

Money Bus

Software and Hardware

Upgrade and Replacement



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Introduction

Networks Financial Institute (NFI) at Indiana State University (ISU) exists to help the financial services industry transform itself through better leadership, creative collaboration and community-based financial literacy initiatives.

The Money Bus is a novel mobile financial literacy classroom for third through fifth grades and teaches children aged approximately 8 to 11 the concepts of earning, saving spending, giving, budgeting and making sound financial decisions via interactive, technology based simulations and activities.

The purpose of this document is to enable both software developers and hardware suppliers, who should work closely together to deliver and install for Networks Financial Institute a fully working, scalable, upgradable, reliable system. Some exhibits do not need updating, or even use the hardware and software that will be replaced but is included here to give the developers a feel for the entire project.

The initial project, which was installed in 2005, has worked very well but the technology, both hardware and software, now needs updating, this includes the touch screens, card and cash readers.

It is unfeasible to repaint the entire interior of the Money Bus exhibits but minor changes can be made. Several of the exhibits do not need any changes made but are included in this document to give an idea of the general style of the exhibits. Photographs of the current hardware and screenshots of the current software are also included for the same reason.

Software developers are expected to work closely with the hardware suppliers to provide a full, working solution to Networks Financial Institute.

Networks Financial Institute will own and therefore need copies of all source code, image, video and other files used in the final programs for the exhibits. Networks Financial Institute will endeavor to provide as much information as possible that we have available from the current system to facilitate the building of the new one.

Interactivity

The Money Bus is basically, a 40 foot recreational vehicle that has been fitted with several computer based learning activities for children. Touch screens and simple push buttons are employed to enable the children to interact with the activities.

To introduce the children to the “plastic money” each child is given a “debit card” on which they can save their “earnings” or pay for items on each of the activities, thus each of the activities has a magnetic card reader.



Money Bus Debit Card

Computers at the rear of the Money Bus control the activities and keep a database of the child’s card usage.

The activities need to be independent. That is, the failure of any one computer, card reader, touch screen or any other part of the system must not affect any other. At the same time, the database needs to be centralized so that the records can be updated for the individual cards and records can be kept of the children’s spending habits during their time on the Money Bus.

Currently each activity is controlled by separate Windows 2000 computers sending and receiving information from a server containing the database. At the time this was installed it was thought to be the best way to ensure independency and autonomy. We are open to other suggestions such as using a smaller number of computers where the software and database is reproduced on two or more and on the failure of one computer the workload can be taken by the other(s).

All of the internal exhibits have their own speaker and this, along with the simultaneous reading of several card readers and the different video outputs, probably prompted the use of separate computers for each exhibit when the system was originally built. We would prefer that the new system be built where we do not need to have separate computers for each exhibit, if another option is feasible.

Some classroom activities are also used and these involve the use of the cards. Connectivity to the classroom and external exhibit laptops to the database on the Money Bus is currently done via wireless and cable.

Wireless causes some problems due to the fact that it is line-of-site which means it cannot always be used in all locations. Cable has problems as well. The distance between the Money Bus and the classroom can vary considerably and any cable used needs to be robust enough to withstand variations in weather and physical abuse i.e. a vehicle running over it.

We need to do away with this connection to the Money Bus. It should be possible to write the initial information to the magnetic card, date, starting amount, child's name, class etc. to the card when the account is set up from the classroom and external exhibit laptops and external exhibits and transfer it to the bus's database system when the child first swipes the card when entering the bus.

There are a couple of activities which require Money Bus paper money. These are the Photo Booth and the Welcome Gal ATM. These activities require a bill reader.

The touch screens currently used have proved to be sensitive to heat and lose their calibration easily. There is also some indication of image burn-in. They should be replaced with a better model.

Computers & Control

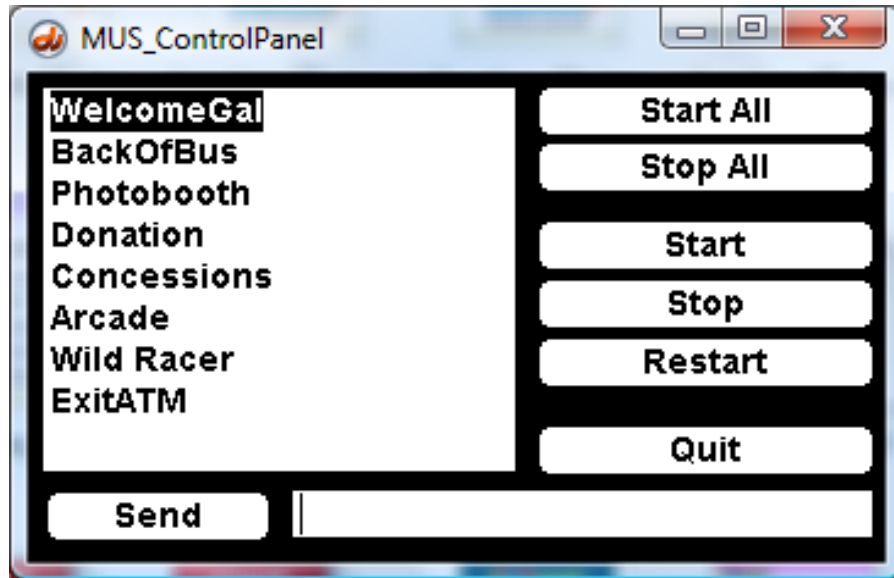
It should be remembered that the Money Bus does not operate in a normal static environment and is subject to a lot of temperature variations and vibration. We realize that this is not the best environment for computers and their associated hardware but we feel that by careful choices in both the type and model of the hardware that most of these difficulties can be overcome.

The exhibits should be controlled independently of each other. The failure of any one computer, screen, card reader or cash counter, electrical supply to any of the exhibits should not interfere with the operation of any of the others.

The bus currently has several computers, one for each exhibit, and a server to manage the exhibits and the database. The computers are currently accessed using a single interface that is switchable to control them individually.



Current computer system



Current exhibit computer control interface
(Current screenshots are included for illustration purposes only)

It should be possible to put all the software onto just two or three computers and have them coordinated so that the exhibits are controlled from any one of them and the database written simultaneously to all of them. Should one of these computers fail then processing should be automatically taken up by one of the others.

The computers should be rack mounted to make best possible use of the limited space that is available for them.

This rack is currently mounted on to the bus's engine cover. It may be possible to move them to another location, although room is very limited on it or provide them with some sort of anti-vibration mounting and use solid state drives.

The space that houses the computers is confined and gets very warm. Some method of cooling, or at least keeping the temperature of this space under control is required.

The system, hardware and software should be designed so that it is scalable. It is currently difficult to alter any aspect of the exhibits or the hardware system.

Hardware

The Money bus makes use of several types of hardware, most of which now needs replacing. This includes but is not limited to touch screens, card readers, illuminated buttons, bill readers, LED displays, camera, vibrating chair, game controller, a thermal printer, an image printer and other printers as needed.

Touch Screens

We have experienced several difficulties with the models currently installed. They are heat sensitive and, as the interior of the Money Bus gets rather warm, often lose their calibration. There have also been some problems with image burn-in on some of them. Some of this could have been eliminated by the use of screensavers or at least varying the animations shown when the exhibits were not in use.

Card Readers

We have suffered numerous failures of the current models used. Electricians and computer engineers have thoroughly checked the Money Bus and could not find the reason for this. The model chosen to replace the existing ones should be robust and reliable.

Bill Readers

Only three exhibits, the Photo Booth and the Welcome and Exit ATMs use bill readers. The current model we use is relatively trouble-free but does jam from time to time.

Illuminated Buttons

Most of the exhibits use remote illuminated buttons to control some aspect of the software. These have always been reliable but, should they be found to need replacing, they should be as close as possible in size and shape to the existing ones. Where one in a set is found to be defective then the entire set should be replaced to give the exhibit a uniform look.

