Sneaker Supply and Demand

**KidsPost Article: “Thrill of the Feet”**

**Lesson:** Students study an everyday item, the sneaker, to learn about the roles of need and demand, technology and discovery, and advertising on supply, innovation and design and consumption.

**Level:** Beginning to Advanced

**Subjects:** Mathematics, Science, English

**Related Activity:** Art, Civics, Social Awareness

**Procedure**

*Read and Discuss*
- Ask students to take a look at the shoes they are wearing. Are they new or are they old? How sturdy are they? Are they good for rainy days? For hiking? For playing baseball? Read the timeline “The History of the Sneaker.”
- 1. What shoes did the Greeks wear?
- 2. Why were grasses and moss used?
- 3. How long has rubber been used for soles? Why was rubber used for soles?
- 4. What is vulcanization?
- 5. What inspired Bill Bowerman to create running shoes with a new design for their soles?
- 6. What early shoe designs are still worn today?
- 7. Explain how jogging is an example of supply and demand.
- 8. In what ways have advancements in technology and the discovery of new materials influenced what shoes look like and when they are worn?

Give students “Word Study: A Look at Shoes.” This introduces students to the etymology of “shoe” and changes in shoe design. In addition to the shoes that humans wear, there are other forms of shoes. Discuss them. What does the idiom mean? If you have time, do the activity in “One Size Doesn’t Fit All.”

*Read*
- You might take a survey: Which athletic shoes do students want to buy or which would they prefer to own?
- Read “Girls Against Boys.” Do your students agree with this characterization of purchasing decisions made by boys and girls?

*Design and Persuade*
- What are the parts of an athletic shoe? What features do all athletic shoes have? How do they differ? Give students “A Shoe Is a Shoe Is a Shoe?” Ask them to compare and contrast the athletic shoes pictured.

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**Sale Language**

**Advertise:** To call attention to a product or business; to seek notice to increase demand and sales of a product or service

**Consumption:** Spending by households on services and goods

**Demand:** To want a product or service and to have the money to buy it. Also, how many products and services people are willing to buy at a certain price.

**Endorsement:** Giving approval or support; making a public statement of approval, usually by someone who is famous and easily recognized

**Factory cost:** What the manufacturer must pay to produce goods. This includes the building, equipment, salaries and taxes.

**Manufacturer:** The person or business that makes something

**Marketing:** To sell

**Market research:** Gathering and evaluation of information about consumers’ preferences for products and services

**Materials:** Fabric, rubber, leather and goods that are used to make the product

**Profit:** Money that is left after expenses are paid

**Research and Development:** Experiment to find a new product or way to do something, then find a way to reproduce it for profit

**Retail:** To sell goods in small amounts to consumers

**Supply:** The amount of products (goods) and services that are available for sale or the amount that sellers are willing to sell for a particular price

**Supply and Demand:** When many people want to buy a few available items, the price goes up; if many items are available for sale but not many people demand it, the price lowers
Pretend you are a shoe manufacturer who is looking for next year’s hot item. Ask students to design a shoe that they think is needed and will sell. Have students draw a sketch of the shoe. Will anything in “Girls Against Boys” influence them? You may wish to discuss market research with older students.

Students are to put this information in writing to persuade you to make their shoes:
- Who will wear the shoe you designed?
- When will it be worn?
- From what materials will it be made?
- In what colors should it be made?
- Why is it needed?
- In what way is it an improvement over shoes that are already for sale?

Name It

Sneaker, tennis shoe, basketball shoe, athletic shoe. Whatever you call it, it’s basically the same thing: a rubber-soled shoe that’s perfect to wear when it’s time to play. How have shoes gotten their names? When rubber soles were placed on canvas shoes, they were called “sneakers” or “sneaks” because the wearer could easily sneak up on someone. In Britain, sneakers are called “plimsolls.” The rubber bands circling these shoes reminded people in England of the Plimsoll mark, horizontal lines painted on the hull of merchant ships to indicate how deep these vessels could be legally loaded. Adidas is named after company owner Adolph Dassler whose nickname was “Adi” and Puma is named after the mountain lion. Some products are endorsed by celebrities. Usually, the well known people just tell how great the product is; occasionally, the person’s name is added to the product. What example of endorsements can students give?

