



Exploring the Current Concepts of Money

by Deborah Yu-Yuk Jung, 2016 CTI Fellow

Winding Springs Elementary

This curriculum unit is recommended for: Media and Information Skills, Grades K-5

Keywords: Household finance; Financial institutions; Government policy and regulation; Capitalism; Economics; Money

Teaching Standards: See [Appendix 1](#) for teaching standards addressed in this unit.

Synopsis: Research shows that lessons on basic personal finance and math are better catalysts for changing the fiscal behavior of students of poverty, more so than traditional lessons on Economics. Budding capitalists need to understand basic economic concepts, so this curriculum unit focuses on the concepts on which entrepreneurship thrives, simple ideas like relationship between supply and demand and compound interest. This curriculum unit supports both Personal Finance and Economics lessons in Grades K-5 homerooms through quick mini-lessons that connect print and electronic resources with social studies lessons presented in homeroom classes. The Kindergarten lessons feature picture books, making connections through the use of realistic fiction and key questions using books that feature approachable characters with real-world problems. Grade1-3 lessons pair picture books with non-fiction titles. Grade 3 lessons are linked to their studies of local culture in another time period, while Grade 4 focuses on personal finance. Gr 3-4 lessons have associated web-based guided-inquiry activities

I plan to teach this unit in the 2016-2017 to 544 students in Media & Information Skills in Grades K-4.

I give permission for Charlotte Teachers Institute to publish my curriculum unit in print and online. I understand that I will be credited as the author of my work.

Exploring the Current Concepts of Money *By Deborah Yu-Yuk Jung*

Introduction

“As our brains enlarged, we became aware of the benefits of cooperation, creating tools like money to facilitate it. But money isn’t just the output of reason and logic.”

Kabir Sehgal, p.34

This past spring, a re-posted piece entitled; “Why The Poor Make Bad Decisions” from *The Huffington Post* caught my eye. In this op-ed, a young woman attempted to explain why poor people make seemingly bad decisions. In the essay, she describes the bone-crushing fatigue, depression and hopelessness that guide her daily decisions as well as the need to find an occasional sensation of pleasure. The very idea of delayed gratification, a middle-class value that teachers try to instill in students, cannot take root in the face of the misery and constant stress that marks a life spent in poverty. Eric Jenson notes in his research that unlike fear and anger, optimism, compassion and patience are all learned emotional responses. I believe economics and financial literacy lessons need to support a much-needed sense of optimism for the future. Research indicates that children who live in poverty have less gray matter in the hippocampus, temporal and frontal lobes of the brain making memory, problem-solving impulse control, behavior and processing difficult.¹ These findings made me wonder how educators can work against this kind of environmental framing of cognition and emotions in order to retrain the brain of students to make better decisions, including financial decisions.

Since I have always viewed money as a time-energy exchange, I found myself intrigued by Kabir Sehgal’s book, *Coined*. Sehgal raises questions about money, not just as a medium of exchange, but also its social function. Sehgal uses the metaphor of symbiosis to explain that human beings use money as a tool to acquire life’s necessities. He views money as the energy equivalent that facilitates social symbiosis, noting that working together is advantageous in evolutionary terms. Just as multi-cellular organisms specialize, this division of and specialization of labor allows us to more efficiently accomplish the tasks of survival. Furthermore, socializing benefits the individual organism by increasing the lifespan and socializing increases the chances of survival of the species.² According to Segal, as we evolved, began to express more sophisticated behavior such as reciprocity, and developed ideas such as equality and morality, we began to develop more tools for working cooperatively such as specialization of work and money. I interpret this to mean that money is not just an abstract symbol of energy, or a tool of exchange, but more importantly, a tangible symbol of faith in the ability of the species to cooperate and symbol of hope; a belief in a better future.

Rationale

Understanding the role of money in American society is vitally important to success of the students I serve. First of all, most of the families are either “unbanked” or traditionally underserved by the financial services sector, so students may not be aware of modern banking practices, interest rates, loans and credit. But more importantly, research shows that poverty affects many aspects of decision making, specifically in key areas of brain processing: language, memory, working memory, spatial cognition, cognitive control, visual cognition and reward processing.³ It has been well documented that poverty contributes not only to stress, social and emotional challenges, lags in cognitive development but also health and safety decisions.⁴ And recent research shows that this extends to the types of financial short-term thinking patterns that undermine the poor.⁵ It would be beneficial to understand how humans deal with the concept of money. How does the brain handle or process money? As our brains got bigger, humans became cognizant of the benefits of cooperation. If I follow Sehgal’s biological model, that is how humans came to understand money as a symbolic exchange of energy. However, research shows that we are not quite rational in our decisions about money. Brain imaging shows how the brain processes financial decisions; we are tapping into fear and pleasure responses when we deal with money. There is more activity in the prefrontal cortex when research participants were asked to make decisions about high-priced merchandise. Interestingly, brain scans that there was heightened activity in the temporal parietal area which normally is activated during the use of tools is also activated during the destruction of money. Neuro-economists have discovered that dopamine levels increased when research participants anticipated receiving money and that the anterior insula fires at the prospect of losing money. This seems to indicate that there is a physiological response in addition to an emotional response when human beings handle money or think about money, further confirming the idea that our responses to money are not entirely rational. The current behavioral economics research seems to indicate that supportive technologies and practices, whether a simple token system, a user-set withdrawal date or a mobile app can help adults make better saving and spending decisions.⁶ In the classroom, activities and problem-solving exercises would accustom students to the decision-making processes required for making financial decisions.