Thermal Printer

This was in the original proposal for the Photo Booth exhibit but was never implemented. During this upgrade we want to take the opportunity to have one installed.

Camera

The camera used in the Photo Booth is now practically obsolete and needs to be replaced by a newer model. Control is by physically moving the camera and it requires a bright light, which adds to the heat inside of the Money Bus.

Software

The software was originally written, we believe, with Visual Studio 6 which is no longer supported by Microsoft. One of the problems we face is that as we do not have the source code or the original image and video files therefore all the software has to be now re-written.

Currently, the commands to the computers are not multi-threaded. We believe that there is a problem with the queuing mechanism employed as the processor appears to be choosing which tasks to complete first thus slowing the entire system, producing corrupt database entries and sometimes locking the entire system.

The new software should be reliable, scalable, maintainable, upgradable, and be able to cope with the demands placed on it.

It has been suggested that the Java programming language and XML file formats be employed, however this is up to the discretion of the software developer. We have no particular preference for either Windows or Linux based computer systems but the hardware and software developers should work closely together to deliver a working solution to Networks Financial Institute.

Various exhibits ask questions based on the child's school grade. The software should be flexible enabling the questions to be edited, deleted or more questions added.

As detailed below, the current software makes use of plain text INI files to control various aspects of the programs. We have no objection to something similar being used in the new software, the settings be kept in a database or some other method employed. Our concern is that it is dependable and easily edited.

The software should have an interface that allows aspects of the exhibits to be changed by the administrators. Currently, these settings are set via a plain text INI file, which makes them very easy to edit. The INI files are split into two sections, one section has a warning that the information in that section should not be altered and contains information about the server location, the database location and the COM ports used by the software. The other section contains user editable information about the cost of using the exhibit, the audio volume, how long the messages stay on the screen. There are two of these, one for short messages and one for long messages.

The following example is for the Photo Booth exhibit...

