash

Our service is a car wash. Our purpose is raising money and washing cars. Our customers would want it because they want clean cars. We will use soap that is friendly to our earth. Our price is a good price so people will be willing to pay for it. The area will be in the back playground. We will limit the water and be careful of how much water we use. We will start this service when there is good weather and when there is dirty cars. The price for the wash is $5.00 for small cars and $10.00 for big cars. We will use half of our money for supplies and the other half will go back to our community. People will come with dirty cars and leave with a clean car and a smile on their face.

_____ Number of **YES** votes

_____ Number of **NO** votes

Thank you for taking our market survey!

Market Survey —Survey Example:

Note: *This is an example of a survey that students could use outside of school*

April 8, 2009

Dear Barnes Community,
We are in the process of starting a sustainable business. We have come up with 5 ideas and we need your help to decide which one will be our business. Please help our class by taking this MARKET SURVEY. Read through the description of each possible product or service and mark YES if you think you would buy this product if it was available. Mark NO if you don't think you would buy this product if it was available. You do not have to choose your favorite, just mark YES or NO for each product based on your interest. Also, please give us any comments or suggestions you might have at the end of the survey. Please return to Ms. Smith and Ms. Malik's class by Monday April 13, 2009. Thanks for your help!

Sincerely,
Ms. Smith and Ms. Malik's 4/5 grade

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Our product is toys made out of recycled material we are going to sell toys for $3.00 and the toys will be dolls, puzzles, morocco, drums, and guitars. The price will be affordable if you want a toy it will be inexpensive, the purpose of our product is to help people who can't afford expensive toys. We'll help people who don't have any thing to play with. It will be available in early may. Our customers will get a money back guarantee if they are not satisfied.

_____ **YES, I would want to buy this product/service if it was available**

_____ **NO, I would not want to buy this product/service if it was available**

T-Shirt Making

Our business is t-shirt making. We will use sustainable color dyes and you may choose from a variety of sayings that advertise sustainability and Lawrence Barnes sustainable school. The prices will be between $10 and $15 dollars for a shirt. You will receive your t-shirt one week after ordering it. You can choose one color and one saying per t-shirt. You will see a prototype of your t-shirt before you buy it to make sure you are content with it.

_____ **YES, I would want to buy this product/service if it was available**

_____ **NO, I would not want to buy this product/service if it was available**

Car Wash

(et cetera)

DO YOU HAVE ANY COMMENTS OR SUGGESTIONS?

LESSON FOUR: Learning Journeys

ESTABLISHED GOAL: Students will explore local sustainable businesses. They will learn how these businesses were created, how they are run, and how they incorporate sustainability. They will gather information to help them create their business.

FOCUSING QUESTION:
What can we learn from this business?

MATERIALS & EQUIPMENT:
- Lens tri-Venn

A NOTE ON PICKING SITES TO VISIT:
It is important that students get out into the community and meet leaders in socially responsible businesses. If you live in Vermont, Vermont Businesses for Social Responsibility can be a resource: http://vbsr.org/ , see also VT businesses: Seventh Generation, Ben & Jerry's, Green Mountain Creamery, Ten Thousand Villages, Hope for Women. If you are not familiar with any socially responsible businesses in your area, this is can be a great opportunity to do some investigating and connect.

Connect with some local sustainable businesses. Arrange for learning journeys (field trips) to visit these sites. Depending on the size of your class it may make sense to split the class up in to smaller groups and visit different sites. Make sure to set up the visits prior to going, informing proprietors about this unit of study so that they can be prepared to highlight the sustainable aspects of their business and answer students' questions.

Prior to the Learning Journey:
1. Explore with students the business they will be visiting. Check out the website, and any other materials. Discuss with students what they are expecting to see and learn, note their responses on a chart that you can return to post-visit to compare expectations with the actual visit.
2. With students brainstorm a list of questions to ask during your visit.

While on the Learning Journey
1. Learn about the business. Ask questions and record the answers.
2. Thank your business hosts for their time.

After the Learning Journey:
1. Process the experience with students. Return to their list of expectations, ask how what they experienced compares to what they were expecting.
2. Ask students to reflect (orally or in writing) on what they learned during their visit. Ask students how this connects to the business they are in the process of planning.

LESSON THREE: Market Survey I

ESTABLISHED GOAL: Students will learn about the purposes and formats of a market survey. They will identify potential customers and collaboratively create and distribute a market survey.

FOCUSING QUESTION:
How will we know if customers would be interested in our product?

MATERIALS & EQUIPMENT:
- Examples of Product Descriptions
- Product Description Checklist
- Groups' Product Description paragraphs (from previous lesson)

Part One

1. Introduce the activity by explaining to students that now that they have developed their product ideas, they will now learn how to use their potential customers to help support their product proposal. Remind students that one of the requirements for a business' product is that customers have to want or need it. Ask students if they have any ideas on how can they might figure out if customers might need or want their product? (***Ask*** our potential customers!)
2. Tell students that they will now learn how to create a *market survey*. Explain that a market survey is a survey that asks potential customers about their interest in a product. Today each group will create their own market survey. What they learn from their market survey will be included in their business proposal.
3. Ask students:
    - Who are our potential customers?
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    As they respond, take notes on the board.
4. Tell students that their next task as a group is to write one paragraph describing their product for potential customers. Show examples, and ask students to identify the elements in the examples. What makes a description persuasive?
5. Distribute product description checklists. Instruct groups to create their product description, using the checklist and the product description paragraphs they wrote earlier.
6. When groups finish, ask for groups to share their descriptions. Collect product descriptions. Tell students that you will compile their descriptions into a market survey. (Alternatively, students could be responsible for creating the survey.)

Part Two:

(Prior to Part Two, compile & create the Market Survey using groups' product descriptions).

1. Distribute the collective market survey to each student, and review it together. Discuss data collection, and error. Ask students what would happen to the results if we collected answers from the same people. Ask student how they might minimize error. Ask students to keep in mind they are collecting data from potential customers, not just peers and friends.
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☐ Do they need/want your product?

☐ How much will they pay for your product/service?

☐ How often will they want it?

☐ Do your customers care about what materials/ingredients you will use?

☐ What are other things your customers might care about when thinking about buying your product?

Market Survey —Survey Example:

Note: *This is an example of a survey that students could use to survey fellow students & teacher in school*

April 8, 2009

Dear Teachers,
We are in the process of starting a sustainable business. We have come up with 5 ideas and we need you and your students help to decide which one will be our business. Please help our class by taking this MARKET SURVEY. Read through the description of each possible product or service and have students vote YES if they think would buy this product if it was available or NO if they don't think they would buy this product if it was available. They don't have to choose their favorite, they can vote YES for as many of the products as they are interested in. Please tally the number of YES and NO votes for each and then return to Ms. Smith and Ms. Malik's class by Monday April 13, 2009. Thanks for your help!

Sincerely,
Ms. Smith and Ms. Malik's 4/5 grade

Recycled Toys

Our product is toys made out of recycled material we are going to sell toys for $3.00 and the toys will be dolls, puzzles, morocco, drums, and guitars. The price will be affordable if you want a toy it will be inexpensive, the purpose of our product is to help people who can't afford expensive toys. We'll help people who don't have any thing to play with. It will be available in early may. Our customers will get a money back guarantee if they are not satisfied.

_____ Number of **YES** votes

_____ Number of **NO** votes

T-Shirt Making

Our business is t-shirt making. We will use sustainable color dyes and you may choose from a variety of sayings that advertise sustainability and Lawrence Barnes sustainable school. The prices will be between $10 and $15 dollars for a shirt. You will receive your t-shirt one week after ordering it. You can choose one color and one saying per t-shirt. You will see a prototype of your t-shirt before you buy it to make sure you are content with it.

_____ Number of **YES** votes

_____ Number of **NO** votes

Car Wash

Our service is a car wash. Our purpose is raising money and washing cars. Our customers would want it because they want clean cars. We will use soap that is friendly to our earth. Our price is a good price so people will be willing to pay for it. The area will be in the back playground. We will limit the water and be careful of how much water we use. We will start this service when there is good weather and when there is dirty cars. The price for the wash is $5.00 for small cars and $10.00 for big cars. We will use half of our money for supplies and the other half will go back to our community. People will come with dirty cars and leave with a clean car and a smile on their face.

_____ Number of **YES** votes

_____ Number of **NO** votes

Thank you for taking our market survey!

Market Survey —Survey Example:

Note: *This is an example of a survey that students could use outside of school*

April 8, 2009

Dear Barnes Community,
We are in the process of starting a sustainable business. We have come up with 5 ideas and we need your help to decide which one will be our business. Please help our class by taking this MARKET SURVEY. Read through the description of each possible product or service and mark YES if you think you would buy this product if it was available. Mark NO if you don't think you would buy this product if it was available. You do not have to choose your favorite, just mark YES or NO for each product based on your interest. Also, please give us any comments or suggestions you might have at the end of the survey. Please return to Ms. Smith and Ms. Malik's class by Monday April 13, 2009. Thanks for your help!

