

# Money Matters for the Young Learner

Andrew T. Hill

**I**f you ask your students, “What is money?” they are likely to tell you that money is the paper dollars and metal coins they carry in their pockets. But what do your students understand about money, why we use it, and what gives it value?

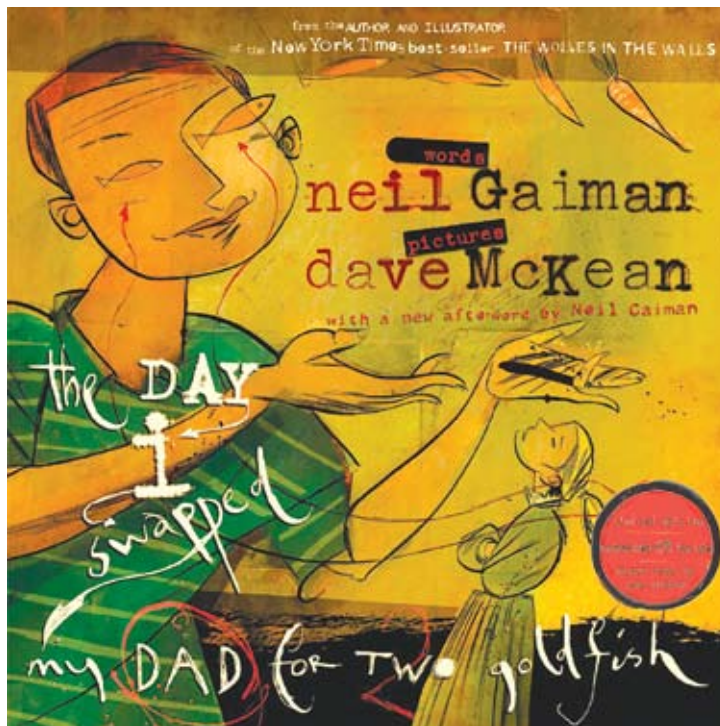
Children’s economic reasoning follows a developmental sequence in which their ideas about money and other basic economic concepts are forming.<sup>1</sup> Even children in the early primary grades can learn some basic economics and retain understanding of economic concepts if they are taught in developmentally appropriate ways.<sup>2</sup> Given how important economic literacy is in today’s world, it is essential that students acquire a correct understanding of money from the beginning. The elementary grades are the right time to teach students about the important role of money in exchanges, how the use of money differs from barter, the three key functions of money, and what characteristics money must have in order to function effectively.

## Exchange and Barter

By the end of fourth grade, students should know that an exchange can be carried out through barter or through the use of money, that barter is the direct trading of goods and services between people, and that people voluntarily exchange goods and services because they expect to be better off after the exchange. (Table 1, page 27, Content Standard 5)<sup>3</sup> It is easy to imagine how exchange arose when prehistoric humans began to live in larger groups. Exchange is a fundamental aspect of human life as we know it.

One of the most effective ways to introduce students to the concept of exchange and barter is to use children’s books such as *The Day I Swapped My Dad for Two Goldfish* by Neil Gaiman, *Saturday Sancocho* by Leyla Torres, *A New Coat for Anna* by Harriet Ziefert, or *One Fine Day* by Nonny Hogrogian. In each story, the characters encounter the difficulties associated with bartering. Bartering requires a coincidence of wants, which occurs only when each participant in an exchange is willing to trade what they have in exchange for what the other participant is willing to trade. Finding a coincidence of wants can

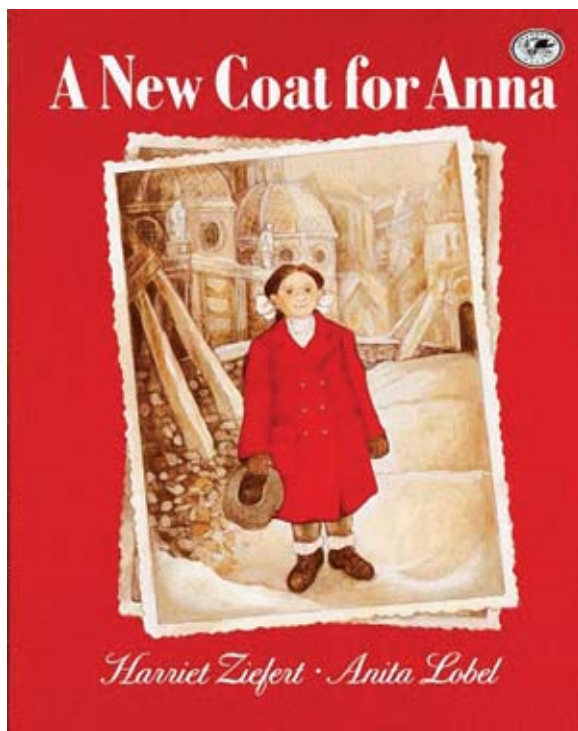
often be difficult and time consuming. Also, bartering usually involves significant uncertainty about how much of one good or service should be traded for a certain amount of another good or service. This difficulty with relative pricing further complicates exchanges when using bartering. *Dinosaur Deals: Equivalent Values* by Stuart Murphy is a book that shows children bartering with relative prices while integrating important mathematics concepts.