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[PicFolderLoc]  
Location = "Y:"  
[MagTek]  
Port="COM7"  
[USBIO]  
Port="COM4"  
[BillReader]  
Port="COM8"  
  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
[PriceToPlay]  
Price="0.00"  
;-----  
;TIMEOUT SETTINGS:  
; ShortMSG - instructions or error messages      - (typically 5-10 seconds)  
; LongMSG   - more complex instructions          - (typically 10-15 seconds)  
; Activity  - The time that the game or activity is idle - (typically more than a minute)  
; Decision  - any decision the child may make      - (typically 15-45 seconds)  
;  
[Timeouts]  
ShortMSG = "5"  
LongMSG  = "10"  
Activity = "60"  
Decision = "45"
```

The current INI file for each exhibit is given in the exhibit information below.

Database

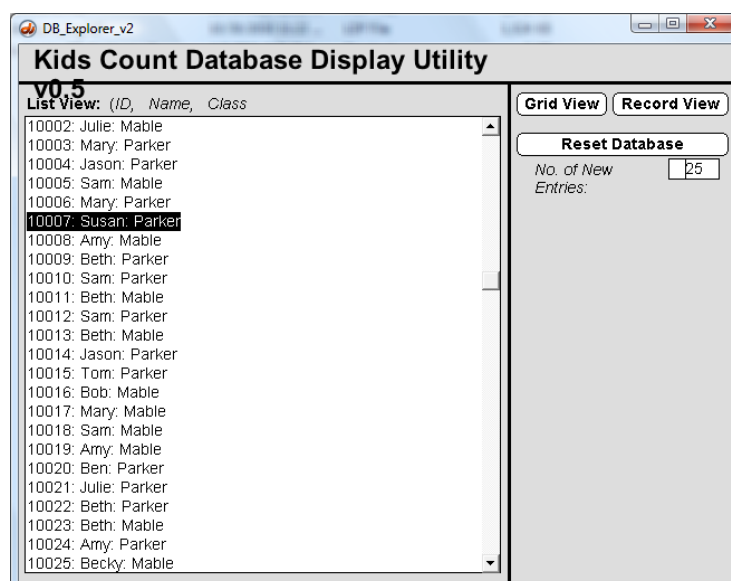
The database resides on a server on the Money Bus. This database contains information regarding the child's bank statement. How much is in the checking and savings accounts, how much cash was spent and how the card was used, how much was donated and so on.

As some of the exhibits ask questions and the questions asked depend on the school grade the child is in then this should be included in the database.

As well as being able to produce reports on each child, the database should be able to produce reports for the class as a whole.

We do not require the children's or the teacher's surnames. In fact, there are legal implications as to why we shouldn't collect identifiable information from or about children. The first initial of the surname may be collected and individuals where this information is the same within the class must be identified using a serial number and the date for the purposes of identifying them in the database.

One of the functions of the database is to allow us to see which of the exhibits are most popular and how long each child spends at each exhibit.



Part of the current database reporting system

The database will include...

- Serial number
- Child's first name
- Child's last name (initial only)
- Teachers last name
- Class grade – used to select questions in some exhibits
- DTG (date time group) of when the account was opened
- The child's "job"
- Beginning amount in savings account
- Beginning amount in checking account
- The exhibits that have been visited (or not)
- End amount in savings account
- End amount in checking account – should be allowed to go overdrawn i.e. negative numbers and a fee charged
- The amount earned at each exhibit
- Number of correct answers for each exhibit that used them – this is to ensure the correct information is being received by the child before entering the bus and will help us tailor the questions
- Amount donated at the "Donation Concentration" exhibit and to which charity

This database is used to produce statements for the children when they leave the Money Bus. Examples of the current statements are shown below...

KIDSCOUNT [™] on the money bus		
ATM Station		
Account Balances		
Susan	Mother's Helper	
	Beginning Balance	Current Balance
Checking Account Balance	\$20.00	\$13.90
Savings Account Balance	\$70.00	\$70.00

KIDSCOUNT [™] on the money bus		
ATM Station		
Money Bus Activity		
Susan	Mother's Helper	
	Money You Spent	Money You Earned
Arcade	\$2.00	\$0.10
Concession	\$3.00	\$0.00
Donation	\$0.00	\$0.00 *
Wild Racer	\$2.00	\$0.80
Say Cheese	\$0.00	\$0.00
TOTAL SAVINGS		\$70.00
TOTAL CHECKING		\$13.90
Money Deposited		\$0.00

* You've missed one! You must complete all activities.

Examples of the current statements given to the children

The software currently uses text INI files to control various aspects of the exhibits. We have no objection to this data being kept in a database. However, in case of corruption, at least two working copies of these databases should be kept.

An example of the current database printout...

Name: Malique Armstrong	Grade: 4	Class: mack		Date: 11/5/2009
Job: Mother's Helper			Salary: \$100.00	
Checking: Start: \$50.00 End: \$42.50	Savings: Start: \$45.00 End: \$45.00	Cash: Received: \$5.00 Deposited: \$0.00	Overdraft: No	
Donation: Spent: \$0.00	Concessions: Spent: \$0.00 Over Budget: No	Arcade: Spent: \$0.00 Earned: \$0.00	Wild Racer: Spent: \$0.00 Earned: \$0.00	Photobooth: Spent: \$0.00
Donated To:				

Name: Tiarah Porter	Grade: 4	Class: mack		Date: 11/5/2009
Job: Pet Care			Salary: \$100.00	
Checking: Start: \$50.00 End: \$36.70	Savings: Start: \$45.00 End: \$45.00	Cash: Received: \$5.00 Deposited: \$0.00	Overdraft: No	
Donation: Spent: \$2.00	Concessions: Spent: \$1.10 Over Budget: No	Arcade: Spent: \$2.00 Earned: \$0.50	Wild Racer: Spent: \$2.00 Earned: \$0.80	Photobooth: Spent: \$4.00
Donated To: American Red Cross				

Name: Lacey Vazquez	Grade: 4	Class: mack		Date: 11/5/2009
Job: Pet Care			Salary: \$100.00	
Checking: Start: \$45.00 End: \$37.50	Savings: Start: \$45.00 End: \$45.00	Cash: Received: \$10.00 Deposited: \$0.00	Overdraft: No	
Donation: Spent: \$0.00	Concessions: Spent: \$0.00 Over Budget: No	Arcade: Spent: \$0.00 Earned: \$0.00	Wild Racer: Spent: \$0.00 Earned: \$0.00	Photobooth: Spent: \$0.00
Donated To:				

The database should have the capability of being exported to an Excel spreadsheet.

Classroom Work

The children complete classroom activities to prepare for the Money Bus experience including:

- Choosing a summer job
- Building a budget for their trip to the bus
- Receiving, signing and depositing a paycheck from a summer job
- Making a withdrawal of funds to pay for the entrance onto the Money Bus
- Visiting a “bank teller” for a simulated banking experience where the child’s information is put into a document for an opening statement
- Receiving a debit card (swiped by the teller containing bank account information)
- Receiving Money Bus cash for incidentals on the Money Bus

The children are each given \$100 and allowed to choose the amount to place in their checking and savings account, based on their budget. Other information that needs to be entered at this time includes the child’s first name, the teacher’s surname – which should remain the same for a class, the school grade, amount deposited into the checking and savings accounts. The date and time should be automatically entered.

Due to the problems we have encountered in the past with both the wireless and Ethernet connections to the Money Bus connections this information should be written to the debit card data strip and transferred to the Money Bus’s database on first use.

External Exhibits

Along with the exhibits built into the Money Bus there are external exhibits which are stored inside the bus when not in use but rolled outside when they are needed. Some of these need no interaction with the computers on the Money Bus but others do.

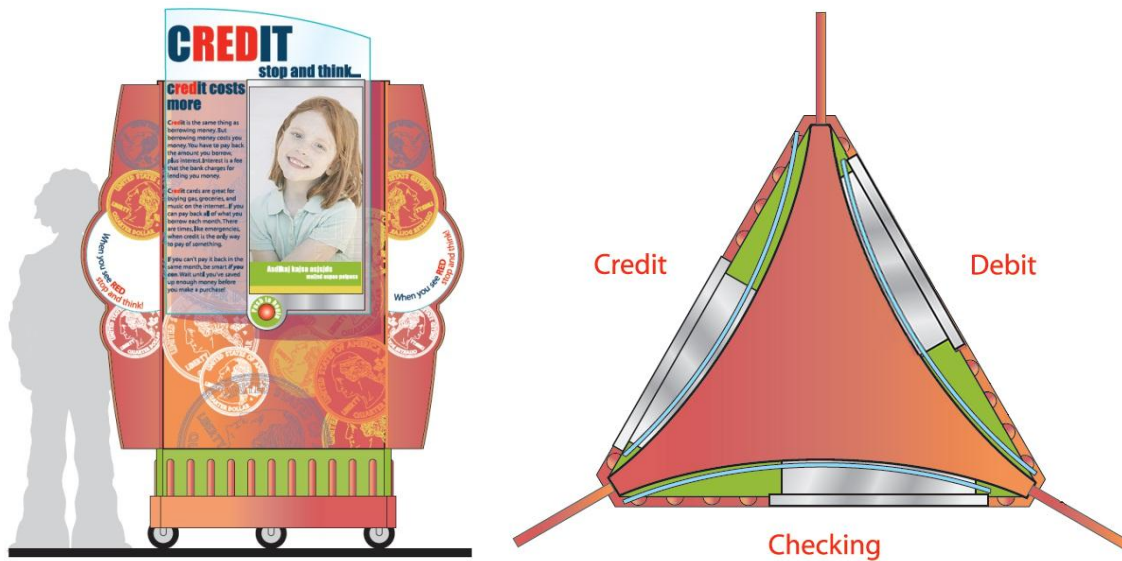
The exhibits that need connectivity to the Money Bus database are currently via wireless or Ethernet. In the locations the money bus is required to work in both methods cause us problems. It is envisaged that all the initial data is put onto the magnetic card the children are given and then transferred to the Money Bus's computers as they board.

The external exhibits are stored and transported in the Money Bus.



External exhibits (center) stored inside the Money Bus

ATM/Debit/Credit/Check Writing Kiosk



ATM/Debit/Credit/Check Writing Kiosk

This three-sided exhibit is an audio/visual activity instruction on how to use an ATM DEBIT/CREDIT card and writing a check. This activity will be viewed by the visitor as a reinforcement of the classroom experience. They will learn that the DEBIT card is another way of accessing money from their checking and savings account – their own money. They will also learn that the Credit card concept is actually “borrowing” money that must be repaid and often repaid with more money than was borrowed.

One side of the kiosk shows credit information, one side is debit information and the other is check writing. Each of these sides has a flat screen, a large button to start the exhibit and a solid-state video player. This activity is standalone and need not be connected to the database server. The video loops should replay automatically and when the “start” button is pressed they should restart at the beginning of the video.

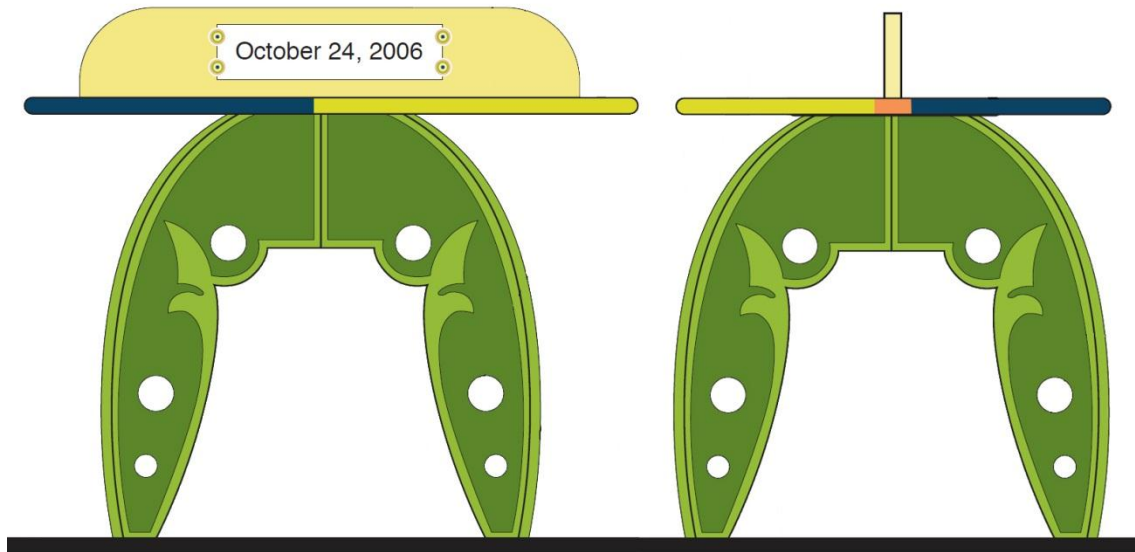
The check writing section of this kiosk guides the students through the process of writing checks and helps them understand that check writing is using and spending their own money from the checking account they just opened.

Power for this exhibit is taken from the school, not the Money Bus.

Check writing script

It's not really that hard to write a check. But, you have to do it right or the bank won't let the person you write the check to get the money that the check says they should get. And, remember that the check is your money so that means that the bank will take the money out of your checking account. First, always write the correct date on the little line at the top right side of the check. You can write the numbers like this September 26, 2012, or like this 09/26/12 (child holds a chalk board with the dates written on it). That's pretty easy. Then, on the first long line write the name of the person you are writing the check to. On that little line next to the person you are writing the check to write the amount you are writing the check for in numbers like \$10.00 (child holds up a chalkboard with this number on it). You write the amount of the check out in longhand number words on the long line underneath. The last thing you need to do is sign your name on the check. If you don't do this, the bank won't let the person you wrote the check to cash the check and get the money. Now you can practice writing a check at the tables next to this station.

The check writing tables are included here for illustration purposes.



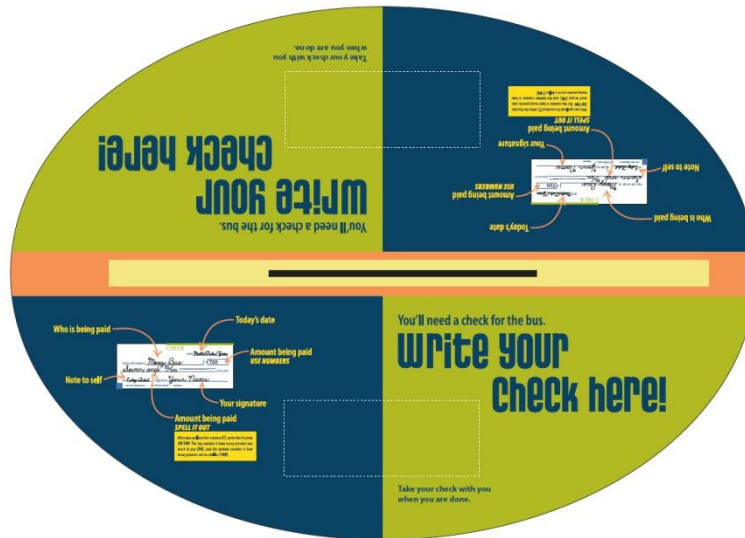


Illustration of the check writing tables

Deposit Slip Kiosk

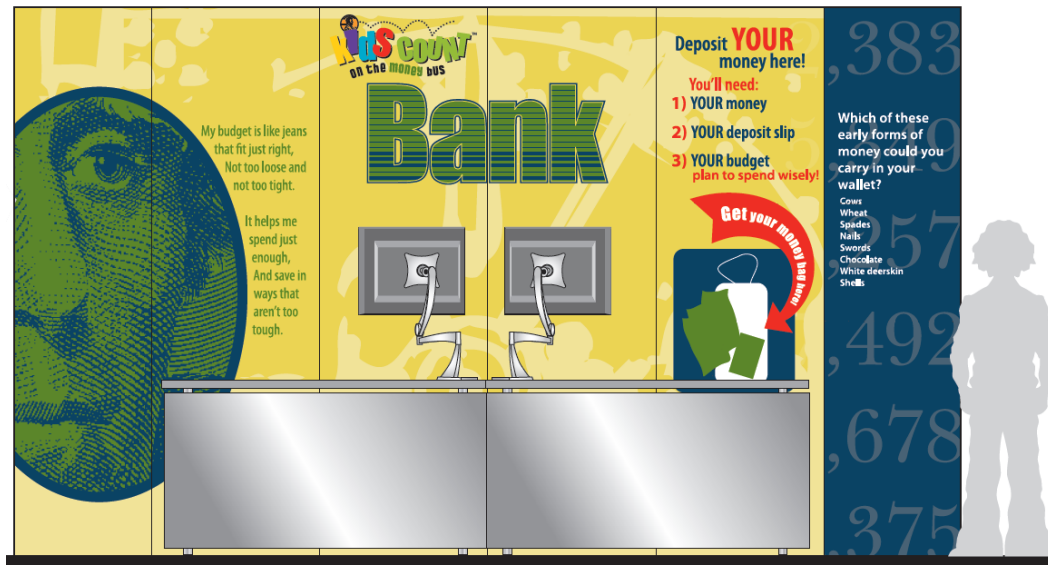


Students will have the opportunity to complete deposit slips determining the amounts to be placed in both their checking and savings accounts. They will sign their name on the deposit slips needed and proceed to the teller window to open their accounts at which time they will receive a statement of each account they open.

The object of this activity is to teach budgeting, choices and saving by allowing the opening of checking and savings bank accounts, withdrawing and depositing money and producing bank statements.

This is a standalone kiosk and not connected to the Money Bus computers.

Teller Station



Teller Kiosk

At the teller station, students will have the opportunity to perform banking activities. They will have the opportunity to deposit their paychecks, obtain their debit cards for the bus, and withdraw cash, based upon their budget.

The Teller Station is made up of a laptop computer, and a card reader. They share a printer between them. The card reader and printer are currently attached to the server via USB cable, the laptop via Ethernet cable.

On the Teller Station Screen there is a button that, when clicked on, will show you all the contents of the database. This database has a list of all students who visited the Money Bus that particular day, as well as which activities they participated in. This way, the instructors may have a hard copy of all of the children and their Money Bus activities. Simply click the "Print" button to print this activity list.

The teller will swipe a magnetic card through the card reader, which will initiate the start new account function.

The teller is prompted to type in the student's name. The next screen prompts the teller to select the job the student has chosen. This information is conveyed to the database in the main computer with the Account ID, name and amount of money earned.

The children may choose from a variety of jobs including house sitting, mother's helper, pet care, washing cars, lemonade stand and yard work.

Choosing a job from the Teller Station
(Current screenshots are included for illustration purposes only)

Other information that needs to be entered at this time includes the serial number, child's first name, child's first initial of their surname, and the teacher's surname – which should remain the same for a class, the school grade, amount deposited into the checking and savings accounts. The date and time should be automatically entered.

Current Teller Station software INI file (for illustration purposes only)

