

Summary and Assessment of National and International Financial Literacy Programs

Credit Union National Association (CUNA)

Laura Scheinholtz
Beatriz Novak
Charles W. Kalish
Karen Holden

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Table of Contents

Summary and Assessment of Personal Finance Programs – National	3
Thrive By 5	3
Economics Education Web	8
Money on the Bookshelf	13
My Money for Kids	20
Summary and Assessment of Personal Finance Programs – International	25
Nationwide Education – U.K. Financial Capability	25
The Finance First Project – Making Cents (Australia)	29
Sorted (New Zealand)	39
Overall Assessment Summary	45
Suggestions for Thrive By 5	50
Additional Activity and Game Suggestions	58
References	63
Appendix A	64

Summary and Assessment of Personal Finance Programs – National

Thrive By 5

Thrive By 5 is a financial literacy program designed by the Credit Union National Association for preschoolers and their parents or guardians to use at home. It contains 8 well-organized and easily accessible lessons that can be downloaded from their website. The lessons are also designed to look fun on paper, which should be appealing to a young audience. Furthermore, given that this program is designed for a family unit, it includes family outings, such as trips to various stores. The eight lessons are:

1. How can I teach my preschooler to wait to spend money?
2. How can I teach my preschooler to not lose money?
3. How can I teach my preschooler to help with the shopping?
4. How can I teach my preschooler about earning money?
5. How can I teach my preschooler about using money to buy something?
6. How can I teach my preschooler that when money is spent, it is gone?
7. How can I teach my preschooler that having fun does not have to cost money?
8. How can I teach my preschooler that gifts do not have to cost money?

http://www.creditunion.coop/pre_k/index.html

The **Thrive By 5** program contains elements of each of the specific concepts outlined as constructive to a personal finance program for preschool age children. Some concepts were more thoroughly represented than others including money and income and social values. Other categories were represented, but not in as concrete a manner. The

Thrive By 5 program also addressed more than half of the general concepts identified by the review as beneficial.

Right on the Money

This program directly addresses each of the specific concepts identified in the review in multiple capacities, except for number concept (see Appendix A). Of particular note is the concept of money and income. The program encompasses ideas about the value and use of bills and coins, functions of money, money as the storage of value, sources of money and income and what it means to earn income. The only area of note missing here is alternative forms of “money.” Lesson 1 gives children direct experience with coins and the value of money by showing them to save, one coin at a time and by linking that saving behavior to the ability to trade the money for an item of a specific value. Lesson 2 piggy-backs off of this lesson by teaching children effective ways to store money while saving for later as well as reiterating the trade value of money Lessons 3, 5, and 6 address how money is used at stores, that is the function of money, by having children help with the shopping, creating a play store at home to practice paying and understanding exchange, and by allowing children to make their own purchase at a store. . Lesson 4 explicitly addresses **earning** money (creating income) as well as the consequences of having that money (i.e. what could be purchased with that income) by creating a paying chore list for the child.

The second specific concept highly represented in the **Thrive By 5** program is social values. The lessons address the issues of gifts/charity, generosity, public good/services and sense of community. The one issue not represented, perhaps a more global issue, is that of equality/inequality in an income situation. These issues are most

closely addressed in lesson 8, “How can I teach my preschooler that gifts do not have to cost money?” In this lesson, parents talk with children about sharing time and talent as an alternative form of a gift. The parent and child identify a special person in the child’s life to which the child would like to give a gift and then brainstorm good money-free gift ideas. The gift could be in the form of spending time with another person doing something enjoyable or completing a chore that the other person might need accomplished. The lesson includes a suggestion to talk about the practice of helping others without expecting payment within a community; that this is what friends and neighbors do for one another. Lesson 7, “How can I teach my preschooler that having fun does not have to cost money?” guides parents and their child in brainstorming and participating in free time or leisure activities that do not cost money (i.e. singing, reading, playing tag or walking the dog). This is perhaps an important predecessor to the lesson on generosity because it focuses the child’s attention on the fact that not everything, fun or work, that we do in the world requires money or is done for profit. One important aspect of understanding finance and economic issues is knowing when money comes into play and when it does not. The child could use ideas generated in this lesson as ways to spend time with another individual.

Showing a Deficit

Abstract representation was most evident in number concept. Ideas about ‘more or less,’ ‘patterns of measurement,’ and ‘data analysis’ were included in an inherent way in many of the exercises, but rarely specifically addressed. For example, in lesson 5, ‘How can I teach my preschooler about using money to buy something?’ there is an implicit sense of ‘more or less’ represented in the set-up of the game. In this activity, the

parent and child create a play store using favorite items around the house as merchandise. The price for each item is decided jointly between parent and child and represented by taping coins to a tag attached to the item. Children, as shoppers, then must match their own supply of coins (income) to the amount on the tag. One can assume that a sense of having enough or too many, and a sense of having too few becomes relevant in this exercise. A child may desire a particular object, set out their income along side the price tag and discover the price tag has one more coin than the child has. This is a prime opportunity to address the general concept of more or less. Yet, it is not specifically outlined in the program. We suggest it would be an easy addition to the 'Ideas To Talk About' section of this exercise.

Similarly, in lesson 1, 'How can I teach my preschooler to wait to spend money?' patterns of measurement could exist. In this lesson, parents talk children through the importance of saving money for a bigger reward at a later time, rather than spending a little bit immediately (delay of gratification). As an accompanying exercise, children make a savings chart with boxes to represent one coin, presumably of the same denomination, and fill in or mark the box when each coin is obtained. While not explicitly addressed, it seems an easy addition to add patterns of measurement to this exercise. If a child is keeping track of quarters, for example, the parent could point out, or help the child notate on their chart that every four quarters saved is always equal to one dollar. Likewise, the chart could have a row for pennies, nickels, dimes and quarters to show the child different ways that one could get to one dollar. This small addition could also make data analysis a bit more concrete.

In respect to general concepts, the program most noticeably lacks an appreciation and incorporation of what children already know coming into each lesson. The two ways this can be addressed is by specifically asking children what they think about the main topic covered in the lesson before the lesson begins or by asking children about prior experiences with lesson topics either prior to or during the lesson. For example, in lesson 3, “How can I teach my preschooler to help with shopping?” parents could begin by asking children how they believe the parent decides what to buy each week. This will give the parent a concrete idea of what their children currently believe before addressing any sort of conceptual change; it provides a starting point. In lesson 2, “How can I teach my preschooler not to lose money?” the parent could begin by asking the child about any prior experience with keeping track of money. If the child has received or found money in the past, what did they do with it? Where did they keep it? Could they keep track of it? Did they spend it? Not only does it reinforce what the child knows for the parent, it also helps to make the lesson more concrete for the child. The child can relate the material to his/her own experiences.

There are hints of this kind of conversation in a few of the lessons. In lesson 4, “*How can I teach my preschooler about earning money?*” parents and children brainstorm chores that need to be done. Presumably, if a child has completed chores before, these will be represented on the list (likely the first ones!), but adding a step for parents to specifically ask children what chores they have done personally could really explicitly call upon a child’s concrete experience with chores. Likewise, in lessons 7 and 8, “*How can I teach my preschooler that having fun does not have to cost money?*” and “*How can I teach my preschooler that gifts do not have to cost money?*” parents and

children brainstorm fun things that can be done for free and things that can be done for free for others. Again, in these situations, specifically helping children brainstorming these activities that they have done in the past can help make the experience more real for child. This could also provide more positive reinforcement and motivation for the child to push forward with the lesson.

Though specific examples were used above, there is no reason that these questions cannot exist in each lesson. Every lesson contains an explanation step instructing parents introduce the topic and ideas addressed in the lesson. This important step could be immediately followed by asking the child their current ideas about the topic and help them brainstorm their past experiences with the topic.

Economic Education Web

EcEdWeb is a program comprised of lessons for kindergarten through 12th grade assembled and copyrighted by the University of Nebraska – Omaha. This program does not claim to address issues with preschool children and is thus a bit ‘old’ for the current review. The kindergarten concepts, however, could be adaptable for slightly younger children. While the list of economic concepts covered in the span of the program is expansive, there are only four that are addressed with kindergarteners: scarcity, choice, goods and services. The overarching goal, as stated on their website is the ability to “Identify how families and communities work together to meet their basic needs and wants.” (<http://ecedweb.unomaha.edu/standards/K6goals.cfm#kindergarten>). This would seem to correspond to 2003 Nebraska Social Studies Standard Number 1.6: “Students will identify basic economic concepts,” and includes the following skills as an indication that the standard has been met:

- Recognizing the difference between basic needs and wants, e.g. food, clothing, shelter, and affection
- Explain differences between buyers and sellers/goods and services. (<http://ecedweb.unomaha.edu/standards/standards03.cfm>)

As indicated by the inclusion of state education standards, this program is intended for a classroom atmosphere, though some lessons could be adapted for use at home with families.

The four main concepts listed above are addressed in three lessons available for download online. The lessons themselves, however, seem to be more geared for older children. In fact, one downloaded lesson claims to be for 1st – 3rd graders. It is unclear how to adapt each lesson for a particular grade level.

Right on the Money

A lesson called, “*Popcorn Economics*,” addresses issues of scarcity, and resources, both those that occur naturally and capital resources (see Appendix A). In the most active of any of the lessons presented for consideration, children in the classroom are called up to the front of the room to help themselves to popcorn from a large brown paper bag claimed by the teacher to have been donated by a parent. Next to the open bag of popcorn sit several more of the same paper bags, yet stapled closed. The first row of children is encouraged to help themselves to as much popcorn as they’d like. The assumption is that the rest of the bags are filled with popcorn. Eventually, before all children have received a snack, the first bag’s contents are depleted and the next bag is opened. The teacher and class discover the remaining bags are, in fact, filled with crumpled newspaper. The class then engages in a discussion about resources, what

happens when they become scarce and solutions to the scarcity (i.e. sharing, teacher making more popcorn, finding a different snack for those who went without, etc.). This lesson engages the students in a process central to understanding economics – the scarcity of resources. Scarcity issues provide a good starting point for contemplating supply and demand and in fact, the lesson has a few discussion points addressing this issue, though it is not labeled as such.

