



Teachers Guide

Welcome to **Moneyville**, an interactive exhibition created to promote math skills and build economic literacy. This *Teachers Guide* provides resources for your class field trip to **Moneyville**, including activities designed to help you get the most from your visit.

TABLE OF CONTENTS

INTRODUCTION TO **MONEYVILLE**

EDUCATIONAL OBJECTIVES

EXHIBIT OVERVIEW

YOUR FIELD TRIP

CLASSROOM ACTIVITIES

- SHOPPING FOR FUN (GRADES K-2)
- MONEY MATCH (GRADES K-2)
- CHOICES, CHOICES, CHOICES (GRADES 3-5)
- BARTERVILLE (GRADES 3-5)
- THE SHIRT OFF YOUR BACK (GRADES 6-8)
- ACTIVE LEARNING LOG (A.L.L.)

ADDITIONAL RESOURCES

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INTRODUCTION TO *MONEYVILLE*

Money isn't just dollars and cents. The ancient Aztecs used chocolate for money, and Yap Islanders used 500-lb. stones! So what *is* money and how does it work? You and your students can explore the history, science, math, and economics behind money in ***Moneyville***. This highly interactive exhibition uses the familiar and fascinating subject of money to build math skills and promote economic literacy in a fun, immersive urban environment.

Museum visitors enter the vibrant “city” of ***Moneyville*** and embark on an exciting hands-on tour through a money factory, an anti-counterfeiting lab, a bank, a shopping district, a stock market, and an international shipping dock. As your students engage in the hands-on activities, games, and simulations found in this imaginary city, they will discover economic concepts, math skills, and problem-solving strategies that can help them in their real-life decision making.

Moneyville meets national mathematics and economics education standards, making it ideal for school groups (grades K-8). There are five major exhibition areas: *The Money Factory*; *The Bank*; *To Market, To Market*; *Dollars and Sense*; and *Global Trade*.



EDUCATIONAL OBJECTIVES

Moneyville provides rich economics, mathematics, and social studies content. The primary focus of the exhibition is **understanding and making economic choices using the power of math**. Through exhibit activities, your students will discover that money, math, and economics are not only relevant to their daily lives—but fun, too!

Economics

Economic themes explored in **Moneyville** include the following:

- The history and role of money (*Standards 3, 11, 18*)
- Resources, scarcity, and choices (*Standards 1, 2, 4, 13, 17, 18*)
- Trade, markets, and competition (*Standards 5, 6, 7, 8, 9*)
- Banks, business, and government (*Standards 10, 14, 16, 17, 20*)
- Changes over time, such as growth, interest, inflation (*Standards 12, 14, 15, 19*)

These themes are drawn from the National Council on Economics Education standards for K-12, available at <http://www.ncee.net/>

Mathematics

The exhibits in **Moneyville** are designed to build the following math skills and concepts:

- Understanding numbers (*Number and Operations*)
- Finding patterns (*Algebra, Geometry*)
- Interpreting data (*Data Analysis and Probability, Representation*)
- Measuring and comparing (*Measurement*)
- Thinking and reasoning (*Problem Solving, Reasoning and Proof, Connections, Communication*)

These skills and concepts are based on the National Council of Teachers of Mathematics standards and strands, available at <http://www.nctm.org/>. In most exhibits you'll find a "Math at Work" feature that highlights the math skills and concepts developed in that exhibit.

Moneyville is especially relevant to the NCTM Standard "Connections", which involves recognizing and applying mathematics in contexts outside of mathematics—using math concepts in a real-world setting. In a field trip to **Moneyville**, students will have many opportunities to apply mathematical concepts, skills, and thinking to real-world situations.

Social Studies

The exhibits in **Moneyville** also support your social studies curriculum, including the following topics:

- Culture and identity (*Strands I, IV*)
- Time, continuity, and change (*Strand II*)
- Individuals, groups, and institutions (*Strand V*)
- Production, distribution, and consumption (*Strand VII*)
- Global connections (*Strand IX*)

The National Council for the Social Studies standards are available at <http://www.socialstudies.org/>

More information about **Moneyville's** educational content is available at www.moneyville.org. Online resources include exhibit details, interactive games (including *Lemonade Stand* and *Get Real*), a glossary, and a bibliography of educational resources.



EXHIBITION OVERVIEW

There are five major exhibition areas in **Moneyville**: *The Money Factory*; *The Bank*; *To Market, To Market*; *Dollars and Sense*; and *Global Trade*.

THE MONEY FACTORY

What is money? Who invented it? How does it work? Explore the history, science, and technology behind money in the Money Factory. Follow the evolution of money from the earliest coins to e-commerce, investigate the barter system, make your own money, see how money is made today, and use high-tech tools to distinguish real U.S. currency from counterfeit.

Making Money

The images on money tell us a lot about the people who made it. Take a look at money from around the world, then design and make your own money, using crayons to rub on borders, designs, and values.

Face Value

Explore aspects of money design as you design and print money with your face on it. Portraits are used on many bills, in part, to prevent counterfeiting. Because people notice subtle variations in a human face, if a counterfeiter doesn't reproduce a portrait perfectly, people will spot it as a fake!

Anti-Counterfeiting Lab

Train to become a special agent and stay one step ahead of counterfeiters as you learn all about security features found on U.S. currency. Use a video microscope and ultraviolet light to find some of the security features hidden in our money. Then use what you've learned to try to spot the counterfeit bills from images of real and counterfeit money.

How Money Is Made/Video Kiosks

Watch two short videos and get an inside look at how currency is printed at the Bureau of Engraving and Printing and how coins are made at the U.S. Mint. See how art, science, and technology all come together in the process of making money.

Barterville

Navigate through a virtual marketplace and try trading to get what you want in a world without money. Discover how barter works and how money has made trade easier.

The History of Money Timeline

What is money? Who invented it? Why do we use it? Explore the connections between money, technology, math, and society on this interactive timeline that tells the global story of the evolution of money. Discover how different forms of money have made trade easier.

Money Mysteries Artifact Cases

Money hasn't always been bills and coins. Examine some of the many forms that money has taken throughout time and around the world in this interactive artifact display, and discover that just about anything can be used as money—as long as people agree it has value.

Moneyworks Park

Play with money in this unique full-body exhibit experience. Enter the light-controlled area, and experiment with different ways of using your own shadow to interact with computer-generated images of money projected on a wall. This piece of interactive "public art" inspires reflections on the importance of public goods and services and the role of tax dollars in paying for them.



THE BANK

Examine the math behind money and learn about the roles of the local bank, the Federal Reserve System, and the government. Discover how compound interest can really add up, follow the life of a dollar bill, and see what a million dollars looks like. At the *Kids Bank*, younger visitors learn to recognize coins, match coins and their values, and pretend to save, borrow, or lend money.

Million Dollars

What does a million dollars look like? See what appears to be a million dollars in one-dollar bills inside a transparent “safe.” A series of fun, thought-provoking questions helps you make sense of big numbers by making comparisons.

Money on the Move

Follow the life of a dollar bill and see how money travels through an economic system, as you watch balls (representing dollar bills) move through a kinetic sculpture, from the Bureau of Engraving and Printing to the Fed to your local bank to you. Then make decisions about spending or saving and see where the money goes. Discover how economics connects people and institutions in communities.

Make a Million

Learn about exponential growth in this computer simulation on compound interest. First, try to predict who will be a millionaire by the time they're 65—Earl, who saves a little but starts saving early or Louise, who saves a lot but starts saving late in life. Then try your own hand at making a million by choosing a savings rate, an interest rate, and using an interactive graph to see how your investment grows over time with compound interest. A fun animation explains compound interest.

Kids Bank

Children build number skills and concepts as they role-play bank tellers and customers using oversized play coins. At an activity table, children learn about coins and their values by putting together puzzles and using clues to guess the coins hidden inside “safes.”

TO MARKET, TO MARKET

Gain an understanding of markets, prices, supply, and demand. Run a “lemonade stand,” test your skills as an investor in the “stock market,” and find out how well you do as a check-out clerk making change for your customers. In the *Kids Market*, younger children can sort, count, group, weigh, and “buy” market goods using play money, cash registers, and produce scales.

Lemonade Stand

Set up a virtual lemonade stand and learn about profit, loss, supply, demand, price, and what it takes to run a small business. In this computer simulation, your challenge is to stay in business as you make daily decisions based on certain information, such as the cost of making a pitcher of lemonade, the weather forecast, graphs of profit and loss, and local news.

