

STUDENT WORKBOOK

THE 21ST CENTURY STUDENT'S GUIDE TO

FINANCIAL LITERACY

GOING GLOBAL



CHAPTER 3
WORKSHEETS
& ACTIVITIES

ILLUSTRATIONS
BY
ZAPP!

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LET'S PRACTICE

Name: _____

Classybucks Conundrum

Money can be almost any *thing*, but it must provide some **specific functions**: (1) it must be **commonly accepted as the medium of exchange**; (2) it must provide a **unit of account** – a standardized value understood by both parties to a transaction; and (3) it must be **capable of being saved** so people can accumulate wealth. If the thing used as a medium of exchange lacks any key function, it's not money. There are also many **characteristics of money**. A medium of exchange may lack some of the characteristics, yet still qualify as money.

You are an expert in the *process or system by which goods and services are produced, sold, and bought*. (That's right. You're an **economist!**) You have been invited to Classtopia to examine and analyze Classybucks to determine whether they meet the specific functions of money. Reread *Calamity in Classtopia!* on page 32, and answer the following questions.

1. Are Classybucks the **medium of exchange commonly accepted** by Classtopians to purchase goods or services? How can you tell? Is a **commonly accepted medium of exchange** a *function* or a *characteristic* of money?

2. Do Classybucks provide a **common measure of value**? How can you tell? Is a **common measure of value** a *function* or a *characteristic* of money?

3. Do Classybucks allow for a **store of value** so they can be accumulated for future use? How can you tell? Is **store of value** a *function* or a *characteristic* of money?

4. **Durability**. Are Classybucks durable? How can you tell? Is **durability** a *function* or a *characteristic* of money?

LET'S PRACTICE

5. Do Classybucks have a **stable value**? How can you tell? Is **stability of value** a *function* or a *characteristic* of money?

6. Are Classybucks **divisible**? How can you tell? Is **divisibility** a *function* or a *characteristic* of money?

7. **Transportability.** Can Classybucks be carried or moved around? How can you tell? Is **transportability** a *function* or a *characteristic* of money?

8. Are Classybucks **difficult to counterfeit**? How can you tell? Is **difficulty to counterfeit** a *function* or a *characteristic* of money?

I have duly inspected and considered the functions and characteristics of Classtopia's Classybucks. I have determined that Classybucks

- are money in Classtopia* *are not money in Classtopia*

Signed:

Economist



What you know about money? Check your answers on the following page.

ANSWER KEY

Classybucks Conundrum

1. Yes. The Classtopians all agreed to use paperclips as their medium of exchange, so they are commonly accepted as the Classtopia medium of exchange. A commonly accepted medium of exchange is a **function** of money.
2. Yes. They have a stated value defined by their red, green or yellow color. A common measure of value is a **function** of money.
3. Yes. Classybucks can be accumulated for future use. We know this because calculator kid saved his Classybucks and bought a calculator. Another student saved enough for tutoring, etc. Store of value is a **function** of money.
4. Yes. Paperclips are relatively durable. In that they do not decompose, deteriorate or degrade much over time. Durability is a **characteristic** of money.
5. Yes. We are told that the government of Classtopia issued Classybucks in limited supply, so we can assume the value will be stable. Stability of value is a **characteristic** of money.
6. Yes. There are several denominations of Classybucks indicated by the different color paperclips. Divisibility is a **characteristic** of money.
7. Yes. Paperclips are lightweight and easy to carry around. Transportability is a **characteristic** of money.
8. Yes. We are told that the Classtopia insignia is difficult to forge. Difficulty of counterfeit is a **characteristic** of money.

LET'S PRACTICE

Name: _____

Detecting Counterfeit Money

Counterfeit currency is *imitation (fake) currency produced without the legal sanction of the state or government*. Counterfeiting has serious implications. The dumping of counterfeit money into circulation affects the **money supply**. That can impact stability of value, reducing the **purchasing power of money**. The Federal Reserve Bank and the U.S. Treasury maintain a great deal of vigilance to prevent the printing of counterfeit money. If you find a counterfeit bill, the correct procedure is to turn it over to the **United States Secret Service**.



Can you spot a counterfeit? For this exercise you will need a U.S. bank note (bill) in any denomination, printed after 1996. (A \$5 bill is best.)

1. Check the portrait.

- Does it appear lifelike? Yes No
- Are the details of the portrait very fine and clear? Yes No
- Does it stand out from the background? Yes No

On a counterfeit bill, the portrait is often lifeless and flat, merging into a dark and mottled background. The details of the portrait may not be clear and crisp, or it may contain ink smudges or bleeds. Real currency uses secret printing methods which cannot be replicated. Portraits on bills are detailed and contain very fine lines. The printing is clear and crisp. Portraits appear to stand out from the background.

2. Check out the Federal Reserve and Treasury Seals.

- Are the saw-tooth points of the seals clear? Yes No
- Are the saw-tooth points sharp? Yes No

On a counterfeit bill, the seals may have uneven, blunt, or broken saw-tooth points.

3. Check out the border.

- Are the fine lines in the border clear? Yes No
- Are the fine lines of the border unbroken? Yes No
- Is there any ink bleed (like a smear) along the border? Yes No

Look closely. On a counterfeit bill, the lines in the outer margin and scrollwork may be blurred and indistinct, and there may be slight ink bleeds along the border.