A second, lengthy lesson, “*Why We Save*,” addresses the issues of making choices and desires, denominations and value of money, opportunity costs, saving, banks and spending. This lesson also provides an optional activity that would address the number concepts of patterns of measurement and data analysis. The primary educational tool used in this lesson is a story about a little girl, Penny (get it?), who has to make a decision about what to do with money she has earned from walking a neighbor’s dog (although this may seem to address sources of income, it is only a mention in the story, without a specific discussion point for whole-class consideration). The students subsequently take part in a class activity during which they receive strips of paper with depictions of five pennies printed on them. Students discuss what they could purchase immediately versus what they could purchase if they saved the coins (presuming they receive the same amount in regular intervals, though that is not explicit). The class can then compare the lists. This thought experiment in saving will also allow students to practice their math skills by adding (or multiplying, depending on age) figures and provides an excellent opportunity to introduce the different value inherent in different coins (i.e. one nickel has the same value as five pennies). Lastly, students take part in a choice activity during which they are asked to choose between items pictured on the

chalkboard – a cheap item accessible with the current amount of money, a slightly more expensive item accessible with a little savings and a hidden item accessible only after saving a great deal of money. Students make their choice and discuss their reasoning with the class. The hidden, expensive item is then revealed and students are allowed to change their answer. The whole class discusses their new choice and the impact of knowing the identity of the hidden item. This is followed a writing period to allow students to personally reflect, and write about their choices.

A final lesson, “*If You Give a Mouse a Cookie*,” focuses mainly on the difference between goods and services. The lesson includes a short section on cause and effect by asking the whole class to consider a set of conditional statements, such as, “If you stop talking, then you may go to recess,” and then to fill in the second half of a condition, such as, “If you do all your homework, then you may...” A story, apparently not included in the online lesson, “*If You Give a Mouse a Cookie*,” describes a mouse who receives a good (the cookie), starting a series of cause and effect events (i.e. if he has a cookie, then he wants milk; if he has milk, then he wants a napkin; etc.). Throughout the story, the mouse wants both goods and services (i.e. reading a story to someone). The story is primarily used to distinguish between the two types of wants an individual might have. Students are asked to discuss their own unlimited wants and to make their own list like the one presented in the story.

Overall, the **Economics Education Web** lessons do a good job of addressing domain specific concepts. They also include some active learning environments that are likely to engage and motivate children to participate. They also try to address the cultural norms associated with a trip to the bank.

Showing a Deficit

While the **Economics Education Web** curriculum does cover a range of the specific concepts identified in the concept review paper, it does not address as many issues that are components of those concepts as do other programs. Furthermore, the few issues that are addressed are done so in a level of detail that does not seem appropriate for a kindergarten student. Of particular note is the “*Why We Save*” lesson. This lesson is quite lengthy and of questionable accessibility for a 5-year-old or group of 5-year-olds. There is a lot of whole class discussion, which can be difficult to facilitate in a kindergarten classroom. There also seems to be a bow to hands-on activities, but they actually comprise a very small percentage of the whole lesson. This type of lesson might be better served in older classrooms.

In fact, when one accesses the other two lessons via the online page which describes those lessons as appropriate for kindergarten, the individual lessons claim to be designed for older children. “*If You Give a Mouse a Cookie*,” suggests its being appropriate for grades 1 – 3 . “*Popcorn Economics*” is suggested for grades 4 – 8. The latter suggestion is surprising because the concepts presented and the level at which they are discussed seemed more similar to concepts we might expect a preschooler to understand.

In fact, with a few modifications, some of the lessons could be adapted to younger children. Popcorn economics could be simplified by using the opening exercise as a way to showcase generosity when we find that others are in need. It could also specifically label “supply” and “demand.” Relating those terms to something even young children could understand – having enough snack food will ground the concepts in something very

real. Similarly, the Penny story seems accessible to young children. The lesson surrounding it could easily be adapted to talking about sources of income and about charity, generosity and sense of community by focusing on Penny's paying job and how that same job could sometimes be considered a chore or a favor we might offer a friend or neighbor in need.

Like **Thrive By 5, Economics Education Web** would benefit from incorporating children's prior theories and experiences into their lessons. Given that this is a school curriculum, doing so becomes slightly more arduous; thirty students' stories of "one time, at the bank..." are certainly more time consuming than one or two. The lessons, however, already seem to rely on whole-class discussion, so it would not be too far off pedagogy to suggest adding this element at the beginning of each lesson or activity. Again, simply asking children what they believe about a topic or how they define a particular term will allow insight into their current conceptual view. This can help focus later discussions by allowing the teacher to know what ideas need more exploration.

Lastly, the overall presentation of the lessons comprising this program was a bit unclear. In addition to the uncertainty about of the age-appropriateness of these lessons, there are other loose ends. For example, the actual story for "*If You Give a Mouse a Cookie*" could not be found on the website. That the story of Penny in "*Why We Save*" is on the website makes this absence seem like a simple oversight, but it does make the lesson more difficult to follow and implement. Also, in "*Why We Save*," Penny goes to the bank and talks about her passbook. It is uncertain if passbooks are still used, so part of this material may be outdated.

Money on the Bookshelf

This program, developed at the University of Nevada via their Extension office is designed to use popular children's literature as an aide for teaching and promoting the understanding of money

(<http://www.unce.unr.edu/programs/sites/moneybookshelf/guides/>). Each unit is designed around one book, such as The Berenstain Bears' Trouble With Money, and provides a parent guide listing main ideas of the lesson, ways to introduce the book, discussion points and activities for children of varying ages. While this program does rely on the inclusion of materials not downloadable from the internet (the source of the program), these materials are presumably easy to obtain from a local library or bookstore.

The goal of the program, stated clearly at the top of each lesson's parent guide, is to "...help parents talk with their children about money. Each story deals with some special ideas about money. The Parent Guide will help you talk about and use these ideas." (<http://www.unce.unr.edu/programs/sites/moneybookshelf/guides/>). The program's age suggestions are also clearly stated atop each guide. Of the 12 lessons, half are designed for 4 years and older, four are designed for 5 years and older, one is designed for 6 years and older and one is designed for 7 years and older. Even if the lesson stipulates the target age as older than preschool, however, it does often include activity ideas for younger children. In fact, all suggested activities are clearly labeled by appropriate age group.

The parent guide then goes on to identify the major ideas addressed in the lesson. These ideas include: problem solving, prioritizing, positive interaction, goal setting, saving, decision making, recognizing resources, allocating resources, and recognizing success. It is unclear which came first, the categories or the resources (i.e. children's

books), but it is not surprising that the selection of children’s literature could constrain concepts addressed. The concepts in each story, which the parent and child read together, are expected to be drawn out by the parent in order to focus the child’s attention on them. Through a series of questions to be asked by the parent during the story, parents can help children understand how the concepts are illustrated by the characters and storyline **and** help relate this to the child’s own life by asking parallel questions of the child’s experience. Hands-on, family activities wrap up the lesson.

The **Money on the Bookshelf** program also provides a list of developmental characteristics and coordinated teaching activities for both preschoolers and early elementary students. Since this review focuses on preschool children, we present a table from these lessons that show how the activities address the concepts appropriate for that age group.

Table 1: Preschool development and suggested activities

Developmental Characteristics	Suggested Activities for Teachers and Parents
Understand the idea of saving when they can see and touch the amount.	Play grocery store or bank with play money.
See money as a way to get things they want.	Borrow or rent something they need to return.
See all money as having the same value.	Separate coins into piles by color and size and discuss their value.
May think coins have more value than paper money.	Let child pay for one item when you shop or put money in the parking meter.

Understand the concept of borrowing by borrowing something and returning it (for example, a book from the library or a video from a store).	Teach children that family members work to pay for food and clothes. Let the child visit your workplace.
Know everyone must do unpaid routine family tasks.	Have children do routine chores without pay, such as setting the table or putting toys away.
Need opportunities to make limited choices.	Put savings in a jar, pay interest, and let children hold the interest amount in their hands.
Imitate much of what they see adults do.	Read stories about money matters and responsibility.
Choose between two or three items to be purchased.	Provide two or three alternatives from which you help them make a choice (for example, breakfast cereal choices).
Can't differentiate between reality (a commercial) and fantasy (a TV program).	Discuss products advertised in TV commercials.
Can't see things from the viewpoint of another person.	Teach desirable money habits by your example.

This chart is copyrighted by, and reprinted with the permission of the University of Minnesota Extension Service from its publication *Children and Money: Teaching Children Money Habits for Life* (FO-6116) by Sharon M. Danes, Professor, Family Social Science Department.

Right on the Money

The **Money on the Bookshelf** program addresses component issues within the specific concepts outlined by the review fairly thoroughly (see Appendix A). As expected from the stated goal of the program, the concept paid the most attention is that of money and income. In fact, the program addresses every idea the review categorized as important for a good understanding of the concept of money and income: the value and use of bills and coins, functions of money, money as storage of value, alternative forms of “money,” sources of money, and income and what it means to earn income.

Learning about bills and coins takes place in the lesson accompanying The Purse in the form of making coin rubbings and sorting coins. This lesson also includes an exercise that helps children (suggested 6 years and up) understand the values of different coins by creating a treasure hunt for loose change in the house and then helping the child count the change. Several lessons address the function of money, including Just Shopping, which includes a play store activity and Bargain for Frances, which suggests setting up an allowance for the child and helping them decide how to spend the money. In the lesson accompanying the story, The Purse, parents and children talk about what it means to save, what it means to earn money, how to decide what purchases to make and how purchasing new items makes people feel (importance/value of a purchase). This discussion is followed by an activity to help the child learn different coin denominations. Alternative forms of money are addressed in the story Sheep In a Shop, where children learn about trading and bartering goods they may have for goods they may want. And finally sources of money and issues of income are addressed in Mama’s New Job when Mama (Berenstain) Bear discovers that her quilting hobby can earn her money for the

family. A follow-up activity suggests teaching kids how to grow plants as a way to develop a hobby that has proven lucrative in the past.