```
;-----
; DO NOT ALTER THESE SCRIPTS
;-----
[DatabaseLoc]
Connection =
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"
[MagTek]
Port = "COM5"
;-----
```

The next screen prompts the teller to enter the desired amounts into the savings and checking account records.

After completing all the entries, the teller initiates printing an opening statement for each child and hands out: a statement, an ID-Debit card, and a Money-Bus pouch containing up to ten (10) one dollar bills in Money-Bus currency. This amount is debited from the child's account.

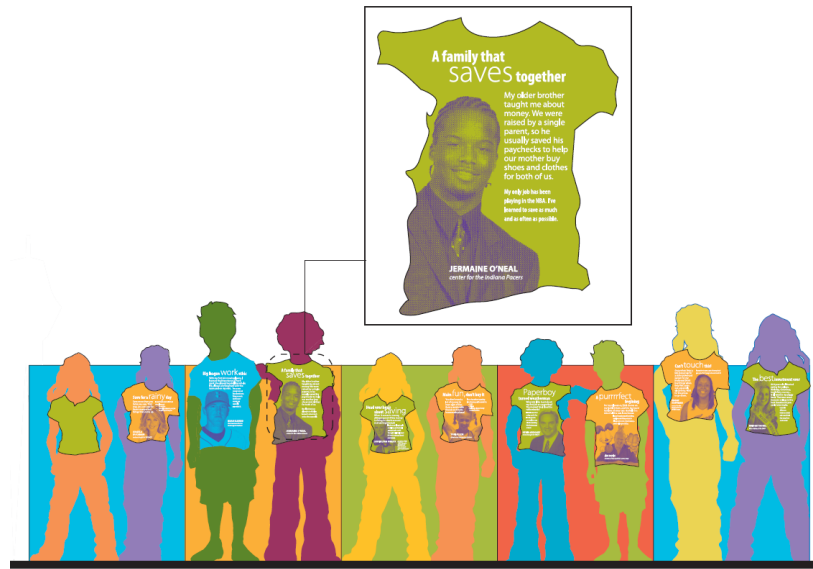
Power for this exhibit should be provided by the school, not the Money Bus.

Ticket Booth



Entrance to the bus must be paid before one enters the bus to participate in the various experiences. Entrance to the bus will cost \$7.50 and will be paid by the check written by each student at the check writing station.

Queuing Line



Stories of kids who started earning money in an entrepreneurial venture while they were young and continued growing a successful business into adulthood will be placed just outside the entrance of the Money Bus. Students will have the opportunity to read these stories while standing in line and hopefully be inspired to make smart financial choices of their own. The only technology used in this exhibit is an audio CD player.

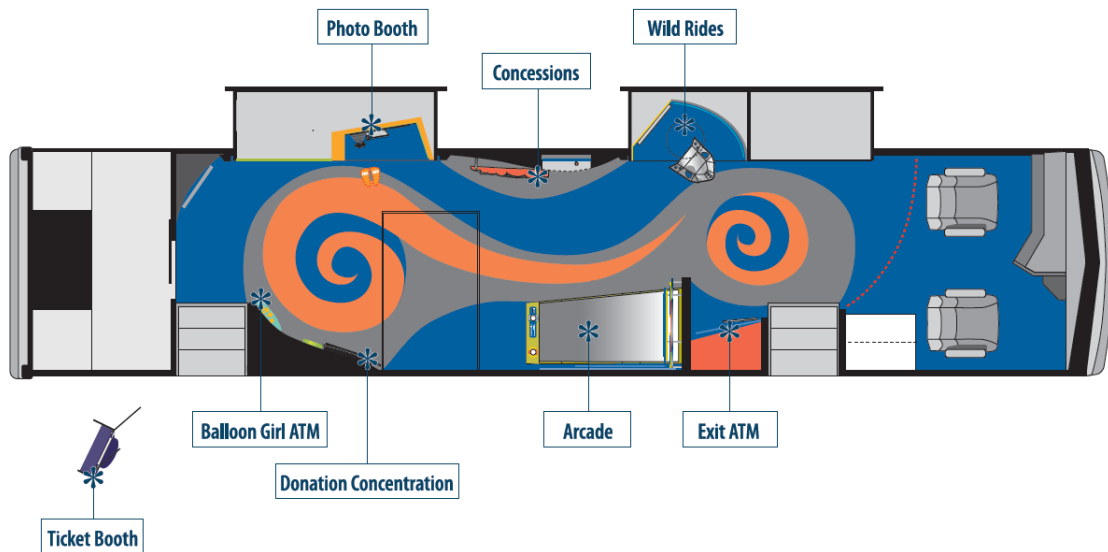
Welcome Guy and Gal



Welcome Guy

Upon entering the Money Bus students will be greeted by the “Welcome Guy” holding a long scroll that states “Welcome to the Money Bus”. This exhibit contains no technology at all and is included here for illustration purposes.

Internal Exhibits



Internal layout of the exhibits in the Money Bus

All of the internal exhibits have their own speaker.

Entrance ATM



Around the corner are Welcome Guy and Gal at the ATM/Information Center where children can use a computer screen to check on their savings/checking accounts to determine what they have left in their accounts. Students will also be able to take any leftover cash not used on the bus and deposit it back into their checking account. This will help them make good (or bad) decisions about their available money as they move through the Money Bus experience.

Children may visit this exhibit multiple times to check their balances and add money to their accounts using their paper bills, thus this exhibit uses a bill reader.

The learning goals for this activity are saving money, short-term goals, long-term goals, decision making and spending money wisely.

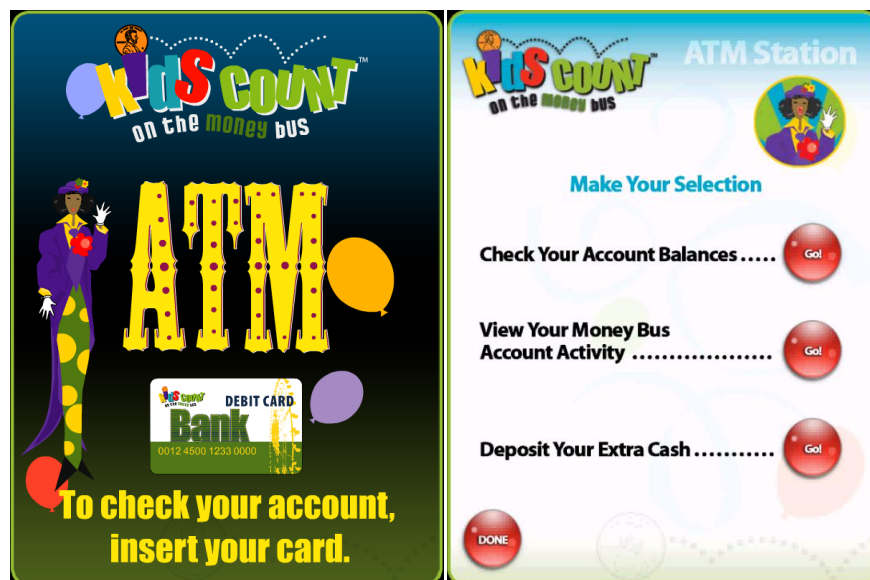
Procedure:

- Upon entering the Money Bus children insert their debit cards into the magnetic stripe reader, which has their information from the teller station stored.
- The child sees the activities completed on the bus and the amount spent and earned on those activities as well as balances.
- They have the option to deposit any extra cash back into their checking account.

Changes: We want this entrance and exit ATM exhibits to have the same functionality. This will allow the children to use either and reduce the queues at any one of them.

Technology: Touch screen, card reader, bill reader

Entrance ATM screenshot (Current screenshots are included for illustration purposes only)





ATM Station

Account Balances

	Mother's Helper	
	Beginning Balance	Current Balance
Susan		
Checking Account		
Balance	\$20.00	\$13.90
Savings Account		
Balance	\$70.00	\$70.00

DONE



ATM Station

Money Bus Activity

	Money You Spent	Money You Earned
Susan		
Mother's Helper		
Arcade	\$2.00	\$0.10
Concession	\$3.00	\$0.00
Donation	\$0.00	\$0.00 *
Wild Racer	\$2.00	\$0.80
Say Cheese	\$0.00	\$0.00
TOTAL SAVINGS		\$70.00
TOTAL CHECKING		\$13.90
Money Deposited		\$0.00

* You've missed one!
You must complete all activities.

DONE



ATM Station

Deposit Cash

Susan	Mother's Helper
Deposit to Checking	CHECKING
Deposit to Savings	SAVINGS

Press the button to choose which account.

DONE

Current Entrance ATM INI file (included for illustration purposes only)

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[MagTek]  
Port="COM5"  
[Apex]  
Port="COM6"  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
;time in seconds  
[Timeouts]  
Global="15"  
Error = "6"  
;-----  
;set Sound volume from 0 to 255  
[SoundLevel]  
Set="100"
```

