

Consumption and Waste: Shoes

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Audience: 7th grade and up

Applicable Subject Areas: Economics, English Language Arts, Family and Consumer Sciences, Geography, Science, Social Studies

Time: 45-50 minutes

Directions:

Share instructions for this activity:

- 1) After the instructions, students will count off into groups.
- 2) Each small group will focus on one aspect of “shoes,” reading the information provided to them, and doing the activities listed on their sheets.
- 3) Each small group needs to prepare a visual to share with the class that gives an idea of what they did. They also need to be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity they completed.
- 4) Ask students to count off to 5, and then gather in their groups. Distribute the activities to each group.
- 5) After 23 minutes, small groups should make their group’s materials visible so teachers from the other groups can walk around the room and briefly review what other groups did.
- 6) Then, the large group will reconvene and one or more from each group will share the visual and highlight two-three compelling or effective aspects of the activity they completed.

Groups:

Group 1: Story of Stuff: Shoes

Group 2: Just Look at Our Shoes

Group 3: Good “Shoe” News

Group 4: Advertisements, Economics & the Endgame

Group 5: Material World: A Global Family Portrait

Group #1—Story of Stuff: Shoes

Materials needed: Stuff: The Secret Lives of Everyday Things book, Hamburger poster, white board or equivalent and drawing materials, post-it notes

Objective: Students will be able to summarize the life cycle of a pair of shoes.

Do you know the chain of production or life cycles of your stuff?

*To get our shoes, for example, raw materials must be **extracted** from the earth and then **processed**. These materials are then **manufactured** into different shoe parts; often these parts are made in different locations around the globe.*

*Next, shippers, truckers and/or other carriers **transport** the parts to one site so the shoe can be **constructed**.*

*Likely in another location around the globe, laborers and machines **manufacture** packaging materials, which then are **shipped** to a location where the shoes are boxed. Suppliers then ship shoes to retail outlets. Finally, consumers buy and wear the shoes.*

*The life cycle also includes **disposal**.*

By learning about the life cycles, we can better understand how our consumption habits affect the environment.

- 1) Quickly review the Hamburger poster to learn about its story from beginning to end. Dow Chemical, who manufactured the “clamshell”¹ that received a lot of negative press in the 1990s, produced these posters. What do you think motivated Dow Chemical to produce this poster, which they provided to teachers around the country? (3-4 min.)
- 2) Look at a pair of shoes. Brainstorm all of the types of materials you can think of that are used to make them. Include packaging materials, and imagine peering inside the structure of shoes to identify the component parts. (3-4 min.)
- 3) Then, list the natural resources used. For example, most leather comes from cattle hide. Use your best judgment to determine what happened to get the natural resource into the shoe. (In the case of leather, it likely came from cattle in a cattle yard. The cattle were slaughtered, hides transported and then tanned in a processing facility. The process of tanning usually uses many toxic chemicals, and is often done overseas where

¹ In the 1990s, many fast food restaurants used these Styrofoam containers to package the hamburgers they sold.

environmental regulations are not as stringent as in the U.S.) To help you, refer to the chapter on shoes in *Stuff: The Secret Lives of Everyday Things*. (7-8 min.)

- 4) Involve everyone in your group in making a simple poster that shows some of the components of a shoe's life cycle. Add words or drawings or colors to help show the life cycle. Use post-it notes to describe various processes and details. (6-8 min.)
- 5) The poster can be the visual you share with the class that gives an idea of what you did in your small group. Also, be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity you completed. (2 min.)

Environmental Activities for the Classroom: Product Life-Cycle Analysis
http://www.istc.illinois.edu/info/library_docs/tn/99-031.pdf

Group #2—Just look at our shoes

Materials needed: Shoe, calculators, white board or equivalent and drawing materials

Objective: Students will be able to gather information, calculate, and make assessments about shoes and society.

We all own shoes. When you no longer need your shoes, they likely are downgraded to “gardening” shoes, or you ignore them in the back of your closet, or you donate them to a charitable organization or take them to a consignment shop. But, ultimately, most shoes are trashed.