Another positive aspect of this program is the activities dealing with choice, which is treated in a slightly different way that has been seen in the other programs reviewed. Choice in this program is presented as part of the larger concept of “problem solving.” For example, in *The Purse*, the result of one decision creates a problem that requires yet another decision: the main character in the story had been keeping money in a bandage box and she liked the sound it made, but her sister told her money is kept in purses. The main character decides she ought to use the money to buy a purse, but then is left with no money and with no positive emotion about hearing the clinking coins anymore. She then had to find a way to get more money (income) to put in her purse and ultimately find another bandage box. Therefore, what this lesson does is show that a decision is rarely just an isolated incident, but that it falls within a larger set of considerations and we deal with these considerations by developing problem solving skills. This slant, therefore, simultaneously guides the child in thinking not only about current perceived necessity, but about the future as well.

Overall, the one of the most important characteristics of the **Money on the Bookshelf** program is its attention to children’s current beliefs and experiences with each topic. That this program has fun, hands-on activities that incorporate norms and emotions is a big plus, but its attention to defining what behavior each lesson is trying to influence or change is an important aspect. Every lesson begins by the parent introducing the book and topic and asking children what they think the book will be about (i.e. trying to gauge the child’s knowledge of the area). And every lesson includes

questions during the book and discussion that ask children for their direct experience with the topic. For example, in Alexander, Who Used to be Rich Last Sunday, Alexander obtains some money, spends it and then is unhappy with how he decided to spend it. The parent guide includes the following questions for discussion:

How did Alexander get his money?

Where does your child get money?

Was Alexander happy with how he used his money?

Ask your child what he or she has spent money for and then wished he or she had not spent it.

[\(http://www.unce.unr.edu/programs/sites/moneybookshelf/guides/\)](http://www.unce.unr.edu/programs/sites/moneybookshelf/guides/)

Notice that the questions parallel Alexander's experience in the story to the child's experience in real life. Thus, the assessment is not just of what the child has heard from a book or from the lesson, but trying to decipher other experiences from the child's life that are likely going to guide his/her thinking.

Showing a Deficit

While the **Money on the Bookshelf** program covered a lot of ideas within the specific concepts identified in the review, there were a couple areas that were less well represented, such as number and time. It is likely that the areas covered or not covered depend in large part on the books that were available for review. If this program were continuously monitored and updated, with a committee reviewing potential new material, some of the overlooked concepts could be addressed or others in greater or updated detail.

It is also the case that more activities could be suggested to pair with the current readings. For example, in any of the stories about purchasing items, the concept of more or less could be the specific focus of a follow-up activity. The parent could create “price tags” (pieces of paper with pictures of coins) and give the child coins. The child would have to decide if s/he had more or fewer coins than the tag required. This would pair particularly well as a predecessor to the grocery store activity suggested for Just Shopping.

The one general concept area that was lacking in this program, and many other programs as well, is to address the issue of being nice and friendly when dealing with an exchange of money. That is, economic exchange is based upon the value of the items being exchanged. It does not have to do with whether or not the person is a friend or is particularly nice. It is the case that in many exchanges, , such as selling one’s personal vehicle to a friend, the price might reflect the friendship. . However, at a car dealer, the employee is not interested in dropping dollars because of the buyer’s friendly demeanor. A simple activity illustrating this concept, again possibly going along with the play store, could be to have the child list something s/he wants to sell and then make a list of classmates. Help the child set a price for that item and then ask the child how much s/he would expect each classmate to pay. The parent might also then suggest that the child is in a candy store with the same group of classmates. How much would the child expect each classmate to pay for the same piece of candy? In this second example, the child must consider that even if s/he is willing to cut a break to a nice person, a third party is likely not going to do the same, that is, price is not set according to niceness or friendliness.

My Money For Kids

This educational program is sponsored by the U.S. Mint and is intended for K-12th grade teachers to use in the classroom with large groups of children (<http://www.usmint.gov/kids/teachers/>). Most of the program cleverly uses coins, such as the state quarters and Lincoln pennies to learn about the history of the United States. Designing lessons around coins is not only clever, but it will increase a child's exposure to and interaction with different denominations of money. The more relevant aspect of this program, however, is the inclusion of unit plans that center around the value and use of money.

The first plan, *Common Sense*, designed for K-2nd grade students addresses some basic issues of math, such as counting and addition, properties of coin money, such as recognizing differences in coin shape and value, and the use of money. The overall focus of this unit is how individuals use money in day-to-day life. The second plan, *What's it Worth*, is also designed for K-2nd grade students and primarily focuses on value differences between types of coins. The focus of this unit is, thus, identifying coins and distinguishing them in daily life. The last of these plans, *Creative Coin Combinations*, again designed for K-2nd grade classrooms and again with a focus on coins and their values takes a slightly different angle. In this set of lessons, the goal is for children to be able to use different types of coins to arrive at the same end amount. In other words, in this lesson, not only will students need to understand that coins can have varying values, but that they still may be used together and in substitution to come up with a goal amount.

The three unit plans relevant here each contains 4-5 lessons. Lessons are laid out clearly with summaries, keywords, necessary materials and national standards the lesson addresses . Hands-on and discussion activities comprise the lessons themselves and are followed by an assessment section. Each lesson also contains a section for “differentiated learning options,” though only a few lessons articulate suggestions for those options.

As stated above, there are a number of other lessons included on this website that have less to do with money itself. In going through those lessons, however, one was found titled, “*Learn to Earn When You Tend to Spend.*” The lesson seems contingent on the students’ already knowing much of the information summarized in the unit plans above about counting, coin denominations and value. It goes on to focus on the difference between earning (i.e. gaining income) and spending, incorporating the concepts of more and less.

Right on the Money

Given that **My Money For Kids** is a program sponsored and created by the U.S. Mint, it comes as no surprise that the focus is largely on the form and function of coins. And this focus is quite thorough. Most of the ideas they cover fall under the review category of: identified concept of money and income (see Appendix A). In fact, all but the final lesson summarized above centered around these concepts. Though these units are intended for classrooms, they do a good job of providing lessons that are largely hands on and incorporate fun games. For example, in *Common Cents: Trading Pennies and Nickels*, students pair up and are given an envelope with a monetary amount written on the outside. The first student in the group must come up with that amount using pennies and nickels. Then the second student checks the work and must come up with a

new way to make the same amount still using just pennies and nickels. Play continues until someone is stumped. Another example is a game in *What's It Worth: Beat the Bank*. Students form groups and take turns using a homemade shaker that will give them a coin amount when shaken. The player reads the amount aloud, then takes the coin equaling that amount from a "bank" pile. After four rounds, each player counts his/her pile and the highest amount wins.

The concept of "number" was often addressed in these activities as they focused on different kinds of coins. Students have ample opportunity to recognize patterns of measurement through activities and ensuing discussions presented in these lessons. Furthermore, games like *Beat the Bank* give students practice with the concept of more or less, as crowning a winner requires comparing amounts and evaluating quantities.

Similar to many other financial literacy programs, **My Money For Kids** also incorporates a "grocery store" activity. In *Common Cents: Let's Go Shopping*, the teacher sets up a mock grocery store in the classroom with snacks, drinks and napkins available for purchase. Items have clearly labeled price tags and students must decide, while still in their seats, what items they wish to buy. One rule is that they must buy a napkin (7¢)! Using class-provided coins only, distributed so that all students have an equal amount, students take turns approaching the store and making their purchase. They must have the correct amount in their tins to make the purchase. Not only does this activity address the function of money, but it also helps the students incorporate a social norm – being able to participate in the grocery store experience and have agency in doing so. **My Money For Kids** also takes this activity one step farther by taking time up front

to discuss food groups and what kinds of foods are important for the diet of a growing body.

Another set of concepts was addressed by the *Learn to Earn When You Tend to Spend* lesson. The lesson did address the idea of income and how/where one might obtain income as part of the “money and income” concept. It also incorporated spending, an idea useful in understanding “markets and exchange.” While just a basic introduction to spending, this lesson could be paired with the grocery store activities in the other units to create a more comprehensive understanding of income, spending, goods and services.

In terms of overall concepts, this program does a fairly good job at covering some important areas of conceptual development for young children. The activities designed for the unit were fun and hands-on and are intended for the use of real money, not a trait always found in financial curricula for whole classrooms. The lessons were domain specific and at times did attempt to incorporate the students’ prior experiences with the topic being presented. There were also a couple of lessons that incorporated the social norm of shopping, giving the students control of the experience and thus an opportunity to feel proud of accomplishing a more grown-up task.

Showing a Deficit

While the focus topics of the **My Money For Kids** program were well thought out and appropriately presented for age and environment, the scope of the program was quite constrained. Likely due to the source of the program, materials focused largely on money and income topics. There were a few nods to markets and exchange (price, goods & services and spending) and numbers (more or less and patterns of measurement), but

several specific concepts areas were missing all together, including time, institutions, choice and social values.

It is possible , that some of these otherwise neglected concepts could be incorporated into the existing lessons, , but the program is clearly not set up with more comprehensive financial education as its main goal. On the contrary, the program's goal seems to be specifically to use currency to teach a number of different lessons. This is not an undesirable goal and, in fact, the lessons are quite creative in design and in connecting currency with money concepts. However, this focus limits the comparability of this program to programs with broader financial literacy goals. .

Despite this specific focus, , the program could have gone a bit farther in the lessons it does present. Just as in some of the other programs, it would not be difficult to gauge students' current theories about money before starting the lesson. Likewise, it was quite surprising that a program sponsored by the Mint did not incorporate any institutional knowledge. Just as the teachers set up a mock grocery store in the classroom, they could set up a mock bank. For kindergarteners, this would have to be a very simple version of a bank, but they could at the very least start to learn the process of visiting the bank. That is another routine that children likely share with their parents. In so doing, this will incorporate more norms, as well as habits in the student's learning process in a domain-specific manner.