Sincerely,
Ms. Smith and Ms. Malik's 4/5 grade

Recycled Toys

Our product is toys made out of recycled material we are going to sell toys for $3.00 and the toys will be dolls, puzzles, morocco, drums, and guitars. The price will be affordable if you want a toy it will be inexpensive, the purpose of our product is to help people who can't afford expensive toys. We'll help people who don't have any thing to play with. It will be available in early may. Our customers will get a money back guarantee if they are not satisfied.

_____ **YES, I would want to buy this product/service if it was available**

_____ **NO, I would not want to buy this product/service if it was available**

T-Shirt Making

Our business is t-shirt making. We will use sustainable color dyes and you may choose from a variety of sayings that advertise sustainability and Lawrence Barnes sustainable school. The prices will be between $10 and $15 dollars for a shirt. You will receive your t-shirt one week after ordering it. You can choose one color and one saying per t-shirt. You will see a prototype of your t-shirt before you buy it to make sure you are content with it.

_____ **YES, I would want to buy this product/service if it was available**

_____ **NO, I would not want to buy this product/service if it was available**

Car Wash

(et cetera)

DO YOU HAVE ANY COMMENTS OR SUGGESTIONS?

MARKET SURVEY RESULTS

White: 40
Yellow: 8

Item	Students Yellow	Adults White	total
Recycled Toys	(3) 82	(5) 14	96
T-shirts	(5) 63	(1) 27	90
Car Wash	(2) 88	(4) 15	103
Bake Sale	(1) 98	(3) 19	117
Photographs	(4) 78	(2) 26	104

LESSON SIX: Market Survey III

ESTABLISHED GOAL: Students will look at the results of the market survey in another way. They will learn about potential profit and gross sales.

FOCUSING QUESTION:
How do we determine our potential profits?

MATERIALS & EQUIPMENT:

- Financial vocabulary (for teacher reference)
- Results of Market Survey
- Potential Gross Sales Sheet (design one for the products your students came up with, see example)
- Potential Profit Sheet (design one for the products your students came up with, see example)

1. Introduce this lesson to students by explaining that last time they compiled the results of their market surveys. They figured out which product received the most votes. Ask students if there is anything else that they can think of that should be considered when deciding which product to create for their class business? Ask: Does it mean we will make the most money if we pick the idea that got the most votes? Why or why not?
2. Discuss 'profitability' with students. Explain costs, profits, and gross versus net sales. Explain that now they will try to figure out the potential profits for each idea based on the number votes it received.
3. Distribute Gross Sales and Potential Profit sheets. Explain the idea of gross sales. Explain the idea of (net and gross) profit. Walk students through filling out the Potential Gross Sales and Profit sheets. (For each idea multiply the price of the product by the number of votes.)
4. Once the data has been compiled, ask students:
   - Which has the most potential for profit?
   - Which were the ideas that had the most potential profit?
   - Was it surprising that even though certain ideas got more votes, they didn't necessarily make more profit?
6. Reflect by asking students to share which product they think should be created based on all of the data so far. Ask them to share their reasoning. Explain that the decision will be made soon.

Financial Vocabulary

Revenue: what you earn

Expenses : what you spend

Net Profit : Total revenue minus total expenses

Net Income: same as net profit

COGS: the cost of goods sold. What you pay for what you sell.

Gross Income: Total revenue minus COGS

Depreciation: reduction in value over time

Appreciation : increase in value over time

Accounts Payable : money you owe for products and services already received

Accounts Receivable: money owed to you for products/services already delivered

Cash Flow: the in and out of money to/from your business

Capital: investment money

Asset: something you own that has value

Liability: something you owe for

Balance Sheet: a financial statement that keeps track of assets, liabilities, and owners' equity.

Income Statement: a financial statement that keeps track of revenue, expenses, and profit.

Income Statement Formula: Revenue minus expenses equals net profit.

Cash Flow Statement: a financial statement that keeps track of all the money that goes in and out of your business.

Read more: Financial Vocabulary Glossary for Students

EXAMPLE—POTENTIAL GROSS SALES

Name:

GROSS SALES are how much money you make from the sales of a product or service without subtracting how much it costs to make the product or service. To figure out what our potential GROSS SALES might be multiply the number of votes by the price of the item.

RECYCLED TOYS
# of Adult Votes_____ X Price _____ = _____

# of Student Votes_____ X Price _____ = _____

TOTAL: $_____

T-SHIRTS
# of Adult Votes_____ X Price _____ = _____

# of Student Votes_____ X Price _____ = _____

TOTAL: $_____

CAR WASH
# of Adult Votes_____ X Price _____ = _____

# of Student Votes_____ X Price _____ = _____

TOTAL: $_____

BAKE SALE
# of Adult Votes_____ X Price _____ = _____

# of Student Votes_____ X Price _____ = _____

TOTAL: $_____

PHOTOGRAPHS
# of Adult Votes_____ X Price _____ = _____

# of Student Votes_____ X Price _____ = _____

TOTAL: $_____

EXAMPLE—POTENTIAL PROFIT

Name:

PROFIT will be how much money we make after we subtract the cost of making the product/service.
GROSS SALES – COST TO PRODUCE = PROFIT

How much will it cost us to make our product/service? Write down your best estimate of how much you think it will cost to make each

1. Each RECYLED TOY will cost us $_____ to make.

GROSS SALES $_____ - (COST x # SOLD) $_____ = PROFIT $_____

2. Each T-SHIRT will cost us $_____ to make.

GROSS SALES $_____ - (COST x # SOLD) $_____ = PROFIT $_____

3. Each CAR WASHED will cost us $_____ to make.

GROSS SALES $_____ - (COST x # SOLD) $_____ = PROFIT $_____

4. Each ITEM AT THE BAKE SALE will cost us $_____ to make.

GROSS SALES $_____ - (COST x # SOLD) $_____ = PROFIT $_____

5. Each PHOTOGRAPH will cost us $_____ to make.

GROSS SALES $_____ - (COST x # SOLD) $_____ = PROFIT $_____

Which has the potential for the most profit?

LESSON SEVEN: A Mission

ESTABLISHED GOAL:
Students will create a mission statement and decide which business idea best aligns with this mission.

FOCUSING QUESTION:
What do we stand for?

MATERIALS & EQUIPMENT:
- Paper and Pencils
- White Board/Markers
- Sticky notes
- Sample Corporate Mission Statements
- Example- Mission Statement/Values
- Example—Values Chart

1. Introduce the lesson by telling students that they are very close to deciding which product they will create. Review the results of the market survey and profitability analysis with students.
2. Explain that their final task before the decision is to create a mission statement so they can see which product idea best aligns with their values.
3. Tell students that they will first explore the mission statements of some socially responsible business. Review them together as a class and discuss them. Ask students how they think these business carry out these missions. Ask students who keeps the businesses accountable?
4. Ask students to think about the things that matter to them most for their class business. Review with students concepts covered in part one of this unit, and refer to the lens tri-Venn, if necessary.
5. Instruct students to meet in their groups to brainstorm ideas for the class business mission and write them out on sticky notes.
6. Once students have finished brainstorming, ask them to report out their ideas and share their sticky notes on the board.
7. Together as a class, collaboratively create a mission statement (list of values) based on these ideas.
8. Create a grid (see example) and cross check each product idea to see how each value can be expressed through each project.
9. Ask students which idea lined up the best with our mission statement. Review all the other factors (market survey results, profitability) with students. Tell students that as a class they need to choose an idea that everyone is committed to. Ask students to vote on each idea. Students can vote for any product idea that they support. Facilitate the process so that an idea is chosen that all student agree to. Make adjustments if necessary to achieve consensus.

Sample Mission Statements

Onion River Co-op

Mission Statement the Global Ends.

The Global Ends embraces:
Results: The difference the Co-op will make in the lives of consumers.
Recipients: The identity of those who will receive those results
Cost: The expense and worth of adhering those results.

Global Ends
The Onion River Co-op will be central to a thriving and healthy community, where:
Consumers have local access to progressive social, environmental and healthful choices;
Residents enjoy an enhanced quality of life;
The local food system is strengthened;
The cooperative model is supported; and our owners have a sense of pride in their cooperative.
The Co-op works to support its Global Ends by implementing a variety of community outreach projects. Our goal is to provide low-income consumers with access to progressive, social, and healthful choices through education and outreach and to specifically reduce childhood hunger in Burlington.

Green Mountain Coffee Roasters

Creating the ultimate coffee experience in every life we touch from tree to cup. Transforming the way the world understands business.

Ten Thousand Villages

OUR MISSION
Ten Thousand Villages' mission is to create opportunities for artisans in developing countries to earn income by bringing their products and stories to our markets through long-term fair trading relationships.

Hope for Women

Hope For Women brings premium quality, Fair Trade products created by women artisans to the mainstream marketplace. We are a socially responsible organization committed to providing sustainable employment for economically disadvantaged women worldwide.
We offer products exclusively made by women so they can take control of their lives and their futures.