In this exercise, adapted from a more detailed lesson plan called “Just look at our shoes,” you will do some math around the issue of shoes.

Counting shoes

- 1) In your small group, determine how many shoes each of you owns. Be sure to include sandals, flip flops and work boots. Then calculate the average number of shoes owned by those in your group. (3-4 min.)
- 2) Complete the Shoes by Weight handout. On average, a pair of shoes weighs approximately 1.5 pounds. Calculate the weight of the shoes owned by you, then by a class of 30 people, then by a school with 400 enrolled. Assume all 30 own the same number as the average calculated in Step #1. (5-6 min.)
- 3) Next, complete the Volume handout. (2-4 min.)
- 4) Optional: Estimate the total cost of all of these shoes.
- 5) Look at your pair of shoes and determine where they were made. Share with the group. (1 min.)
- 6) What surprised you as you completed the handouts? Discuss the ways in which the choices we make have an impact on our individual and collective futures. Think broadly, looking at anything from environmental and financial impacts to spiritual and quality of life impacts. (4 min.)
- 7) Prepare or identify a visual to share with the class that gives an idea of what you did in your small group. Also, be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity you completed. (2-3 min.)

Complete the table by filling in the boxes below.

Shoes by number and weight

	Column 1: Write down the number of pairs of shoes you own	Column 2: Determine the average number pairs of shoes your group owns, and the weight of that average	Column 3: Using the average number pairs of shoes shown in Box 2, determine how many pairs a class of 30 students would own. Then calculate the weight.	Column 4: Using the average number pairs of shoes from Box 2, determine how many pairs a school of 400 students would own. Then calculate the weight.
Pairs	Box 1	Box 2	Box 3	Box 4
	X 1.5 pounds (average weight of one pair of shoes)	X 1.5 pounds	X 1.5 pounds	X 1.5 pounds
Pounds	Box 5	Box 6	Box 7	Box 8

Shoes by volume

	Column 1: If 10 pairs of shoes fit into a box measuring 25x21x18, calculate that in cubic inches and in cubic feet and write in Boxes 9 and 13.	Column 2: Using the total number of cubic inches for 10 pair of shoes (Box 9), calculate the average number of cubic inches and cubic feet of 1 pair of shoes	Column 3: Using the average number of shoes your group owns (from Box 2 above), calculate the average number of cubic inches and cubic feet for a class of 30 students	Column 4: Using the average number of shoes your group owns (from Box 2 above), calculate the average number of cubic inches and cubic feet for a school of 400 students.
Cubic Inches	Box 9	Box 10	Box 11	Box 12
Cubic Feet? <i>(1728 cubic inches in 1 cubic foot)</i>	Box 13	Box 14	Box 15	Box 16

Teacher Guide:

Answers are on the premise that each person owns an average of 25 pairs of shoes. Other assumptions are shown below.

Shoes by number and weight

	Column 1: Write down the number of pairs of shoes you own	Column 2: Determine the average number pairs of shoes your group owns, and the weight of that average	Column 3: Using the average number pairs of shoes shown in Box 2, determine how many pairs a class of 30 students would own. Then calculate the weight.	Column 4: Using the average number pairs of shoes from Box 2, determine how many pairs a school of 400 students would own. Then calculate the weight.
Pairs	Box 1 25	Box 2 25	Box 3 750	Box 4 10,000
	X 1.5 pounds (average weight of one pair of shoes)	X 1.5 pounds	X 1.5 pounds	X 1.5 pounds
Pounds	Box 5 37.5	Box 6 37.5	Box 7 1,125	Box 8 15,000

Shoes by volume

	Column 1: If 10 pairs of shoes fit into a box measuring 25x21x18, calculate that in cubic inches and in cubic feet and write in Boxes 9 and 13.	Column 2: Using the total number of cubic inches for 10 pair of shoes (Box 9), calculate the average number of cubic inches and cubic feet of 1 pair of shoes	Column 3: Using the average number of shoes your group owns (from Box 2 above), calculate the average number of cubic inches and cubic feet for a class of 30 students	Column 4: Using the average number of shoes your group owns (from Box 2 above), calculate the average number of cubic inches and cubic feet for a school of 400 students.
Cubic Inches	Box 9 9,450	Box 10 945 (9,450/10)	Box 11 708,750 (25 * 30 * 945)	Box 12 9,450,000 (25 * 400 * 945)
Cubic Feet? <i>(1728 cubic inches in 1 cubic foot)</i>	Box 13 5.5	Box 14 (Average to 2 decimal points) .55	Box 15 (Average to 2 decimal points) 410.16	Box 16 (Average to 2 decimal points) 5468.75