Summary and Assessment of Personal Finance Programs – International
Nationwide Education – U.K. Financial Capability

In the United Kingdom, Nationwide Education has launched an online program that focuses on a conceptual area they call ‘financial capability.’ According to their program and the country’s Department for Education and Employment, this includes:

“Financial knowledge and understanding – helping children understand the concept of money and how it is used.

Financial skills and competence – helping children to manage money, including planning for the future.

Financial responsibility – helping children to understand the wider impact of money and how their financial decisions influence their future as well as that of their family and community.”

http://www.nationwideeducation.co.uk/teachers/fin/fin_4-11/default.asp

The program is designed to accommodate learning from ages 4 – 14 by splitting lessons into 4-7 year olds, 7-11 year olds and as of spring, 2009, 12-14 year olds. The program also includes its own set of conceptual development objectives, attention goals of which are again spilt by age group. These concept categories are: money and exchange, where money comes from, where money goes, looking after money, spending and budgeting, basic risk and return, making personal choices and implications of finance (i.e. what it means to have more or less money).

The lessons for this program are designed as curricula to be used in a classroom setting with large groups of children. There are both online and offline components to the lessons, including interactive books and games and downloadable worksheets. For the 4-7 year olds, the interactive components available are three chapters in an online book called Rena and Jay and interactive games that go along with the story. For

example, students can fill in the blanks left out of the story with finance related words, they can match coins to a written amount (i.e. click the picture of the coin whose value equals £1), and complete word searches with finance related words. Finally, the online component features an interactive quiz for the end of the unit. The downloadable, offline, material for 4-7 year olds include fact sheets, including sheets that allow students to explore how different coins could sum to £1, 5p, 10p, 20p and 50p, sheets that give students easy tips for being smart about money (i.e. don't spend all at once or keep money in a safe place), and a sheet of financial vocabulary (i.e. bank, cash, buy, spend, etc.). The program also includes downloadable worksheets. For 4-7 year olds, these include practice with counting money, practice with identifying markings on coins, practice with distinguishing values among various coins, and practice matching various representations of value (i.e. a picture of the coin and the written denomination). Finally, the program offers advice for ways to extend upon the material provided, such as additional activities (i.e. predicting what would happen if x amount was spent, role-playing, mock stores, having the class invent their own money games, etc.), additional discussion ideas (i.e. how parents obtain money, how to save for something special, the difference between U.K. coins and money from other countries, etc.), and ways to incorporate these lessons into other classroom disciplines (i.e. math, science, history, etc.).

Right on the Money

The **Financial Capability** program incorporates ideas from each of the concepts deemed important for a preschoolers' understanding of finance by the conceptual development review. Once again, the heaviest emphasis is on the concept of money and

income (see Appendix A). Most of the worksheets and fact sheets are about different kinds of coins. Several worksheets focus on distinguishing coins by size, shape, color and detail, noting how depictions on the coins match the country's history. Others focus on the values of coins, showing the details of different ways to make 20p or £1. The three -chapter story available online is about a brother and sister, Rena and Jay, who want to save up to buy a pet. Among all of the decisions and responsibilities that go along with this process, they must figure out how much money they have by counting the coins they have saved at home. Additionally, they must find ways to make more money needed to purchase and care for their pet (i.e. chores). Furthermore, some of the suggested additional activities and discussions included at the end of the section for 4- to 7-year-olds specifically address ideas of money and income, including activities comparing different coins and a discussion about where parents get their money (or income).

The story of Rena and Jay provides a lot of information about making choices. The children must set a budget and then decide exactly what they need to buy to care for their new pet. By setting a budget and knowing what they need, the siblings then must compare prices at the store and practice thriftiness. While it is unclear from the available teaching materials whether this is specifically addressed in the story, this would be an easy platform from which to start a discussion of delay of gratification. Perhaps the brother and sister duo have enough money to buy a couple of smaller toys now, but if they saved, could purchase a bigger, fancier toy later. This story also incorporates prices, spending and managing money.

The concept of the interactive story book to be read on a computer, with corresponding online activities and offline worksheets in and of itself is a good way to get young children involved. One important overall concept identified in the developmental review is that of incorporating norms – tasks that grown-ups tend to have that a child can complete. Using the computer is one such task. This is also a very hands-on, engaging and fun activity for children, particularly in classrooms where computer use is otherwise limited. While other programs in this review have had materials available online, the **Financial Capability** program is one of only two programs reviewed here to include online curricular programs for children, and the other (Sorted) consisted of just online games.

Showing a Deficit

As noted above, the main focus of the Financial Capability program is on money and income and choice, with some focus on spending, prices and managing money. Several other ideas were represented as well, but in somewhat more cursory detail. For example, data analysis (number concept) was represented, but only by a suggestion on a sheet called Money Smart Tips that children keep track of money when they drop it in their piggy bank (or other money managing device). Role or jobs of family members (concept of institutions) was present, but only in the suggested further discussion section by asking students to brainstorm how their parents earn money and on the Tips sheet via suggestion that the students help parents around the house by remembering to turn off lights, etc. As these activities seem tangential to the main program, it is unclear how well the concepts will be developed in participating youngsters. Given that a portion of this program is online already, it would not seem too difficult to incorporate some of these

concepts into the games already there. Perhaps new game options could be created, such as one in which the player must calculate the correct amount in a piggy bank after several deposits have been made or a game in which a house is pictured with various items the player could click to indicate a way to help the family save money (i.e. click on lights to save on electric bill, click on open window to save heat, etc.).

Again, the biggest deficit in overall concepts seen in **Financial Capability** is in assessing knowledge of students' theories about money, spending, budgeting, etc. prior to initiating lessons. In addition, this program does not often incorporate personal experience either. Likely many students will have had experience buying a family pet, perhaps a plant, or at the very least an item that they or a sibling needed to save in order to buy. That the Rena and Jay story is relatable to these experiences is a great start, but to make this more appropriate for very young children, drawing out specific parallels would have been beneficial.. The program could easily add a discussion or sharing time to allow individuals to tell their own stories. For slightly older children, journals could be used to note their experience and whether or not their thoughts on the process changed after reading the story and participating in the lesson.

The Finance First Project – Making Cents (Australia)

The **Making Cents** program is an initiative developed in collaboration by Citi and the YWCA NSW in Australia to aid in the financial literacy skills of elementary school children. The program is designed as an in-school curriculum, but with a parallel parent education component as well. A specific need for this program was identified as lower-socio-economic areas of New South Wales. The program is designed for Kindergarten through 6th grade in three stages, according to age

(http://www.makingcents.com.au/teachers_nsw_lower1.php). For the purpose of this evaluation, just the first stage, for 6-8 year olds, will be assessed.

The first set of lessons call for students to be in years 1 and 2 of school. It is unclear if this refers to kindergarten and 1st grade or 1st grade and 2nd grade. In either case, the lesson comes with the disclaimer that the material will be challenging for year 1 and may be better off presented to year 2 students. This puts the material above the preschool level of understanding. The unit itself contains 4 sections: Introductory Scenario: Pocket Money Problem, Financial Resources and Sources, Money as a Tool, and The SUPERstore.

The Introductory Scenario begins by telling the class a story about a boy who hears his friends receive pocket money (allowance) for helping out with chores around the house, but he does not and needs the class's help to explain pocket money to his parents. The class then enters a discussion about pocket money; what it is, where it comes from, how it is used and how it is saved. The students then move on to play a board game called the Home to Bank Game. To begin, each player receives the same sum of money (real coins or fake) from a bank pile. Similarly to other board games, players advance along a path following the instructions of the spaces on which they land (i.e. buy lollies for \$2, \$3 falls out of your pocket, wash the car for \$5, etc.) The winner is the player with the most money when everyone has reached the end of the path. A caveat to this game is that students should be familiar with Australian coins. If that familiarity is doubted, the teacher should spend time reviewing coins, their value and how to count them, however, no further instruction in this task is provided.

In the Financial Resources and Sources section, students learn basics about banks and banking. They also begin to learn terms associated with money and finances. The lesson begins with a review of the pocket money story from the prior section. This time discussion revolves around ideas of income. From where would the boy receive his pocket money? Where do his parents get money? What is income? And so on. Students then receive handouts with sample bank forms on them (i.e. deposit and withdrawal slips, checks, bank statements, etc.) and are asked to give their current ideas of what these forms are and what they mean. The teacher is then instructed to correct misconceptions. The intent is not that students will hold sophisticated understandings of these items, nor that they should be able to perform complex mathematical procedures to which some forms may elude. Rather, this activity's goal is to allow students to familiarize themselves with the types of materials they may see at banks in the future or on current trips with their parents. The teacher and students then brainstorm ways of keeping money safe and, with the teacher's guidance, land on bank accounts, which are then defined individually by students and shared with the class. The whole class then comes up with a definition. Students can then practice filling out a deposit slip using the amount of money they earned in the Home to Bank game in the previous lesson. The Financial Resources lesson also suggests, if possible, arranging a trip to a bank or having a banking professional visit the class. This will allow students some real-life experience. Classrooms could also set up mock banks and role-play the procedures that take place there. Lastly, there is a take-home component that suggests students ask parents/family members to take them to their bank and show them some of the procedures they go through.

The Money as a Tool lesson contains several elements, including goods and services, needs vs. wants, delaying spending now to save for something bigger later, and the effects of advertising on spending habits. The lesson begins by the whole class making a list of needs and wants that are distinguished by cost (i.e. how much it would cost, or if it is free, like friendship). After a brief discussion of the difference between goods and services, the list is further divided into these 2 categories. Students then make their own list with a provided “mind map,” using different colors and areas of the map to make distinctions between goods and services and, needs and wants. The lesson then returns to the story of the boy who wants pocket money by asking students to look at their mind maps and decide how the boy’s parents might get money for these things. Once again, the class discusses the boy’s situation, but this time, talk revolves around earning an income (i.e. the boy gets an allowance of \$4/week for doing chores) and saving money for wants and needs he might have in the future. Advertising strategies come into play when trying to save money, so this lesson suggests analyzing paper ads, and television if feasible, to talk about methods advertisers use to get someone to spend their money now instead of saving.