Seventh Generation:

To inspire a revolution that nurtures the health of the next seven generations.
Values
Care wholeheartedly
Collaborate deliberately
Nurture nature
Innovate disruptively
Be a trusted brand

Sample Mission Statements

Tom's of Maine

Our Reason for Being

To serve our customers' health needs with imaginative science from plants and minerals;
To inspire all those we serve with a mission of responsibility and goodness;
To empower others by sharing our knowledge, time, talents, and profits; and
To help create a better world by exchanging our faith, experience, and hope.

Statement of Beliefs

- We believe that both human beings and nature have inherent worth and deserve our respect.
- We believe in products that are safe, effective, and made of natural ingredients.
- We believe that our company and our products are unique and worthwhile, and that we can sustain these genuine qualities with an ongoing commitment to innovation and creativity.
- We believe that we have a responsibility to cultivate the best relationships possible with our coworkers, customers, owners, agents, suppliers and community.
- We believe that different people bring different gifts and perspectives to the team and that a strong team is founded on a variety of gifts.
- We believe in providing employees with a safe and fulfilling work environment and an opportunity to grow and learn.
- We believe that competence is an essential means of sustaining our values in a competitive marketplace.
- We believe our company can be financially successful while behaving in a socially responsible and environmentally sensitive manner.
- We believe that we have an individual and collective accountability to the Company's beliefs, mission, destiny, and performance goals.

Mission

To serve our customers by providing safe, effective, innovative natural products of high quality.
To build relationships with our customers that extend beyond product usage to include full and honest dialogue, responsiveness to feedback, and the exchange of information about products and issues.
To respect, value, and serve not only our customers but also our coworkers, owners, agents, suppliers, and community; to be concerned about and contribute to their well-being; and to operate with integrity so as to be deserving of their trust.
To provide meaningful work, fair compensation, and a safe, healthy work environment that encourages openness, creativity, self-discipline, and growth.
To contribute to and affirm a high level of commitment, skill, and effectiveness in the work community.
To recognize, encourage, and seek a diversity of gifts and perspectives in our worklife.
To acknowledge the value of each person's contribution to our goals and to foster teamwork in our tasks.
To be distinctive in products and policies which honor and sustain our natural world.
To address community concerns, in Maine and around the globe, by devoting a portion of our time, talents, and resources to the environment, human needs, the arts, and education.
To work together to contribute to the long-term value and sustainability of our company.
To be a profitable and successful while acting in a socially and environmentally responsible manner.
To create and manage a system of accountability which holds each person in the Company's employment or governance responsible for individual behavior and personal performance consistent with the Company's Beliefs, Mission, Destiny, Performance Goals, and Individual Work Plans.

Ben & Jerry's Mission

OUR MISSION STATEMENT

our values

- To earn money and be sustainable
- To make a memorable and unique product
- To treat our customers fairly and always tell them the truth
- To give our profits back to the community in some way
- To make a product that is of high quality. If customers are not satisfied we will refund their money.
- To make our product locally

Ms Smith/Ms Malik's 4th/5th grade class

	To make $ and be sustainable	Memorable and Unique	To be fair (no lies)	Give $ to comm.	Quality assurance	most $	local produced
CAR WASH	✓	+	+	+	+	−	✓
RECYCLED TOYS	✓	+	+	+	+	−	✓
PHOTOS	✓	+	+	+	+	+	✓+
BAKE SALE	✓	−	+	+	+	−	✓
T-SHIRTS	✓	+	+	+	+	+	✓

Totals=
CAR wash = 3
Recycled Toys = 4
Photos = 5½
Bake Sale = 3
T-shirts = 5

- = low
✓ = medium
+ = high

Our values & Our Business Ideas
Ms Smith/Ms Malik's 4th/5th grade

LESSON EIGHT: Mapping Our Plan

ESTABLISHED GOAL:
Students will compile a business plan to present to an investor by identifying important information. Students will individually write a persuasive essay introducing their product. Each student will present to the class, and the best presenter and the best essay will be selected to use in the business pitch.

FOCUSING QUESTION:
How can we best persuade someone?

MATERIALS & EQUIPMENT:
- White Board and markers
- Paper and pencils
- Copies of relevant materials from the unit (mission, market survey, etc…)

Note: Depending on your purposes, the persuasive writing piece can be a paragraph or essay, and can be an on-demand task or a process piece. You may also choose to use this piece of writing as part of your summative assessment.

Part One

1. Introduce the activity by asking students what they need to do to get their business started. Ask: What materials do we need to create our business? Will they cost money? How will we get this money to start up our business? An investor!
2. Tell students that together as a class they will create a business plan that reports all of the information we have collected to present to an investor. Explain what an investor is, if necessary.
3. As a whole class, ask students to imagine that they are an investor. What would they want to know about a business plan before giving their money? Brainstorm a list of questions. For example:
    - What is our product?
    - What is our product going to look like?
    - How is it sustainable?
    - How will we make our product? How long will it take to make our product? When will it start? When will it end?
    - What are the materials needed to create our product?
    - How much money do we need from them to start our business?
    - How much will we charge?
    - How much profit do we expect to make?
    - Where are our profits going?
    - What is our mission statement?
    - Where and how will we sell our product?
    - How are we going to market our product?
    - What research have we done?
    - Why and how did we end up choosing this idea as our business?
    - Why should they invest in our business?
4. Ask student to break out into groups (this is a good opportunity to form new groups, if necessary) and think about how they might answer the questions.
5. Ask students what other evidence and investor might need to make their decision (market survey results, cost research, et cetera). Have students gather copies of materials the investor might want to see.
6. Look at the Business Proposal questions together. Assign each student, or pairs of students, question(s) to answer. Students should answer each question in writing, using the gathered resources if necessary.

LESSON EIGHT: Mapping Our Plan—con.

MATERIALS & EQUIPMENT:

- PBL Presentation Rubric http://www.bie.org/tools/freebies/presentation_rubric
- CCSS Writing Checklist

Note: Depending on your purposes, the persuasive writing piece can be a paragraph or essay, and can be an on-demand task or a process piece. You may also choose to use this piece of writing as part of your summative assessment.

Part Two (Over a few days)

1. Tell students that each student will individually be writing a persuasive concluding paragraph (or essay) on why the investor should choose to invest in their product . Each student will share their essay with the class. The class will select the best essay and the best presenter to make the pitch to the investor.
2. Share with students some samples of persuasive paragraphs. Analyze them with students to create a checklist of elements to include.
3. Release students to write their essay. Depending on your timeframe, you may want to draw this out into a process piece of writing.
4. Once students have written their pieces, review with them the elements of a good presentation. Ask them to be specific, and list their responses on the chart paper. Use the Buck Institute's Presentation Rubric to cross reference their answers, and add anything missing.
5. Give students time to practice independently. Then ask students to partner up and present to each other. Have students use the rubric to give each other feedback.
6. When you judge that students are ready, have each student present to the class. Students can assess each other for both content of their essay and presentation skills. You might want to collaboratively create a checklist or tool for them to use to do this.
7. Ask students to review their notes and vote (paper ballot) for the best essay and best presenter to be used in the pitch to the investor. Runners up for best presenter can also help make the pitch.

LESSON NINE: Making the Pitch

ESTABLISHED GOAL:
Students will practice then present their business plan to an investor. They will be able to answer questions an investor might have. They will be able to sell their business idea so the investor will want to fund it.

FOCUSING QUESTION:
How can we best present our idea?

MATERIALS & EQUIPMENT:
- An investor, scheduled to come to class
- Student drafted Business Plan (market survey, potential profits, mission statement, values chart, budget, etc…)
- Student drafted talking points

Prior to this class, invite your investor to come to class for this presentation. Explain the process to the investor, and explain your expectations for their visit, as well as letting them know ahead of time the amount of money students will be seeking. Tell the investor to ask questions of the students before revealing their decision.

1. Prior to the investor's visit, have students practice making their pitch. The presenters should practice while the rest of the class (and teacher) pretends to be the investor and asks questions.
2. When the investor arrives, have students greet and seat the investor. Students can begin their presentation. When they are finished, offer the floor to the investor for questions, and student responses.
3. Ask investor if they feel ready to make a decision. Let the investor make the big reveal. Ask the funder for any advice, and what their expectations are. The investor should let students know that they expect an annual report once the business is complete.
4. Celebrate if students received funding! (You may want to have some snacks prepared to celebrate this occasion, before more hard work begins!)

LESSON TEN: Launching Our Business

ESTABLISHED GOAL: Students will divide into task teams and begin to carry out steps needed to begin their business.

FOCUSING QUESTION:
How do we conduct business?

MATERIALS & EQUIPMENT:
- White board and markers

Prior to this lesson, it will be helpful if you think through the logistics of the student business so that you can guide students in carrying out their work.

1. Begin by explaining to students that now the real work begins. They now have money to launch their business, and need to figure out where to begin.
2. Ask student to think about the tasks that need to get done to start our business. Students brainstorm tasks.
3. Once you have a good list of tasks, put tasks into categories, and have students create job descriptions for each task. This can be done as a whole class , in small groups, or independently.
4. Have students decide which job they want to do, and assign jobs. Help students complete their jobs as necessary.