This is important because our more recent Latino and the not-so-recent Montagnard immigrant families are likely to function on a cash-only basis. Indeed, according to local businessman and minister, Steve Parker, entrepreneurship is a concept virtually unknown to the agrarian tribes of the Montagnards⁷, whose survival has been based on cooperation. So, for students growing up in poverty, teaching subtopics in capitalism such as financial literacy and economics can fill a gap in essential information or explain a behavior that may not be modeled in their homes. Understanding how the brain deals with the concept of money, especially understanding what drives the financial habits of the poor may guide how I approach the topic in my instruction. This unit will explore subtopics within capitalism such as entrepreneurship, money, and financial literacy that will be introduced

into my teaching this year, through reading assignments, research and story-times. Social Studies standards in elementary education are very basic, ranging from “Understand economic concepts” to “Understand that personal choices result in benefits or consequences”, while Information Skills standards focus on reading, researching and using information. Since Media classes are taught only once a week for 45 minutes, Media lessons will focus on one aspect of capitalism to support the ongoing work of homeroom teachers while using the topic to teach information skills. In this unit, I try to feature multicultural titles with strong characters and global settings. More conventional titles can be found at EconKids, <http://econkids.rutgers.edu/top-5-books-by-concept-econmenu-155>. Another excellent source is Social Studies and the Young Learner at The National Council for Social Studies at <http://www.socialstudies.org/teacherslibrary>. For practicality, the curriculum unit is organized by grade-level with the associated content immediately preceding the lessons and activities.

Demographics

Winding Springs is a high poverty neighborhood school surrounded by more affluent housing developments. Wedged between two interstate highways and hemmed in by industrial businesses, this school serves households where the average household income ranges from \$33,000 to \$54,000. A noticeable number of foreclosed houses still sit empty in the cul-de-sacs closest to the school, unaffordable for many of the families crowded into nearby trailer parks. Immediately outside the beltway, income jumps drastically to almost double that of the school’s service area. The ethnic composition of the school at 49% African-American and 48% Hispanic, does not reflect the diversity of the greater metropolitan region which is 58.9% Caucasian, 32.3% African American and 12.8% Hispanic. This results in both a concentration of poverty and ethnic minorities. The school population, whether from old established families or recent emigrants, Hispanic, African-American, Caucasian or Asian, share one characteristic, that of poverty. Winding Springs also has a high population of special needs students, due to the Exceptional Children Pre-School that shares the building. In spite of that, most students meet or exceed expected yearly academic growth, due not only to the rigor of instruction, but also because of the support of specialized staff and a strong school culture. Because of this, the Winding Springs academic profile looks similar to schools in more moderately affluent areas of the county. The earnings potential of this group of students is tremendous, if they realize the opportunities that a good education affords. Given the current and predicted demographics of North Carolina^{8,9} these students stand to make a significant social and economic impact in the future.

Grade K Lessons | Consumer Choices or Needs v. Wants

Economics is generally defined as the study of production, consumption and distribution of commodities or the transfer of wealth. The reality is that the happiness we humans seek is usually tied into our consumption of resources. Economics, therefore, is the study

of scarcity--how we choose to balance our needs and wants and why we make the choices we do. In a perfect world, economists assume that humans are rational and will make choices that maximize their happiness.¹⁰ Economists use data on human behavior to predict trends in employment, savings and spending that affect the Gross Domestic Product (GDP). The term for this measure of satisfaction is utility, but what makes a person happy varies and includes selfish as well as selfless decisions. Economist Adam Smith believed that even selfish actions benefited the community, the commerce generated by seeking happiness acted as “an invisible hand” serves as an equalizer to balance supply and demand in a free market.

What Kindergarteners understand, unlike the storybook character Betty Bunny, is that humans simply cannot have everything they want. There are limitations that force you to choose. Economists classify these limitations as Resource, Time and Technology constraints. Resources refer to natural resources, which may or may not be under the control of the government. Food and fuel fall in this category and are examples of natural resources that are probably controlled by private entities. Time is a fixed resource defined by one’s lifespan, and affects choices related to labor and leisure. Lack of technology, such as medicine, is an important constraint, especially to the poor. Then there is a matter of choice. After a choice is made, all other opportunities are lost, what economists refer to as opportunity cost. For instance, Kaplan’s character Betty Bunny can either hoard her chocolate cake or eat it, but not both. Most of the time, however, people do not make an all-or-nothing choice, they engage in a cost-benefit analysis called marginal utility. So even if Betty Bunny could eat an entire cake, at some point, the slices eaten would bring less and less satisfaction. This concept is known as diminishing marginal utility. Economists use this behavior model to predict what and how people will purchase, because for many people, the cost-benefit analysis is a monetary decision, therefore rational and predictable

Grade K Instructional Implementation

The standards of this unit are quite basic, and require only that students explain the differences between needs and wants as well as the concept of work. This is covered throughout the year in the classroom by visiting parents and community helpers who describe the work they do. I support teachers by providing resources on various careers. Two specific lessons addressing the standards will be presented. Assessment will follow in an interactive whiteboard activity.

Teaching Strategies: whole-group instruction including checking for understanding, discussion, use of a graphic organizer on an interactive whiteboard.