Note: A 25 x 25 x 8 foot classroom is 5,000 cubic feet, so the school example of shoes (shown in Box 16) would fill that room to capacity and overflow into the hallway.

Group #3—Good “shoe” news

Materials needed: Computer and wifi, handouts, white board or equivalent and drawing materials

Objective: Students will be able to summarize several positive environmental and social actions taking place in America, and identify initial steps in planning a school service project.

According to anecdotes from teachers,² Iowa students own an average of 25 shoes apiece. Some own as few as three pairs, and some own more than 65. Ultimately, the vast majority end up in the trash.

At the same time, according to Soles4Souls, 300 million children around the world are without footwear. That’s just a little less than the population of the United States.

Individuals, organizations and businesses, however, are helping make a connection between U.S. waste and the needs of people around the world. Read on.

- 1) Soles4Souls³ collects new shoes to give relief to the victims of abject suffering and collects used shoes to support micro-business efforts to eradicate poverty. Watch this 4-minute Soles4Souls clip: <http://www.youtube.com/watch?v=eVf7jMdsA5A> . What did the video clip capture? (3 min.)
- 2) Other organizations/businesses are helping reuse shoes as well. Briefly skim the [Shoe Reuse and Recycling Options](#) handout. Charitable organizations such as St. Vincent de Paul and Goodwill Industries International, Inc., take shoes in any condition. If they are in decent condition Goodwill sells them in one of their many locations throughout Iowa. If they are not reusable they will sell them as salvage material to textile or shoe reuse companies.

St. Vincent de Paul in Waterloo, Iowa, gives away donated shoes at no cost to families in need locally through their assistance programs and they also sell donated shoes at their

² University of Northern Iowa Waste Reduction: Addressing the Overlooked “R” workshops.

³ Soles4Souls has received some negative press for the high salary of their Chief Executive Officer and for some shoes that were not directed to people in need: <http://www.wbir.com/news/local/story.aspx?storyid=108419> and <http://www.tennessean.com/article/20110403/NEWS01/104030371/Soles4Souls-Elsey-s-salary-among-tops-social-service-group-leaders>

retail stores. If the shoes don't sell in their stores, they bulk package shoes and sell them for reuse or recycling based upon a criteria established by the markets. Most paired shoes bring about \$.65/pound. Boots, flip flops, sandals, high heels and shoes with cleats are graded as #2 shoes and command about \$.25/pound (prices as of May 2012). Two decades ago, these went to the landfill. (3 min.)

- 3) Here's a creative option for getting more use from shoes...a Clothing/Shoe Swap. Check out the video which shows how it's done at:
<http://www.youtube.com/watch?v=pv09ZTzIvc0> (5:10 min.)
- 4) Take a few minutes and create a short to-do list of what you would need to do if you created a school service project around shoes...whether it's to collect shoes for donation to a charitable cause, a clothing swap or another idea. (8 min.)
- 5) Discuss the ways in which the choices we make have an impact on our individual and collective futures. Think broadly, looking at anything from environmental, financial and social impacts to spiritual and quality of life impacts.

Prepare or identify a visual to share with the class that gives an idea of what you did in your small group. Also, be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity you completed. (4-5 min.)

Numerous other resources are available on the web, such as images of shoes made from recycled products

(<https://www.google.com/search?q=shoes+made+from+recycled+materials&hl=en&client=firefox-a&hs=fpP&rls=org.mozilla:en-US:official&prmd=imvns&tbm=isch&tbo=u&source=univ&sa=X&ei=ODWkT5C5OYfvgg e4zf24AQ&ved=0CKMBELAE&biw=1418&bih=705>)

Shoe Reuse & Recycling Options

Running Wild

1801 Clock Tower Road
Coralville, IA 52241
319-351-3602

1950 Dodge Road NE
Cedar Rapids, IA 52402
319-378-8020

<http://www.runningwild-iowa.com/>

<http://www.recycledrunners.com/shoe-donation-programs/us-shoe-donation-programs/>

Takes shoes in good used condition & gives them to Johnson & Linn county agencies for youth in need.