The final lesson in this unit is The SUPERstore. As one might expect, this lesson centers on creating a mock grocery store in the classroom. This atmosphere allows them, not only the shopping experience, but also an opportunity to apply the concepts learned in previous lessons, such as needs versus wants, budgeting, and saving for later. These opportunities are encouraged not only through small group interactions, but also via solitary, self-directed play. Creating the store environment is also an educational opportunity because students will have to think about what sorts of things individuals

purchase, as well as other parts of the environment that might sway shoppers to buy things (i.e. signs, sales tags, advertisements, etc.). Students then bring in items that could be sold in the store – or the class creates visual representations on paper that can be hung on the walls of smaller spaces. As play continues, the lesson suggests changing the atmosphere a bit in several ways, such as announcing sales – how will this effect purchase choices? One other suggested change of note is to provide a Play Now Pay Later option (i.e. rudimentary credit system). The teacher-directed part of this play requires students to shop from a list 3 times without replenishing money between each round. The expectation is that students will see what happens when they do not budget from the beginning (i.e. lack the funds to make sufficient purchases in the last round).

Right on the Money

Before discussing how Making Cents addresses the specific and general concepts laid out in the developmental review, it should be noted that this *curricular* program is the only one to specifically outline ways in which parents can be involved with their child’s financial education at home. Several sections of the teacher instruction pages include ways to invite parents to actively engage in the material at home with their children. Furthermore, in some places, the program suggests bringing parents and community experts into the classroom to help.

Similarly to other programs in this assessment, Making Cents covers issues of money in income in depth (see Appendix A). All of the lessons require students to understand the differences (physical and value) of various denominations of money, and as the lessons progress, the function and use of money. The story that runs throughout the lesson, about a boy who realizes his peers receive money for doing chores around the

house and wishes to earn his own pocket money, addresses income from the very start.

The initial class discussion about the story includes the following questions:

Who pays pocket money?

Where does this money come from?

How often do you think this pocket money is paid?

Do children get money from anywhere else besides pocket money?

What do they do with their pocket money?

What happens when someone doesn't have enough pocket money to buy what they want?

How do you think you could save for something that costs more than (weekly or fortnightly) pocket money?

Where and/or how could you keep your pocket money (or other money you get) safe?

http://www.makingcents.com.au/teachers_nsw_lower2.php

Therefore, from the very beginning, students are thinking about the concept of income as the primary way to obtain money. They also begin the unit thinking about how to save that income and why saving might be important. These concepts are reinforced throughout the unit by having a more in-depth discussion in lesson 2, Financial Sources and Resources, about various aspects of income (i.e. specific sources of income aside from a primary job and stability of income over time), via a discussion about how income is used to obtain needs and wants in lesson 3, Money as a Tool and through actively learning how income must be split to obtain goods and services in lesson 4, The SUPERstore.

The SUPERstore, again a common element among programs assessed here, is a good way to incorporate norms into children's learning. Making Cents goes a step further, though, and suggests setting up and role-playing at a mock bank. This activity, proposed in lesson 2, Financial Sources and Resources, aligns quite well with the rest of the lesson that talks about banks as institutions. Included in the materials for Financial Sources and Resources are several copies of bank forms that students may peruse and discuss as a whole class. Teachers are encouraged to bring in real samples from their own financial institutions, as well. Furthermore, parents are encouraged to share their examples of their personal finance forms with children at home. It is quite likely that children accompany parents to financial institutions on errands, thus linking that experience with the forms they are now familiar with from class will help them better transfer classroom knowledge to the real world.

Due to the heavy emphasis on money, income and consideration of needs versus wants, the Making Cents program also does a good job of helping students understand choice. Not only do the lessons incorporate degree of perceived necessity via mapping out needs and wants, considering the effect of advertising, and applying these concepts in a mock grocery store, the unit also heavily considers thrift and budgeting. Both in the story of the boy who wanted an allowance and in the mock grocery store experience, students must consider how much money to set aside for certain items. Via a discussion about the allowance story, the class considers setting part of an allowance aside each time it is received, therefore spending only some of it. This means the boy can still spend some immediately, but will still be working toward a larger purchase in the future. Similar actions could be taken in the mock grocery store, but here, another aspect of

choice is added: thrift. The grocery store might have several kinds of an item with different prices. Students could choose the cheaper brand, thereby still obtaining a need (or want), but having more money left for future purchases. All of these practices allow students practice in the arena of finance with delay of gratification.

It should be noted also that Making Cents is the only program assessed here to include the ideas of credit and of interest rates. While very cursory in detail, students are at least introduced the vague ideas. Credit is not labeled as such, but is present in an optional additional way to run the SUPERstore, Play Now Pay Later. This option comes with a fee of \$15, so students learn that this type of action has an associated cost. Interest rates are suggested as one possible item to discuss in Financial Sources and Resources when looking at bank forms, though even the presentation of this idea, "...and perhaps the concept of earning interest,"

(http://www.makingcents.com.au/teachers_nsw_lower2.php), seems to imply comprehension will be iffy.

Lastly, the Making Cents program rates well overall when considering general concept development. The program makes attempts to discover current theories about issues being presented in class, particularly in Financial Sources and Resources when teachers are specifically directed to ask children to explain banking materials (passbook, plastic card, checkbook and bank statements) and correct misconceptions. It also heavily incorporates student experiences both into the classroom lessons and by encouraging them to create more experiences at home. As mentioned above, there are several ways in which students can practice norms and habits and these are all accomplished in a hands-on, fun way. Additionally, by suggesting that experts come to the classroom to assist in

various activities (i.e. learning about banking, SUPERstore), the program attempts to set the education in the context of the community to which the students belong.

Showing a Deficit

There are two main areas of the Making Cents program that seem deficient. The first is in the concept area of social values. While the attempt to involve community members mentioned above is admirable, it is only ever mentioned as a very loose suggestion. It is understandable that relying on community members to aid in education is a tenuous task, but there are other ways around it. If stories are already being used with this curriculum, perhaps an additional story about a shopkeeper or a banker, or even adding a chapter to the current story. The reason for this perhaps harsh criticism is that this is the only idea within social values that was addressed by this program. In reviewing various activities, there seemed to be areas in which these values could be easily added. For example, the board game in the Introductory Scenario includes many methods for attaining and losing money. It would be quite simple to add a square that says “gave \$3 to sister,” or even “gave \$5 to charity.” Following the game, the class could engage in a dialogue about what it means to give money to charity and to be generous.

The second way in which this program seemed lacking was in the depth of addressing particular concepts. There were several ideas across the board that seemed to “sort of” be addressed. As mentioned above, these included the ideas of credit and interest rates. These are fairly complex ideas to suggest as “tag-ons” to the curriculum. That is, if the program wants to address these ideas, it would be valuable to do so in a stronger manner. Perhaps there could be a shopping round at the store where everyone

uses credit. The class can then discuss the pros and cons of that process and the concept could be given its proper general name. Likewise, interest could be specifically explained in a very simple manner while the students are examining the bank forms, particularly as a way to promote saving for later. Another concept that was “sort of” represented in Making Cents was the idea of more or less, in number concept. There were several mathematical goals at the beginning of the lesson, stating what students should be able to do at the end of the lesson. While none of them specifically mentioned the idea of more or less (i.e. know which coin is more than the other), it was implied. Even so, specific mathematical work, and even identification work with coins was presented in a tangential way in the first lesson, Introductory Scenario. This lesson included a bullet point:

“Ensure that students have a sound knowledge of Australian coins. It may be necessary to develop students' knowledge in sorting, ordering and counting money using face value”

http://www.makingcents.com.au/teachers_nsw_lower2.php

There were no further instructions, exercises or activities suggested for how the teacher might guide this learning.

The general concept area that seemed lacking in this program was that of incorporating student emotions. There were evaluations included for each lesson of the unit, but they were very academic in nature. Given the highly interactive teacher/student/parent/community member nature of this program, there should be ample opportunity for praise along the way. Perhaps this is considered inherent in schooling practices in Australia, but it is worth it to spell it out in a lesson plan, particularly for such

young children. Attaching a positive emotional response to the experience will provide motivation and interest in the future.

Sorted (New Zealand)

The Sorted program for children is part of a larger initiative to teach the population about finances at <http://www.sorted.org.nz>. This page has a separate sub-program for teaching children financial literacy, though there are no age suggestions on this page. There are three sections in the children's program, one for kids that includes online games, one for parents that includes information and activities to teach children about money at home, and one for teachers that talks about how to use provided activities and games as part of a curriculum. The kids' page seems to cater to an older crowd. The games are flashy, but require a higher level of mathematical and financial literacy, but also a higher ability level in working with computers. The parents' page does not specify ages either, but if one clicks on the link that provides guidance for parents using the site's games, there is a claim that materials are for 5-12 year olds. These are the same games found on the kids' page, so age appropriateness might depend on level of parental involvement. Significant navigation through the teachers' page reveals games and activities specifically designed for 5-7 year olds. Given that this is the closest age range to our target age (preschool), the assessment of Sorted will be of this subset of information.

There are four Sorted games designed for 5- to 7-year-old children to play on the computer. The first is called Birthday Bash and focuses on making financial choices. The object of the game is to pick the best present for a friend once the "finish" square is reached. A budget is presented at the beginning of the game (i.e. 'you may not spend

more than \$20.'). Present choices are presented on cards that players collect throughout the game. Along the way, certain squares will give players hints about what the friend likes and dislikes. Other squares affect the card choices that the player holds (i.e. throw away one card, pick a card, exchange a card, etc.) Players (the student logged on and 2 computerized components) advance by clicking a die on the screen. Upon reaching the "finish" space, the player must decide which present to give by considering hints learned earlier in the game. The right choice elicits a positive reaction from the friend at their birthday party and a number of points. The game is colorful and full of stimulating sounds. The accompanying lesson plan specifies that children should learn that choices about presents are made by considering the wants of the receiver, not the giver, that we must buy according to the amount of money we currently have, and that our purchases reflect our stage of life. There is also a list of questions to ask students after they have played the game that address the difference between the present desires of the giver and the receiver, what information about the receiver was helpful in making a present decision and a few questions about sources of income.