Now that your students have designed a product, have them name their shoes. Will they name their product after an object, a person or an idea? Will they make up a new word? They are to write a paragraph in which they tell why they have selected this name.

Do the Math

What will you charge the customer for the shoes you make? Give students “Sneaker Economics 101.” Students, given data from 1995 and 2002, are asked to create graphs to explain why shoes cost what they do. The instructions are left general so you can determine the type of graph and what will be illustrated. The class could be divided into groups to

Shoes from These

ON THE WEB

http://www.kicksology.net

Kicksology.net
One man’s opinion. Chicagoland Ernest Kim evaluates the latest sneakers on the market. Reviews are archived. Kicksology 101 provides definitions for terminology associated with shoes.

http://www.nike.com/main.html

Nike
Select your language and part of the world to learn more about products. A comparison of Web design and approaches to promotion in different world markets makes it worth a visit.

http://www.soyouwanna.com/site/syws/sneakers/sneakers.html

So You Wanna.com
Takes you through the decision process (activities and needs) of finding the best sneaker.

http://www.centuryinshoes.com/home.html

Solemates: The Century in Shoes
Look decade by decade at the 1900s from your feet up. Pictures and posters illustrate the popular styles, narrative tells about day and evening shoes, heels and cloggers, silhouettes and what was to dye for, as well as economic and social influences. Boxed copy lists “all the rage.” A must-see online museum.

http://www.shoeinfonet.com/history/usm/hi_shoes.htm

The History of Your Shoes
A brief illustrated history of shoes from the commoner’s sandal of ancient Egypt to moccasins and contemporary pumps.

http://www.northampton.gov.uk/Museums/Collections/Boot_and_Shoe/history_of_shoes.htm

History of Shoes
Brought to you by Northampton Borough Council, U.K., home of museums with distinctive shoe and boot collections. Take a closer look at early shoes, medieval shoes, Tudor to 20th century shoes.

IN PRINT

Lawlor, Laurie. Where Will This Shoe Take You?: A Walk Through the History of Footwear, Walker & Co., 1996.

From bark sandals to Elton John’s rhinestone platform shoes, the author provides stories of customs, origins and social status associated with 7 shoe styles. One chapter features shoes in myth and literature. Suggested for ages 9-12.


The shoes in this volume were exhibited at the Victoria & Albert Museum in London. From Henry VIII’s wide-toed shoes and Queen Victoria’s narrow slippers to contemporary artistry, colorful photographs, engravings, paintings and advertisements capture the details and prose captures the history.
create graphs to illustrate the cost to factory owner, cost to shoe company, and cost to store owner. What data is needed for the particular graph they are to make?

Evaluate

In 2001, Americans spent $15.42 billion on athletic shoes. About 107 million pairs of those were bought for kids. Rank these in importance to you: Brand, Comfort, Design, Durability, Endorsement, Materials used, Peer comments, Price, Store appearance (where you buy the shoes). What are the top three in your class?

Read “For Some, an Uncomfortable Fit.” Either debate these questions or ask students to argue on paper. Are sneakers worth more than $100 a pair? Should you or your parents purchase your sneakers? What percent of your allowance or your parents’ budget should be spent on your athletic shoes?

Enrichment

What is the relationship of sneaker production to child labor and sweatshops? After reading “For Some, an Uncomfortable Fit,” ask students what the corporations say about the wages they pay and what the activists for fair wages and better working conditions say.

Tell students: A sweatshop exists if a company is violating at least two labor laws, including child labor laws, according to the U.S. Dept. of Labor. When you are asked to help do chores at home, you are not engaged in child labor even though you are working. You are being a helpful member of your family. The work that your family asks you to do should not interfere with your educational opportunities.