Factoids



The Factoid simply displays various money related facts and is not interactive.

4000 years ago, grain was the first type of currency accepted! Later, other goods, including cattle, agricultural implements, and precious metals were accepted. –

Source: A History of Money from Ancient Times to the Present Day by Glyn Davies, rev. ed. Cardiff: University of Wales Press, 1996.

<http://www.ex.ac.uk/~RDavies/arian/amser/chrono1.html>

Over a lifetime, a person with a college degree earns about \$1 million more than someone with only a high school diploma.

Source: College Board.

<http://www.collegeboard.com/article/0,3868,6-29-0-4494,00.html>

Do you buy your lunch every day? If you spent \$5 a day (instead of bringing a lunch from home), you'd spend \$900 a school year! Just think what you could do with \$900...

You could fly to Paris and back to Indiana!

You could buy a new computer!

If you put \$900 in the bank every year for five years at 5% interest, your money would grow to \$6,370.37! After 10 years, you'd have \$13,352.11!

Young Americans (ages 8 to 21) earned about \$211 billion in 2003! However, they're spending almost all of it instead of saving.

Source: (Harris Interactive, Generation Y Earns \$211 Billion and Spends \$172 Billion Annually, September 3, 2003,
<http://www.harrisinteractive.com/news/allnewsbydate.asp?NewsID=667>

More than half of parents agree that their child thinks "money grows on trees."