The second game is called School Trip Trek and addresses concepts of income, saving, and spending. The game is similar to the previous game in that the players take turns rolling a die to advance along a path. The object is to save \$50 in six weeks (or 6 times around the path). Landing on squares could automatically deduct money (i.e. 'you went to the movies with your friends, \$15 was deducted from your savings'), automatically add money (i.e. 'you won a competition, \$10 was added to your savings') or allow the player a choice to pay or use a voucher (i.e. 'you broke the bed while jumping on it, pay now or use a voucher?'). As these transactions take place, the game

keeps track of how much money the player has by showing a record sheet with all the gains and losses accounted for. The bottom of the sheet tells the player if s/he is overdrawn or is 'in the black'. When all players have finished, the game's teacher (an octopus) assess the player's savings with either a positive response or one that suggests the player took too many risks or spent too much money (the author spent too much money – should never have repaired those bed springs). The lesson plan purports that students playing this game will learn about saving for bigger, more expensive items in the future over smaller items now, that individuals have different saving and spending habits, and that recording our financial transactions will help monitor risk behavior. The lesson also suggests follow-up questions about the student's own spending and saving behaviors, how those behaviors affect the student and his/her family, and how the student's behaviors might compare to different individuals (i.e. an older sibling).

The third activity, Treasure Chest, is also about income, saving and spending, but places more agency in the player to choose and record transactions. The player, or participant, chooses a name, a weekly allowance amount and the activity duration (i.e. 5 weeks). The participant then sees a table that displays each week. In Week 1, the allowance is listed under the Money In category. A menu function allows the participant to enter other forms of income (i.e. walking the neighbor's dog, gift from grandmother) and debits in the Money Out category (i.e. food, fun, clothing). The computer automatically figures both the weekly and total balances (over 5 weeks, for example) and allows the participant to see where their income is insufficient. This activity is essentially a very basic form of Quicken. Concepts this lesson proposes one learns include how record keeping can help manage risk, that financial decisions are up to the

individual and different people will make different decisions, that this can affect our well-being, and that actions today can dictate decisions in the future. Follow-up questions address personal savings vs. spending patterns, thoughts about those patterns and consequences of spending more than is earned.

The last activity, Time Warp, is similar to Treasure Chest, but the agency is taken off the participant in terms of deciding how money is earned or spent. In this activity, the participant's job is to observe how the balance of earning and spending can affect cash balance at the end of the week. The computer presents activities one day at a time. When the participant fully understands the day's activity, they click "next" to move on to the following day. Activities fall either into the Money In or Money Out category. Money In items include weekly allowance, completing jobs, finding money and receiving money as a gift. Money Out items include watching a DVD, jumping on the bed and needing to pay for repairs, the dog eats money left lying around, and riding the bus. Each of these activities has an associated cost. For example, weekly allowance is always \$10, filling in for a friend's paper route is \$5. Repairing the bed will cost \$20. It should be noted, however, that there are several Money Out items that cost nothing, including watching a DVD, reading a book and walking to the beach with friends. The computer automatically calculates the week's ending balance and how much money was earned per hour that week. The concepts this lesson is said to teach are managing risk by keeping records of transactions, decisions about spending and saving are up to the individual and that those decisions have the ability to affect the individual's well-being. Follow-up questions address what was earned and spent during the activity, what unexpected expenses arose, what outcomes of the game are more desirable and, the consequences of

spending more than is earned.

Right on the Money

The Sorted program followed the pattern of strengths and weaknesses seen in other international programs. The two largest areas of concentration were in the concepts of money and income and choice (see Appendix A). The nature of the games and activities described above certainly center around the exchange of money. Players are prompted to consider price when playing Birthday Bash and are constantly watching their income versus their debts in the other game and activities. Of particular note to this program is the detail in which types of income are addressed. In both the record keeping activities, income is broken down into specifics. In Treasure Chest, participants are asked to specify exactly where their income (and their debts) came from. In Time Warp, participants are provided many ideas for different sources of income. Both of these activities allow participants to think more thoroughly about all the different ways money is earned and spent.

Choice is the other prime concept covered by Sorted. Not only are participants constrained by a budget in Birthday Bash, they must also consider which present will make the birthday girl or boy the happiest (this is an assumed goal.) Furthermore, in School Trip Trek, players must decide on how to best manage their money for a number of weeks with a long-term goal in mind – saving enough to go on a school trip. This introduces the element of delaying gratification. One choice that comes up in this game is whether or not to go to the movies with friends. If the saving has not gone well up to that point, the best decision might be to forgo the trip. This can be a difficult decision for a young child. Budgeting and thrift come into play in the last two activities as well. In

these record-keeping challenges, participants can see how sticking to a budget and being thrifty throughout the week can extend the income they make.

There are several overall concepts that are addressed well in this program. Certainly the activities and games are fun for children. The website has a 'comment' component and several participants have commented on the fact that this program helped them learn while having a good time. The program also is hands-on, to a degree. The interactive nature of the games and activities make the program more active and engaging than perhaps a textbook or lecture, however, it might be a step down from live mock environments. The fact that participants can use their own income and debts in the Treasure Chest activity does add an element of real life, which could provide motivation and increased engagement with the program. The program also promotes one very important habit for children to practice – keeping financial records.

Showing a Deficit

Before getting into specifics, one important deficit of this program was the difficulty involved in finding appropriate materials. Age ranges were not well labeled and many links on the website became circular. It turns out that the kid, parent and teacher pages all use the same set of games, but unless one starts at the teacher site, age ranges are impossible to find. The games and corresponding discussions described above are those suggested for early elementary students (ages 5-7). As part of this assessment, the author played each game or completed each activity and is not confident that a 5-year-old would be able to do the same. These games and activities would require an adult partner at all times for such young children. If this program was initiated in the home, that is more of a possibility, but seems an impossible task in a classroom setting.

In consideration of specific concepts, the Sorted program was limited in very similar ways to the other international programs. There was no incorporation of the concept of social values and the only idea present about institutions was the role of family members. It is possible that issues of generosity, charity and community participation are included in materials for older children, but it certainly could be addressed with the younger ages. It was surprising that some of the Money In items in Time Warp were not also worth \$0. There very easily could have been an item for charity, such as, ‘mow your elderly neighbor’s yard, \$0.’ A follow-up discussion question could have addressed ideas of donating time and talent as well as money.

It is also surprising that banks were not included in the discussion of the importance of record-keeping and risk-taking behavior. Again, this could be a concept reserved for older ages that could be adapted for younger ages. Follow-up discussion questions for Treasure Chest or Time Warp could easily have addressed the record-keeping that banks do and the importance of checking that record (this could be a very rudimentary example leading to the importance of balancing a checkbook).

Finally, the Sorted program is similar to many of the other programs in this review in its lack of attention to children’s prior theories or concepts. As addressed above, the program does incorporate students’ money earning and spending experiences by asking them to record their weekly habits, however, this is the extent of relating to real-life experiences. There are a few suggested follow-up questions that ask how students might have acted differently in real life, but few that specifically call upon past experiences.

Overall Assessment Summary

Program Similarities. The programs included in this assessment all purport to aid

children in developing financial literacy concepts and, according to standards suggested in the prior literature review, likely do so to different extents. Of the general concepts deemed particularly relevant, all programs assessed here shared in being domain specific and in encouraging active learning. This means that the programs engaged children in tasks specific to the development of financial and economics concepts. All but one program received credit for creating fun learning activities, as well. The program that failed to receive this assessment, Economic Education Web, likely attempted to create fun activities, but fell short in the end, at least in the materials available to the reviewers. All but one program also at least made a good attempt at incorporating norms into their lessons and activities. To review, norms, which are often culturally relative, are common activities performed by members of society, typically by adults. When a child can participate in these types of activities, s/he often gains a sense of mastery or competence, in other words, is proud to be taking part in the grown-up world. In the case of financial literacy programs, the norm most often represented was shopping at stores, though banking procedures were also present in Thrive By 5, Economic Education Web and Making Cents.

The most notable similarity in the specific concepts among the programs assessed was money and income. There was a very heavy emphasis on the ideas incorporated with the development of this financial concept. Not surprisingly, every program dealt specifically with the function of money and the only program that did not specifically address bills and coins was Sorted (the program seemed to assume participants held this knowledge prior to using its software). Six of the seven programs incorporated lessons on the value of money, as well as the idea of income and where income originates

(Economic Education Web did not address these issues). There were several other popular specific concepts addressed by most, if not all programs, including spending (all 7 programs), patterns of measurement and data analysis in the concept of number (6 programs), saving or deferring spending in the concept of time (6 programs), and prices in the concept of markets and exchange (6 programs).

These popular items seem to be representative of the basic ideas within financial literacy concepts that are easiest to teach to young children. That is, money is a manipulative item and one that is easily accessible by most families (at least at the level of a handful of change), and even very young children have likely had experiences with the value of money (i.e. “this bill Grandma sent you is more than a piece of paper, you can buy a toy with it”) that can be incorporated into lessons. Likewise, making charts is a popular way to help children learn to keep track of items or events in their lives (i.e. potty training) as a form of data analysis and patterns of measurement are almost a natural part of learning about coins and their value. The concept of saving is also easy to address in a hands-on way with young children, especially with the popularity of piggy banks. Finally, prices are quite accessible to young children, as they seem to inundate our world (advertisements, sales fliers, gigantic price tags at big box stores, etc.). Therefore, in some sense it seems natural that most programs would address these issues.

Programs assessed here were not only similar in the concepts they included in their lessons, but also in what they did not address. In terms of general concepts, none of the programs included the idea that financial exchange is not about being nice or friendly. In other words, no program specifically brought the focus to markets and pricing determining financial decisions, while downplaying the role of personality or fairness.

The programs may intend for this to be inherent in the way that they present information, but young children often fall back on determinants such as personality when making decisions about who receives a particular resource (Kim & Kalsih, 2007). Therefore, it would be useful to specifically address that this is not the case when dealing with finances, rather, the market determines prices at large.