Citation:

“Shoe Recycling Directory.” *Recycled Runners.Com*. 2009. RecycledRunners.com. 5 December 2009

<<http://www.recycledrunners.com/shoe-donation-programs/us-shoe-donation-programs/>>.

Running Wild is Eastern Iowa's Premier Running Shoe Store. 3 December 2009 <<http://www.runningwild-iowa.com/>>.

Nike ReUSE A SHOE

Nike Recycling Drop-off Center
Nike Factory Store
241 Tanger Drive
Williamsburg, IA 52361
319-668-8047

<http://www.nikereuseashoe.com/>

Nike takes old shoes & uses a slice-and-grind technique to separate the shoe into the rubber outsole, foam midsole, & fiber upper. The rubber is used in track surfaces, gym floor tiles, playground surfaces, & some is used to make new Nike products. The foam is used in the cushion on outdoor basketball & tennis courts. The fiber is used in cushion pads for indoor synthetic courts & wood courts.

Citation:

“Reuse-A-Shoe & Nike Grind.” *Nike's Shoe Recycling & Sustainability Program*. 2008. NIKE, Inc.

<<http://www.nikereuseashoe.com/>>.

Soles4Souls

Foot Solutions
1100 Blairs Ferry Road NE
Cedar Rapids, IA 52402
319-743-3668

Soles4Souls, Inc.
C/O Village Northwest Unlimited
200 N. 18th Avenue
Sheldon, IA 51201

<http://www.soles4souls.org/index.html>

They take new or used shoes for relief efforts. They began as www.katrinashoes.org which was comprised of several churches that organized a collection & distribution of shoes after the Asian Tsunami & Hurricanes Katrina & Rita.

Citation:

“A shoe charity giving shoes to those in need.” *Soles4Souls*. 2009. Soles4Souls. 1 December 2009 <<http://www.soles4souls.org/index.html>>.

Goodwill

Goodwill Industries
1441 Blairs Ferry Road
Cedar Rapids, IA 52402
319-393-3434

Goodwill SuperCenter
2121 Holliday Dr
Dubuque, IA 52002
563-557-3158

Goodwill Stores
4318 University Ave
Cedar Falls, IA 50613
319-277-0040

Goodwill Industries
3575 4th St
Mason City, IA 50401
641-421-4167

Goodwill Industries
1850 Madison Ave
Council Bluffs, IA 51503
712-328-8911

Goodwill Industries of Central IA
4900 NE 22nd St
Des Moines, IA 50313
515-265-5323

Goodwill (<http://www.goodwill.org/>) will take shoes in any condition. If they are in decent condition they will sell them in one of their many locations throughout Iowa. If they are not reusable they will sell them as salvage material to textile or shoe recycler companies. Above are a few of their locations in major cities in Iowa. Some cities such as Des Moines have several locations.

Citation:

Goodwill Industries International, Inc. 2009. Goodwill Industries International. 30 November 2009 <<http://www.goodwill.org/>>.

The Salvation Army

The Salvation Army
133 E 2nd Street
Des Moines IA 50309
515-243-4277

The Salvation Army
747 Village Green Dr.
Mason City IA 50402
641-424-5574

The Salvation Army
114 E 3rd Street N

Newton IA 50208
641-792-2684

The Salvation Army
232 N. 13th St.
Marshalltown IA 50158
641-752-3084

The Salvation Army
3435 W Broadway
Council Bluffs IA 51502
702-325-0684

http://www.salvationarmyusa.org/usn/www_usn_2.nsf/vw-local/Home

They will take gently used shoes to sell in their thrift stores which are used to provide quality items at bargain prices. Their stores also fund their adult rehabilitation centers, provide training opportunities for men & women during their rehabilitation to regain confidence & learn a skill.