Lesson & Activities

The Kindergarten lesson will consist of three storytimes, beginning with a set review questions and SMART Board lessons on needs and wants¹¹. The books used for this lesson will be *Betty Bunny Loves Chocolate Cake* and *Betty Bunny Wants Everything* by Michael B. Kaplan, *Those Shoes* by Marilyn Boelts and *A Chair for My Mother* by Vera Williams. Each book focuses on a particular economic subtopic. I will begin with Kaplan's and Boelts' books. They will be used to discuss the difference between necessities and non-necessities, although Boelts' could also be used to discuss consumerism and marketing in another grade-level. The second storytime features Williams' text which promotes both working to earn money and the importance of saving money. The final text in the series of lessons is *Sam and the Lucky Money* by Karen Chinn, in which a child demonstrates empathy and donates his funds to charity.

Assessment: Students will be assessed informally during a SMART board exercise when they discuss and sort items into a "Wants & Needs" chart.

Grade 1 Lessons | The World of Work

In First Grade, students learn about resources in terms of land, labor and capital. Land is not only the physical acreage, but includes all the natural resources: water, air, weather, minerals, etc. A country's economy refers to how a country allocates labor, capital and natural resources. Labor is the work, measured by time, that humans provide to change raw resources into a product. Capital can refer to the technologies used to produce goods and services. It can also refer to the skill of the workers; the more skilled the workers are, the higher their value. Highly skilled workers can produce more with the same limited resources than unskilled workers. In addition, educated workers produce more innovations.¹² Thus, education is a good investment for both society and for the individual. Economic prosperity and social mobility are two benefits that come with regular employment. Countries that provide inclusive economic and political institutions that provide security and opportunity encourage innovation and entrepreneurship.¹³ The economy is measured using several sets of indicators that include the rate of economic growth, unemployment rate, inflation and interest rates, but the best known is Gross Domestic Product (GDP). GDP refers to the total production of goods and services by a country's citizens. When GDP is divided by population, it yields a per capita GDP which is what is used to compare the economies of different countries.¹⁴ Production is can be limited by both technology and natural resources. The factor that determines how much can be produced from resources is that of diminishing returns. What that means is simply the maximum output for the minimum input of labor, or what is most efficient. When more goods are created with the same limited resources, productivity rises. When workers are more productive, their living standards improve--so GDP can be used as an indicator of living standards. Businesses must constantly balance land, labor and capital in order to be profitable. Competition forces businesses to provide better products and

services at prices that consumers are willing to pay. With the balanced use of technology, humans can efficiently create a wide variety of goods and services. This unit explores different ways we earn money by providing goods and services.

Grade 1 Instructional Implementation

These Social Studies standards build on the Kindergarten standards, bringing in the concept of money, goods and services as well as supply and demand. In first grade Media lessons during the second quarter, we will be exploring fiction and nonfiction, so both informational texts and picture books will be used to explore the topics. Natural resources will be introduced as part of a science unit in second quarter, but will reappear when I teach about goods and services.

Teaching Strategies: As in Kindergarten classes, most of the instruction will be in a large-group, with questions that check for understanding. Students will be asked to link new information to prior information in a formative assessment at the beginning of the first lesson.

Lesson & Activities

This set of lessons begins with an assessment of the understanding of Needs & Wants using a bean-bag toss game. Teacher will tell students the first lesson is about learning the difference between goods and services. A non-fiction title will be paired with 1-2 picture books as we compare the characteristics of non-fiction and fiction using topics in economics. The first lesson looks at the world of work through the books, *Earning Money* by Natalie M. Rosinsky and *Uncle Jed's Barber Shop* by Margaree King Mitchell and Cathy Fink's song, *What Does Your Mama Do?* which always elicits a lot of conversation. The second lesson provides time to discuss Goods & Services. The lesson will begin with *What Do We Buy?* by Robin Nelson. *Rainbow Weaver/Tejedodra del arcoíris* by Linda Elovitz Marshall will be used to spur discussion about goods and services. Next will be a set on supply and demand, beginning with the non-fiction title *Supply and Demand* by Janeen R. Adil, *Babu's Song* by Stephanie Stuve-Bodeen and *Can Man* by Laura E. Williams. This unit will end with a presentation of *Scarcity* by Janeen R. Adil and *Four Feet, Two Sandals* by Karen Williams and Khadra Mohammed.

Assessment: A formative assessment for learning will be administered at the beginning of the set of lessons to determine if a review is needed. An informal assessment of learning will be observations made during class discussions of key questions.

Grade 2 Lessons | Supply, Demand, Trade and Banking—or what to do with all that money

Consumers are people who use goods and services, while producers make goods or provide services. Most of us are both producers and consumers. So, the 2nd grade lessons on economics begin with a review of goods and services. Traditionally, this is when we look at public goods such as water and roads, and services such as schools, libraries and airports. Governments play an important part in local economies. Not only do they provide crucial services and infrastructures, the provision of these services and goods create jobs. Government requires revenue from taxes on income, property, sales and profits in order to provide public goods and services. Governments must balance spending and borrowing to foster stable economic growth.¹⁵

Supply and demand is readily understandable to students; after all, they know exactly what toys are most coveted during the holiday season. This concept is easy to understand because students have experienced it. This is not some abstract model, but one governed by the resources held by any individual at a given time. Demand simply refers to what consumers are willing to purchase at the price they are willing able to pay. This can be governed by variables such as the costs of other desired goods and services, income and personal preferences.¹⁶ Producers and consumers often use money to purchase goods and services. The quantity of goods and services that a consumer can purchase is known as purchasing power.¹⁷ Price is key in discussing supply and demand because price changes as supply and demand change. Prices can rise when there is either a strong demand or there is an insufficient supply and fall when the supply is overabundant or demand drops. Generally, the price of a good or service will align supply to demand.