Kids Market

Children take on the roles of buyers and sellers as they set up a farmers market with market stalls, shopping baskets, play money, and produce. Children learn about money, math, and markets as they set prices, weigh produce, go shopping, and make change.

Quick Change

Sharpen your computational and mathematical thinking skills at the giant “cash register” as you try to make change for customers in a virtual store. Three levels of play let you build your skills as you advance from “trainee” to “sales manager.”



Stock Market

Test your skills as an investor. Learn how buyers and sellers interact in a virtual stock market. Begin with \$10,000, choose your strategy, and buy and sell stocks. Examine company profiles, analyze financial graphs, and watch for breaking news that may affect stock prices. In the four-person game, players' decisions affect stock prices in real time. Related activities focus on risk and understanding the financial pages.

DOLLARS AND SENSE

Discover strategies for making sound economic decisions in the context of everyday life by using math skills and concepts such as estimation, calculation, percentages, and problem solving. Explore money management, learn the real cost of credit, find out what it means to be a smart shopper, balance a household budget, and see how prices have changed over time.

Balancing Your Budget

Consider economic choices and trade-offs as you try to balance your monthly household budget using weighted “expense” blocks and a fixed “income” weight on a balance scale. Choose among blocks that represent “needs,” such as housing, food, and transportation, as well as “wants,” such as vacations, toys, and movies. You may have to make some tough decisions as you “weigh” your choices.

Get Real

Living in the real world means making choices—about earning, spending, and saving money. Imagine you are living on your own for the first time. You've got a job and your own apartment. What choices will you make? Can you make it through a whole year and meet some of the goals you've set for yourself? Find out how well you do on your own as you make decisions based on real-life scenarios in this computer simulation. Develop skills in economic decision-making as you compare alternatives, make choices, and see what happens.

Inflation Station

Travel back and forward in time and learn about prices and inflation as you try to guess the price of a movie ticket or family car from several different eras. Select a time to “visit” (1935, 1940, 1960, 1980, 2000, and 2020) and see how the costs of the same five items (movie ticket, pair of jeans, bicycle, family car, and average yearly salary) have changed over time. Discover how inflation reduces the value of money, and that if income and investments don't keep up with inflation, real purchasing power declines.

The Real Cost of Credit

How much will you pay if you use a credit card to buy something that costs \$1,000 and make only the minimum monthly payment on your credit card bill? Put your hand over an air tube and watch as a ball rises to show you how much you would really pay—including interest. You can compare costs and create a graph as three other balls in tubes show you the consequences of other payment choices. Learn why paying “the minimum” can add a surprising amount to the original cost.

The Better Buy

Set off on a virtual shopping spree and build your math skills as you compare prices to see if you can pick the better buy. On a computer screen, view pairs of identical items, one with a percent discount price and the other without. Pick the item you think is the “better buy”, using a “price-code scanner.” Three levels of play let you discover patterns and develop your understanding of proportional relationships and percents.



GLOBAL TRADE

Explore how trade connects us to people around the world, the values of world currencies, and the global distribution of wealth. See money from around the world, guess the mystery imports inside shipping crates, load exports on ships, view a display of photos of families and their possessions from around the world, and learn about imports by checking the label inside your shirt!

Money from Around the World

Examine bills and coins from around the world, marvel at their designs, and compare their values in terms of U.S. dollars.

From Around the World

Gain a deeper understanding of global economic interdependence as you use clues about resources and the countries they come from to guess the “mystery imports” inside four shipping crates. Then look through a viewfinder to “X-ray” each crate and uncover the surprising contents.

Material World

Imagine if a photographer knocked on your door and asked to take a picture of your family in front of your house with everything you owned spread out in your front yard. What would your family’s photo look like? See photos of families and their possessions from around the world and discover how culture, values, and available resources affect a family’s economic decisions. Use key economic data to gain a better understanding about how wealth is distributed around the world.

The Shirt Off Your Back

Do you know where the shirt you’re wearing was manufactured? Explore world trade by collecting data about where your own clothing was produced. First, check the “Made in…” label on the inside of your shirt to find the country and region it was made in. Next, check the graph to see how many shirts each region produced for sale in the U.S. Which region produced the most shirts?

The Shipping Dock

Using a crane, children can explore international trade as they sort and load export crates on cargo ships heading to three major U.S. trading partners: Canada, Mexico, and Japan.

Please note this is a preliminary exhibit description. The completed exhibition is subject to change.



For additional details, visit the **Moneyville** website at www.moneyville.org, or OMSI’s website at www.oms.edu.



YOUR FIELD TRIP TO *MONEYVILLE*

BEFORE THE TRIP

Preview the exhibit before your students' visit.

If you are familiar with the exhibit, you will be better able to plan the pre- and post-visit activities and the visit itself. Ask about previewing the exhibit when you schedule your group. During your preview, make a list of the exhibits you consider “musts” for your class to experience.

Prepare your students with pre-visit activities.

Use open-ended questions to gauge your students' knowledge and engage their interest in exhibit topics. Ask, “What do we already know? What do we want to know? How could we learn that?”

See the Classroom Activities section of this guide for activities to use before the visit. A review of vocabulary terms is also useful.

Prepare students for the trip itself by discussing the trip agenda, student behavior, and other expectations ahead of time.

Prepare your chaperones.

Check with your field trip destination for specific expectations, such as number of chaperones per class.

Before a trip, inform your chaperones about the purpose of the visit, behavior expectations, and your school's policies. Give them the *Moneyville* website address and any other useful information.

DURING THE TRIP

Have students use the Active Learning Log.

The Active Learning Log (A.L.L.) is a great alternative to a conventional scavenger hunt. The open-ended questions help keep students focused and involve them in deeper exploration of the exhibits. The A.L.L. is available at www.moneyville.org, along with an answer key for teachers and chaperones.

AFTER THE TRIP

Follow up with post-visit activities.

Additional exposure to exhibit topics helps students retain field-trip learning. See the Classroom Activities section of this guide for activities to use after the museum visit. The computer games *Lemonade Stand* and *Get Real*, found in the exhibit, are also available online at www.moneyville.org. You can also use the A.L.L. as the basis for a follow-up activity.

Other online resources:

- Interactive training and basic banking information
<http://www.aboutchecking.com>
- Interactive games and information on how to be a smart consumer.
<http://www.consumerjungle.org>



Encourage family activities.

Invite students and their families to try the activities in the **Moneyville** Family Activity Guide, available on the **Moneyville** website at www.moneyville.org.

Invite an expert to class.

Invite a community economics “expert” to your class to answer students’ questions. Experts in your community may include economics teachers or professors, bankers, stockbrokers, business managers, cashiers, and representatives from community economic education groups. Contact any of the following businesses, agencies, or community members to arrange for a speaker, workshop, special event, or ideas for other educational activities:

- The Federal Reserve Banks produce many excellent educational resources. They also provide information about tours and links to other resources.
<http://www.federalreserveeducation.org/>

<http://www.federalreserve.gov/>

The branches listed below have particularly useful K-8 materials:

- San Francisco Fed branch
<http://www.frbsf.org/>
- Minneapolis Fed branch
<http://minneapolisfed.org/>
- New York Fed branch
<http://www.ny.frb.org/>
- National Council on Economic Education
<http://www.ncee.net/>
- Junior Achievement
<http://www.ja.org/>
- Small Business Association
- Local Bank
- Economics Professor
- Coin Collector
<http://www.coinworld.com/>
- U.S. Mint
<http://www.usmint.gov/>

For kids activities:

<http://www.usmint.gov/kids/>



CLASSROOM ACTIVITIES

Bring the fun of **Moneyville** to school with these hands-on classroom activities. They can be used before or after your field trip. Grade levels are intended as guides only. Many activities can be easily adapted for other levels.

Full descriptions of the activities listed below can be found online at www.moneyville.org.

ACTIVITIES

Shopping for Fun (Grades K-2)

Students develop their ability to identify coins, count money, and make economic choices by purchasing items for an art project in a class “store.”

Money Match (Grades K-2)

Students develop their ability to identify coins and their values by selecting and matching coins in an interactive game.

Choices, Choices, Choices (Grades 3-5)

Students practice budgeting by using tokens to represent spending choices. After making their choices, students use data analysis techniques to examine the results.