Students will likely need to work at home and out in the community to complete their jobs. Work with students and families as necessary. It may also be useful to send a letter home to families to explain the class business.

LESSON ELEVEN: Measuring Progress

ESTABLISHED GOAL:
Students are introduced to the annual report as a way of communicating information about a business to investors and the general public..

FOCUSING QUESTION:
How can we communicate to the public about our business?

MATERIALS & EQUIPMENT:
- Examples of annual reports:: Friends of Burlington Gardens, Intervale Center
- What is an annual report?
- Chart paper and Markers
- Sample Annual Report template

1. Introduce the concept of an annual report to students. Explain that they have started their business, and now need to document all that we have done.- one way to do that is an annual report. Ask students why business might need to document what they've done.
2. Distribute examples of annual reports. Tell students to take a look at these reports. Ask: What do you think the purpose of these reports is? What do the businesses want to convey to their readers? What elements included on these annual report might they want to include on their annual report?
3. As students brainstorm elements they want to include list them n the board.
4. Share with student the sample annual report template. Discuss with student how they will create their report. Assign different parts to students/groups of students. This could be an opportunity for students to use a Web 2.0 collaborative writing tool, such as Google Docs.
5. Students should begin compiling information, and work until the report is completed.

What is an Annual Report?

An **Annual report** is a comprehensive report on a company's activities throughout the preceding year. Annual reports are intended to give shareholders and other interested persons information about the company's activities and financial performance.

Some reports and financial statements in an annual report may include:

Accounting policies
Annual general meeting (AGM) invitation
Auditor's reports
Balance sheet
Cash flow statement
CEO's report
Chairman's report
Corporate governance compliance statement
Corporate information
Financial data summary
Financial highlights
Financial statement notes
Income statement
Letter to shareholders
Mission statement
Statement of directors' responsibilities
Statement of retained earnings

The front of an annual report often will be colorful, flashy and glossy, while possibly containing photos, graphics and brief text highlights. The latter part of the report contains the detailed financial information.

Ms. Smith's and Ms. Malik's 4/5 Grade Class Business Sustainability Academy at Lawrence Barnes School

ANNUAL REPORT

PICTURES GO HERE:

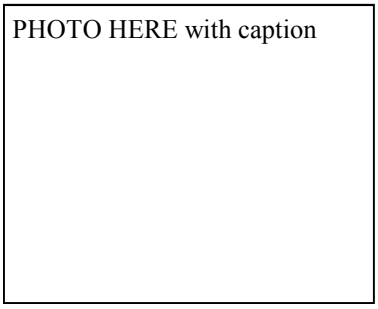
Mission:

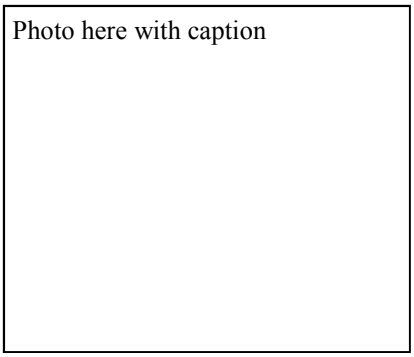
CONTACT INFO:

DATE

DEAR

Letter from the class here





Sincerely,

Ms. Smith's and Ms. Malik's 4/5 grade class

OUR PROCESS

- Use bullets and list here

Picture here with caption

Picture here with caption

Picture here with caption

Picture here with caption

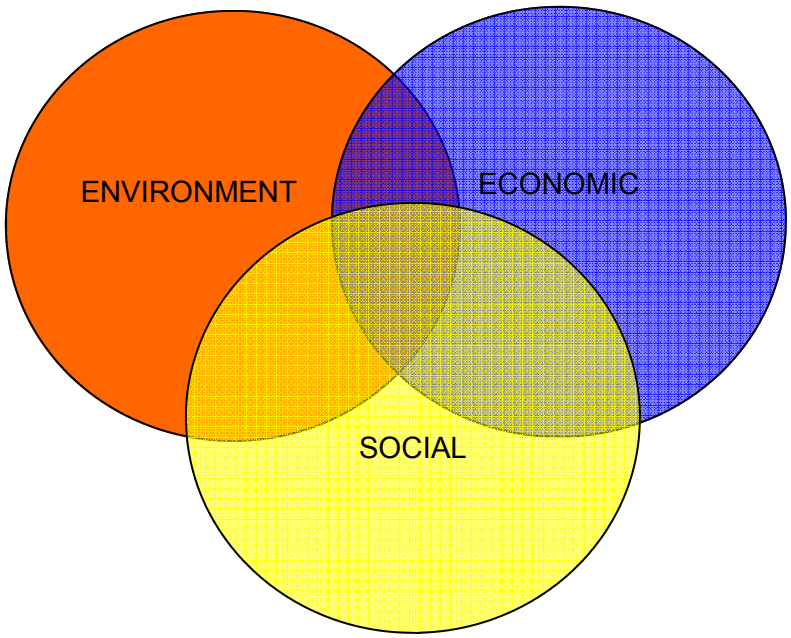
SUSTAINABILITY DEFINITION:

We address sustainability through our business by:

ECONOMIC

SOCIAL

ENVIRONMENTAL



FINANCIALS

Describe what is in this section

2009 Budget

EXPENSE
List items here

REVENUE
List money earned here

2009 ACTUAL

EXPENSE
List items here

REVENUE
List money earned here

OUR STAFF
class picture here:

staff names here:

THANK YOU!

To all the people who helped us…

Annual Report 2008

Friends of Burlington Gardens

Creating,
enhancing,
and preserving
community gardens
where people,
plants, and
possibilities
bloom

www.burlingtongardens.org

Fulfilling our public mission

December 2008

Dear Friends,

During times that are challenging for so many, it is apparent to me that the values at the heart of FBG's work will enable Vermont communities to persist and thrive in the emerging new world. In the beautiful pictures that fill the pages of this annual report, I hope that you will see these values represented in:

- ◊ young people engaged in the work and play of gardening and food preparation.
- ◊ neighbors coming together to plan how gardens will fit into their communities.
- ◊ students filling hearts and minds with the knowledge of how to create a more sustainable world.
- ◊ families experiencing together the joys of planting, tending, harvesting, and eating healthy foods.

Friends of Burlington Gardens has a critical mission. We are dedicated to reaching out to underserved groups so that there can be equal opportunity for access to gardening in schools, neighborhoods, and communities.

Friends of Burlington Gardens is firmly rooted as a statewide resource that can smooth the way for new garden development by fostering the knowledge and community connections needed for success.

During the past year we brought people together from distant Vermont towns and from neighboring streets to be part of a movement that is building community through gardening. As food costs rise, even more people are discovering that gardening is a time honored way to find hope in the midst of hard times.

As we continue to plan for 2009, we hope that you will be part of helping us to achieve our mission in whatever way you can.

We are grateful for the many supporters who contributed to our organization's ability to succeed in 2008, and with your help, I am confident that we will continue to grow and multiply our efforts in 2009.

Sincerely,

Linda Berlin
Board President
Friends of Burlington Gardens

Friends of Burlington Gardens is grateful to honor Linda for five years of service as a board member, including two years of leadership as board president. As Linda completes her term, we welcome Bart Westdijk as new board president in 2009.

Friends of Burlington Gardens 2008

Gardens Created

- **20** new community and school gardens were created in Vermont with mini-grant support and assistance provided by FBG.
- **29** Community Teaching Garden students completed an intensive 20-week organic gardening and service-learning program.
- Funding was secured to establish a model Edible Schoolyard Project which will open in spring 2009 at Burlington High School.

A $375 mini-grant from FBG helped the Shelburne Meadows Community Garden build a new tool shed.

Gardens Enhanced

- **675** garden organizers and supporters in **150** Vermont communities received FBG's free monthly community and school garden e-newsletter.
- **18,800** spring flowering bulbs donated by Gardener's Supply were distributed by FBG for fall planting at area school and neighborhood gardens.
- **25%** of Vermont's elementary, middle, and high schools now have raised beds and/or vegetable garden plots on campus.

Gardens Preserved

- FBG awarded **$17,825** in mini-grants to fund improvements at **62** community and school garden sites across Vermont.
- **55** Vermont Community Garden Network members attended the Community Gardens for Vermont Conference held March 8, 2008 at Vermont Technical College.
- **75** educators and youth garden leaders participated in the first ever Vermont School and Youth Garden Conference on April 12, 2008 at Vermont Law School.

Garden leaders from across the state braved an ice storm to attend the March 8th garden conference at Vermont Technical College.

Friends of Burlington Gardens — local outreach programs

planting raised beds at Flynn Elementary

restoring the New Discovery Garden

harvesting fall greens at Barnes Elementary

Corn Roast Dinner and Veggie Ball

garden expansion at Burlington High School

In the Community Teaching Garden at Ethan Allen Homestead, beginning gardeners attend twice weekly class sessions from May to September, learning how to garden organically and serve the community.