In this day and age, the market is not necessarily limited to a small geographic area; efficient transportation, low fuel costs and electronic communication have fostered a global marketplace for many businesses. International trade creates opportunities for not only increased sales, but also to higher productivity and innovation.¹⁸ There are some drawbacks to global trade that must be taken into account since these topics offer teachers opportunities to teach students to think deeper, such as the homogenization of culture, income inequality and the possible abuse of power by stronger nations.¹⁹ The primary lesson for Grade 2 students is that the price of a good or service guides financial decisions based on their needs and income.

There are a number of institutions that play a part in raising the standard of living in a community: democracy, limited liability corporations, literacy²⁰ and secure property rights.²¹ Banks serve as a means of access, providing services that allow people who save to enable loans to others in the community. Banks function by profiting from the difference between the interest rate charged to borrowers and the interest rate paid to saving accounts²², typically depositing funds into accounts only during the 5 day work-week, but withdrawing funds from accounts all 7 days of the week²³, which might

unexpectedly penalize those who do not have any kind of financial cushion between paychecks. Finally, banks in poor areas are few and far between, doubly difficult if one is relying on public transit. So, many poor families have no bank account²⁴, preferring payday lenders and check-cashing services for convenience, as well as fee & rate transparency. This is costly to low income households, not only because of the interest rates charged by payday lenders and the cost of check cashing, but because there is simply no way to save at these businesses. The poor do not have a financial margin if there are no savings, so learning to save and about how to use banks becomes critical to improving the standard of living.

Grade 2 Instructional Implementation

This set of lessons will be a new extension of an existing communities unit, which includes map skills and lessons on basic citizenship. I envision that this will be more interactive than the lower grade lessons, beginning with a large-group read-along. Storytimes will include questions that check for understanding. Small group activities will include paired assessment activities such as using iPads to work through Econedlink's "Goods and Services"²⁵ exercises.

Teaching Strategies: Think-Pair-Share

Lesson & Activities

This set of lessons will begin with a whole group read-along activity, "Why Isn't Everything Free?", followed by a discussion. The first lesson will focus on saving and spending. *Keepers*, a lesson on opportunity cost, will be followed by *What Can You Do with Money?* The second lesson will focus on producers and consumers as well as supply and demand with the books, *Who's Buying? Who's Selling?* and *Mama and Papa Have a Store*. The second part of the lesson reviews entrepreneurship with *Goods and Services* and *Sweet Potato Pie*. The last set of books brings the subject back to saving and introduces bank services with a pair of non-fiction books and Vera Williams's *A Chair for My Mother*.

Assessment: Students will participate in a Think-Pair-Share activity to discuss Kenyon's predicament in *Keepers*. Students will create a tracking chart showing how they earn, save and spend money and work through Econedlink's Goods and Services activity.

Grade 3 Lessons | Natural Resources and Market Economy

A quick study of a world map will reveal population centers clustered around rivers and coasts, which provide water for consumption as well as transport. We can trace our own local history by the development of communities along the rivers from the coast to the mountains.²⁶ Arable land, minerals and fuel can all be considered natural resources. And

regardless of where people live, natural resources limited and we must choose to use them wisely. Political structures that protect property rights and offer the citizenry economic opportunities are more likely to foster economic growth for the entire country. Governmental structures such as protection of the law to prevent fraud and theft and to enforce contracts, provide equitable public services and functional transportation networks are essential to creating a market economy and promoting entrepreneurship.²⁷

Grade 3 Instructional Implementation

This will be completely different from the lessons I taught for this unit in the past. In this set of lessons, I will focus on natural resources and entrepreneurship with a global perspective in the choice of picture book examples, since the standards stress the dependence upon natural resources as well as a developing understanding of entrepreneurship. Picture walks and book talks will be employed to introduce the connection between natural resources and economic development. Students will take notes from web-based resources such as The Mint Museum's "*From The Land*" website, as well as print resources, such as almanacs and encyclopedias. Using books and realia, I will take the focus from global to local by ending the lesson with examples of the use of natural resources by local artisans and industries and an introduction to using encyclopedias to locate information on state crops and industries.

Teaching Strategies: This lesson will primarily employ direct instruction. The environmental conservation titles would work well with a 4-corners activity before discussion.

Lessons & Activities

This set of lessons begins with a look at the present and end with the past. Debt in human societies date back millennia in the earliest forms of community sustained agriculture (CSA),²⁸ so the lesson will look at micro-loans and market economy through the use of picture books. There are a number of books such as *One Hen* by Katie Smith Milway and *Beatrice's Goat* by Page McBrier that could be used to talk about the effects that loans have on a community. The key questions posed during the lesson will prompt discussion on the subject of why people become entrepreneurs. *Red Bicycle* and *My Rows and Piles of Coins* will lead to a discussion of how to find opportunities to become an entrepreneur. *Cycle of Rice*, *Cycle of Life* and *River Ran Wild* focus on natural resources and conservation. Then we will travel back through time and space, so to speak to look at local natural resources using *Ask Roy... What is Silviculture?* and *Goods from the Woods Kit*. It will end with a short research project using The Mint Museum's *From the Land* activity and a reading of *Dave the Potter*.

As an extension of the activity I plan to read *Yasmin's Hammer* by Ann Malaspina and will fund \$25 for each class that wishes to research, discuss and come to consensus on a

business loan using Kiva.org or if the homeroom teacher desires, the class can fund-raise to make the loan.

Assessment: Assessment will be informal observation during class discussions. *From the Land* is a matching activity that requires students find answers on The Mint Museum's website.