Source - Visa USA, Visa USA Back to School Survey Shows Building Teen Personal Finance Skills a Top Worry for Parents, Visa Survey Finds, August 9, 2005,
<http://www.practicalmoneyskills.com/english/presscenter/releases/080905.php>

A house is a good thing to buy because its value usually goes up while you live in it. In 1963, the average new home sold for \$17,800. In 2004, the average new home sold for \$141,900!

Source: U.S. Census Bureau. http://www.census.gov/const/price_sold.pdf

Some people borrow more than they can pay back. In 2003, nearly one in every seven households declared bankruptcy – that means they weren't able to pay back the money they owed. In fact, more people filed for bankruptcy that year than graduated from college!

Sources: (National Retailers Federation, Retailers: Attach Bankruptcy Reform to Ag Bill, January 28, 2004), and (Ghidotti, Natalie. "In Too Deep." Little Rock Family (Feb. 2004)

If you had 10 billion \$1 bills and spent one every second of every day, it would be 317 years before you spent all the money!

No one knows for sure how the "\$" sign got started. It might have come from the Mexican or Spanish money, pesos, which was written as "P's." Some people started writing the "S" over the "P," and it started looking like the "\$" mark. However it started, the "\$" already was widely used before the first U.S. dollar was adopted in 1785.

Most people think the car on the back of the \$10 bill is a Model "T" Ford ... but it's not. It's a made-up car created by the person who made the \$10 bill.

Martha Washington is the only woman whose picture has been on U.S. paper money. She was on the face of the \$1 Silver Certificate of 1886 and 1891, and on the back of the \$1 Silver Certificate of 1896.

How much does money cost to make? In 2005, it cost about 5.7 cents each to produce 8.6 billion U.S. bills.

A stack of dollar bills one mile high would contain over 14. 5 million bills!

Five-cent coins minted from 1942 to 1945 aren't nickels... Why? Because they don't have any nickel in them! During that time, the United States was fighting World War II, and the U.S. Mint used a special mix of metals. The saved nickel was used to make airplanes and weapons.

Is it time for change? The Secretary of the Treasury can change the design on our pennies, nickels, dimes and quarters after 25 years. Congress, however, can authorize a change at any time.

According to legend, Martha Washington donated the silverware from her table to make the nation's first coins.

Does money wear out? Yep. The life expectancy of a coin is 30 years. A dollar bill? Just 18 months.

The largest bill ever printed by the U.S. Bureau of Engraving and Printing was the \$100,000 Gold Certificate, Series 1934.

Have you ever wondered how many times you could fold a bill before it would tear? About 4,000 double folds (first forward and then backward) are required before a bill will tear.

Paper money is printed in Fort Worth, Texas, and Washington, D.C. Together, the two places use about 18 tons of ink per day!

In 1862, two men and four women worked to get \$1 and \$2 bills ready for people to use as money. Today, 2,800 people in two cities – Fort Worth, Texas, and Washington, D.C. - work to print our paper money and get it ready to use.

Technology: Screen

Photo Booth



Photo Booth Exhibit

On board the Kids Count on the Money Bus, at the “Say Cheese” Photo Booth students can take home a fun photo of themselves from the visit. They have their picture taken and then have printing choices to make based on varying prices and the size of their budget. The choices are selected from a series of buttons to the right of the screen.

The photo booth is comprised of a touch screen monitor, card reader, bill collector, camera, and activation buttons. This is one of the few exhibits on the Money Bus that accepts “cash” and so uses a bill reader. The cost of the exhibit depends on the type of picture the child chooses. The children need to insert their debit card in order to start the exhibit. Children can only use this exhibit once during their visit to the Money Bus.

Since the original camera was installed, the cameras have become better with autofocus and with better low light capabilities. The camera needs to be adjustable due to the different heights of the children who will be using it. At the moment the camera is adjusted by rotating a cuff, but there should be no problem using software control to do this so long as it is simple enough for the children to operate.

The original specifications for this exhibit called for a thermal printer to be installed to provide a receipt for the children as they used their “cash”. This was never implemented but should be now that the software is being redesigned.

The images should be printed on standard paper using a printer installed at the rear of the bus in the computer room, or the front of the bus if room permits.

Another screen, to the left of the exhibit should show a selection of pictures taken by children who have visited the exhibit before. These can be generic at first but need to show pictures from other children in the class.



Current Photo Booth camera adjustment

Currently, there is a countdown for the child to adjust the camera to their position. The child only has 10 seconds before the picture is taken. This can be continued in the new version of the software or they can simply press an onscreen button when they are ready.

The photograph should appear both on screen and be printed.

Procedure:

Stage 1: Take Your Picture

- The child inserts the debit card into the magnetic stripe reader to activate the camera.
- The child sees a countdown on the screen.
- The child sees his or her face on the screen and moves to position his or her face in the oval on the screen.
- The child pushes a red button on the screen to take the picture.

Stage 2: Choose Your Style

- The child is prompted to look to the wall display for several choices to make regarding how the photo is to be printed. These options cost varying amounts of money:

Magazine	\$4
Weird	\$2
Award	\$1
Photo	Free
- The child selects his or her choice and a digital display located near the Money Bus currency reader which indicates the amount of money to be deposited.
- The child's picture is shown.
- The option will be available to choose any of the four options at no charge, should the need arise not to use the bill reader, for example, the bill reader malfunctions.
- A "back button" allows the child to change their mind about their choice of image
- The child inserts the exact amount of cash based on his or her choice.
- When the correct amount has been deposited, the choice of photo is sent to a file in the main PC for printing on the photo printer.
- After completing the activity, a receipt is printed for the children to take with them.
- This receipt indicates the amount of cash spent at the photo experience and it must be placed in their money pouch. This receipt is their record of playing the game and for using cash as payment.
- The pictures and receipts will be available upon exit of the bus.
- All print outs have a Money Bus name and logo on them.
- The child's account will be debited based on the cost of the picture chosen.

Technology: Camera, card reader, bill reader, thermal printer, photo printer.

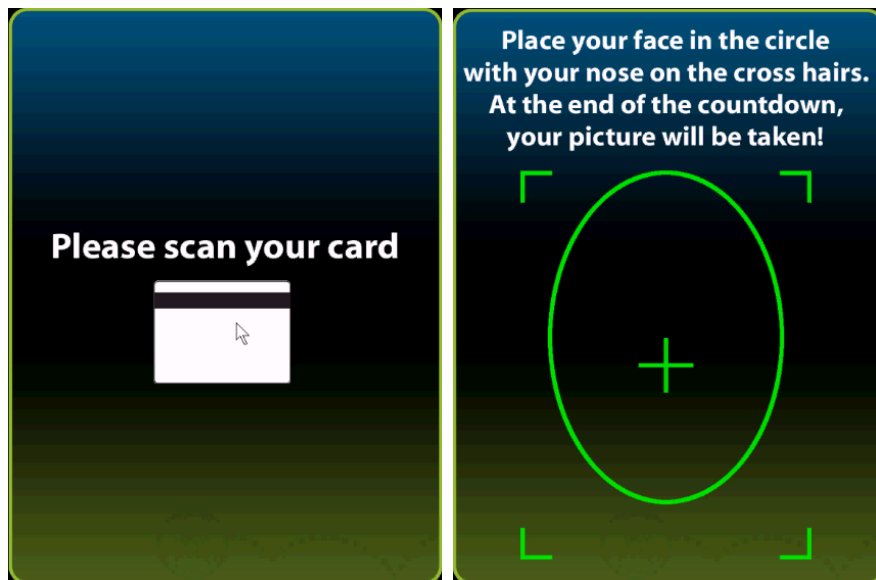
Photo Booth screenshot (Current screenshots are included for illustration purposes only)