Citation:

“Doing the Most Good.” *The Salvation Army*. 2009. The Salvation Army. 1 December 2009 <http://www.salvationarmyusa.org/usn/www_usn_2.nsf/vw-local/Home>.

Retex Northwest

Retex Northwest, Inc
P.O. Box 13047
Mill Creek, Washington 98012
425-742-8377
<http://www.retexnorthwest.com/>

This company collects old shoes & ships them overseas to be recycled in other countries by workers. The workers will go through the items piece by piece to sort out the good shoes. Then they sort the wearable shoes by size, gender & other specifications to sell them by weight or sent to countries that are experiencing severe shortages of basic clothing. Then the workers sort the unwearable shoes & send them to buyers who break down the shoes into the original materials. The base material forms the foundations for new shoes & other products.

Citation:

“Clothing Shoes – Recycle.” *Retex Northwest Textile Recycling*. Retex Northwest, Inc. 1 December 2009 <<http://www.retexnorthwest.com/>>.

Handout developed by Jessica Pullman, Turkey Valley School District, and printed with permission.

(Retrieved May 15, 2012, at
<http://www.uni.edu/ceee/sites/default/files/Education/shoerecyclingreusehandout.pdf>.)

Group #4—

Advertisements, Economics & the Endgame

Materials needed: Sample advertisements, handouts, white board or equivalent and drawing materials

Objective: Students will be able to dissect an advertisement, draw conclusions from a reading, and relate concepts from the two activities.

- 1) In your small group, review and complete Part I of the handout. (7-8 min.)
- 2) Next, read the excerpt from *No Impact Man*, and complete Part II of the handout. (7-8 min.)
- 3) What surprised you as you completed the activities? Discuss the ways in which the choices we make have an impact on our individual and collective futures. Think broadly, looking at anything from environmental and financial impacts to spiritual and quality of life impacts. (4 min.)
- 4) Prepare or identify a visual to share with the class that gives an idea of what you did in your small group. Also, be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity you completed. (3-4 min.)

Part I: Giving Advertisements a Critical Look

Look over the ads and select your favorite.

- 1) What is happening in the advertisement?
- 2) What objects in the advertisement can you identify?
- 3) With which general time period are those objects associated (historical past, present, or future)?
- 4) What are the people in the image doing?
- 5) What do the facial expressions or body language suggest?
- 6) What characteristics of buildings or environment give you clues to the location?
- 7) What are the people wearing?
- 8) What is the advertisement selling?
- 9) What interests you the most about the advertisement?

(Retrieved May 21, 2012 at <http://www.readwritethink.org/classroom-resources/lesson-plans/critical-media-literacy-commercial-97.html?tab=3#tabs>.)

Part II: No Impact Man—Conspicuous Nonconsumption (from 141-149)

Read the excerpt from No Impact Man.

- A.) What is the message of this excerpt?
- B.) On page 143, Colin Beavan says “I’m not moralizing. I’m not blaming. Because it’s me, too.” Rather than consuming, what does he suggest he and other humans do?
- C.) What do you think Colin Beavan mean by “the endgame?”
- D.) How does the reading relate to the Part I activity where you dissected the advertisement?

Group #5—

Material World: A Global Family Portrait

Materials needed: *Computer and wifi, Material World: A Global Family Portrait*, white board or equivalent and drawing materials, post-it notes, shoe

Objective: Students will be able to note differences and similarities between Americans' and Argentinians' consumption habits and lives.

Most Americans have many pairs of shoes, but that's not the case around the globe. In this exercise, adapted from a more detailed lesson plan called "Material World: A Global Family Portrait," you will explore a sampling of justice issues around the topic of shoes.

Background: Here's what Tom's Shoes website says about children, shoes and the developing world:

Many children in developing countries grow up barefoot. Whether at play, doing chores or going to school, these children are at risk:

- A leading cause of disease in developing countries is soil-transmitted diseases, which can penetrate the skin through bare feet. Wearing shoes can help prevent these diseases, and the long-term physical and cognitive harm they cause.
- Wearing shoes also prevents feet from getting cuts and sores. Not only are these injuries painful, they also are dangerous when wounds become infected.
- Many times children can't attend school barefoot because shoes are a required part of their uniform. If they don't have shoes, they don't go to school. If they don't receive an education, they don't have the opportunity to realize their potential.