## Invention of Money

Money has been around for thousands of years. Civilizations developed money because bartering is so difficult. An active

approach for teaching students the difference between bartering and using money is explained in Activity 1, below.<sup>4</sup> In her lesson “A Rooster and a Bean Seed,” Julia Lelyuk uses an active approach to teach students the difference between bartering and using money. In this lesson, the teacher reads aloud a Ukrainian folk tale about barter, and students participate in a



trading activity that helps them recognize the problems with barter and the benefits of using money.<sup>5</sup>

Throughout history, societies have used a vast array of things as money, including huge stones, shells, elephant-tail bristles, gold and silver coins, furs, salt, whales' teeth, and of course, pieces of paper.<sup>6</sup> Children should understand that in our economy we use several different things as money. We use paper money called *Federal Reserve Notes*; coins; checks; and electronic money such as checking account balances that are accessible with debit cards. Students can be shown examples of paper currency and coins from other countries, indicating that different economies create their own currency for use as money. Many teachers establish classroom economies, which provide an active, collaborative method for students to learn about exchange and the use of money. Students can design their own currency, modeling the process a government goes through when designing paper money.<sup>7</sup> What words and images should be portrayed on the paper? If there is a face portrayed, whose should it be?

### Functions of Money

After learning the differences between bartering and using money, students are ready to learn about the three functions of money. Students use money in these three ways without realizing it.

- When they buy something in a store using Federal Reserve Notes or coins, they are using money as *a medium of exchange*.
- In making the decision about whether to buy something based on the price, they use money as *a unit of account*.
- When they save their allowance or a birthday gift and use it to buy something later, they use money as *a store of value*.<sup>8</sup>

### Characteristics of Money

In order for money to be used effectively in these three ways, it must possess a number of key characteristics. Students may not realize how important the characteristics are until they are taught about them.

- Money should be *portable*. Items that are heavy or bulky would not be useful as money because they would be difficult to transport.
- Money needs to be *divisible* if we are to use it to buy goods and services with different prices.
- Money needs to be *durable*. Anything that wouldn't stand up to everyday handling and the test of time would not serve as a good store of value.
- Money needs to be relatively *scarce*. Any item that was readily available or could be easily grown or reproduced would not retain its value.
- Money needs to be *acceptable*. If people are no longer willing to accept something as money, it will no longer work well as a medium of exchange.
- Finally, money needs to remain relatively *stable in value* in order to work well as a store of value and unit of account. Countries that have experienced high inflation have seen the value of their money erode.<sup>9</sup>

Activity 2 provides an active, collaborative approach to teaching about the characteristics and functions of money. In the lesson by Bonnie Meszaros "What is Money?" students participate in a play about things used for money during the American colonial period, identify the types of money mentioned in the play, and evaluate each of the items against the characteristics of money.

### Conclusion

Educators who teach children in the primary grades about exchange and money in developmentally appropriate ways can expect their students to provide reflective answers to questions that probe for economic reasoning. Students who are taught about exchange in grades K-2 will be able to explain that money is being used to facilitate a trade when they go to the store with a family member, and not just as an exchange of paper money and coins between two people. Students who are taught about the characteristics and functions of money in grades 3-4 will understand that money serves important functions in the economy, and it is money's functionality, not what it looks like, that gives it value. These same well-taught nine- and ten-year olds will be able to explain the characteristics that money needs to have in order to function well in the economy.