The other two general concepts that tended not to be addressed by the programs in this assessment were incorporating emotions (1 program) and addressing current theories (2 programs). Incorporating emotions most easily couples with incorporating norms and again could be seen as inherent in the norm activities. However, just as it is important to specifically point out the way prices are determined, it is important to specifically help children feel proud of themselves. Praise can be a powerful tool in the learning process of the young mind. Similarly, knowing current theories that children hold coming into a learning situation is important in the process of conceptual change, as current understandings provide a starting point for that change, an idea of what parts of the concept are incomplete or incorrect.

There were several ideas incorporated with specific concepts identified in the review that were not addressed by any of the programs in this assessment (see Table 1). Many of them can be rationalized as more advanced concepts (i.e. investing, profit, cost of borrowing, insurance, etc.). Some of them, however, such as building assets or shortages and surpluses could be addressed at a very basic level with young children. Surely, relating shortages to not having enough snacks to go around or building assets to popularity at playtime because of toys owned or possessed would be ways to link these ideas to something a young child already knows.

Program Differences. While the programs were often similar in the concepts they addressed and failed to address, they differed in some important ways. There are two primary differences that need to be highlighted. The first is that of the age of participants. Thrive By 5 is a program designed for preschool children. The intent was to assess it along with other programs meant for preschool age children, however, these programs proved difficult to find. Or, if they existed, materials were not readily available. Therefore, programs for slightly older children were used. In many cases, these programs were designed for kindergarten-aged individuals and older, therefore, just the materials for the youngest of that age range were analyzed. It could be that these programs were not meant to be dissected in such a way and that other concepts would be addressed in due time.

The second big difference in the programs was the instructional environment. Programs tended either to be for use at home with parents/guardians, or for use in schools with the intention of being implemented into a curriculum. These differences are important because it changes the ratio of adults to children and therefore both the design of the lessons and the activities that are feasible in each situation. It is by far easier to incorporate more thoroughly hands-on and fun activities for one or two children than for a room of 20-30 children. Thrive By 5 is a program designed for the home environment, so assessments of programs intended for classrooms might not be the best comparison.

It is important to note that the assessments on these programs were based on materials that could be accessed by the assessment team. Therefore, we went through similar motions to access materials that a parent or teacher might. Another big difference between programs lies within this process – how well organized and easily accessible

program materials are. For example, both Thrive By 5 and Money on the Bookshelf have a series of well-organized, easily downloadable pdf files. Many of the other programs were less organized and downloadable information was not necessarily in the same format. Additionally, the Thrive By 5 and Money on the Bookshelf lessons themselves were well-organized and presented with illustrations and a bit of whimsy, making the lessons even appear more desirable.

One last interesting difference to note is regarding the specific concept of social values. Addressing ideas associated with social value concept development (i.e. charity, generosity and public service) was much more common in national programs than in international programs. The only parts of social values represented in foreign programs is the idea of generosity by the United Kingdom's Financial Capability program and a slight bow to sense of community in Australia's Making Cents program. It may be that countries outside of the U.S. do not view the concept of social values as important to developing financial literacy.

Suggestions for Thrive By 5

As reviewed in the assessment above, CUNA's Thrive By 5 financial literacy for preschoolers and their parents is already doing a lot of things well. Thrive By 5 addresses many specific concepts targeted as beneficial for an individual's overall concept of finance, with significant focus on money and income and social values. Beyond those heavily addressed specific concepts, the program also includes at least some of the ideas in every other specific conceptual area to some degree.

The Thrive By 5 program also does a good job of incorporating some of the more

general concepts beneficial to financial literacy development. The program incorporates both norms and habits through its use of shopping and saving activities. It also does a particularly good job of presenting lessons that are both fun and that encourage active learning on the part of the child. Lastly, lessons were created to be domain specific. These are very good starts for the program.

Though Thrive By 5 excels in many ways, there are a few areas that could be improved. For example, many of the ideas incorporated with number concept seemed to exist on an inherent level, they could be made much more direct and specific. Within the general concepts section, the biggest deficit seen in this program was that the lessons did not attend to the child's current theory about the concept, nor did it consistently incorporate the child's prior experiences.

Conveniently, although some of the other problems showed more deficits than Thrive By 5, a few of them have done a better job at addressing these issues. By mirroring aspects of some of the other assessed programs and by suggesting ways of modifying Thrive By 5's programs using new activities, CUNA's financial literacy program could be improved in important ways. Following is a list of areas that could use improvement and suggestions for making those improvements.

Number Concept. Given that certain aspects of number concept seem inherent in the Thrive By 5 program, it might be easiest to start with where they start to manifest. The concept of 'more or less' was a part of lesson 5 during which the children must decide what they can buy based on the amount of money they have versus the amount of money an item costs in a mock store environment. The lesson makes an assumption that the child understands having more or fewer coins, but this lesson would be a good place

to incorporate a specific activity to practice ‘more or less’ skills before entering the mock store. This activity could be quite similar to a buying situation, but instead of the child thinking about the end goal of buying something, they merely focus on whether the coins s/he has is more or less than another set of coins.

One way that this is accomplished in another program is in the Beat the Bank activity from My Money For Kids. Recall that in this group activity, a homemade shaker was created to indicate what kind of coin a child should collect. Play continued for four rounds and then the participants counted their coins and the player with the highest amount was the winner. This particular game used different denominations of coins and expected children to count the amounts, but it was also for a slightly older set of children.

This game could be modified for a preschool child and guardian. A novice version of the game could use just one coin, for starters, a penny. A spinner or shaker could indicate just the number of the coin that the player should take from a bank pile. Play could alternate between the child and adult for a few rounds. The child would then count their number of coins and compare it to the adult’s number to see who has a greater number and thus won the round. If a child is advanced enough, this game could be modified by using nickels instead of pennies. At the end of the game, the child could figure out both the number of coins and the value. An advanced version would include multiple coin denominations and again the child could count number of coins and denominations. This version of the game would start to get into coin value as well and address the issue that a greater quantity does not necessarily mean a greater value.

A second aspect of number concept represented in an inherent manner already in the Thrive By 5 program is that of patterns of measurement. In lesson 1, children and

parents address issues of saving. According to the program, one way to encourage saving is by helping the child create a savings chart that will help them keep track of how much they have saved. For every coin that is saved, a box is marked on the chart. It is not entirely clear if one box represents the same coin all the time, if the parent and child must convert any amount given into “boxes” or whether there are different boxes for different denominations.

One program that addresses the concept of patterns of measurement well is the curricular program Financial Capability. The concept is mostly presented through worksheets, but gives students many examples of how different coins could be combined to reach certain amounts. Additionally, worksheets show how many of one denomination will always make up another denomination. The program is designed for educational purposes in the U.K., so the denominations are different than in the U.S., but could easily be modified.

A combination of the chart already used in Thrive By 5’s lesson 1 to keep track of savings and some worksheets about American coin denominations and how they relate would be beneficial for encouraging an understanding of patterns of measurement. Given that the Financial Capability program was for a large group of students and combined with other hands-on activities, the worksheets incorporated in that program were less hands-on, interactive and perhaps more assessment based. In the case of modification for Thrive By 5, an at-home, parent-child, fun-activity based program, these worksheets themselves could be more hands-on. As part of lesson one, parents could download the worksheet, which would provide outlines of coins and the child could color in the coins. The parent and child, together could decide how much each set of coins was worth. The

sheets that the parent and child create together could be placed near the child's savings chart for reference.

One last way to incorporate patterns of measurement into this particular activity is to specifically create boxes on the savings chart for different denominations of money. There would be a separate row each for pennies, nickels, dimes, quarters and dollars. Each row would be labeled with the name of the coin and a picture of the coin that the parent and child could create and color. The end of the row would contain the final amount earned if all boxes in the row are filled in. Thus, the child can start to see the difference in how each coin measures up. Providing the total row amounts also creates a concrete savings goal toward which children can work.

Current theories and prior experiences. Thrive By 5 was certainly not alone in failing to address children's current concepts or bringing in their prior experiences (which likely contribute to those theories). In fact, this is a problem across education, not just within programs about financial literacy. For the most part, programs identify a learning goal and decide how to teach the concepts required to reach that goal. What is rarely taken into account, however, is the *starting point* as opposed to just the ending point (goal). In fact, conceptual development is a trajectory with a starting point and an ending point. If one makes assumptions about the starting point, which is often the case, then the trajectory to the goal may not be the most efficient.

While a few programs made an effort to incorporate child experience into the lessons, two programs did a good job at incorporating both experiences and current theories, Money on the Bookshelf and Making Cents. Australia's Making Cents program included elements of connecting current material to experiences the students had in the

past by specifically asking for them to discuss those experiences. It also then went further by encouraging them to connect their new experiences to those old ones. The program also explicitly asked for children's current theories in one lesson about banking processes. After current concepts of items such as passbooks and bank statements are shared, the teacher is then instructed explicitly to address any misconceptions that became apparent through the discussion.

Perhaps the best example of incorporating current theories, though, comes from the program, *Money on the Bookshelf*. This program, whose goal is to teach financial literacy by using common children's books, begins each lesson by introducing the book and its title and asking children to describe what they think the book will be about. This is in essence, asking children to examine familiar words and/or pictures and talk about their current thoughts about the topic. For example, for the children's book, *The Purse*, children might describe the different ways of obtaining a purse, the different functions of a purse or perhaps even create their own story about the particular purse pictured on the cover. This will give the adult a good idea of what they consider as important for the topic. It will also give the adult a reference point later in the lesson. Perhaps the children came up with a part of the story in his/her initial description that the parent could reference while reading or later in the lesson. This helps ground the material in knowledge that the child already has, to integrate new ideas with existing knowledge.