Barterville (Grades 3-5)

Money makes it easier to compare choices and trade. In this activity, students play a barter game to learn what it’s like to trade *without* the use of money.

The Shirt Off Your Back (Grades 6-8)

Students collect, graph, analyze, and interpret data about where their clothing was made. They use this data and other research to explore global trade.

Reproducing U.S. Currency for Classroom Use

Below are the guidelines for reproducing U.S. currency, from the Secret Service web site: <http://www.ustreas.gov/usss/faq.shtml#rules>

- **What are the rules for the printing, publishing and illustrations of U.S. currency?**

The Counterfeit Detection Act of 1992, Public Law 102-550, in Section 411 of Title 31 of the Code of Federal Regulations, permits color illustrations of U.S. currency provided:

1. the illustration is of a size less than three-fourths or more than one and one-half, in linear dimension, of each part of the item illustrated;
2. the illustration is one-sided; and
3. all negatives, plates, positives, digitized storage medium, graphic files, magnetic medium, optical storage devices, and any other thing used in the making of the illustration that contain an image of the illustration or any part thereof are destroyed and/or deleted or erased after their final use.

Title 18, United States Code, Section 504 permits black and white reproductions of currency and other obligations, provided such reproductions meet the size requirement. See [Know Your Money](#) for more information.



Shopping For Fun

Students develop their ability to identify coins, count money, and make economic choices by purchasing items for an art project in a class “store.”

GRADE LEVELS	ECONOMICS CONCEPTS	MATH SKILLS
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K-2

Money
Prices
Choices
Trade-offs

Understanding numbers
Measuring and comparing
Thinking and reasoning

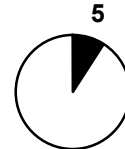
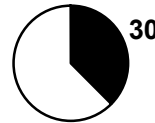
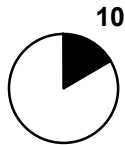
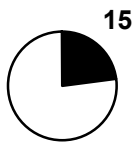
TIME REQUIRED

Advance Preparation

Set Up

Activity

Clean Up



MONEYVILLE EXHIBITS

Related **Moneyville** exhibits include *Balancing Your Budget*, *Kids Market*, *Quick Change*, and *Kids Bank*.



SUPPLIES

- A selection of special art supplies and recycled items, such as wrapping paper scraps, stickers, pom-poms, pipe cleaners, sequins, feathers, ribbon, buttons, wire, etc.
- Shoeboxes in which to display the different art supplies in the “store”
- Other “free” art supplies as needed for the specific project, e.g., construction paper, paper bags, markers, crayons, glue, tape
- Coins (pennies, nickels, and dimes, as appropriate to students’ understanding of coins and their values), 10 cents per student plus “change” for the store.

ADVANCE PREPARATION

Select a class art project, such as one of the following:

- Bags or boxes for valentines or class mail
- Cards for holidays
- A collage
- A sculpture
- Select materials for students to use.
- Create a price list for project supplies that students can buy, e.g., pipe cleaners for 2 cents; 4 pom-poms for 1 cent
- Gather enough money to give each student 10 cents. Note: It’s important for students to have some practice with real coins. If that’s not possible, you can use play money, enlarged photocopies of coins, or coins made using coin stamps on paper.

SET UP

- Set the project materials out in shoeboxes on a table to create a “store.”
- Label these items with prices (e.g., 4 pom-poms for 1 cent, etc.).
- Sort and count money to be distributed to students.
- Choose someone (a parent volunteer, a student, or you) to be the “seller.”
- Distribute money to students (10 cents per student).



INTRODUCING THE ACTIVITY

Ask students:

Have any of you ever used money to buy something? (*Ask for a show of hands and brief examples.*)

How did you decide what to buy? (*Answers will vary.*)

Tell students:

In this activity, we're going to have a "store," where you can use money to buy special materials for your art projects. I'm going to give each of you 10 cents to spend. That's enough to buy some things, but not enough to buy everything. Some things cost more than other things. (*Give examples and help students compare prices.*) **You will need to choose the things you want to buy for your project.**

CLASSROOM ACTIVITY

Procedure:

1. Hand out "free" art supplies to students.
2. Show students the special art supplies and discuss their prices.
3. Explain: **Each item costs a different amount of money. Some things cost more than others. Which item costs the most? Which item costs the least?**
4. Remind students: **Before you shop, decide what you want to spend your money on.**
5. Demonstrate the process of buying and selling with a student volunteer.
Buyer: **"I would like to buy ____ (name of item)."**
Seller: **"That will be ____ (price of item)."**
The buyer counts out the correct coins and gives them to the seller, who checks the amount and gives the buyer the item, along with change, if needed. The buyer then says, "Thank you." The seller replies, "You're welcome."
6. Choose students, one or two at a time, to come to the "store," while the others start their art projects.
7. Let students complete their projects.
8. Have the students help you clean up after they have completed their projects.



CLASS DISCUSSION

Discuss students' spending decisions.

Were you able to buy everything you wanted? Why or why not? (Encourage students to understand that people have to make choices with their money in real life, too.)

Did everyone choose to buy the same things? (Let students give examples of their choices.) **How did you decide what to buy?** (Let students give examples of their decision-making process. Encourage them to understand that when they choose one thing, they give up other things—choices involve trade-offs.) **How did you compare your choices?** (Help students understand that prices can help us compare choices.)

Why might people choose to buy different things? (*People like different things.*)

OPTIONAL EXTENSIONS

- A. Coin Combinations: Invite students to show with coins alternative ways to make the same amount for money: for example, 8 cents is 8 pennies, or 1 nickel and 3 pennies.
- B. Sharing Resources: Allow students at a table to pool their resources and share items if they choose to. **What could be good about sharing (benefits)?** (*You might be able to get more by combining any leftover money and you could share items that come in multiples, like 4 pom-poms for 1 cent.*) **What might be bad about sharing (costs or risks)?** (*Your partners might not share fairly; they might not want to spend any money on items you want.*)
- C. Snack Shop or Toy Store: You could sell snack items or small toys instead of art supplies. Older students could even run the stores themselves.
- D. Graphing Choices: Keep track of purchased items on a class graph. Compare:
 - the amount spent each item
 - the most popular item (the one chosen most often)
 - the one that students spent the most money on

**CROSS-
CURRICULAR
CONNECTIONS**

WRITING

Before shopping, have students write or draw and label a shopping list of the items they want. Write the names of the items on the board for them to copy.

SOCIAL STUDIES

If you are studying another country, get some of the country's currency at a bank and have students compare that currency to U.S. currency.

MATHEMATICS

This activity already involves counting, pattern recognition, comparisons, and simple addition, subtraction, and problem solving. Encourage students to count aloud and to communicate their reasoning as they make choices and purchase items. Advanced students can practice adding, making change, and finding equivalent combinations of coins



Money Match

Students develop their ability to identify coins and their values by selecting and matching coins in an interactive game.

GRADE LEVELS

K-2

ECONOMICS CONCEPTS

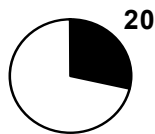
The role of money

MATH SKILLS

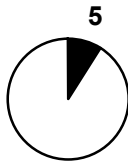
Understanding numbers
Measuring and comparing

TIME REQUIRED

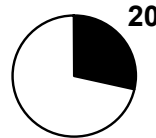
Advance Preparation



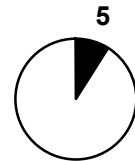
Set Up



Activity



Clean Up



MONEYVILLE EXHIBITS

Related **Moneyville** exhibits include the *Kids Bank*, the *Kids Market*, and *Quick Change*.

SUPPLIES

- 1 sock per student
- 1 penny, 1 dime, 1 nickel, and 1 quarter for each sock
- 12 snap cubes for each team of two students
(or other counters for keeping track of scores)



ADVANCE PREPARATION

- Place 1 penny, 1 dime, 1 quarter, and 1 nickel in each sock. *(If your students are already familiar with coins, you can use two or three of each coin to make the activity more challenging.)*
- Divide snap cubes into groups of 12. *(Note: Students should be able to identify a penny, a nickel, a dime, and a quarter before doing this activity.)*

SET UP

- Give each student a sock with the coins inside.
- Divide the class into teams of two.
- Give each team 12 snap cubes (or other counters).