Children who have this level of economic understanding by the end of grade 4 will have a leg up on their counterparts who do not. They will have a sound foundation for understanding about other monetary concepts taught in grades 3-5 like banking, saving, and interest. When they reach middle and high school, these same students will likely be better pre-

pared to learn about inflation, investment, monetary policy, and the Federal Reserve System. In this age of globalization, our highly developed economy rewards those people with stronger economic reasoning. Children taught some basic elements of that reasoning at an early age can be expected to become more effective consumers and producers, better decision-makers and savers, and stronger global citizens. 🌐

Notes

1. Mark C. Schug, "Children's Understanding of Economics," *The Elementary School Journal* 87, no. 5 (1987): 506-518; Mark C. Schug and C. Jean Birkey, "The Development of Children's Economic Reasoning," *Theory and Research in Social Education* 13, no. 1 (1985): 31-42; Mark C. Schug, "What Educational Research Says About the Development of Economic Thinking," *Theory and Research in Social Education* 9, no. 3 (1981): 25-36.

2. Kim Sosin, James Dick, and Mary Lynn Reiser, "Determinants of Achievement of Economics Concepts by Elementary School Students," *Journal of Economic Education* 28, no. 2 (1997): 100-121; James D. Laney and Mark C. Schug "Teach Kids Economics and They Will Learn," *Social Studies and the Young Learner* 11, no. 2 (1998): 13-17.

3. Council for Economic Education [formerly National Council on Economic Education], *Voluntary National Content Standards in Economics* (New York: CEE, 2000), [www.councilforeconed.org/ea/program.php?pid+19](http://www.councilforeconed.org/ea/program.php?pid+19).

4. See also Andrew T. Hill, "Lesson to Accompany the Book *Saturday Sancocho*" (Federal Reserve Bank of Philadelphia), [www.philadelphiafed.org/education/teachers/lesson-plans/saturday-sancocho.pdf](http://www.philadelphiafed.org/education/teachers/lesson-plans/saturday-sancocho.pdf) and Bonnie T. Meszaros, "What Is Money?" *A Lesson to Accompany the "Money in Motion" Exhibit* (Federal Reserve Bank of Philadelphia), [www.philadelphiafed.org/education/teachers/lesson-plans/MoneyGrades3-5.pdf](http://www.philadelphiafed.org/education/teachers/lesson-plans/MoneyGrades3-5.pdf).

5. See Julia Lelyuk, "A Rooster and a Bean Seed," in *Roosters to Robots: Lesson Plans from Writers Around the World* (Council for Economic Education), [www.councilforeconed.org/ei/lessons/lesson1](http://www.councilforeconed.org/ei/lessons/lesson1). See also Meszaros, "Why Money?" *A Lesson to Accompany the "Money in Motion" Exhibit* (Federal Reserve Bank of Philadelphia),

[www.philadelphiafed.org/education/teachers/lesson-plans/MoneyGrades6-8.pdf](http://www.philadelphiafed.org/education/teachers/lesson-plans/MoneyGrades6-8.pdf).

6. For background information on early money, see Niall Ferguson, *The Ascent of Money* (New York: Penguin Press, 2008), 17-31.

7. Marilyn L. Kourilsky, *Mini-Society: Experiencing Real-World Economics in the Elementary School Classroom* (Menlo Park, CA: Addison-Wesley, 1983).

8. The specific terminology describing these three functions varies depending on the source, but the essential meaning of each function remains the same.

9. The specific number of characteristics of money often varies depending on the source.

The views expressed here are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

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Children’s Literature Cited

Neil Gaiman, *The Day I Swapped My Dad for Two Goldfish* (London: Bloomsbury, 2004).

Leyla Torres, *Saturday Sancocho* (New York: Reading Rainbow, 1999).

Harriet Ziefert, *A New Coat for Anna* (New York: Dragonfly, 1988).

Nonny Hogrogian, *One Fine Day* (New York: Aladdin, 1974).

Stuart Murphy, *Dinosaur Deals: Equivalent Values* (New York: HarperCollins, 2001).

Table 1: Relevant Standards in Economics and Elementary Benchmarks

from Council for Economic Education, *Voluntary National Content Standards in Economics* (New York: CEE, 2000), [www.councilforeconed.org](http://www.councilforeconed.org)

**Standard 5:** Students will understand that: Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

Grades K-4 Benchmarks:

- 1. Exchange is trading goods and services with people for other goods and services or for money.
- 2. The oldest form of exchange is barter—the direct trading of goods and services between people.
- 3. People voluntarily exchange goods and services because they expect to be better off after the exchange.