Though *Thrive By 5* differs in that it does not utilize books as a basis for introducing concepts, it can still beneficially incorporate the practice of uncovering current theories and connecting material to prior experiences. One of the strengths of *Thrive By 5*, surprisingly not shared by all of the other programs, is the clear layout of

each lesson. Each lesson includes a description of all the activities, a list of other topics to discuss and suggestions for further activities or ways to modify the lesson. Therefore, it would be relatively easy to include a section at the very beginning of each lesson instructing parents to share the topic with their child and ask the child what they know or think about that topic. Likewise, each lesson could very easily include direct instructions on asking children about prior experiences. It is likely some experiences will be uncovered when asking about a child's current theory, particularly because preschoolers are still in the egocentric stage of development, thus tend to relate everything to their personal experience. In case they do not, however, the following list suggests ways in which prior experiences could be incorporated into each lesson:

- Lesson 1: Before making the savings chart, ask the child when s/he has saved before. Or, was there ever a time the child wished s/he had saved money? Or, can the child remember another family member (older sibling, parent, cousin, etc.) saving money?
- Lesson 2: Before or while making the money holder, ask the child how s/he has saved/kept/stored money in the past. Or, can they think of ways other people store their money?
- Lesson 3: After explaining the activity, ask the child if s/he remembers helping either the parent or another adult at the store. Or, if the child can explain one time when s/he accompanied an adult to the store for a shopping trip. Also, while helping the child create their own list, talk about making lists and ask if the child has ever made a list like this before and if so, when and for what? If not, ask if the child has ever seen the parent or another adult make a list. If the parent

- decides to discuss making choices, ask the child to recall a time that s/he had to make a choice (this does not **have** to be about shopping, but given the child's age, will most likely have to do with acquiring one item over another).
- Lesson 4: When making a list of chores that need to be done around the house, take the opportunity to ask the child if they can remember ever helping with some of those chores, or if they can remember seeing a sibling doing the chore. After the child shares those experiences, make a mark next to the chores on the list that the child has helped with in the past.
 - Lesson 5: While setting up the store, ask the child to think about items they may have seen in the real store and ask which items they thought cost more there. When setting up the cash register area, ask the child to recall being at the cash register at the store.
 - Lesson 6: When explaining the lesson to the child, ask them to think about a time when either they or perhaps a sibling has spent money at a store. Ask them specifically what they remember about the situation and where the money goes. Then, to reiterate that money is *exchanged* for a good or service, ask specifically if the shopper got the money back. When helping the child what to buy at the real store with their gifted dollar, ask them to recall other toys or goods that they have at home or that they played with at a friend's house in order to help them conceptualize "most fun," "last the longest," and "fun to share with friends."
 - Lesson 7: Instead of asking for a list of things the child likes to do, ask for a list of things that the child has done for fun recently, first, allowing the child to call to mind specific experiences and incorporate the fun emotions incorporated with

those activities.

- Lesson 8: Before deciding on the special person who will receive the child's generosity, ask the child to think of times when s/he has received gifts. The parent can then distinguish between those that likely cost money and those that did not. Parents might also want to think of free gifts they know the child has received in case the child does not spontaneously suggest those gifts.

Again, it is likely that some of these experiences might be expressed within the original lesson plans of Thrive By 5, however, making these small modifications will assure that each child is connecting this new knowledge to their prior experiences.

Summary. While Thrive By 5 rated fairly well compared to other programs in this assessment, making some of the modifications suggested here can help the program become even stronger in its goal of preschool financial literacy. By focusing a bit more on basic number concept and by explicitly addressing children's current financial theories and prior financial experiences, the program will be better able to affect the course of conceptual development. Though some of these concepts may have been considered inherent in the current lessons, conceptual development theory suggests that addressing them in a concrete manner will create a more efficient learning environment.

Additional Activity and Game Suggestions

- (Lesson 7) Check out Madison's PlayDay for a list of activities and games families can create using common household and recycled materials. A new set of these games and activities are presented annually at the Dane County Fair in Madison, Wisconsin. Families in other areas can look up local PlayDays, as they are becoming more and more

popular. The purpose of a PlayDay is to allow children to engage in more free and unstructured play as a way to combat the reduction of recess and physical education time in America's public schools. The Madison PlayDay has also chosen to focus on games and activities that would be accessible to families of any income level – i.e. fun for free. For a list of some of the activities presented at past PlayDays, please visit:

http://www.education.wisc.edu/edpsych/playday/playday_activities.html

- (Lessons 1, 2 and 8) Consider creating separate savings holders with the child. One holder would be money saved to be spent later and one would be money saved to give to someone who may need it more than the child. The child could decorate these two containers in a different way and label them. Decide with the child when to put money in each holder and how much would go into each holder (i.e. does it all go into 'savings' one time and all into 'giving' the following time, or does a portion go into each holder every time money is received?). If the family has a particular organization to which they like to give, for example a religious organization or health research organization, the child may choose to specifically decorate their holder for that cause. Furthermore, the parent could offer several choices of charities that might need money and allow the child to choose. The parent should carry through and make the donation in the child's name after a particular duration of time has passed or a goal amount has been reached. This activity shows children that money can be saved for more than one thing at once, but also promotes the concept of generosity and sense of community.

- (for a lesson on number concept: patterns of measurement, more or less)

This game is modified from a simple game used to teach children about number magnitude (i.e. that on a scale of 1-10, 5 is the same distance from 1 and 10;

Siegler, 2009). In this version, children can see the different magnitudes of the coins and also how they measure side by side (i.e. “I have to go 5 penny spaces to get to a nickel”). The winner of the game must have the pile of coins with the most value, so players must use the concept ‘more or less.’

Leaps and Coins (holder name – can be modified)

What you will need:

- A number line made of 27 boxes. The first and last box are labeled ‘start’ and ‘finish.’ Each box in between is labeled with a number from 1-25 in order. Each box is also labeled on the outside with a picture or name of a coin. Every numbered box gets a penny, every 5 boxes gets a nickel, every 10 boxes gets a dime and the 25th box gets a quarter. That means some boxes will have more than one coin label. (note: this number line should be included as a downloadable item from Thrive By 5).
- A spinner. This can be a paper version provided by Thrive By 5, or one of the following options can be used. On a large piece of paper, draw a circle divided into 4 equal sections. Label the sections 1-4. Place a used, but clean water or soda bottle in the middle of the circle and spin it around. The lid to the bottle will indicate how many spaces to move. OR, write the numbers 1-4 on small pieces of paper. Then, using a hat, basket or used, but clean plastic tub (i.e. from yogurt, cool whip, sour cream, etc.) as a receptacle, take turns choosing numbers out of the receptacle. The number drawn will indicate the spaces to move. Remember to return the number to the receptacle when your turn is over!

- Game pieces. Again, this can be a paper version provided by Thrive By 5, such as colored dots or something more elaborate. OR, parents and children may wish to use recyclables from around the house, such as buttons, bottle caps or even small, clean pebbles/rocks from the garden.
- A small pile of change. This will act as the bank pile, from which coins are drawn when a player lands on a space. This pile should have at least the number of coins represented on the number line.

How to play:

- Each player chooses a game piece and places it in the 'start' square
- Each player then spins to see who goes first. The person who spins the highest number takes the first turn.
- The player spins and moves their piece the number of squares indicated by the spinner. The player must say each number as s/he moves (i.e. "3, 4, 5").
- When the player lands on the target space, indicated by the spinner, they must also say the name of the coin, or coins that label that space (i.e. if landing on 5, they must say "penny and nickel").
- The player then receives those coins from the bank and keeps them in a pile
- Play continues, alternating between players until both players have reached the 'finish' square.
- Players then count the value of their piles of money. The player whose coins sum to the greatest value (i.e. more than any other player) is the winner.

Modification

This game can also be played outside! Simply draw the board on the sidewalk or

driveway with colorful chalk. Both spinner options will work the same way outside, BUT instead of using game pieces, YOU become the pieces! You will spin and JUMP that many times. Be sure to remember to count and to say the name of the coin or coins when you land on your final space.

In this modification, it might be best to have a designated banker/spinner so that players don't have to leave the board to spin or collect their money.

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Appendix A: Assessment Chart for National and International Financial Literacy Programs

Specific Concepts from Review	Thrive By 5	EcEdWeb (K only)	Money on the Bookshelf	MyMoney for Kids	New Zealand Sorted	UK Financial Capability	Australia MakingCents
Number							
more or less	x			x			sort of
production/consumption							
patterns of measurement	x	x, O	x	x		x	x
data analysis	x	x, O	x		x	x	x
Time							
thinking about the future	x	x	x		x		x
saving/deferring spending	x	x	x		x	x	x
investing							
building assets							
time value of money	x						sort of
Money/Income							
bills and coins	x	x	x	x		x	x
functions of money	x	x	x	x	x	x	x
money as storage of value	x		x	x	x	x	x
alternative forms of "money"			x				
sources of money	x		x		x	x	x
income and what it means to earn income	x		x	x	x	x	x
Markets/Exchange							
prices	x		x	x	x	x	x
equilibrium pricing							
supply and demand		x	x				
shortages and surpluses							
profit							
competition							
goods and services	x	x		x	x		x
resources (human/natural/capital)	x	x	x		x		x
debt					x		
credit							sort of
bartering	x		x				
trade	x		x				
trust							
cost of borrowing							
fees and interest rates							sort of
spending	x	x	x	x	x	x	x
managing money	x		x		x	x	x
consumption matching income	x				x		x
property ownership and transfer of ownership			x				
taxes	x						
specialization							
Institutions							
credit unions/banks	x	x					x
entrepreneurs			x				
insurance and insurance agencies							
roles of jobs of family members	x		x		x	x	x
Choice							
scarcity		x					
opportunity cost over time		x					
degree of perceived necessity	x		x		x	x	x
thrift			x		x	x	x
budgeting	x		x		x	x	x
financial risk					x		
*delay of gratification and self-regulation	x		x		x	x	x
Social Values							
gifts/charity	x		x				
generosity	x		x			x	
public goods/services	x	x					
sense of community	x		x				sort of
equality/inequality							
General Concepts from Review							
Emphasis off of nice/friendly							
Address current theories			x				x
Incorporate norms	x	sort of	x	x		x	x
Incorporate emotions			x				
Incorporate habits	x		x		x	x	x
Domain specific	x	x	x	x	x	x	x
Add in fun	x		x	x	x	x	x
Active learning	x	x	x	x	x	x	x
Acknowledges prior experience			x	x		sort of	x

* O = optional