INTRODUCING THE ACTIVITY

Show an empty sock to the students. Hold up a penny.

What is the name of this coin? How much is it worth?

Have the class respond as a group, and then put the penny inside the sock. Do the same with a nickel, a dime, and a quarter.

In this activity we will be playing a matching game using coins, socks, and cubes.

Model the game using the procedure below by playing it with one student.



CLASSROOM ACTIVITY

Procedure:

1. Demonstrate how to play the game with a student volunteer. Tell students: **Here's how to play the game. Be sure to take turns. When it is your turn, reach into your sock. Take out one coin and show it to your partner. Say: "This is a _____.** Without looking, can you find a _____ in your sock?"
(name of coin) (name of coin)
2. **Then, without looking, your partner will try to find the matching coin in his or her sock.**
3. **Then your partner holds up the coin, names it, and tells what it is worth.** Have your student partner do this for the class.
4. **If your partner finds a match, he or she takes a cube. If there isn't a match, then no one takes a cube.**
5. **Then you and your partner put your coins back into your socks, and it's your partner's turn to pull out a coin for you to match.**
6. **Play until all of the cubes have been taken. When all the cubes have been taken, count the cubes each player has.**
7. Remind students that both partners need to agree about the name and value of the coin and whether or not it is a match.
8. When finished, have students (or helpers) put away the socks and cubes, and count and store the coins.

CLASS DISCUSSION

**Which coin was the easiest to match?
Why?**

Which coin was the hardest? Why?

**What clues did you use to match the coins?
(Discuss how the coins are alike and different.)**



OPTIONAL EXTENSIONS

- A Closer Look: Pass out magnifying glasses. Have the students take a closer look at the coins. Tell how the coins are alike and how they are different. Make a chart on the board with two columns, “Alike” and “Different,” to record student observations.
- Coins from Around the World: Explore other countries’ money by replacing the U.S. coins with coins from other countries. (Some coins have unusual shapes, for example, round with a square hole, pentagonal, or octagonal.)
- Mathematical Challenge: If students can add and subtract two-digit numbers, have them challenge their partners to match the total value of three coins that they pull from their sock. For this activity, socks should be filled with 5 pennies, 2 nickels, 2 dimes, and 1 quarter.

CROSS- CURRICULAR CONNECTIONS

MATHEMATICS

Have students tell the value of each coin and add the value of the four coins together. Have students arrange coins from least to greatest value. You can also give students a variety of challenges, such as “Show me coins that add up to 6 cents.”

VISUAL ARTS

Have students draw pictures of their four coins. This will reinforce shape and image recognition.

SOCIAL STUDIES

Bring in coins from other countries and help students identify the countries they are from and find those countries on a map or globe.

ADDITIONAL RESOURCES

For more on the history and role of money, try this web site:
The U.S. Mint: <http://www.usmint.gov/kids/>



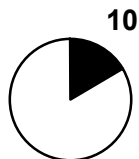
Choices, Choices, Choices

Students practice budgeting by using tokens to represent spending choices. After making their choices, students use data analysis techniques to examine the results.

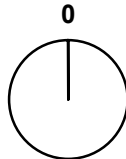
GRADE LEVELS	ECONOMICS CONCEPTS	MATH SKILLS
3-5	Resources, scarcity, and choice Trade, markets, and competition	Understanding numbers Measuring and comparing Thinking and reasoning

TIME REQUIRED

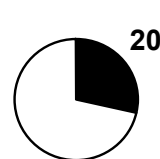
Advance Preparation



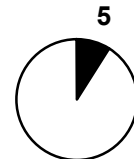
Set Up



Activity



Clean Up



MONEYVILLE EXHIBITS

Related **Moneyville** exhibits include *Balancing Your Budget*, *Get Real*, and *Material World*.



SUPPLIES

- Tokens, (e.g. dry beans or other small counters), 10 per student
- Paper cups, small plastic bags, or other containers for tokens, 1 per student
- Copies of Master A, “Choices, Choices, Choices Worksheet”, 1 per student
- Large graph paper, grid, or grid transparency for class discussion
- Optional: graph paper for students
- For Optional Extension A: 3 extra tokens per student

ADVANCE PREPARATION

- Copy one worksheet for each student.
- Optional: tokens can be divided ahead of time into sets of 10.

SET UP

- Have sufficient supplies and worksheets on hand.

INTRODUCING THE ACTIVITY

Ask students:

How do you decide how to spend your money, for instance, allowance money or money you get as a gift? Can you buy everything you want? Why or why not?

Explain:

In this activity, you get to decide how to spend your “money,” in this case tokens.

I’m going to give each of you 10 tokens. (This represents about \$20.00)

You get to choose how to use your tokens, for instance, you can use them for food, for fun, or to buy things. Then we’ll look at the choices everybody made.

What you choose doesn’t just depend on how much you have, it also depends on what you prefer. Different people will choose different things.



CLASSROOM ACTIVITY

Procedure:

1. Pass out tokens and token containers (10 tokens per student). Ask students to (quietly) count their tokens.
2. Pass out the “Choices, Choices, Choices Worksheets.” Point out that each choice “costs” a different number of tokens. For example, going to the park might be free, but getting a video costs two tokens, and going to the movies costs three.
3. Ask students to put their tokens on the circles to “pay” for the things they would buy. They can move the tokens if they change their minds.
4. After students have made their final choices with tokens, have them mark their choices with pencil and add up the totals. Then start the class discussion.
5. Clean up: Gather all remaining tokens and cards. If you like, have students count their tokens back into the containers for storage.

CLASS DISCUSSION

Explain:

This game is about making choices. Let’s look at the choices you made.

Ask students to explain the choices and trade-offs they made in different categories and why they made those choices. Encourage students to understand that making choices involves making trade-offs. Whenever a choice is made, something else is given up.

Why do you think different people made different choices? Encourage students to understand that different people will make different choices based on preferences, past experiences, goals, and values.

Ask:

Did anyone have tokens left over?

Did anyone wish they had more tokens?

What would you do if you had fewer tokens? Let’s say you could only spend 8 tokens, not 10. What would you give up? (Let students share their decision-making process.)

You can also collect class data from this activity. For each choice in each category, ask how many students made that choice. Record the data in a table, and have students convert the information into a graph. Have students use their graphs to discuss the following questions:

What was the most popular choice in each category?

What was the least popular?



OPTIONAL EXTENSIONS

- A. **Setting Priorities:** Ask students to take away 3 tokens from their sheets. **How did your spending change? What did you give up? Why?**
Add those tokens back plus 3 more. **How did your spending change? What did you choose? Why?**
- B. **Sharing:** Play the game in pairs or groups. (Groups can either share a single worksheet, or each group member can use his or her own.) Distribute 10 tokens per student as before. Discuss the benefits and drawbacks of sharing tokens for certain choices. *(For example, playing in the park might be more fun with two people, and it's still free. Renting a video costs the same whether one person or two people watch it, so by sharing you can save money. Going to the movies together can be more fun with two people, but it still costs the same per person. Sometimes sharing can be hard when people want different things.)*
- Is there a limit to how many people can share something?**
 - What could we do in real life by putting our money together that we probably couldn't do alone?** *(Examples from real life include going in together to get a pizza; buying something more expensive than an individual could afford, such as playground equipment; and providing the many goods and services funded by tax dollars, like public parks.)*
- C. **Looking at Data:** Have students create their own graphs from the worksheet data. Help students articulate a question and design a graph to answer it. Questions may be about group trends or about personal data, e.g., What was the average amount spent on food? Did I spend more or less than the average on food? Examine and compare graphs. Discuss averages and other data analysis techniques.



CROSS-CURRICULAR CONNECTIONS

WRITING

Have students write a description of what they would do if they had \$20 in real life. (Suggest describing short-term choices, over the course of a week.)

LANGUAGE ARTS

Read one of the books in the Additional Resources section of the Teachers Guide. Discuss the choices that characters made with money. Did you agree with their choices? Did they seem happy with their choices?

SOCIAL STUDIES

Give the students an opportunity to decide how to spend some money in the classroom budget, for example, on a class party. Help them determine a process for decision making, such as discussion and voting or choosing a committee to make decisions, and then carry it out. Afterwards discuss what worked well and what didn't work so well with the process.

You can use the photos and information in the book *Material World: A Global Family Portrait* to encourage discussion about how people make decisions with the resources they have available to them.