Vermont Community Garden Network — statewide programs

A community that values gardening and self-sustaining agriculture is stronger than one that does not, both economically and spiritually.

I think Friends of Burlington Gardens does great work and I want to support it.

— Janice Dawley

Since 2006, 121 community and school gardens have received mini-grants through Friends of Burlington Gardens and the Vermont Community Garden Network.

The School of International Training Community Garden in Brattleboro received VCGN mini-grants in 2007 and 2008.

Photo contributed by Amber Garrard and Anne Gough.

sharing skills at the VCGN Conference

VT School and Youth Garden Conference

starting a community garden in Newport

rebuilding the King Street Youth Garden

a new senior community garden in Barton

Friends of Burlington Gardens
2008 Program Year
12/1/2007—11/30/2008

Operating Revenues

Grants & Awards	61,750.00
Contributions	17,082.50
Projects & Services	6,547.82
Sales & Events	6,345.00
Interest income	1,298.97
Total Revenues	93,024.29

Operating Expenses

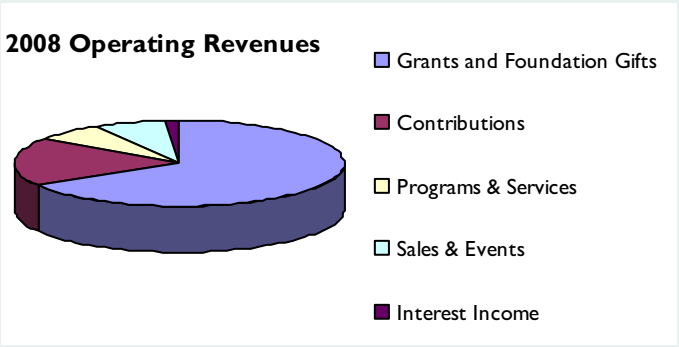
Staffing & benefits	49,234.03
Projects, Programs, Mini-grants	19,749.28
Office rent	4,500.00
FICA/Medicare Match	3,202.80
Sales & Events	1,963.21
Insurance	1,801.00
Phone, Internet, Utilities	825.46
Postage	800.68
Printing & Photocopies	689.65
Equipment & Supplies	572.26
Fees, Dues, Services, Consulting	522.61
Mileage	496.65
Volunteer Support	246.68
Total Expenses	84,604.31

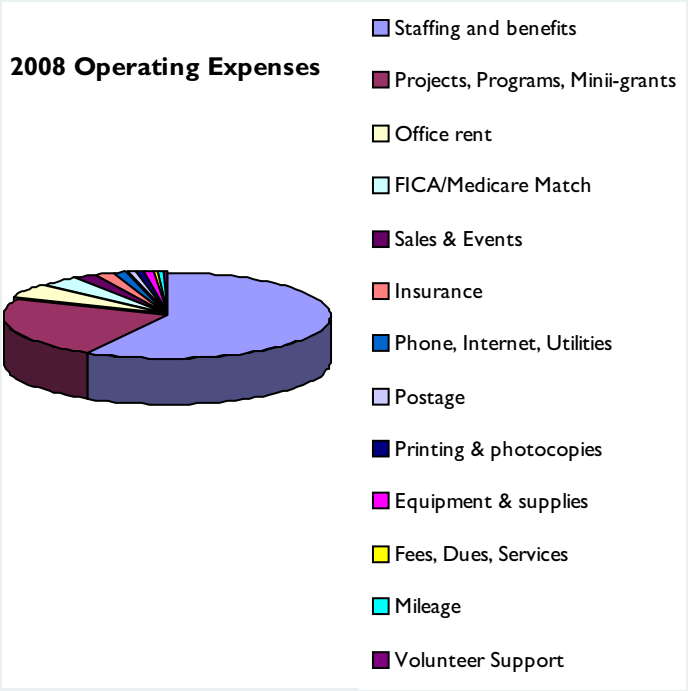
Balance Sheet

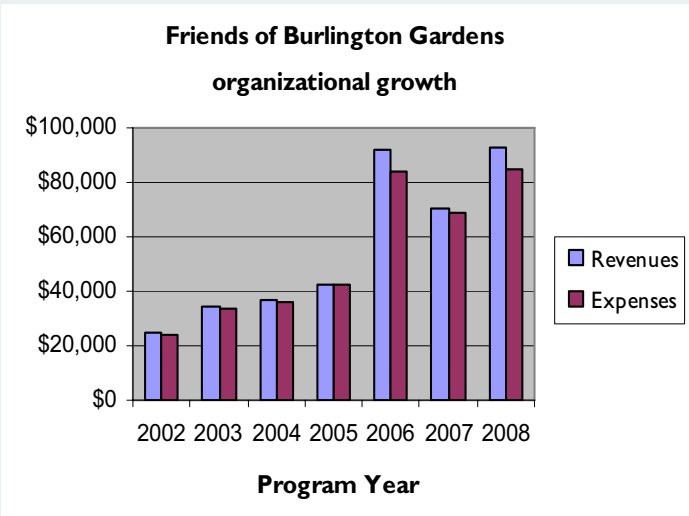
Beginning balance 12/1/07	11,082.45
Net Income and grant carryover	8,419.98
Ending balance 11/30/08	19,502.43

Friends of Burlington Gardens incorporated as a non-profit organization on February 9, 2001 and received 501(c)(3) status from the Internal Revenue Service on November 6, 2001. Friends of Burlington Gardens files an annual Form 990 tax return based on a fiscal year of January 1— December 31.

Charitable contributions made to support the mission of Friends of Burlington Gardens are tax deductible to the fullest extent of the law.







Support from donors, sponsors, and grant funders allows Friends of Burlington Gardens to deliver high quality education and outreach programs at the local and statewide levels.

Thank you to all our donors 12/1/2007—11/30/2008

Friends of Burlington Gardens
Vermont Community Garden Network

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Friends of Burlington Gardens thanks major funders for the 2008 Program Year

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Friends of Burlington Gardens—mission goals

- increase public access to community gardening resources
- develop outreach, education, and service-learning programs that cultivate and sustain community-based gardens
- ensure that underserved groups have equal opportunities for community, school, and neighborhood gardening
- cultivate political support for community-based gardening through statewide networking, advocacy, and activism

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President

Bart Westdijk
Vice President

Jeff Govoni
Secretary

Joseph Fiacco
Treasurer

Beth Truzansky
Maggie Leugers
Henri Sparks
Will Workman

2008 Staff members

Jim Flint
Executive Director

Mimi Wong
(above center)
United Way volunteer

Matt Tucker
Americorps member

Amy Clay (center left)
Kira Castro (right)
UVM Summer Interns

Special thanks to the dedicated volunteers from the Community Teaching Garden and to all who share their time and talents to support community and school gardening in Vermont.

Friends of Burlington Gardens ▪ 180 Flynn Ave Studio 3 ▪ PO Box 4504 ▪ Burlington, VT 05406-4504
www.burlingtongardens.org ▪ 802-861-4769 ▪ info@burlingtongardens.org

2008 Annual Report

Our mission is to develop farm- and land-based enterprises that generate economic and social opportunity while protecting natural resources.

Sustaining Farms

- Success on Farms enrolled its 60th farm in 2008, providing business planning and technical assistance
- The Food Basket had a very successful first year with an innovative multi-farm CSA project that delivered fresh, local food directly to workplaces
- 12 independent farms at the Intervale grew everything from baby greens to free-range chickens

Sustaining Land

- The Intervale Conservation Nursery, after years of nurturing native plants for river and stream bank restoration efforts, saw a tripling of available stock with its business planning coming to fruition
- The nursery grew 10,000 native trees to restore 50 acres of forest between farm fields and streams

Sustaining People

- 25 teens participated in the Healthy City program and learned leadership and farming skills, making a popular veggie rap video and winning a junior iron-chef contest along the way
- 1,000,000 pounds of food traveled from the Intervale to the local area, including 30,000 pounds gleaned for the Chittenden Emergency Food Shelf and other local social service organizations
- Intervale staff worked with the Association of Africans Living in Vermont to support 27 African women in setting up market gardens in the Intervale and selling vegetables and cooked foods at farmers markets as part of the New Farms for New Americans program

IN THIS REPORT

LEARN MORE & DONATE ONLINE

www.intervale.org

Eating is an agricultural act

Glenn McRae
Executive Director

This is Wendell Berry's pronouncement in his essay "The Pleasures of Eating." It was taken up this year by Michael Pollan (*In Defense of Food*) when he and others called for the appointment of a Secretary of Food rather than a Secretary of Agriculture in the new federal administration.

The work of the Intervale Center has long intrigued me because it very much connects us to what we eat and where it comes from. When offered the opportunity to come to the Center as Executive Director in August 2008, I was excited and daunted. This organization has worked for 20 years to connect people to the land and the food that it produces. It has inspired us all to better understand and participate in our local food system.