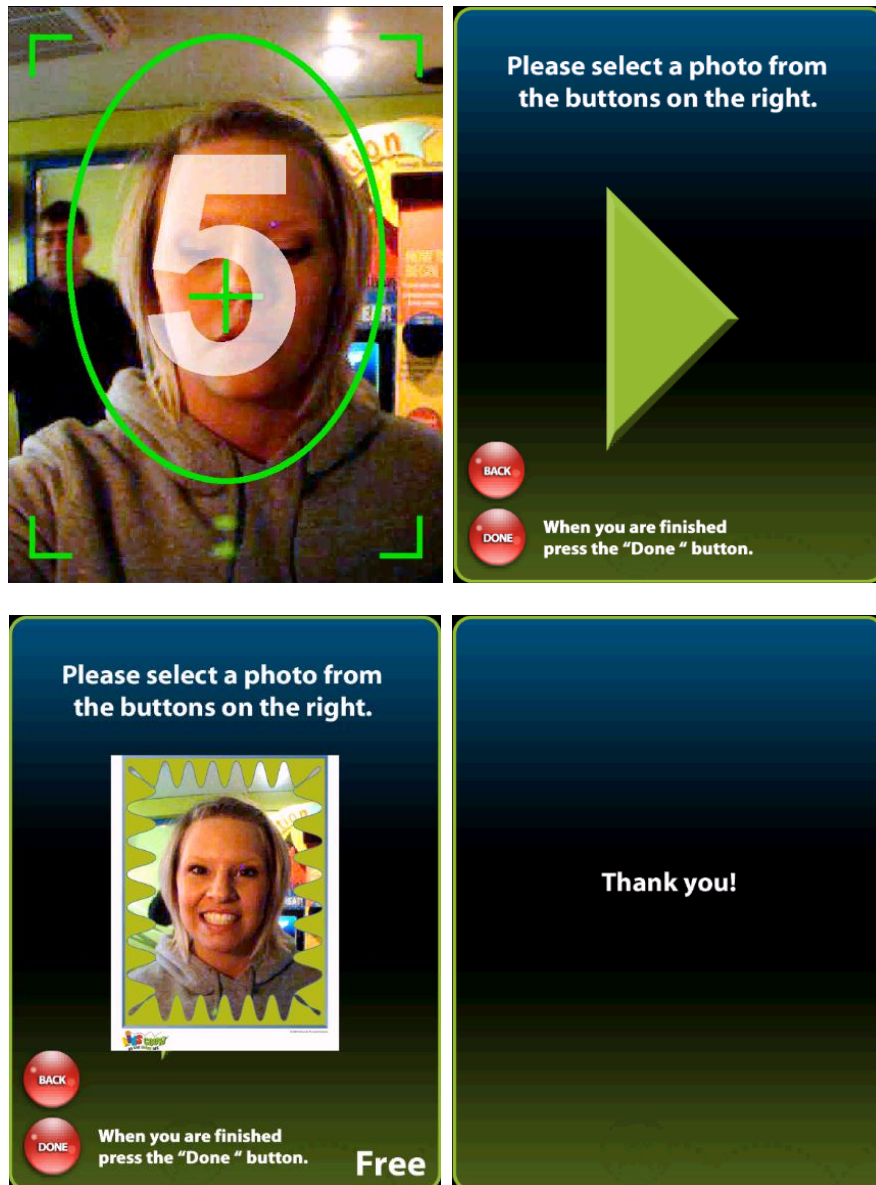
The initial animation cycles through several of the picture formats the child has a choice of. All have a "Start" button.





On payment and starting the exhibit the child is asked to swipe their card, adjust the camera and choose a photograph style.





The child can choose from a variety of image styles at range of prices chosen using the push buttons at the left of the exhibit. These are plain images with a simple background which are free. An award or ID style photo at \$1; a distorted “weird” photograph at \$2 and a magazine style photograph at \$4.

The back button allows the child to redo their choices.



Plain and ID style images
 Plain images are free, ID type images are \$1



Distorted or "weird" images
 These are \$2



Magazine cover type images

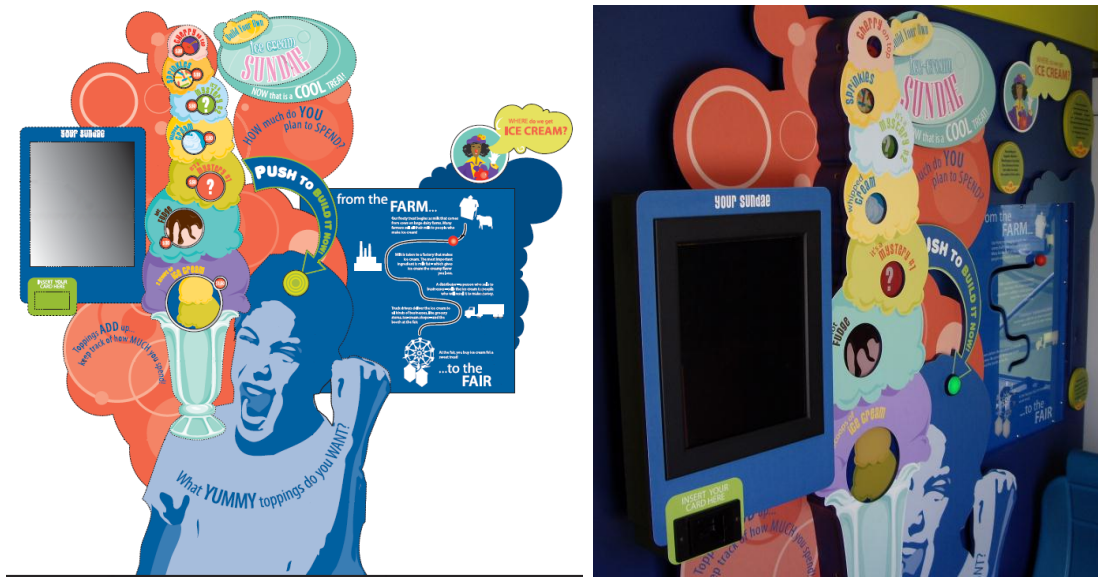
These are \$4

(Current screenshots are included for illustration purposes only)

Current Photo Booth INI file (included for illustration purposes only)