When does harmful child labor take place? Child labor takes place when children under the age of 15 work full-time jobs and are prevented from attending school. Kids are asked to do work that is dangerous and that is hazardous to their physical, mental or emotional health.

Research more about child labor laws, sweatshops or the efforts to change work conditions and wages in factories that produce athletic shoes and toys for the American market.

“The History of the Sneaker” can be found at http://www.washingtonpost.com/

“Girls Against Boys” can be found at http://www.washingtonpost.com/wp-dyn/education/kidspost/nie/A11124-2002May13.html

“For Some, an Uncomfortable Fit” can be found at http://www.washingtonpost.com/wp-dyn/education/kidspost/nie/A11126-2002May13.html

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Child Labor

ON THE WEB


Oxfam Community Aid Abroad

News releases and reports on wages paid to the workers who produce athletic shoes and accessories.

http://www.freethemouls.org/campaigns/cl_us.html

Free the Children

Timeline highlights use of child labor and Education section provides research material.

http://us.ilo.org/ilokidsnew/kids.html

International Labor Organization Kids Pages

Sections include: “What is Child Labor?” and “What is Made with Child Labor?” and “What We Can Do.”

http://www.unicef.org/

United Nation’s Children’s Fund

Visit the section “United Nations Special Session on Children” held May 2002.


“Worked Till They Drop: Few Protections for China’s New Laborers”

Washington Post Foreign Service reporter Philip P. Pan tells the story of the death of nineteen-year-old Li Chunmei who died after working long hours in a toy factory in Songgang, China. Learn why Chinese families encourage their young children to leave home, live in a dormitory and work in factories.

In Print


Appropriate for nine- to twelve-year-olds, Kids at Work is a profile of photographer-reformer Lewis Hine. Illustrated with black-and-white photographs that Hine took in the early twentieth century while working for the National Child Labor Committee. Recognition for this work include ALA Notable Book and Publishers Weekly Best Books of the Year.


Photographs and narrative focus on children who worked in the mines of Pennsylvania in the early 1900’s.
You enjoy walking barefoot at the beach or across thick, green grass. Being barefoot is part of summer's freedom. Then someone gets cut on a piece of coral or scratched on the foot bottom. It rains or is muddy.

It's time to find your shoes. What do you wear? Clear plastic flipflops, colorful sandals or tennis shoes? Shoes today make fashion statements as well as provide protection for your feet.

Shoes have been a basic necessity for centuries, not just a fashionable accessory. Otzi, the 5,300-year-old Bronze Age hunter found frozen in the Italian Alps, wore shoes. The Iceman wore goatskin leggings and shoes made of grass tied around his feet.

Paintings on vases reveal that early Greek athletes did not wear shoes while competing. In daily life most early Greek men and women went barefoot. On rough ground, men wore sandals made of leather that had been treated with oak bark and polished with olive oil. Women's sandals were simple, soles and thongs usually stained red or yellow. In cold weather, peasants wore leather boots.

The noun “shoe” comes from the Old English word *scoh*. A soldier, a priest or a merchant could travel on foot much further if he was wearing shoes. Made of durable material such as leather, shoes usually covered the foot from toe to heel.

In 1868 sneakers began as “croquet sandals,” the beginning of sport shoes. These soft fabric shoes that are worn for sports or casual wear became known as plimsolls in the United Kingdom and sneakers in the U.S. In South Africa, sneakers and the tires on trucks both are called takkies. Do you know other words for sneakers?

A horse is shod with four shoes. Supports for the superstructure of a bridge rest in a shoe. Brakes on a car have shoes. You certainly don’t want them to wear out.

“Shoe” is also an adjective. You have gone to a shoe shop. Shoe polish can be purchased in many colors. How many colors do you have at home? Do you spit and polish or use a shoe shine brush?

Have you ever wondered how your brother would act if the shoe were on the other foot?