The Intervale Center has been challenged on a number of levels as it pioneers new approaches to local food production and distribution. In 2008 we worked to ensure that farming, composting, and food distribution activities could continue in balance with the need for environmental stewardship, protection of cultural resources, and access for community recreation. The Intervale Center and the 350 acres of land it stewards are the product of many partnerships and the synthesis of many interests. Keeping these interests aligned and partnerships active so that we can best serve the community is of utmost importance.

The dozen farms in the Intervale are the latest in a line of food producers in the area over the last 5,000 years, and probably longer. Many of us now eat food that has traveled just a couple of miles from the Intervale farms to our tables. Our whole community thrives in association with the Intervale and we each experience it in many different ways. We bike, walk, canoe, or cross-country-ski across the lands of the Intervale. We restore river and stream banks with native plants from the Intervale Conservation Nursery so that farming can co-exist with clean waterways. We teach or take classes or bring our students to see farming and ecosystems operating in real time. We pick our own basil for pesto and berries for jam. We tend a garden plot or volunteer to help young people harvest beans for school lunch programs.

Working through our challenges in the past year, the Intervale Center has continued to increase its connection to the community. Wendell Berry is also credited with saying that "Great problems call for many small solutions." As I get to know the Intervale Center by working here, I am convinced that the ingenuity of the staff, the commitment of the community, and the wonderful value of the resource of this "land in between" will continue to produce many small solutions to feeding our bodies and our souls for years to come.

The Intervale Center's mission is to develop farm- and land-based enterprises that generate economic and social opportunity while protecting natural resources. Through the Center's 20 years of operation, almost 350 acres of formerly abandoned, historically significant agricultural land in Burlington's Intervale has been reclaimed and put to productive agricultural, recreational, and conservation use. The various enterprises in the Intervale support approximately 100 full-time, part-time, and seasonal jobs in agriculture.

2009 Intervale Center Staff

Mark Cannella, *Agricultural Development Specialist*
Mandy Davis, *Agricultural Development Associate*
Sona Desai, *Agricultural Development Specialist*
Brianna Farver, AmeriCorps/Healthy City Staff
Jess Hyman, *Development Associate*
Mike Ingalls, *Intervale Conservation Nursery Manager*
Jessica Ingram, *Bookkeeper*
Travis Marcotte, *Agricultural Development Services Director*
Jenn McGowan, *Healthy City Director*
Glenn McRae, *Executive Director*
Bill Mitchell, *Development Director*
Tim Kranz, *Finance & Accounting Manager*
Andrea Tursini, *Intervale Conservation Nursery Director*

2009 Board

Edward Antczak, *CEDO, City of Burlington*
Kalisa Barratt, *Fletcher Allen Health Care*
Scott Buckingham (Secretary), *Citizen*
Rob Downey, *American Flatbread Burlington Hearth*
Tom Hudspeth, *UVM Environmental Program*
Charles G.Lief (Treasurer), *The Hartland Group*
Tom Nold, *Shelburne Farms*
Nancy Owens, *Housing Vermont*
Noah Perlut, *UVM Natural Resources*
David Skinas, *Missisquoi Abenaki Representative*
Meg Smith (Chair), *Public Relations Consultant*
Mary Sullivan, *Burlington Electric Department*
Thomas G. Walsh, Esq., *Walsh Law, LLC.*

Will Raap (Honorary Founding Member)
Gardener's Supply Company

2009 Farms

Adam's Berry Farm
Arethusa Collective Farm
City Chicks
Diggers' Mirth Collective Farm
Fat Mitchell's Pumpkin Farm
Franklin Heyburn's Bees
Half Pint Farm
Intervale Community Farm
Knee Deep Farm
Open Heart Farm
Pitchfork Farm
StrayCat Flower Farm
Sugarsnap

Contact us

Intervale Center, 180 Intervale Road, Burlington, VT 05401
(802) 660-0440 • www.intervale.org

Agricultural Development Services

The **Farms Program** creates opportunities for new farmers by leasing land and facilities to small organic enterprises and provides technical support and networking among other more experienced farmers.

- Two Intervale farms transitioned from the program: Knee Deep Farm, which joined the program as an incubator in 2007, has a long-term lease in Fairfax; and Full Moon Farm, a mentor farm which has been at the Intervale since 1998, is moving to Hinesburg.
- Half Pint Farm erected a 1/2-acre hoop house (the state's largest) in the fall.
- Fat Mitchell's Pumpkin Patch will join program as an incubator farm in 2009.
- Intervale Center staff and farmers provided agricultural education and marketing support for the New Farms for New Americans project, which was deemed one of the country's best immigrant farming programs. The Intervale Center, Intervale Community Farm and New Farms for New Americans are scheduled to be featured on an episode of "Big Ideas for a Small Planet" to air on the Sundance Channel in Spring 2009.

Success on Farms enrolled its 60th farm this year and continues to be a successful and flexible business planning program, supporting unique projects to increase profitability and quality of life for Vermont farm managers.

The **Food Hub** has had a tremendous impact on agricultural research, farmer support, and new enterprise development in 2008. Its first enterprise, the Food Basket, had a great launch year in 2008 with 120 customers at seven business drop-off sites and $70,000 in gross sales for the summer shares and$35,000 gross sales for winter shares. More than 15 farm partners worked with the Intervale Center to develop a farm alliance. Food Hub product will begin moving into institutional markets in spring 2009.

Intervale Conservation Nursery

Despite some hard times in 2008 (such as the arson fire that destroyed a large portion of our bareroot trees), the Conservation Nursery had a record year in terms of increasing its impact on streambank restoration, stabilization, and buffer plantings along miles of Vermont's agricultural fields. In the past year, the nursery:

- Tripled sales of live cuttings used for streambank stabilization — 10,000 linear feet of willow fascines and 3,500 live willow stakes were installed to stabilize streambanks.
- Added a second planting crew during the spring planting season and planted twice as many riparian buffer and streambank stabilization projects — 12 acres of trees in Franklin and Chittenden counties and 30,000 linear feet of streambank along the Lamoille Valley Rail Trail.
- Hosted two workshops to educate the public on the importance and function of riparian buffers while teaching tree identification and plant propagation skills.
- Hosted a Reforestation Conference for conservation professionals to facilitate information transfer and to increase the success of planting projects along agricultural fields.

Healthy City

- Healthy City teens spent a total of 186 hours harvesting, slicing and freezing vegetables from area farms for the Burlington School District. In addition to lightly processing the usual favorites for the school year, the teens sliced and bagged local cucumbers and zucchini for the free summer lunch program, reaching 1,600 students in our community who are at the highest need.
- Healthy City expanded its CSA to 70 members, filled 54 senior shares, and made wholesale food sales to the Chittenden Emergency Food Shelf, Fletcher Allen Health Care, and the Burlington School District. All of this was achieved despite a rainy early season and flooding.
- More than 350 volunteers spent close to 1,500 hours weeding, pulling carrots, planting seedlings, and helping the program to accomplish its goals.
- Healthy City developed the Healthy City Commons, a convenient two-acre setting for learning about sustainable agriculture, and hosted field trips for local school classes in partnership with Shelburne Farms as part of the Burlington School Food Project.

From the new board chair

Meg Smith
Board Chair

An annual report is a good time for reflection. I would like to take this opportunity to acknowledge the tremendous dedication, time, and energy of the staff and board past and present in their efforts to support a strong local food economy.

We have had several board transitions over the past year, including the departure of several long-time board members. Melinda Moulton, President of Main Street Landing, was a dedicated board member and previous chair for nine years. Her positive energy and spirit were only eclipsed by her organizational acumen. Tom Moreau, General Manager of CSWD, was a long-standing board member and a constant partner and friend to Intervale Compost Products.

We shall also miss Karen Freeman, another longtime board member who remains active as a volunteer, as well as Jon Ramsey and Nicole Carpenter, who needed to free themselves up from board obligations due to time constraints and personal moves. They have all made significant contributions to the Intervale Center and we are a better organization thanks to their dedication and participation. A hearty thank you from all of us!

I would also like to thank previous board Chair, Kalisa Barratt, who remains on the board after her three-year term as chair. She led the organization during its most successful years in fundraising and held steady leadership and counsel during the most recent time of transition. She put in many, many hours on top of her already demanding position as Chief Compliance Officer at Fletcher Allen Hospital.

David Skinas of the Abenaki Self Help Association joined the board this year and has been instrumental in coordinating efforts to document and preserve the archaeological heritage of the Intervale.

And let me welcome our new incoming board members, Tom Nold, Director of Finance and Administration at Shelburne Farms; Nancy Owens, President of Housing Vermont; and Ed Antczak, Economic Development Specialist at Burlington's CEDO office. It will be very exciting to have you become a part of our organization!

I also want to acknowledge one other new person to the Intervale Center, our executive director, Glenn McRae. Glenn has a wealth of experience in nonprofit management and policy development, and brings both to bear in his role as leader. He has plunged head first into the work at the Intervale Center, going full-tilt ever since his first day on the job. We're extraordinarily fortunate to have Glenn lead our dynamic organization into a very exciting future.