Grade 4 Lessons | Market Economy Personal Finance

For eons, humans lived in societies that were subsistence economies, or production-consumption economies. As humans used up the natural resources in one geographical area, they would move to another.²⁹ At some point, systems of exchange such as barter, gifts or loans would have to have been established. Previously, economists believed that barter preceded the development of money, however current anthropologists believe that debt, specifically agricultural grain loans³⁰ caused the development of money. Barter, or use of proto-money such as commodities, it is now believed, occurs when a substitute for money is needed.³¹ But debt, part of the founding of our nation³² as the popular Broadway musical *Hamilton* proclaims, seems to haunt the average American, inversely affecting the people least able to carry it.³³ The solution seems to indicate that educating students in both mathematics and financial literacy seems to better equip them for managing debt.³⁴

In a perfect universe, the free market would determine the price based on supply and demand. When demand increases, the price should as well. Production then might increase the supply to meet the demand. At some point the increased supply would drive down both demand and price. However, we do not live in a perfect universe, and other factors directly and indirectly affect the cost. One of the key factors in this complex balancing act is the income of the consumer, therefore the perfect price is the one the consumer is willing to pay.

Consumers can choose to pay with cash or some form of debit from an account that has funds, or can choose to acquire debt by borrowing against a line of credit. Using credit can be a reckless decision; the price for immediate gratification fetters us to a high-cost repayment plan. Interest is another topic that should be covered because it affects credit interactions. Simply put, interest is what a saver earns and a debtor pays over and above the value of the transaction. Interest is where both banks and payday lenders make their money. Interest rates are lower when savings are high and government spending is controlled and rise when the demand for loans is higher than rate of saving.³⁵ To estimate how long it would take to double debt or income students can use the rule of 72, multiplying the annual interest rate by 72 to determine how quickly loans would double or dividing 72 by the annual interest rate of a savings account.

Grade 4 Instructional Implementation

These standards are being co-taught in the homeroom classes, using a Vanguard curriculum, *My Classroom Economy* linked to Junior Achievement's JA Biz Town. My Classroom Economy begins with the basics of the economic system in the home room. Students apply for jobs, pay rent on their desks, pay fees and fines for late classwork, mislaid books, behavior infractions. JA Biz Town takes this a bit further by building background in how communities function through the goods and services provided by workers. Additional modules suggested by Vanguard, such as real estate, taxes and interest are optional. To aid students' understanding of the subject of money, this grade level will focus on personal finance, specifically pricing, interest rates and credit cards. I will review the characteristics of money, introduce the role of banks and interest rates using the book and supporting website, *Follow Your Money: Who Gets It, Who Spends It, Where Does It Go?*

Teaching Strategies: Primarily direct instruction, although the research may be completed as an orbital activity.

Lessons & Activities

The first lesson is a read-aloud of pages 4-5 of the text, which discusses pricing, gross profit, net profit and the term "Bottom Line." Students will Think-Pair-Share before writing key terms and definitions on an exit ticket. For the second lesson, students will each receive a different good or service description from the book. Pairs will be randomly drawn by students from the Bowl of Chaos, a bowl which contain multiples of various objects, which divides the class into working teams. Each student will read the pages assigned, review it with a partner who has the same topic, then explain it to a student who had a different assignment. We go back to a whole group activity with "Bank on It", the chapter on how banks use interest. This will be followed by either an explanation of the Rule of 72 or Demi's One Grain of Rice to teach the concept of compound interest. The last activity is a paired activity, where students select a card from the Bowl of Chaos. When they locate their partner, they read the chapter on the difference between debit and credit cards, then work on the credit or budget problem on the back of their card. As an extension of the activity I will fund \$25 for each class that wishes to research, discuss and come to consensus on a business loan using Kiva.org or if the homeroom teacher desires, I will fund the start-up costs for student businesses within the grade-level.

Assessment: Most formal and informal assessments will take place in the homerooms.

Appendix 1: Implementing Teaching Standards

CCSS.ELA-LITERACY.SL.K.1, CCSS.ELA-LITERACY.SL.1.1, CCSS.ELA-LITERACY.SL.2.1

Participate in collaborative conversations with diverse partners about topics and texts with peers and adults in small and larger groups.

This standard teaches students about how to participate in group discussions.

CCSS.ELA-LITERACY.RI.3.7, CCSS.ELA-LITERACY.RI.4.7

Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Students are asked to connect information visual and print elements of a text to create meaning.

Grade K NC Social Studies Standards

K.E.1 Understand basic economic concepts.

Kindergarten standards focus on the needs and wants of families and how jobs help families meet those needs and wants.

Grade 1 NC Social Studies Standards

1.E.1 Understand basic economic concepts.

Students are asked to summarize how people earn and use money, how they purchase goods and services and how supply and demand affect choices they make.

Grade 2 NC Social Studies Standards

2.E.1 Understand basic economic concepts.

Second graders are expected to broaden their perspectives to include how businesses provide goods and services, including the concepts of: producers, consumers and trade. They are expected to be able to explain borrowing, saving and giving as well as the role a bank can play in the community.

Grade 3 NC Social Studies Standards

3.E.1 Understand how the location of regions affects activity in a market economy.

Third grade standards focus on how the economy is affected by natural resources, particularly local resources. Students should be able to explain why people become entrepreneurs as well as give local examples.

Grade 4 Standards

4.E.1 Understand how a market economy impacts life in North Carolina.

Grade 4 looks at basic market economy concepts: price, supply, demand, scarcity, productivity and entrepreneurship. Students should understand how scarcity affects choice, analyze both contemporary and historical roles that industry has on the local, regional, national and global economies. On a more personal level, students should be able to explain the positive and negative consequences of spending, saving and taxes.