Master A: Choices, Choices, Choices Worksheet

Name: _____ Class: _____ Date: _____

How would you spend your money? The circles (○) show how much each choice costs. Put your 10 tokens on the circles to mark your choices. When you are done choosing, add up what you spent.

<p>Food</p> <p>Eat at home: FREE</p> <p>Get a treat: ○ ○</p> <p>Eat out: ○ ○ ○ ○</p> <p>Order pizza: ○ ○ ○ ○ ○</p> <p style="text-align: right;"><u>Food Total:</u></p> <div style="border: 1px solid black; width: 100px; height: 40px; margin-left: auto;"></div>	<p>Stuff</p> <p>Swap toys or get books or CDs from the library: FREE</p> <p>Buy a small toy: ○ ○</p> <p>Buy a used book or game: ○ ○ ○</p> <p>Buy used clothes or CDs: ○ ○ ○ ○</p> <p>Buy a new book or game: ○ ○ ○ ○ ○</p> <p>Buy new clothes or CDs: ○ ○ ○ ○ ○ ○ ○</p> <p style="text-align: right;"><u>Stuff Total:</u></p> <div style="border: 1px solid black; width: 100px; height: 40px; margin-left: auto;"></div>
<p>Fun</p> <p>Invite friends over or visit the park: FREE</p> <p>Go swimming or do a craft project: ○</p> <p>Rent a video: ○ ○</p> <p>See a movie: ○ ○ ○</p> <p>Go out for indoor sports, arcade games, or bowling: ○ ○ ○ ○</p> <p>Visit a theme park or carnival: ○ ○ ○ ○ ○ ○ ○</p> <p>Do something else: _____ ○ ○ ○ ○</p> <p style="text-align: right;"><u>Fun Total:</u></p> <div style="border: 1px solid black; width: 100px; height: 40px; margin-left: auto;"></div>	<p>Other Choices</p> <p>Help out at home, school, or elsewhere: FREE</p> <p>Save: ○</p> <p>Give to charity: ○</p> <p>Buy a gift for someone: ○ ○ ○</p> <p>Buy something else: _____</p> <p style="text-align: right;"><u>Other Choices Total:</u></p> <div style="border: 1px solid black; width: 100px; height: 40px; margin-left: auto;"></div>

Grand Total:



Barterville

Money makes it easier to compare choices and trade. In this activity, students play a barter game to learn what it's like to trade *without* the use of money.

GRADE LEVELS

3-5

ECONOMICS CONCEPTS

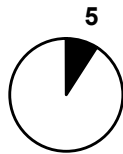
History and role of money
Trade, markets, and competition

MATH SKILLS

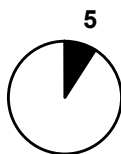
Measuring and comparing
Interpreting data
Thinking and reasoning

TIME REQUIRED

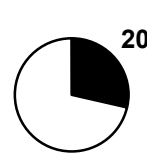
Advance Preparation



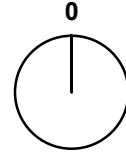
Set Up



Activity



Clean Up



MONEYVILLE EXHIBITS

Related **Moneyville** exhibits include *Barterville*, *Money Mysteries Artifact Cases*, and *The History of Money Timeline*

SUPPLIES

- Index cards
- Markers, crayons, or colored pencils
- Optional (for Extension B): Photocopied "Shopping Lists" (Master A)
- Optional (for Extension B): Photocopied "Barter Cards" (Masters B and C)



ADVANCE PREPARATION

- ❑ Optional (for Extension B): Photocopy Master A, “Shopping Lists.” Cut into individual lists. Prepare enough to distribute one Shopping List to each group of students.
- ❑ Optional (for Extension B): Photocopy Masters B and C, “Barter Cards.” Cut into individual cards. Prepare enough to distribute four to five Barter Cards to each group of students.

SET UP

- ❑ Set out index cards.

INTRODUCING THE ACTIVITY

Ask students to consider the following questions:

What do you think life was like before money was invented? How did people get the things they needed and wanted? *(Answers will vary.)*

Have you ever heard of “barter?” What does “barter” mean? *(Trading without using money)*

In this activity, we’re going to imagine we’re in a town where nobody uses money. Instead of buying things with money, we’ll barter, or trade, for whatever we want.

This activity is called, “Barterville.”

Have each student get out a piece of notepaper, crayons, colored pencils, or markers. Hand out one blank index card to each student.

**CLASSROOM
ACTIVITY****Procedure:**

1. Tell students:
We need some things to barter. On your index card, draw something you would like to get. Write the name of that item on the card, too. (If students need suggestions, give examples: something to eat, a movie ticket, a toy, a game, and so on.)
2. Allow time for students to complete their index cards.
3. Announce:
Now I'm going to collect the index cards. Don't forget what you drew on your card. Write it down on your notepaper as a reminder.
4. Collect all the cards and shuffle them. Pass out one card to each student. If possible, avoid giving students their own cards.
5. Explain:
You will start with a card that shows something that somebody else wants. Try to get your own card back by trading with other people, one card at a time.

(Optional: **Keep track of how many times you trade cards.**)

When you finish trading, sit down and hold your card in front of you so I can see it.

OK, start trading.

6. Let students try the activity once, as a fast-paced, noisy trading scramble. Check the time, and note how long it takes the first trader and the last trader to complete their trades.
7. If desired, gather the cards and play the game again with variations (see extension A). Then discuss the results.

**CLASS
DISCUSSION**

How many times did you trade? How did you decide when to trade with somebody? Were some things easier to trade than others?

Trading one thing for another is called *barter*. Barter is a way to exchange things without using money.



When do you think people might use barter? *(Before money was invented; when there is no common form of money, for example in Colonial America, among British, French, Dutch, and Native Americans; when people do not trust money or cannot get it, for example, in a war zone or an unstable economy; and when it's convenient, for example, among friends or neighbors)*

When does barter work well? *(When each person wants what the other person has to trade and they agree that it's a fair trade)*

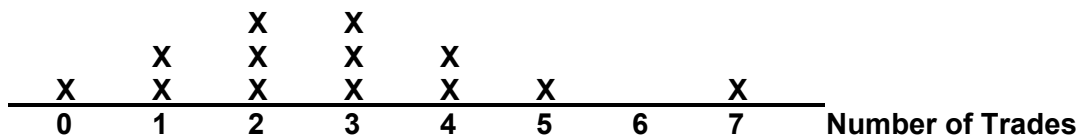
When does barter not work as well? *(When you cannot find anyone who wants what you have)*

How might trading be different with money? *(It would be easier to compare values with one standard of measurement—money; you could trade with anybody who accepted money; you wouldn't have to make so many different trades)*

Why do you think people invented money? *(Answers will vary, but should include the idea that money makes it easier to trade, especially when there are lots of different goods to be traded.)*

INTERPRETING DATA

If students kept track of the number of trades they trade, make a simple graph on the chalkboard. Draw a number line horizontally, and have students come up and mark an “x” in the column above the number of trades they made, for instance:



Students can find averages and draw their own graphs. Show how to use graphs to answer questions like:

- Did you trade more times, or fewer times, than most people?
- What was the average number of trades?

OPTIONAL EXTENSIONS

A. Variations on Barterville:

- Have students play again, tracking the number of trades they each make and how long it takes them to get their cards.
- Add new rules:



What if we add a few extra cards? (Or a “store” with extra cards.)

(Is someone with multiple cards more likely to have something you want?) **What if you cannot leave your seat and can trade only with people next to you? What if we allow one student “trader” to move around the room?**

B. Shopping Lists:

- Group students into teams, or “families.”
- Give each team a “Shopping List” (Master A) and four or five “Barter Cards” (Masters B and C). Have students trade as before, card for card, trying to get all the items on their team’s list.
- Discuss results.

C. The History of Money:

Have students research the history of money and pick one form of money to report to the rest of the class. Students should be able to explain who used the form of money, when it was used, and why. Help students generalize to come up with a definition of money that reflects the concept that money is anything widely accepted as payment for goods and services. Here’s a website students may find helpful: Federal Reserve Bank of Minneapolis:

<http://minneapolisfed.org/econed/curric/history.cfm>

CROSS-CURRICULAR CONNECTIONS

WRITING

Make an imaginary “barter diary,” creating a story about an imaginary trader’s travels, exchanges, and adventures.