**Standard 11:** Students will understand that: Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

Grades K-4 Benchmarks:

- 1. Money is anything widely accepted as final payment for goods and services.
- 2. Money makes trading easier by replacing barter with transactions involving currency, coins, or checks.
- 3. People consume goods and services, not money; money is useful primarily because it can be used to buy goods and services.
- 5. Most countries create their own currency for use as money.

Grades 5-8 Benchmarks:

- 1. As a store of value, money makes it easier for people to save and defer consumption until the future.
- 2. As a unit of account, money is used to compare the market value of different goods and services.
- 3. Money encourages specialization by decreasing the costs of exchange.



## Activity 1: Barter Versus Money

**Learning Goal:** Third grade students will be able to define the terms “barter” and “money”, and explain the advantages of using money.

**Time:** One 50-minute period

### Materials and Preparation:

In advance of the lesson, prepare a set of four pepperoni pizza ingredient cards (flour, water, and yeast; oil and salt; cheese and pizza sauce; and pepperoni) and two money cards for each student. Print each ingredient card on a different colored card stock, such as white, blue, pink, and yellow. The money card should be green.

### Procedure:

1. Ask students what ingredients are used to produce pepperoni pizza. List the ingredients on the board. Explain that they will now play a game involving the ingredients for pepperoni pizza. Show them one complete set of four ingredient cards and read each card aloud. Explain that students will each get four randomly chosen ingredient cards. The object of the game is to get one of each of the ingredient cards through bartering.
2. Explain that *bartering* means trading goods and services without the use of money. In this activity, students can barter ingredient cards with one another. For example: “If I am holding four pepperoni cards, I will try to barter three of them for the other ingredient cards so I can make a complete pizza. I want to end up with four different cards.”
3. Roughly shuffle the ingredient cards, and randomly distribute four cards to each student. Allow time for the students to trade using barter. Students should continue to buy and sell ingredient cards until each student has a set of the four different ingredient cards.
4. After students have returned to their seats, discuss the following:
  - a. What problems did you have trading for all four ingredient cards? (Finding someone who had exactly what I wanted and wanted exactly what I had to trade away.) Point out that this is called a *coincidence of wants*. Explain that a coincidence of wants occurs when each participant in an exchange is willing to trade what they have in exchange for what the other participant is willing to trade. Emphasize that finding a coincidence of wants can very often be difficult, and that makes bartering a lot of work.
  - b. Did anyone make a trade for an ingredient card they did not want? (It is likely that at least one student traded for an ingredient card she didn’t want in hopes of trading it with somebody else for something that she did want.)
  - c. What would have made trading easier? (money)
5. Collect the ingredient cards from the students and shuffle them again.
6. Explain that *money* is any object that is widely accepted as a final payment for goods and services. Different societies have used all sorts of things as money, including huge stones, shells, elephant-tail bristles, furs, salt, whales’ teeth, gold and silver coins, and of course, pieces of paper. Students can now trade for the pepperoni pizza ingredient cards again, but this time they are not going to barter; they will use money.
7. Show the students a money card and explain that they can use the money cards to purchase the ingredient cards they need to get a complete set of the four different cards. One money card purchases one ingredient card. Emphasize that students sell any extra ingredient cards they have. Students should only return to their seats when they have just the four different ingredient cards plus any money cards they may have left after the exchanges. (No hoarding of goods or bartering allowed!)
8. Randomly distribute four ingredient cards and two money cards to each student. Allow time for the students to trade using money. Students should continue to buy and sell ingredient cards until each student has a set of the four different ingredient cards.
9. After students have returned to their seats, discuss the following:
  - a. Was it easier to find someone to trade with when you used money or when you bartered? (Using money) Why? (Everyone was willing to accept the money cards).
  - b. Emphasize that bartering required a coincidence of wants, while, with money, the students could trade their extra ingredient cards in exchange for money cards, which everyone knew they could use to buy the ingredient cards they wanted.
  - c. Repeat the definition that money is any object that is widely accepted in society as final payment for goods and services. Today, we use paper currency, coins, checks, and electronic money (such as debit cards). We use money because it makes trading easier than if we had to barter.
10. Define *exchange* as any trade by barter or with the use of money.

### Assessment:

To assess student learning, give the students the following assignment:

- a. What do we call the trading of goods and services without the use of money? (barter)
- b. What do we call any object that is widely accepted in society as final payment for goods and services? (money)
- c. Draw a picture to illustrate two people bartering and write two sentences to explain what you have drawn.
- d. Draw a picture to illustrate two people trading using money and write two sentences to explain what you have drawn.