(Retrieved May 3, 2012 at <http://www.toms.com/our-movement>.)

- 1) Watch the video at <http://www.toms.com/our-movement>. What in the video surprised you, or made you think in new ways? What did you observe about the people in Argentina? (5 min.)
- 2) Answer the questions below (Material World Scavenger Hunt) by looking at the book, *Material World*. Note: This book will tempt you to wander through many of its pages, which is a good thing! But, please, for this exercise, stay focused. You can look at the book in more detail at a later time. Ask the instructor for a loaner copy. (10 min.)
- 3) Discuss the ways in which the choices we make have an impact on our individual and collective futures. Think broadly, looking at anything from environmental and financial impacts to spiritual and quality of life impacts. To help you, review the handout, *Two Young Women*. (4-6 min.)

- 4) Prepare or identify a visual to share with the class that gives an idea of what you did in your small group. Also, be prepared to highlight for the entire class two-three of the most compelling or effective aspects of the activity you completed. (2-3 min.)

Material World Scavenger Hunt

Names of group members: _____

Using the book, *Material World: A Global Family Portrait*, ©1994, answer the following questions.

Explore Argentina, starting on page 121.

- 1) How many people live in this household? Adults? _____ Children? _____ Total number _____
- 2) First Impressions: Look at your family's profile. Read the photographer's notes, country information, and Family Statistics. Jot down some first impressions below.
- 3) Does this family have electricity? Running water? Evidence:
- 4) Does each child have his/her own bed to sleep in? Evidence:
- 5) Do the children have toys to play with? Evidence:
- 6) This family is not rich or poor. It is average for the country. In your opinion, what is this country? Check one:
 This is a rich country This is a poor country Not rich or poor, but in between

Explore the United States, starting on page 136.

1. Look at the profile of the family in the United States and read the photographer's notes, country information, and family statistics. Jot down some first impressions below:

Two Young Women

In a phone conversation July 1, 2004, Leon Lynn, Rethinking Schools,
provided permission to distribute and permission for teachers to use this poem in their classrooms (ph:414-964-9646).

I'm 18, and years older than that.

I'm 18 and I can't believe I'm that old.

I get up before sunrise because I have to be at work.

I get up at 6, because I need time to do my hair and makeup before school.

I walk two miles to work, the blisters on my feet open from wear.

I drive to school and walk carefully, because I need to keep my shoes clean.

I spend my day inside a factory, with hundreds of other girls, unable to take breaks, and unable to leave.

I spend my day in classes, wanting only to get out.

I would give anything to go to school, to learn, to be able to get somewhere in life.

I would give anything to be done with school. Who cares anyway?

I would quit but I can't. I have parents, brothers, and sisters to support, and jobs are hard to find.

I'd drop out but then my parents would be pissed.

At 4:00, we get a five-minute break for water, and then it's back for more work.

At 3:30, we get out, and head for basketball practice.

I sew the Swoosh on, time after time, hour after hour, until my fingers bleed, and my knuckles aches.

I lace up my Nikes, my new ones.

I earn barely enough to live, and not even near enough to help my family. I get paid per pair, and I can only make so many.

These cost me \$130, and everyone has a pair.

My lungs burn with every breath, and I cough up dust every night when I get home.

My lungs sear as I run up and down the court, but I know it only makes me stronger.

I sew pair after pair, trying to earn enough to buy food and clothes.

These shoes hurt my feet, I think I'll buy a new pair.

I go home and cry. I want out, but it's such a vicious cycle. I work to get out, but I always need to work a little more before I have enough.

I go home, and lie on my waterbed. I can't wait till college. I can get out.

Deidre Barry was an 11th grade student at Franklin High School in Portland, Oregon, when she wrote this poem. (Retrieved May 4, 2012 at <http://lindseydoodle.tumblr.com/post/257930424/two-young-women-by-deidre-barry-im-18-and>)