CREATIVE ARTS

Have students draw “collectible” trading cards, or create art objects for trading.



Master A: SHOPPING LISTS

Babysitter
SHOPPING LIST:

milk,
apple,
banana,
bread

Vegetarian
SHOPPING LIST:

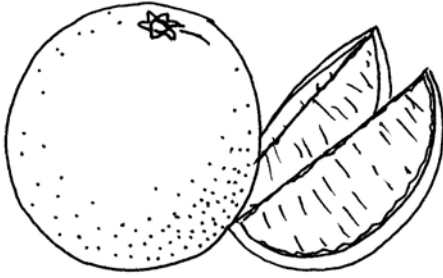
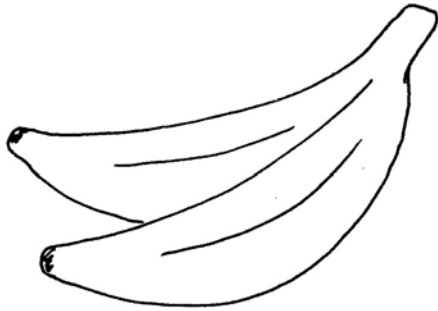
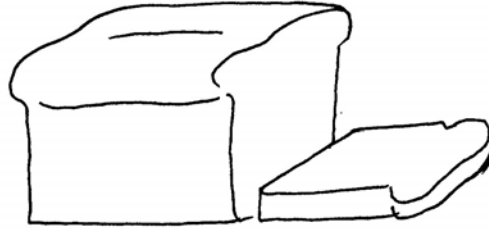
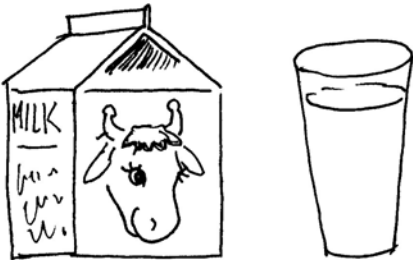
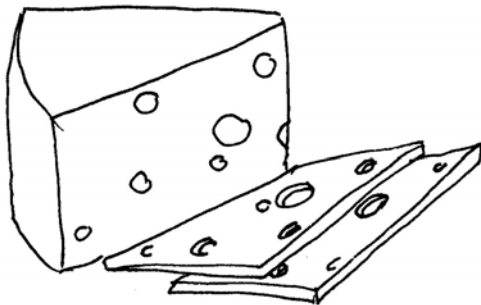
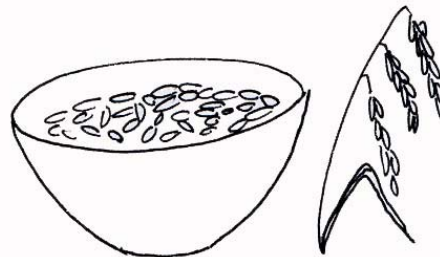
rice,
beans,
broccoli,
pumpkin

Snacker
SHOPPING LIST:

chocolate,
cookies,
orange,
sunflower seeds

Cook
SHOPPING LIST:

cabbage,
potato,
cheese,
tomato

Master B: BARTER CARDS**Orange****Apple****Banana****Bread****Milk****Potatoes****Cheese****Rice**

Master C: BARTER CARDS

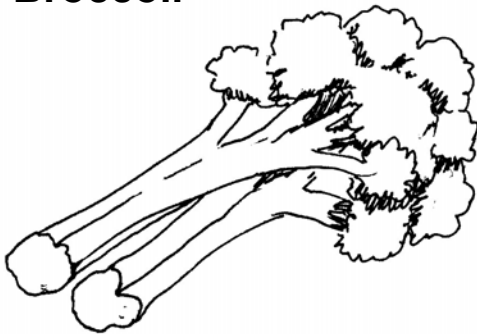
Pumpkin



Cabbage



Broccoli



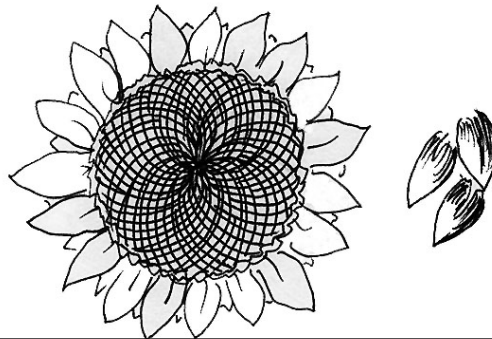
Tomatoes



Beans



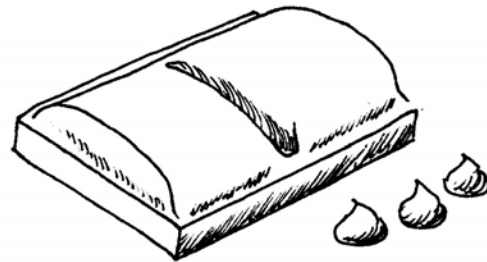
**Sunflower
Seeds**



Cookies



Chocolate





The Shirt Off Your Back

Students collect, graph, analyze, and interpret data about where their clothing was made. They use this data and other research to explore global trade.

GRADE LEVELS	ECONOMICS CONCEPTS	MATH SKILLS
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6-8

Productive resources
Specialization
Trade
Choices

Measuring and comparing
Finding patterns
Interpreting data
Thinking and reasoning

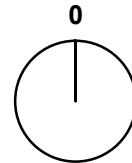
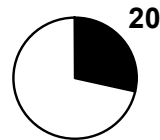
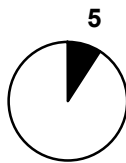
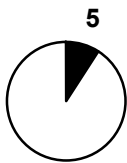
TIME REQUIRED

Advance Preparation

Set Up

Activity

Clean Up



MONEYVILLE EXHIBITS

Related **Moneyville** exhibits include the *Shirt Off Your Back* and *From Around the World*.

SUPPLIES

- Copies of Master A, “Student Data Collection Sheet” (one copy per group of students)
- World map or globe
- Copy of Master C: “World Regions and Countries”
- Optional: Excel or other spreadsheet program for Optional Extension A



ADVANCE PREPARATION

- Make copies of Master A, “Student Data Collection Sheet”
Make one copy for each group of two to four students.

SET UP

- Create a table for collecting class results on the chalkboard, chart paper, or overhead by copying or adapting the sample template shown in Master B, “Sample Template for Classroom Data Table.”
- Set out map or globe and copy of Master C, “World Regions and Countries.”

INTRODUCING THE ACTIVITY

Explain:

We are going to take a look at global trade by looking at some things we use every day.

You will be checking the labels on your shirts or sweaters to see where they were made. Then we will collect and analyze the data.

Divide students into same gender groups of 2 to 4.

Note: Because it may be necessary for students to check clothing labels for each other, you may want boys to work with boys and girls to work with girls.



CLASSROOM ACTIVITY

Note: Each student should record the data from all members of the group.

Procedure:

1. Tell students: **Look at the tag on your shirt, sweater, sweatshirt, or dress to check the manufacturer's "Made in..." label to discover the country in which your shirt was made.** (Students may need the help of a partner to read the label.)
2. **Record the manufacturer's name (brand) and the name of the country where the item was made on the Student Data Collection Sheet.**
(Tell students that if the shirt does not have a manufacturer's tag, but they know the country in which it was made, they can record that data. Otherwise, they can put that data in a category labeled "Unknown.")
3. **Look at the map, globe, or list of World Regions and Countries to find the region that country is in. Record the region on the Student Data Collection Sheet.**
4. **Look for patterns in the results from your group and make a prediction about the class results.**
5. Ask one member from each group to record the group's results on the Classroom Data Table you have prepared.
6. Have students check the Classroom Data Table for accuracy.
7. Analyze the data, as a class or in individual student groups. Calculate the percentage of shirts from each region or country of origin.
8. Have students draw conclusions.

CLASS DISCUSSION

Ask:

How many shirts were made in each region?

What percentage of the total does this represent?

Do group results and class results differ? Why or why not?



INTERPRETING DATA

Ask the following questions, allowing time for discussion and different viewpoints:

Were you surprised by any of the data? Do you see any patterns in the data? Do the shirts from our class tend to come from one or two countries or regions? How might you explain the patterns you see? *(Some countries or regions may specialize in producing textiles. Companies might choose to locate clothing factories in certain countries or regions where production costs are low.) Why might some countries or regions produce more shirts than others?* *(They have the productive resources—raw materials, labor, energy—and other conditions that make it advantageous to specialize in textile production. Companies might choose to locate their clothing factories in those countries or regions because production costs are low and the companies can make greater profits when they sell that clothing in the U.S.)*

From our class data, can we draw conclusions about what regions of the world produce the most shirts? Why or why not?