Resources

List of Materials for Classroom Use

Adil, Janeen R. *Goods and Services*. Champaign, IL, United States: First Facts Books, 2006.

———. *Scarcity*. Champaign, IL, United States: First Facts Books, 2006.

These two books are part of the *First Facts* series by Capstone Press that is widely available.

Carling, Amelia Lau and Amelia Lau. *Mama and Papa Have a Store*. New York: Dial Books for Young Readers, 1998.

This delightful picturebook about the daily life of a business run by a Chinese family in Guatemala City in the mid-1900s, sharing a successful story of immigrant entrepreneurship.

Cherry, Lynne. *A River Ran Wild: An Environmental History*. San Diego: Harcourt Brace Jovanovich, 1992.

A story of environmental renewal about the Natshua River—a hopeful story of how humans can change their behavior for the better.

Cooper, Melrose and Nneka Bennett. *Gettin' Through Thursday*. New York: Lee & Low Books, 1999.

Cash flow problems are common in many households; this book should strike a chord with many of us. This book teaches us the importance of a strong social network and creativity. Pair with William Miller's *Rent Party Jazz* about the depression era custom of busking for rent money. Teachers guides available for both books at www.leeandlow.com.

Gunderson, Megan M. *Banks & Banking*. Minneapolis, MN: ABDO Publishing Company, 2012.

From the *Economy in Action* series, this basic text covers the services provided by banks.

Hazen, Barbara Shook. *Tight Times*. United States: Turtleback Books, 1983.

A story of how a family deals with a recession, published in the late 1970s. A realistic portrayal of how difficult this can be for both parents and children, with what we now consider swinging “retro” illustrations by the award-winning Trina Shook Hyman. This is an old title that may be difficult to locate.

Hill, Laban Carrick and Bryan Collier. *Dave the Potter: Artist, Poet, Slave*. New York: Little, Brown Books for Young Readers, 2011.

A gorgeous book, illustrated by Bryan Collier in his distinct collage work, about the slave, Potter Dave. The text describes the formation of Dave’s signature storage vessels, which were sometimes inscribed with poetry. Consider pairing with *Pot that Juan Built* by Nancy Andrews-Goebel.

Hollyer, Beatrice and Zadie Smith. *Our World of Water: Children and Water Around the World*. New York, NY: Henry Holt and Co., in association with Oxfam, 2012.

A multicultural look at the essential life-giving resource, stressing the importance of having clean water. Great book for picture-walking and discussion.

Johnson, Jen Cullerton and Sonia Lynn Sadler. *Seeds of Change: Wangari’s Gift to the World*. New York: Lee & Low Books, 2011.

One of several excellent picturebook biographies of the life work of Wangari Maathai. Pair with interview clips from *Dirt: The Movie*.

Kaplan, Michael. *Betty Bunny Activities*. n.p.: Penguin Publishing, 2016.
http://www.penguin.com/static/pages/youngreaders/children/features/betty_bunny/downloads/BettyBunnyActivities.pdf.

———, *Betty Bunny Wants Everything*. Philadelphia, PA, United States: Dial Books for Young Readers, US, 2012.

An Eloise character for the next generation, Betty Bunny is “a handful” and proud of it. She behaves so badly that even kindergarteners know that she is misbehaving, which makes the series an excellent choice for teaching. Note that Betty has no remorse, so if you are looking for moralistic tales, see Beatrix Potter.

Larson, Jennifer S. *Do I Need It? Or Do I Want It? Making Budget Choices (lightning Bolt Books - Exploring Econ..* Minneapolis, MN: Lerner Publications Co., 2010.

———. *What Can You Do with Money? Earning, Spending, and Saving (lightning Bolt Books - Exploring..* Minneapolis: Lerner Publications Co., 2010.

———. *Where Do We Keep Money? How Banks Work (lightning Bolt Books - Exploring Economics).* Minneapolis, MN: Lerner Publishing Group, 2010.

———. *Who's Buying? Who's Selling? Understanding Consumers and Producers (lightning Bolt Books: Exploring Economics).* Minneapolis, MN: Lerner Publishing Group, 2010.

Lightning Bolt Books does a good job making this Economics series visually appealing and useful for teaching some text features. This set is appealing upper elementary students.

Lindsey, Kathleen D, Charlotte Riley-Webb, and illustrated by Charlotte Riley-Webb. *Sweet Potato Pie.* New York: Lee & Low Books, 2003.

A sweet story of how a family deals with adversity when a drought in the early 1900s affects the harvest. A perfect book to teach about natural resources and how they affect local economics.

Malaspina, Ann and Doug Chayka. *Yasmin's Hammer.* New York: Lee & Low Books, 2011.

Yasmin is a child laborer working as a brick chipper, but longs for an education. This book stresses the importance of an education in raising a family's socioeconomic status. Teacher's Guide and interviews available at www.leeandlow.com.

Marshall, Linda Elovitz. *Rainbow Weaver/Tejedora Del Arcoiris.* United States: Children's Book Press (CA), 2016.

Set in Guatemala, this story is about a little girl who aspires to be a weaver and how she proves that she can contribute to the family through her weaving by recycling the plastic bags that litter her village.

Mitchell, Margaree King and James E. Ransome. *Uncle Jed's Barber Shop.* New York: Simon & Schuster Books for Young Readers, 1996.

Uncle Jed is saving money to have his own shop. Twice he almost succeeds, first gives it away and then loses what he has saved in a bank collapse. This wonderful book

can be a springboard to discussion of many difficult topics. The story of hard work and perseverance will speak to many children.