2008 News

Intervale Center settles compost dispute

After almost a year of permitting disputes and negotiations that threatened to cripple the organization, the Intervale Center successfully transitioned Intervale Compost Products management and operations to the Chittenden Solid Waste District (CSWD).

This outcome preserved five local jobs in the compost operation, and the partnership between the Intervale Center and CSWD offers a firm foundation for a continued local system to divert organic wastes from landfills.

The agreement with CSWD has enabled the Intervale Center to focus anew on programs that help support viable farms, increase access to fresh local produce, protect water quality through stream bank restoration, and educate young people about agriculture and healthy food.

The Intervale Center will lease the compost operations to CSWD for a period of up to three years, after which CSWD will relocate the facility to a new site in Chittenden County. The Intervale compost site will be rehabilitated and returned to farmland use.

For for Intervale Compost Products hours, directions and more information, visit the CSWD web site at www.cswd.net

The Missisquoi Abenaki–Intervale Center Alliance

The Intervale Center and Chief April St. Francis Merrill of the St. Francis-Sokoki band of the Abenaki Nation of Missisquoi formed a partnership in late 2007 to ensure that all ground disturbing activities planned by the Intervale Center would not adversely affect any Native American archaeological deposits, traditional cultural properties, sacred sites, and unmarked Abenaki burials.

The Intervale land contain one of the best collections of ancient Native American archaeological sites known in Vermont. Native peoples lived within the Intervale for at least the last 5,000 years and perhaps longer, first in small seasonal encampments and later in semi-sedentary villages as cultivated foods became a more reliable and significant food source. The Intervale produced a vast amount of animal, plant, and riverine resources that attracted ancient groups to this area to collect seasonally available foods and other needed resources. As agriculture developed, these people were able to harvest corn, beans, squash, and other cultigens with surplus foods stored in deep pits dug into the floors of their lodges. The earliest evidence of agriculture in the Intervale was documented during an archeological study of the Donahue site where charred corn kernels were radiocarbon dated to approximately 1450 AD. To this day Abenaki families continue to collect Intervale plants for food and medicinal purposes and fish the river.

The Missisquoi Abenaki will continue to work with the Intervale staff and board to protect these important sites. In the spirit of this partnership the Intervale Center offered a suitable repatriation plot to Chief April to reinter human remains found along Mallets Creek because it could guarantee perpetual protection of these burials through the Vermont Housing and Conservation Board easement. In July of 2008 three sets of human remains were reinterred on Intervale Center property in a remote and protected location.

— Chief April St. Francis Merrill, *Abenaki Nation of Missisquoi, St. Francis/Sokoki Band*

— David Skinas, *Abenaki Self Help Association, Intervale Center Board Member*

A charred corncob circa 1450 AD

Archaeology Fund

The Vermont Division of Historic Preservation (DHP) maintains a fund to facilitate its archaeological investigations and assist in the identification and conservation of archaeological resources located on Intervale property. For more information, call DHP at (802) 828-3213.

Representing the Intervale in Italy...

Spencer and Mara Welton of Half Pint Farm and **Thomas Case** of Arethusa Collective Farm traveled to Turin, Italy, for the Slow Food Terra Madre Conference from Oct. 23 to 27. Representing the community of Intervale farmers, they joined 8,000 delegates from food communities from all over the world to network and learn from each other.

This year's Terra Madre theme was youth with an emphasis on activism. "It was inspiring to hear from so many young farmers striving to have successful businesses and motivate others to get into farming," Mara said. "Of all the topics that were discussed at the conference, it was widely acknowledged and obvious to us how Vermont is definitely at the forefront of this important movement."

... and in Japan

Intervale Center Development Director **Bill Mitchell** represented the Intervale Center and Burlington at an international symposium on urban agriculture and sustainable development in Nishinomiya, Japan.

The December symposium was organized and sponsored by the Learning and Ecological Activities Foundation for Children (LEAF). It took place at Kobe College in Nishinomiya and was attended by more than 100 people, including professors, students, and citizens, as well as representatives of the Japanese Ministry of Agriculture, Nishinomiya city government, and various regional businesses. Presenters included professors from Kyoto University and Kobe College, as well as universities in Malaysia, Vietnam, South Korea, and Thailand. Bill gave what was billed as the "special speech," introducing attendees to the Intervale Center and its efforts to build a sustainable community food system.

The City of Burlington has had a relationship with the City of Nishinomiya since 2003, when the two cities issued a joint declaration aimed at improving environmental education (Bill was assistant to the mayor at the time). Various delegations from Nishinomiya have visited Burlington and Shelburne Farms. Mayor Peter Clavelle and others from Burlington visited Nishinomiya in 2003.

"Once again, I was reminded of the strong international interest in – and appreciation of – the Intervale Center and the City of Burlington," Bill said. "I was honored to be able to represent both."

2008 News

Historic Intervale barn rises from the ashes

One of the most rewarding instances of renewal at the Intervale in 2008 was the restoration of the Intervale English barn, which was burned by an arsonist in April.

Eliot Lothrop and his crew from Building Heritage LLC in Huntington meticulously reconstructed the timber-frame barn. They salvaged 20 percent of the original beams and put them back in their original spots – even the one beam that had been placed upside-down by the first builders. Some of the pieces that weren't able to be reused were brought to a local sawmill and were re-sawn to become braces and studs. All of the new pieces, with the exception of the rafters, which were enlarged to meet code, matched the original in size and joinery.

On a beautiful day in late October, Building Heritage, Gardener's Supply, Winooski Valley Parks District and Intervale Center employees gathered for a traditional-style hand raising of the timberframe. The building was completed just before Christmas.

Before the fire, the Intervale Conservation Nursery had been using the English barn for cold storage. The fire destroyed more than 3,000 bareroot trees and shrubs. These plants represented countless hours of seed collection, planting, and weeding over three years. In 2009, the barn will once again be used for ICN storage, as well as crop and equipment storage for Intervale farms. It may also house the Intervale Center's Burlington Food Hub project, providing storage and distribution services to bring local food to markets all year round.

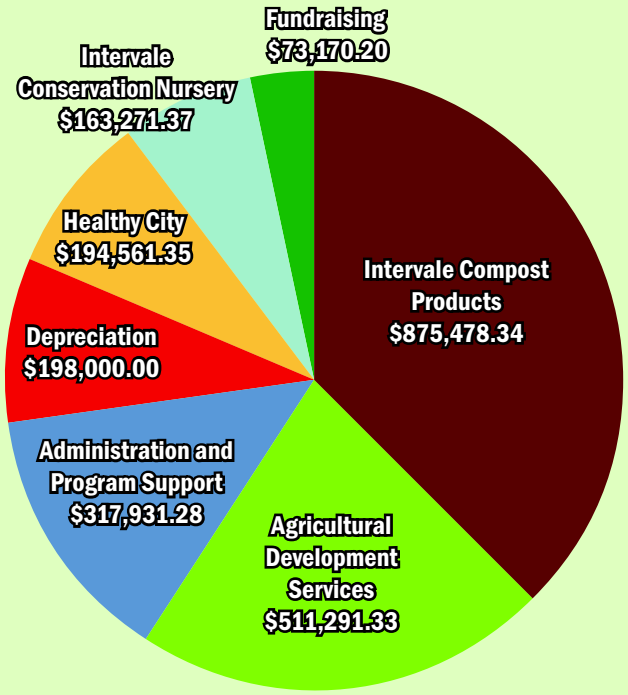
Reconstruction costs are expected to total close to $120,000, partially paid for by an insurance settlement. The Intervale Center is also seeking donations to help pay for the remainder of the work.

Junior Iron Chefs

The Healthy City team won top prize in the statewide Junior Iron Chef Competition with their recipe for "Medley of Local Tater Tots with Herb Dip." The team, led by Aziza Malik, beat out culinary arts students from around the state.

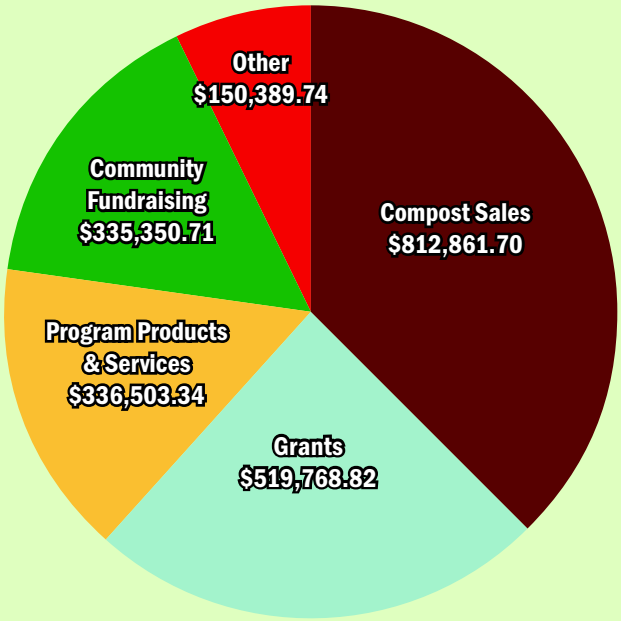
2008 Financial Report (unaudited)

Expenses



Total expenses: $2,333,703.87

Revenues



Total revenue: $2,154,874.31

The Intervale Center is...