(Some of the possible reasons the class' data may not be representative of the class, the school, the state, the country, or the world:

- The results are specific to the day the data was collected. Other days could produce different results.*
- Our class may not be representative of other classes or schools from other parts of the state.*
- Our class may not be representative of a larger group, such as people in our state, country, or the world.)*

When sample size is small and not representative of a larger group, it is hard to make generalizations based on that data. How do you think we could collect data that would let us generalize about where the most shirts are made?

Why do you think a company might choose to produce shirts (or other products) in one country and not another?

(Possible reasons:

- raw materials are available*
- workers (labor force) are available*
- operating costs are less expensive*
- people of the country have the needed skills to make the product*
- favorable trade regulations among countries)*

What was the most interesting or surprising thing about this investigation? Why? *(Answers will vary.)*

How has this investigation changed what you know about the products you use? Specific examples? *(Answers will vary.)*

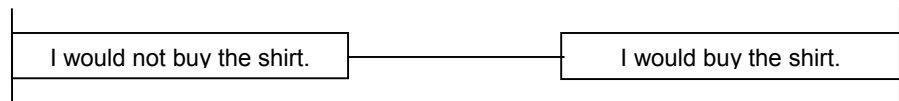
OPTIONAL EXTENSIONS

- A. Have students enter data into a spreadsheet program, such as Excel, and transform the data for presentation (e.g., to bar graphs or pie charts).
- B. Expand the data pool to include other classes, the entire school, or online student project communities.
- C. Have students collect data on the origins of other common products: CD and DVD players, shoes, CDs, toys, sports equipment, etc. Collect class data in a chart that lists the type of product, the company that made it (brand), and the country in which it was manufactured. Have students look for patterns in the data.

CROSS- CURRICULAR CONNECTIONS

WRITING

Persuasive Argument: There is a shirt you really want to buy. You discover that the workers who make these shirts get paid an extremely low wage or have poor working conditions. Would this information affect your decision about whether or not to buy the shirt? Why or why not? What information might influence your decision?



Let students work in pairs and discuss their opinions and the reasons for those opinions. Students should take turns listening to each other and writing down the main ideas that their partner presents. Then have students research and write persuasive arguments in support of their own opinions, including their responses to counterarguments.

SOCIAL STUDIES

Have students choose an item from their closet and research its manufacture. Have them use the Internet and other resources to find out more about how the item was manufactured. What company made it? Where was it produced? Who works in the factory? What wages are they paid? What are working conditions like?

Have students summarize their findings in an essay or a narrative piece tracing the product from its origins to the student's closet.



Master A: Student Data Collection Sheet

Name: _____ Class: _____ Date: _____

The Shirt Off Your Back

1. Where was your shirt made? Look at the “Made in ...” label on your shirt.
2. Write down the manufacturer’s name (brand) and the country where your shirt was made.
3. Write down the region where the country is located.
4. Add the data from your group to the Classroom Data Table.

Shirt	Brand	“Made in...” (Country)	Region of the World
1			
2			
3			
4			

Name: _____ Class: _____ Date: _____

The Shirt Off Your Back

1. Where was your shirt made? Look at the “Made in ...” label on your shirt.
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Shirt	Brand	“Made in...” (Country)	Region of the World
1			
2			
3			
4			



Master B: Sample Template for Classroom Data Table

Make a large version of the following table on the board, chart paper, transparency, or computer to organize data for the entire class.

(Note: Students could write in hatch marks for each region, which could be tallied later.)

Number of Shirts in Our Group	Number of Shirts from Each Region of the World						Total
	Africa	Asia and the Middle East	Europe	Latin America and the Caribbean	North America	Oceania	
4	1	3					4
3		2	1				3
2			1	1			2
4		1	1		2		4
3		2			1		3
4	1		1		2		4
Total Shirts Made in Each Region	2	8	4	1	5	0	20 Shirts
Percent by Region	10%	40%	20%	5%	25%	0%	100%



Master C: World Regions and Countries

AFRICA

Algeria
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Rep.
Chad
Comoros
Congo
Congo (Dem. Rep.)
Djibouti
Egypt
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Ivory Coast
Kenya
Lesotho
Liberia

EUROPE

Albania
Andorra
Austria
Belarus
Belgium
Bosnia-Herzegovina
Bulgaria
Croatia
Czech Republic
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Liechtenstein
Lithuania
Luxembourg
Macedonia
Malta
Moldova

Monaco
Netherlands
Norway
Poland
Portugal
Romania
San Marino
Serbia/Montenegro
(Yugoslavia)
Slovakia
Slovenia
Spain
Sweden
Switzerland
Ukraine
United Kingdom
Vatican City

Libya
Madagascar
Malawi
Mali
Mauritania
Mauritius
Morocco
Mozambique
Namibia
Niger
Nigeria
Rwanda
Sao Tome and Principe
Senegal
Seychelles
Sierra Leone
Somalia
South Africa
Sudan
Swaziland
Tanzania
Togo
Tunisia
Uganda
Zambia
Zimbabwe



OCEANIA

Australia
Fiji
Kiribati
Marshall Islands
Micronesia
Nauru
New Zealand
Palau
Papua New Guinea
Samoa
Solomon Islands
Tonga
Tuvalu
Vanuatu

LATIN AMERICA & THE

CARIBBEAN

Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia
Brazil
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Rep.

El Salvador
Ecuador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Nicaragua
Panama
Paraguay
Peru
St. Kitts & Nevis
St. Lucia
St. Vincent & The
Grenadines
Suriname
Trinidad & Tobago
Uruguay
Venezuela

NORTH AMERICA

Canada
United States

ASIA & THE MIDDLE

EAST

Afghanistan
Armenia
Azerbaijan
Bahrain
Bangladesh
Bhutan
Brunei
Cambodia
China
Cyprus
East Timor
India
Indonesia
Iran
Iraq
Israel
Japan
Jordan
Kazakhstan
Korea, North
Korea, South
Kuwait
Kyrgyzstan
Laos
Lebanon
Malaysia
Maldives
Mongolia
Myanmar (Burma)

Nepal
Oman
Pakistan
Philippines
Qatar
Russian Federation
Saudi Arabia
Singapore
Sri Lanka
Syria
Taiwan
Tajikistan
Thailand
Turkey
Turkmenistan
United Arab
Emirates
Uzbekistan
Vietnam
Yemen



OMSI Active Learning Log: Featured Exhibit Hall **Moneyville**

More information, additional resources, and online activities, are available on **Moneyville's** website: www.moneyville.org.

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The exhibit was created and is toured by the Oregon Museum of Science and Industry.

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Moneyville Active Learning Log

Name: _____

Making Money or Face Value

Draw or describe the symbols you would you put on money if you could design your own money.

[Answers will vary. After the field trip, teachers can ask students “Why did you choose those symbols?” and have students reflect on the idea that people and countries choose symbols to put on their money to show what’s important to them.]

Anti-Counterfeiting Lab

Name three security features that protect U.S. money from counterfeiters.

[U.S. bills are designed with security features such as fine-line printing, microprinting, intaglio printing, red and blue fibers, U.V. security threads, and color-shifting ink. After the field trip, teachers can ask students, “Why do we need to protect money from counterfeiting?” and have students discuss how the value of money depends on people believing that the money has value—that a dollar bill is really worth a dollar and is not just a worthless piece of paper.]

The History of Money Timeline or Money Mysteries Artifact Cases

What are three things that have been used as money? Who used them and why?

[Cacao beans – Aztecs; metal coins – ancient Romans; beaver pelts – Native Americans and Europeans; cowrie shells – almost every culture; bronze tools – ancient Chinese; limestone wheels – Yap Islanders. All of these things were used as money because they were rare, durable, and widely accepted as valuable.]

Barterville

What is bartering? *[trading one thing for another]*

How does money make trade easier?

[Answers may include: It makes it easier to compare the value of things. It is easy to carry and is widely accepted.]

Lemonade Stand

How did you decide what price to charge for your lemonade?