NCFA News Feed. "An Overview of the Forest Products Industry in North Carolina." YouTube. August 8, 2013. Posted September 24, 2016. <https://youtu.be/rLBdK78qHS8>.

This video is a little dated, but can be used to build background about forestry.

Nelson, Robin. *What Do We Buy? A Look at Goods and Services (lightning Bolt Books - Exploring Economics)*. Minneapolis: Lerner Publications Co., 2010.

Part of the Lightning Bolt Books Economics series cited above.

Reynolds, Jan. *Cycle of Rice, Cycle of Life: A Story of Sustainable Farming*. New York: Lee & Low Books, 2009.

———. *Only the Mountains Do Not Move: A Maasai Story of Culture and Conservation*. New York: Lee & Low Books, 2011.

These two conservation titles feature beautiful photographs, perfect for picture-walking and discussing similarities and differences between communities. Teacher's Guides and interviews available at www.leeandlow.com

Rosinsky, Natalie M. *Earning Money*. Darby, PA, United States: Compass Point Books, 2003.

Part of the *Let's See Library* on Economics, this older title is appropriate for Gr. K-2. Look for more up-to-date resources at your local library.

Stuve-Bodeen, Stephanie, Aaron Boyd, and illustrated by Aaron Boyd. *Babu's Song*. New York: Lee & Low Books, 2004.

Set in Tanzania, this story is about economic choices. Bernardi sells a beloved music box made by his grandfather in order to buy a soccer ball, but has seller's remorse and turns the money over to his grandfather, who uses the money to further Bernardi's education. Teacher's Guide available at www.leeandlow.com

Watts, Jeri Hanel. *Keepers*. n.p.: Lee & Low Books, 2000.

A good choice to use in discussing opportunity-cost. When Kenyon buys a baseball glove instead of the present he intended for his grandmother, he must come up with a solution that does not involve money. Teacher's Guide available at www.leeandlow.com

Williams, Karen Lynn, Khadra Mohammed, Doug Chayka, and Khadra Mohammad. *Four Feet, Two Sandals*. Grand Rapids, MI: Eerdmans Books for Young Readers., 2007.

William's book deals with life in a refugee camp, where two girls each find one half of a pair of sandals and decide to share. Williams books often feature stories of life in Africa. Pair with *Galimoto*, also by Williams.

Williams, Laura E and Craig Orback. *The Can Man*. New York: Lee & Low Books, 2010.

Two weighty topics are discussed in this book, homelessness and charity. Tim notices a homeless neighbor collecting cans and decides to do the same in order to purchase a skateboard. When he realizes that he is competing against his neighbor, he decides to give the man the money. Pair with *Sam and the Lucky Money* by Karen Chinn.

Williams, Vera B. *A Chair for My Mother*. New York: HarperCollins Publishers, 1998.

First of a quartet of books by award-winning Vera Williams, *Chair for My Mother* is the story of a family that saves for a new armchair after being burned out of their apartment. See also: *Music, Music for Everyone, Something Special for Me* and *Chair for Always*. Extension activities available at <http://www.scholastic.com/teachers/lesson-plan/chair-my-mother-extension-activities>.

Resources for Students

The resources below link to lesson activities in the curriculum unit.

“Chores of Colonial Children.” Accessed November 13, 2016.
<http://colonistsdailyives.weebly.com/chores-of-colonial-children.html>.

“Chores of Colonial Children.” Accessed November 13, 2016.
<http://colonistsdailyives.weebly.com/chores-of-colonial-children.html>.

“Colonial America for Kids: Daily Life in the City.” Accessed November 13, 2016.
http://www.ducksters.com/history/colonial_america/daily_life_in_the_city.php.

“Colonial America for Kids: Jobs, Trades, and Occupations.” Accessed November 13, 2016. http://www.ducksters.com/history/colonial_america/jobs_occupations.php.

“Crafting•NorthCarolina.” Accessed November 13, 2016.
<http://www.mintmuseum.org/craftingnc/funsheet-04.htm>.

“EconEdLink,” Council for Economic Education, accessed September 23, 2016,
<http://www.econedlink.org/tool/101/Goods-Services>.

“Why Isn’t Everything Free?” April 28, 2016. Accessed November 13, 2016.
<http://wonderopolis.org/wonder/why-isnt-everything-free/>.

Resources for Teachers

Dasgupta, Partha. *Economics: A Very Short Introduction*. Oxford: Oxford University Press, 2007.

Part of the *Very Short* series, provides you with just the necessary information major economists and their theories.

Flynn, Sean Masaki. *Economics for Dummies*. 2nd ed. Oxford, United Kingdom: Wiley, John & Sons, 2011.

Not just for dummies, this is a quick and easy reference to basic economic concepts.

Jensen, Eric. *Teaching with Poverty in Mind: What Being Poor Does to Kids’ Brains and What Schools Can Do about It*. United States: Association for Supervision and Curriculum Development, 2009.

———, *Engaging Students with Poverty in Mind: Practical Strategies for Raising Achievement*. Alexandria: Association for Supervision & Curriculum Development, 2013.

Jensen’s two books shed light into the long term effects of childhood poverty on the human brain and give strategies on how to teach students of poverty.

Prados, Elena Fernandez. *Economics Through Everyday Stories from Around the World: An Introduction to Economics for Children or Economics for Kids, Dummies and Everyone Else*. United States: Createspace Independent Publishing Platform, 2016.