A model for other cities across the country

The efforts of the Intervale Center are vital to Burlington's success as a community with a commitment to sustainability, economic self-reliance, and equity. *Creating opportunities for local food production, passive recreation, and small-scale farming, the Intervale Center is a unique organization and a model for other cities across the country. As a city, we should do everything we can to support and enhance the Intervale Center's good work.*

Bob Kiss, Mayor
City of Burlington

A leader in increasing access to local food

Recently there has been a renaissance in consumers' interest in local foods. We are seeing this active interest in Vermont through the growth of farmers' markets, Community Supported Agriculture (CSA), Buy Local, the Vermont Fresh Network, and other venues that increase access to locally produced foods. ***The Intervale Center is considered by many, including myself, to be a leader in increasing access to local and organic food.*** *Its farmer incubators as well as its programs for educating people about agriculture and healthy foods, are renowned both within Vermont, nationally and internationally. All this is done within the city limits of Burlington, Vermont's largest city.* ***The Intervale's 20-plus year model is one that helps to further a sustainable agriculture system for Vermont as it integrates farming, food processing, distribution, and consumption in ways that enhance the environmental, economic, social, and nutritional health.*** *The Board of Directors and staff of the Intervale should be commended for their vision and its execution.*

Roger Allbee, Secretary
Vermont State Agriculture, Food and Markets

The work we do at the Intervale and around the state would not be possible without continued support from our major funders, local businesses, and community members.

THANK YOU!

Major Funders 2008 ($2,000+)

American Flatbread Burlington Hearth • Ben & Jerry's Foundation • Block Foundation
Cape Branch Foundation • Claneil Foundation • Fieldstone Foundation
Gardener's Supply Co. • High Meadows Fund • Jane B. Cook 1992 Trust • John Merck Fund
Lattner Foundation Martin Foundation • Maverick Lloyd Foundation • Oakland Foundation
Salmon Foundation • Sustainable Agriculture Research and Education Program (USDA)
Tarrant Foundation • Community Development Block Grant • UVM Center for Rural Studies
Vermont Agency of Natural Resources • Vermont Community Foundation
Vermont Housing and Conservation Board • Windham Foundation

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LEARN MORE DONATE ONLINE

Go to www.intervale.org to learn more about Intervale Center programs and enterprises, and to make a secure online donation through Network for Good.

Community support is vital to our success as a leader in sustainable agriculture

The Intervale Center operates several programs and enterprises that are supported in part by sales of products and services. Most programs rely on supplemental revenue from contributions and grants. And, in addition to our work to support financially and environmentally sustainable agriculture, we steward the trails and lands of the Intervale, hold public events and activities in the restored Community Barn, and provide information about how the public can enjoy this productive corner of Burlington.

Your support will help keep this incredible Burlington resource available for years to come.

Send your contribution to: Intervale Center, 180 Intervale Road, Burlington, VT 05401
or make a secure online donation at www.intervale.org.

If you'd like more information about specific operating needs or planned giving opportunities, please contact Development Director, Bill Mitchell, at 660-0440, Ext. 113 or bill@intervale.org.

The Intervale Center is a 501(c)(3) non-profit organization. All donations are tax deductible.

LESSON TWELVE: Giving Back

ESTABLISHED GOAL:
Students discuss what should happen with the profits of the class business.

FOCUSING QUESTION:
Where are our profits going?

MATERIALS & EQUIPMENT:
- Class business Mission Statement & Values
- White Board
- Markers
- Internet access to research organizations

Part One: (Pre-business)

1. Explain that students need to decide how to use the profits from the class business. Show students the business mission statement, and gather any relevant guidance from that statement on how to use profits . Students may have identified returning part/all of the money to a need in the community. If they have not, perhaps suggest this idea, and listen to student responses. Return to other companies' mission statements for inspiration (see Lesson Seven). Giving back to the community is an important element of sustainable businesses, so if students need encouragement, highlight examples from businesses you have already explored.
2. Hopefully, students will agree to using all or part of the profits from the class business to support the community. Once this decision is reached, ask: What is a need in our community? What community organizations address this need? Students may need to use resources such as the internet to find the answers.
3. After brainstorming needs and organizations, ask student to make a case for which community organization should receive their profits. Decide as a class which organization will receive the profits.

Part Two: (Post-business)

1. After students have successfully run their business they should tally their profits.
2. Invite the community organization that students have decided to support to your final celebration (invite the media, too!) - See Lesson Fifteen. Students can present their donation to the organization at the celebration.

LESSON THIRTEEN: Open for Business!

ESTABLISHED GOAL:
Students are running their business. They know what their job is and carry out the tasks associated with that job.

FOCUSING QUESTION:
How do we run this business well?

MATERIALS & EQUIPMENT:
Depends on class business.

At this point, students should have a detailed plan for running their business (see Lesson Ten). Likely the business involves an opportunity for students to sell their product or service directly to the public. This happens now! Plan and set up this event with student with students, and get ready for the big day!

Prior to Opening

1. Tell students that they have been working hard over the last few months, and today we get to sell our product! Have students set up their business as it will be once we open it and practice our interactions with customers to make sure all systems work and all students know what their role is.

Opening Day

1. Make sure everything is ready to go!
2. Wait for customers, when they arrive, sell your product or service. Continue business as needed.

Closing Time

1. Clean-up!

LESSON FOURTEEN: Reflecting on a Job Well Done

ESTABLISHED GOAL:
Students compile information and reflect on their class business.

FOCUSING QUESTION:
What? So what? Now what?

MATERIALS & EQUIPMENT:
- Sales receipts
- Cash/Checks
- Annual Report
- White board/markers
- Paper/Pencils
- Student Reflection, one copy per student

Part One: Wrap Up

1. Debrief the running of the business with students. Congratulate them on their hard, good work. Explain that they need to analyze their sales, start by counting all money!
2. Count money. Ask students: Is this all profit? What do we need to subtract? Start up costs, business costs, et cetera. Determine with students net profit (discuss net versus gross profit, see financial vocabulary, Lesson Six.)
3. Assign some students to invite the community organization who will be receiving the profits to the final celebration.
4. Assign some students to add the final sales information to annual report.
5. Elicit comments from student about how they feel now that they've come to the end of this project.

Part Two: Reflection

1. Prepare students to engage in deep and meaningful reflection. Review with them everything you have studied over the course of the unit; it can be helpful to take notes for the class during this discussion, and leave the notes visible for independent reflection time. Make sure to include content and understandings from Part One if you completed it.
2. Review the student reflection sheet with students.
3. Give students time to independently complete their reflections. Students' self-assessment and reflection can constitute a major factor in final grades.

Sustainable Economics—Student Reflection

Name:

List the major steps of our class business:

What is the most important thing you learned during this unit?

What do you wish you had spent more time on or done differently?

What part of this project are you most proud of?

What was the most enjoyable part of the project?

What was the least enjoyable part of the project?

Sustainable Economics—Student Reflection con.

Directions: Below is our essential question for this Sustainable Economics unit. Your task to is think about everything you have learned over the course of this unit and answer our essential question. Include examples.

Essential Question:

How do our decisions affect humans, the environment, and the economy?

LESSON FIFITEEN: Sharing & Celebrating with the Community

ESTABLISHED GOAL:
Students will share and celebrate the accomplishments with the community.

FOCUSING QUESTION:
What impact did this project have on our community and on us?

MATERIALS & EQUIPMENT:
- Party supplies
- Student presentation supplies

Guests:
- Administrators
- Investor
- Community Partners
- Parents & families

1. Congratulate students again on a job well done. Discuss with students the purpose for celebrating accomplishments. Tell students they will now be planning a celebration to end this unit. Ask them what the celebration should look like. Who should come? What should be displayed and celebrated?
2. With students make a list of ways to celebrate project completion. Decide which activities are feasible and select activities. Ask students who should be invited to the celebration (make sure to include your investor, community partners, and the recipient of your business profits). Have students get appropriate permission from parents/guardians and school administration.
3. Make a list of tasks to complete and who will be responsible. If students are organizing event touch base with them periodically to evaluate progress and event organizing. Create invitations to celebration once event is planned. If the media has documented the project in the past invite them to the final celebration.
4. If students are sharing their work at the celebration give ample time to document work and prepare presentations.
5. On day of the celebration, factor in time for set-up and clean-up into the day's events.
6. At the beginning of the event acknowledge student achievements. Have a group of students present an overview of the entire project with event participants.
7. Celebrate, Celebrate, Celebrate!
8. Reflection Activity: Circle students to share one word that summarizes the project and their experience. Write down each word in random order. When everyone has shared, read the words back as a poem.