[Answers may include checking the weather and news reports, thinking about how much customers would be likely to pay, and covering the cost of supplies.]

Balancing Your Budget

What choices did you make at the *Balancing Your Budget* exhibit?

Did you have to take something off the scale to get something else you needed or wanted?

[Answers will vary, but should indicate prioritizing needs and wants. After the field trip, class discussion might focus on comparing some of the choices students made and the reasons they made them.]

What is an example of something you have bartered for?
[Answers will vary, but may include food, services (e.g. chores), toys, etc.]

How did you decide what was a fair trade? *[Each person has to want what the other person has – both have to agree that it is a fair trade.]*



The Real Cost of Credit

If you buy a \$1,000 computer on a credit card and just pay the minimum each month, how much will you end up paying in total? Why?

[nearly \$2500; because you have to pay interest on the money you borrow, and the longer it takes you to pay it back, the more interest you have to pay]

Million Dollars/How Much is a Million?

Write "1 million" with numbers.

[1,000,000]

How many zeroes does it have? *[6]*

\$1 million ...

IN...	WEIGHS...	HAS THIS MANY INDIVIDUAL BILLS...
\$1 bills	2, 200 lbs.	<i>[1,000,000]</i>
\$100 bills	<i>[22 lbs.]</i>	<i>[10,000]</i>
\$1,000 bills	<i>[2.2 lbs.]</i>	<i>[1,000]</i>

Material World

Name some things that almost all families choose to buy. *[All of the families pictured have things to meet basic needs, such as bedding, pots and pans for cooking, some form of transport, furniture, etc.]*

Money from Around the World

For extra credit:

Pick one of the currencies on display. When you get back to school, do research to find out the current value of that currency in U.S. dollars and report back to the class.

Choose one interesting fact from the Moneyville exhibit and prepare a Jeopardy question to "stump" your class or family. (Be sure to write down the answer so that you remember it!)



ADDITIONAL RESOURCES

BOOKS

26 Letters and 99 Cents by Tana Hoban (Mulberry Books, 1995). Ages 4-8.

Two “books” in one, illustrated with photographs of colorful letters, toys, and coins. Shows combinations of coins equal to various amounts.

Jelly Beans for Sale by Bruce McMillan (Scholastic Press, 1996). Ages 4-8.

Coins and jellybeans illustrate amounts from 1 cent to 25 cents (and jelly beans). A rhyming introduction and luscious photographs add flair to the simple concept.

Emeka’s Gift: An African Counting Story by Ifeoma Onyefulu (Cobblehill Books, New York, NY, 1995). Ages 4-8.

As a young African boy travels to visit his grandmother, he passes through the village market, where he sees things Granny would like—four brooms, five hats, six necklaces, and so on. Stunning color photographs taken in a Nigerian village illustrate this heartwarming story.

Bunny Money by Rosemary Wells (Dial Books for Young Readers, 1997). Recommended for ages 4-8, entertaining for adults as well.

Max and his sister Ruby (both bunnies) are shopping for a birthday present for Grandma. After spending money on a few accidents along the way, they each find the “perfect” present.

A Chair for My Mother by Vera B. Williams (Scott Foresman [Pearson K-12]; reprint edition, 1984). Ages 4-8.

After their house burns down, a girl, her mother, and her grandmother earn and save money to get a new, special chair.

A Quarter from the Tooth Fairy by Caren Holtzman (a Hello Math Reader, Scholastic, Inc., 1995). Ages 6-8.

A boy gets a quarter from the tooth fairy, buys a monster from his sister, but then returns it for his money back. She gives him two dimes and a nickel. Variations on this scenario end with money under the pillow to get the tooth back! A great lead-in to the classroom challenge: “How many ways can we make 25 cents?”

The Hundred Penny Box, by Sharon Bell Mathis (Viking Press; reprinted, 1986). Ages 6-10.

The hundred-penny box belongs to Michael’s grandmother—one penny for each of her birthdays. Michael loves to listen to her tell the story behind each penny, and knows he must save the box from his mother, who wants to get rid of the old box and buy Grandmother a new one.

Alexander, Who Used to Be Rich Last Sunday, by Judith Viorst. (Aladdin Paperbacks, Simon & Schuster Childrens’, 1987). Ages 6-8.

Alexander’s grandparents give him a dollar—and he feels rich! There are so many things that he could do with all of that money! But somehow, through Alexander’s misadventures, the money begins to disappear.

How Much Is a Million by David M. Schwartz, illustrated by Stephen Kellogg (A Mullberry Paperback, Morrow, 1985). Ages 6-10. *If You Made a Million* by David M. Schwartz, illustrated by Stephen Kellogg (A Mullberry Paperback, Morrow, 1994). Ages 6-10.

Both of these are beautifully illustrated and entertaining books, in which Marvelosissimo, the Mathematical Magician, creates fantastic scenes in order to



educate several young human and animal pupils. *How Much Is a Million* focuses on physical examples: stacks of coins, volumes of goldfish bowls, how many days to count, and so on. *If You Made a Million* takes the subject further, exploring ways to earn and spend amounts of money from a penny to \$1,000,000.

Round and Round the Money Goes: What Money Is and How We Use It, by Melvin and Gilda Berger. (Ideals Children's Books, 1993).

Explores where money comes from, where it goes, and money from different times and cultures—from shells to credit cards.

Math Games & Activities From Around the World by Claudia Zalavsky. (Chicago Review Press, 1998). Ages 9-up.

Explores board games, games of chance, logical puzzles, geometric designs, and symmetry problems from a wide range of different cultures. Games are grouped by type, often including several variations on the same game from different cultures. Questions and "Things to Think About" point out further explorations and connections to everyday problem-solving skills.

Ultimate Kids' Money Book by Neale S. Godfrey (Simon & Schuster, 1998). Ages 8-13.

In this comprehensive guide, financial expert Neale S. Godfrey reveals everything you need to know about money, including how to earn it, save it, spend it, and share it—through engaging text and illustrations. Ms. Godfrey served as an advisor on the **Moneyville** project, and may be scheduled as a special guest speaker. To schedule Ms. Godfrey as a speaker, contact her directly at nealeg34@aol.com or 908-879-8898.

Eyewitness Books, Money by Joe Cribb (Alfred A. Knopf, 1990). Ages 8-up.

Through fascinating photos and text, this book tells the story of money in close-up—its history, its meaning, and its many forms around the world.

Material World: A Global Family Portrait by Peter Menzel (Sierra Club Books, 1994). Ages 10-up.

To create this book, thirty photographers traveled around the world and took photographs of families surrounded by all their possessions. These photos provide a fascinating and thought-provoking look at how people live around the world and the choices they make with the resources they have. *Material World* puts a human face on the issues of population, environment, social justice, and consumption and illuminates the crucial question facing our species today: Can all 5 billion of us have all the things we want?

CURRICULUM MATERIALS

Math By All Means, Money, Grades 1-2 by Jane Crawford (Math Solutions Publications, 1996)

A wonderful resource, full of easy-to-use activities for the classroom.

FAMILY MATH II: Achieving Success in Mathematics

This latest addition to the FAMILY MATH series presents exciting new mathematics materials to help families learn and enjoy mathematics together. FAMILY MATH II is also an excellent supplement for teachers looking for innovative ways to reach students. This K–6 book provides an interactive approach to understanding algebra, geometry, number sense, estimation, logical thinking, probability, statistics, and much more. Important math



content is presented in easy-to-follow activities, games, and investigations, including Grandpa's Coins, in which children make discoveries by using algebraic thinking and number sense.

ON THE WEB

The Fed: www.federalreserveeducation.org

The Federal Reserve Banks produce many excellent educational resources. They also provide information about tours and links to other resources. The branches listed below have particularly useful K-8 materials:

San Francisco Fed branch: <http://www.frbsf.org/>

Minneapolis Fed branch: <http://minneapolisfed.org/>

New York Fed branch: <http://www.ny.frb.org/>

US Mint (for kids): <http://www.usmint.gov/kids/>

Bureau of Engraving and Printing: <http://www.bep.treas.gov/>

The US Treasury: <http://www.ustreas.gov/>

National Council on Economic Education: <http://www.ncee.net/>

For lesson plans and more resources, see <http://www.ncee.net/resources/>

The NCEE standards can be found at

<http://www.economicamerica.org/standards/contents.html>.

National Council of Teachers of Mathematics: <http://www.nctm.org/>