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**Word Study:** A look at shoes

Shoes come in many sizes and shades. They are made of leather and rubber and cloth. They protect your feet and do much more.

Shoes dance and jump and hike. Look at the shoes in your house. Where have they been and what do they do?

Find a picture or draw one of each of these shoes. Identify the shoe, then tell when and why each is worn.

- Ballet slippers
- Buskin
- Cleats
- Clogs
- Cowboy boots
- Deck shoes
- Espadrilles
- Flipflops
- Galoshes
- High heels
- Moccasins
- Mule
- Oxfords
- Platform heels
- Sandals
- Slippers
- Tap shoes
- Thigh boots

What shoes would you add to the list?
A Shoe Is a Shoe Is a Shoe?

NIKE'S AIR JORDAN XVII
- Leather upper for lateral support
- Removable mid-foot support strap
- Firm ankle support
- Zoom Air cushioning
- Solid rubber outsole with mid-foot rubber pods for added traction
- Stitchless sock-like liner
- Full-length composite shank plate for arch support and stability

Design history: Air Jordan line dates to 1984-85; new model released in February. Color options: 2 (black/metallic silver or white/college blue). New colors planned for summer and fall. Famous tall guy who has worn the shoe: Michael Jordan.

CONVERSE CHUCK TAYLOR ALL STAR
- Canvas high-top design offers little ankle support
- Fat rubber toe
- Flat vulcanized rubber footbed
- Air vents

Design: Basically unchanged since the 1920s. Color options: 13 (includes stars and stripes combo, as well as black with orange flames). Famous tall guys who’ve worn the shoe: Wilt Chamberlain, Bill Russell, Oscar Robertson, punk rocker Joey Ramone.

Sneakers, tennis shoes, takkies, plimsolls. Whatever you call them, athletic shoes are basically the same thing: rubber soles, canvas uppers, a pair of shoe laces. So is one athletic shoe just like another or are there big differences that require closer study?

Take a look at the examples on this page. Use the information that is given, the pictures and what you know about athletic shoes to write a comparison-contrast of these athletic shoes. In what ways is a Nike Air Jordan XVII similar to a Converse Chuck Taylor All Star? In what ways do they differ?
Sneaker Economics 101

Who and what determine the price that you pay for a pair of sneakers?
Here are the numbers and information from two years, 1995 and 2002. Create graphs to help us understand:

■ What it cost the factory owner to make a pair of athletic shoes,
■ What it cost Nike to produce and promote a pair of athletic shoes,
■ What it cost the shoe owner to have athletic shoes in stock ready for you to buy them.

In 2002
An $80 pair of sneakers has about $11 worth of materials in it, according to sneaker giant Nike. So why does it cost nearly eight times more? Here's the breakdown of how those shoes make their way from a factory to a store.

STEP 1
Materials: $11
(This is the fabric, rubber, leather and other things that go making the sneaker.)
Factory Cost: $6
(This is the cost of the equipment to make the sneakers, as well as rent on the building and the salaries and taxes the factory must pay.)
Factory profit: $1
(Profit is the amount of money a company can keep after expenses are paid.)
Nike pays factory: $18

STEP 2
Shoe Cost: $18
Nike Cost: $17
(Nike's costs include research and development to invent new shoes, the money they pay to superstars such as Michael Jordan and the ads they buy on TV.)
Nike taxes: $1.50
Nike net profit: $2.50
Retailer Pays Nike: $39

STEP 3
Product Cost: $39
Retailer cost: $38
(The retailer is the store customers buy the sneakers from. Its biggest costs are paying the salespeople and paying rent on the store.)
Taxes: $1
Retailer net profit: $2