Read-aloud stories/scenarios that explain basic economic concepts, using contemporary multicultural characters.

¹ Eric Jensen. “How Poverty Affects Behavior and Academic Performance.” *In Teaching with Poverty in Mind: What being Poor Does to Kids’ Brains and What Schools Can Do About It*, (Alexandria, VA: ASCD, 2009), 32-33.

² Kabir Sehgal. *Coined: The rich life of money and how its history has shaped us*. (New York,, NY: Grand Central Publishing, 2015), p.34.

³ Jensen, 34.

⁴ *ibid.*, 34.

⁵ Dan Ariely, *Poverty Makes Financial Decisions Harder. Behavioral Economics Can Help*, (PBS NewsHour), January 20, 2016, <http://www.pbs.org/newshour/making-sense/poverty-makes-financial-decisions-harder-behavioral-economics-can-help/>.

⁶ Merve Akbas. "Here's Proof You'll Be Spending More Money in 2016." *Wired*. November 14, 2016. Accessed November 14, 2016. <http://www.wired.co.uk/article/2016-will-be-more-expensive>.

⁷ Steve Parker. Montagnard Entrepreneurial Project. *Focus Academy of Charlotte*. Focus Academy of Charlotte, Accessed September 23, 2016. <http://www.focuscharlotte.com/>.

⁸ John Chesser. *Hispanics in NC: Big numbers in small towns*. August 15, 2014. Retrieved 29 October 2016, from <https://ui.uncc.edu/story/hispanic-latino-population-north-carolina-cities-census>.

⁹ Owen Furseth and Heather Smith. "Other Articles of Interest: Who are Charlotte-Mecklenburg immigrants?" Retrieved 29 October 2016, from <https://ui.uncc.edu/story/Hispanic-latino-population-north-carolina-cities-census>.

¹⁰ Sean Masaki Flynn, *Economics for Dummies*, 2nd ed. (Oxford, United Kingdom: Wiley, John & Sons, 2011). 23.

¹¹ "Wants and Needs," SMART Lesson Exchange, 2012, accessed September 23, 2016, <http://exchange.smarttech.com/details.html?id=04ef0bcc-d93e-41d9-b576-98beac201902>.

¹² Sean Masaki Flynn, *Economics for Dummies*, 2nd ed. (Oxford, United Kingdom: Wiley, John & Sons, 2011), 350.

¹³ Daron Acemoglu and James A Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (London: Profile Books, 2013), 68.

¹⁴ Anthony Clark, *Economics Through Everyday Life: From China and Chili Dogs to Marx and Marijuana* (United States: Zephyros Press, 2016), location 323.

¹⁵ Elena Fernandez Prados, *Economics Through Everyday Stories from Around the World: An Introduction to Economics for Children or Economics for Kids, Dummies and Everyone Else* (United States: Createspace Independent Publishing Platform, 2016), 50.

¹⁶ Flynn, 58.

¹⁷ Prados, 25-37.

¹⁸ Prados, 33.

¹⁹ Anthony Clark, *Economics Through Everyday Life: From China and Chili Dogs to Marx and Marijuana* (United States: Zephyros Press, 2016), location 1478.

²⁰ Clark, location 529.

²¹ Acemoglu, 69.

²² Prados, 57.

²³ Lisa J Servon, "The High Cost of Using a Bank." *Currency* (The New Yorker), July 16, 2014, Retrieved November 06, 2016, from <http://www.newyorker.com/business/currency/the-high-cost-for-the-poor-of-using-a-bank>.

²⁴ "Michael Sivy, "Why so Many Americans Don't Have Bank Accounts," *Time*. November 20, 2012, accessed November 14, 2016, <http://business.time.com/2012/11/20/why-so-many-americans-dont-have-bank-accounts>.

²⁵ "EconEdLink," Council for Economic Education, accessed September 23, 2016, <http://www.econedlink.org/tool/101/Goods-Services>.

-
- ²⁶ DiNome, William G. "Settlement Patterns." *NCpedia*. North Carolina Government & Heritage Library at the State Library of North Carolina, 2006. <http://ncpedia.org/settlement-patterns>.
- ²⁷ Acemoglu, 70.
- ²⁸ Sehgal, 86.
- ²⁹ Guattam, Sonal. (n.d.) *7 Main Features of Primitive Societies*. Sociology Discussion. Retrieved October 22, 2016, from <http://www.sociologdiscussion.com//society/7-main-features-of-primitivesocieties/2864>.
- ³⁰ Sehgal, 86.
- ³¹ Iliana Strauss, "Myth of the Barter Economy," *The Atlantic Magazine*, February 6, 2016, accessed October 23, 2016, <http://www.theatlantic.com/business/archive/2016/02/barter-society-myth/47051/>.
- ³² Matt Phillips, "The Long Story of U.S. Debt, from 1790 to 2011, in 1 Little Chart," *The Atlantic Magazine* (The Atlantic), November 13, 2012, accessed November 13, 2016 from <http://www.theatlantic.com/business/archive/2012/11/the-long-story-of-us-debt-from-1790-to-2011-in-1-little-chart/265185>.
- ³³ Matthew Frankel. "The Average American's Credit Card Debt May Shock You." *Motley Fool*. Retrieved November 12, 2016, from <http://www.fool.com/retirement/2016/10/02/the-average-americans-credit-card-debt-may-shock-y.aspx>
- ³⁴ Meta Brown et al., "Financial Education and the Debt Behavior of the Young," *SSRN Electronic Journal*, doi:10.2139/ssrn.2334889.
- ³⁵ Prados, 59.