LET'S PRACTICE

4. Check out the serial numbers.

- Are the numbers printed in the same ink color as the Treasury seal? Yes No
- Are the numbers evenly spaced and perfectly aligned? Yes No

On genuine bills, the serial numbers have a distinctive style and are perfectly aligned. They are printed in the same color or ink shade as the Treasury seal and the numbers are uniformly spaced. On a counterfeit, the serial numbers may be vertically or horizontally uneven, and lack uniformity.

5. Check out the paper.

- Look closely – can you see tiny red and blue fibers embedded in the paper? Yes No
- Feel it – Is it thin and crisp? Yes No
- Can you feel the raised print ever-so-slightly? Yes No

The paper that money is printed on is a blend of cotton and linen fibers. It is made according to a secret manufacturing process and never sold commercially. It is illegal to even *try* to reproduce it! Counterfeiters often attempt to simulate the red and blue fibers by printing tiny red and blue lines on their paper. On real money, the red and blue fibers are embedded into the paper, not printed on it. Also, a fake will feel like ordinary paper. A real bill is very thin and the print is slightly raised and detectable by feel.

6. Hold the bill up to the light. (This works only for \$5, \$10, \$20 or larger bills printed after 1996)

- Do you see a strip or thread running vertically to the left of the Federal Reserve seal? Yes No
- Does the strip appear to be embedded in the bill? Yes No
- Can you see a watermark? (A small area of darker and lighter areas.) Yes No
- When shifting the angle of view, does the number on the lower right corner of the note change color? Yes No

Security threads are placed in different places on each denomination. This prevents lower denomination bills from being bleached and reprinted as higher denominations. (Those crooks think of everything!) The security thread is not printed on the bill – it is embedded in it. All 1990 series and later bills, except \$1 and \$2 bills, include this feature. A watermark feature makes counterfeiting difficult because it does not copy on color copiers or scanners. In a genuine bill, the ink on the lower right numeral will appear green when viewed directly and change to black when the note is tilted.

Want to know more about detecting counterfeit currency?

Bureau of Engraving and Printing

U.S. Department of the Treasury

www.moneyfactory.gov/anticounterfeiting/securityfeatures.html

United States Secret Service

www.secretservice.gov/money_detect.shtml

EXPLORING 21ST CENTURY SKILLS AND ISSUES

Name: _____

Careers in Cybersecurity

NOW HIRING

- Employees for a fast-growing industry.
- Excellent pay
- Video gaming experience helpful
- **Desire to apprehend cyber-criminals and investigate cyber-crime.**
- Knowledge of cryptography helpful.
- Willing to complete intensive training program.

Hackers encouraged to apply.

In 2013, 40 million credit and debit card numbers were stolen when Target's computers were hacked. Adobe, eBay, Sony Pictures, Yahoo and Marriott have all suffered serious and very damaging data breaches (hacks). Every year, hundreds of billions of dollars are lost to hackers. **Hackers pose a real and constant threat to the security of our nation in the form of a cyber attack on the money supply, air traffic control, telecommunications systems, nuclear facility, utilities, or banks.** Cyber attacks are on the rise. Data breaches can also occur as a result of accidental or unintentional leaks.

Cybersecurity refers to the **technologies, processes and practices that protect networks, computers, programs and data from attack, damage or unauthorized access.** Cybersecurity is so critical

to commerce and our national defense, the **National Security Administration (NSA)** and **Homeland Security** are working with colleges to shape and promote cybersecurity education in order to increase the cybersecurity workforce. The **EC-Council** is an organization of IT (Information Technology) professionals who provide training and certification in all areas of cybersecurity. Want to become a CEH (Certified Ethical Hacker)? The EC-Council will train you. The U.S. military's version of cybersecurity is called cyber operations ("cyber-ops"). Let's investigate **cybersecurity education and cyber-ops.** Your resources for this assignment are:

- Watchmojo.com *10 Cyber Security Facts* (YouTube) (8:52)
- www.defense.gov/explore/story/Article/1648425/dods-cyber-strategy-5-things-to-know
- www.eccouncil.org

Watch *10 Cyber Security Facts* to answer questions 1 and 2.

1. Financial literacy includes knowing how to protect your online information. According to *10 Cyber Security Facts*, what steps can you take to secure your online information?

2. According to *10 Cyber Security Facts*, what is *shell shock*? What other name is it known by?

EXPLORING 21ST CENTURY SKILLS AND ISSUES

Refer to www.eccouncil.org/Certification to answer the questions 3-8.

3. What (or who) is an *ethical hacker*?

4. Can you earn a certificate in *ethical hacking*?

5. What does CHFI stand for? What does a CHFI do? What are their skills?

6. What (or who) is a CHI and what do they do?

7. What is *steganography*?

8. What (or who) is a CES, and what do they do?

EXPLORING 21ST CENTURY SKILLS AND ISSUES

Go to www.defense.gov and search **cyber strategy** to answer question 9.

9. What is the DOD Cybersecurity Strategy?



Go to www.nsa.gov; on the menu bar click *Resources for...*; On the drop down menu, go to *Resources for Students and Educators* to answer questions 10-12.

10. What is the intent of the CAE-Cyber Operations (Cyber-Ops) program?

Go to *List of Current Centers of Academic Excellence – Cyber Operations*.

11. If you want to study cyber-ops in an NSA authorized and designed program, what college can you go to? List the three colleges that are closest to your home.

12. Are you interested in pursuing a career in cybersecurity or cyber-ops? Why or why not?

Check what you know about
Cybersecurity Careers on page 304.