COST TO CONSUMER: $80

Source: Nike

In 1995
The typical American in 1995 owned two or three pairs of athletic shoes, which ranged in price from a $20 pair of old-fashioned sneakers at a discount store to $135 for top-of-the-line basketball shoes. One big seller was Nike's Air Pegasus, which, like nearly all athletic shoes, was manufactured by suppliers in Asia. This accounting is based on a sale at an outlet of a large national retailer.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Production labor</td>
<td>$2.75</td>
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<tr>
<td>Materials</td>
<td>9.00</td>
</tr>
<tr>
<td>Rent, equipment</td>
<td>3.00</td>
</tr>
<tr>
<td>Supplier's operating profit</td>
<td>1.75</td>
</tr>
<tr>
<td>Duties</td>
<td>3.00</td>
</tr>
<tr>
<td>Shipping</td>
<td>.50</td>
</tr>
<tr>
<td>Cost to Nike</td>
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</tr>
<tr>
<td>Research/development</td>
<td>$.25</td>
</tr>
<tr>
<td>Promotion/advertising</td>
<td>4.00</td>
</tr>
<tr>
<td>Sales, distribution, administration</td>
<td>5.00</td>
</tr>
<tr>
<td>Nike's operating profit</td>
<td>6.25</td>
</tr>
<tr>
<td>Cost to retailer</td>
<td>$35.50</td>
</tr>
</tbody>
</table>

COST TO CONSUMER $70.00

Academic Content Standards

This lesson addresses academic content standards of Maryland, Virginia and the District of Columbia. Among those that apply are:

**Maryland**

**Mathematics**
Knowledge of Statistics (4.0): Students will collect, organize, display, analyze and interpret data to make decisions and predictions. By the end of grade 3, students know and are able to: gather relevant data and compile the results to answer a question; organize and display data using tables, pictographs and bar graphs; interpret, compare and make predictions based on tables, pictographs and bar graphs.

Process of Problem Solving (7.0): Students will demonstrate their ability to apply a wide variety of mathematical concepts, processes and skills to solve a broad range of problems.

**Science**
Chemistry, Structure of Matter: By the end of grade 3, students know and are able to describe physical properties of materials (i.e., texture, size, color, shape).

Skills and Processes, Technology: By the end of grade 5, students know and are able to explain that technology extends the ability of people to change the world (e.g., to cut, shape or put together materials).

**Language Arts**
Writing (3.0): By the end of grade 5, students know and are able to write essays of description and problem/solution for an intended audience and purpose.


**Virginia**

**Mathematics**
Probability and Statistics, Grade 3: 3.21. The student, given grid paper, will collect data on a given topic of his/her choice and construct a bar graph showing the results. A title and key will be included. 3.22. The student will read and interpret data represented in bar and picture graphs.

**Science**
Grade 3: 3.3, The student will investigate and understand that objects can be described in terms of the materials they are made of and their physical properties.

**English**
Writing, Grade 3: 3.7. The student will write descriptive paragraphs.

- Develop a plan for writing.
- Focus on a central idea.
- Group related ideas.
- Include descriptive details that elaborate the central idea.

Grade 5: 5.7 The student will write for a variety of purposes to describe, to inform, to entertain, and to explain.

A complete list of Standards of Learning of Virginia can be found on the Web at [http://www.pen.k12.va.us/](http://www.pen.k12.va.us/).

**Washington, D.C.**

**Mathematics**
Data Analysis, Statistics and Probability, Content Standard 3: The student collects, organizes, represents, evaluates and interprets data. Grade 4: The student makes statements and draws simple conclusions based on data. By the end of Grade 5, the student will collect and organize tables and graphs (e.g., bar graphs, line plots, stem-and-leaf plots, circle and line graphs).

**U.S. History**
Scientific, Technological and Economic Change, Content Standard 3: Students recognize scientific, technological and economic changes and understand how they have affected societies, culture and politics throughout history. The student analyzes the relationship of supply and demand to production and consumption.

**English Language Arts**
Language for Research and Inquiry, Content Standard 3: Students use language and symbol systems to define problems and organize information.

A complete list of Standards for Teaching and Learning of the District of Columbia Public Schools can be found at [http://www.k12.dc.us/](http://www.k12.dc.us/).