## Activity 2: Testing Objects in “The Money Lab”

**Learning Goal:** Third grade students will be able to evaluate, using the six characteristics of money, an object’s ability to function as money.

**Time:** One 50-minute period

### Materials and Preparation:

Copy for each student a blank money evaluation table like the one that appears below. Prepare a visual of the table for use in classroom discussion. Prepare one set of the following items for each group of four students:

- Confetti in a plastic bag
- Unpopped popcorn in a plastic bag
- A heavy rock or brick
- A pencil
- One fresh carrot
- A typical book

### Procedure:

1. Write the three *functions* of money (it’s a medium of exchange, a store of value, and a unit of account) on the board and explain them.
2. Explain that in order for money to perform all three of these functions well, it must possess six distinct *characteristics*. List the six characteristics of money on the board (it’s portable, divisible, durable, relatively scarce, socially acceptable, and relatively stable in value) and explain them.
3. Tell the students that they are going to evaluate different items to see whether they meet the characteristics of money. They will be asking, “Does this object meet the characteristics of money?” “Could this object serve as a form of money?” “What problems would there be?” “Would it work?”

4. Divide the class into groups of four students and distribute one set of the items you have prepared in advance to each group. Distribute a copy of Handout 2: **Testing Objects in “The Money Lab”** to each student. Explain to the students that each group should decide whether they think the item in each row meets the characteristic listed in each column. They should put a plus sign (+) in the space if they believe the item meets that characteristic, a minus sign (-) if they believe it does not. Provide time for the groups to evaluate each item and complete the table.
5. After all groups have completed their tables, ask them to share their answers with the rest of the class. (This activity requires students to use higher order thinking skills and therefore different groups may have different answers.) Encourage groups to explain why they evaluated the items the way they did. Record answers on the visual. The **Teacher’s Key** below provides some possible answers to the activity.
6. Discuss with the students whether they would recommend to an imaginary country that it adopt any of the six items as that country’s form of money. Show the students a \$1.00 bill and ask them to evaluate the characteristics of the \$1.00 bill. Record the answers in the last row of the table on the visual.

### Assessment:

To assess student learning, choose a new item (a shoe or a goldfish in a bowl may elicit some laughs) and ask each student to write a paragraph evaluating whether it would be a good form of money based on the six characteristics of money.

## Teacher’s Key: Possible Answers to “The Money Lab Activity

Item Being Evaluated	Characteristics of Money					
	PORTABLE	DIVISIBLE	DURABLE	RELATIVELY SCARCE	ACCEPTABLE	STABLE IN VALUE
Confetti	+	+	-	-	-	-
Popcorn	+	+	-	-	-	-
Rock	-	-	+	-	-	-
Pencil	+	-	+	-	-	-
Carrot	+	+	-	-	-	-
Book	+	-	-	-	-	-
\$1.00 Bill	+	+	+	+	+	+

# Functions and Characteristics of Money

*Functions: **Money is a useful invention because it acts as a...***

**Medium of Exchange:** Money can be used as a go-between to make it easier to buy things than it would be if we had to barter. Sellers are willing to accept money in exchange for goods and services.

**Unit of Account:** Money can be used to measure and compare the value of goods and services in relation to one another. People can use money to compare the prices of different goods and services and determine which goods and services to buy.

**Store of Value:** Money can be used to transfer purchasing power and value from one time period to another. People are able to save their money from one time period and use it to buy goods and services in another time period.

*Characteristics: **An object might work well as a form of money if it is...***

**Portable:** Money must be easy to carry.

**Divisible:** Money must be easy to divide into smaller parts so that it can be used to buy goods and services that have different prices.

**Durable:** Money must be able to last a long time despite frequent use by many people.

**Relatively Scarce:** Money must be difficult for people to obtain. There cannot be as much of it as everyone wants.

**Acceptable:** Money must be something that everyone wants.

**Relatively Stable in Value:** Money's value must remain fairly constant over time.

# Testing Objects in “The Money Lab”

Item Being Evaluated	Characteristics of Money					
	PORTABLE	DIVISIBLE	DURABLE	RELATIVELY SCARCE	ACCEPTABLE	RELATIVELY STABLE IN VALUE
Confetti						
Popcorn						
Rock						
Pencil						
Carrot						
Book						
\$1.00 Bill						