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[PicFolderLoc]  
Location = "Y:"  
[MagTek]  
Port="COM7"  
[USBIO]  
Port="COM4"  
[BillReader]  
Port="COM8"  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
[PriceToPlay]  
Price="0.00"  
;-----  
;TIMEOUT SETTINGS:  
; ShortMSG - instructions or error messages      - (typically 5-10 seconds)  
; LongMSG   - more complex instructions          - (typically 10-15 seconds)  
; Activity  - The time that the game or activity is idle - (typically more than a minute)  
; Decision  - any decision the child may make      - (typically 15-45 seconds)  
;  
[Timeouts]  
ShortMSG = "5"  
LongMSG = "10"  
Activity = "60"  
Decision = "45"
```


Build Your Own Sundae



At the “Build Your Own Sundae” exhibit, students will build their own ice cream sundae to learn about why some ice cream sundaes cost more than others. Students have to prioritize their wants within their individual budgets while participating in this activity. Each individual ingredient of the sundae has its own cost and students must add all of the various prices together and pay the final total based on their selections. The exhibit costs \$1 to play and the children can spend up to \$3. The object of this exhibit is to teach choices and budgeting.

To the immediate right of the main exhibit is a display, “From the Farm to the Fair” indicating how the costs for goods increase as more processes are required to manufacture and distribute them. This activity is a display only and does not cost anything. The display will consist of a large handle that can be pulled through a pre-determined track. At various points on this track, pictures illuminate indicating the process at that point. A digital display located near the track increases in value indicating the increase in cost associated with that process. Children progressively move the peg through groove to reveal production process. The process is presented through a math story problem. At each production stop the explanatory graphic lights up and reveals price that registers onto the tally board. This board adds up the cost for the production process.

At the main exhibit children insert their card and enter the amount they plan to spend on their ice cream. The exhibit has a single video touch screen to display a series of questions regarding how much they want to spend on an ice cream sundae. Children are then prompted to make choices using a series of push buttons. Simple red push buttons reveal the costs of the various ingredients and toppings. However, there will be 2 “mystery” topping buttons that when pushed will provide additional fun toppings. One of the toppings is currently worms! When students push any of the buttons the correlating graphic illuminates the choice of topping. An adjacent keypad is available for children to “do the math” associated with this activity. After they have made their selections they input the amount

they think they have selected. If they have overspent the keypad tells them. At this point, they have the opportunity to take off toppings. After they feel comfortable with what they have selected they push the “build it now” button. After this is done the video screen displays an animation of the sundae being built showing all toppings. At the end of the experience the child’s account is debited the amount they have spent.

Procedure:

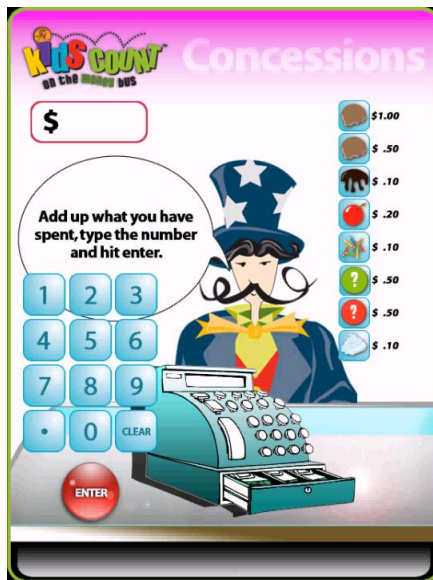
- Children insert their card to activate the activity.
- Students enter the amount they plan to spend on their ice cream.
- A series of questions regarding how much they want to spend on the ice cream sundae are displayed.
- Children are then prompted to make choices about toppings by touching the screen.
- After they have made their selections they input the amount they think they have selected.
- An adjacent keypad is available for children to “do the math” associated with this activity.
- If they have overspent the keypad tells them. At this point, they have the opportunity to continue and modify options.
- When the child is finished building the sundae, he or she is prompted to push the “build it now” button to the right of the screen which activates the lights and pyramid of toppings on the adjacent model.
- The video screen displays an animation of the sundae being built showing all the toppings.
- The child’s account is debited the amount he or she spent.

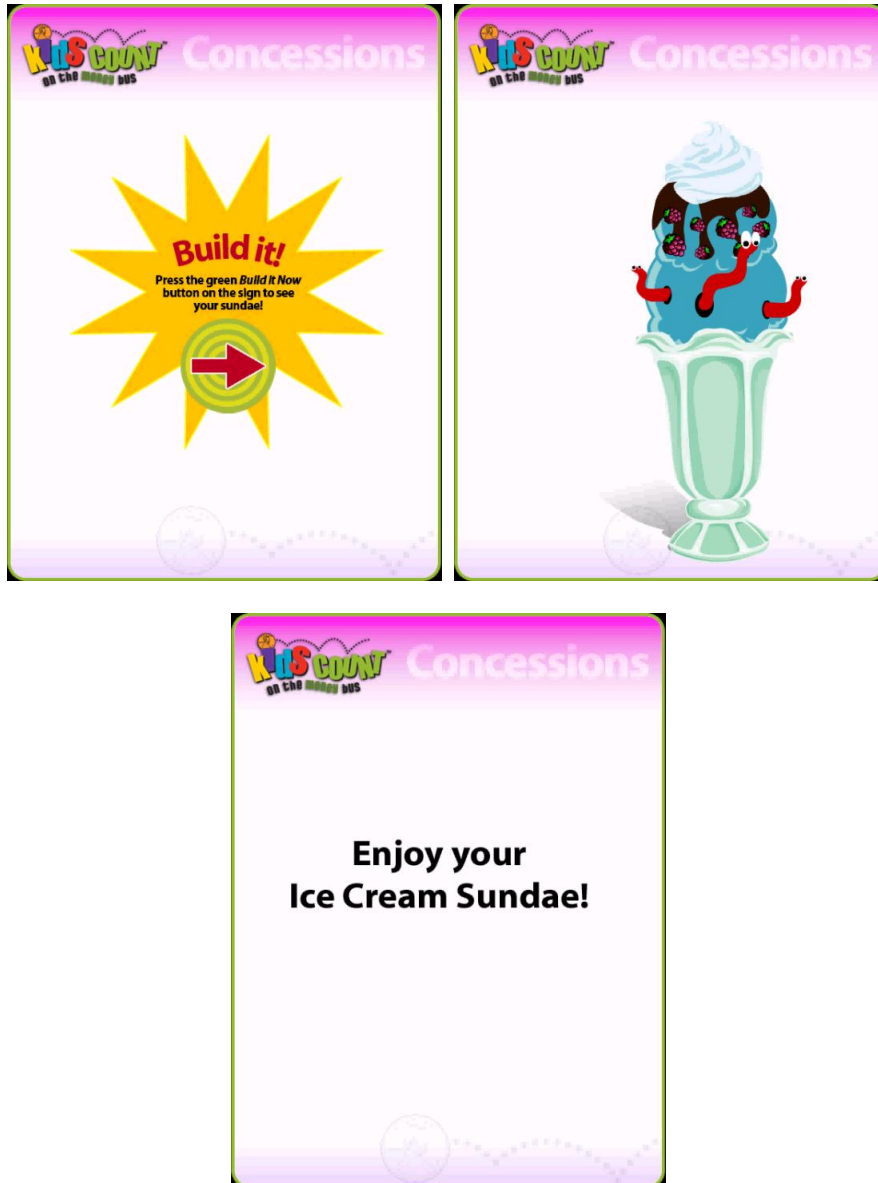
Changes: We want more time for the children to do the math, maybe set during the setup and variable. The building of the sundae needs to be more exciting than it currently is.

Technology: Touch screen, card reader

“Build Your Own Sundae” screenshots (Current screenshots are included for illustration purposes only)







Current Build Your Own Sundae INI file (included for illustration purposes only)

```

;-----
; DO NOT ALTER THESE SCRIPTS
;-----
[DatabaseLoc]
Connection =
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"
[MagTek]
Port="COM5"
[USBIO]
Port="COM3"
;-----

```

; THE USER CAN ALTER THESE SCRIPTS

;-----

[PriceToPlay]

Price="2.00"

;-----

;TIMEOUT SETTINGS:

; ShortMSG - instructions or error messages - (typically 5-10 seconds)

; LongMSG - more complex instructions - (typically 10-15 seconds)

; Activity - The time that the game or activity is idle - (typically more than a minute)

; Decision - any decision the child may make - (typically 15-45 seconds)

;

[Timeouts]

ShortMSG = "6"

LongMSG = "10"

Activity = "60"

Decision = "45"

Call It! Arcade



At the “Call It! Arcade,” students have the opportunity to make decisions between wants and needs. At this interactive arcade game, students roll-a-ball down one of two chutes. Correct answers are based on questions in which students determine what they need versus what they want. Older children will be challenged to discover pricing “games” and other marketing gimmicks sometimes used to get them to buy more than they need – or even want.

The idea of this exhibit is to teach the children how to prioritize needs against wants and how to choose how to spend money.

The student initiates the game by swiping their ID/Debit card through the magnetic stripe reader to activate the activity and debit their account \$2. The station has a single video screen to display pictures of various items that the student will need to determine if it is a “Need” or a “Want”. Children indicate their answers by rolling a ball down one of two chutes – one for Need and one for Want. The computer system keeps track of these responses. Children answer as many questions as possible in the allotted time. After the completion of the game, scores are tallied and various amounts of money may be deposited into their savings account based on percentage of correct answers.

A countdown LED timer on the exhibit shows the child how much time they have left to answer.

The Arcade exhibit uses a LED timer and a card reader.

This exhibit asks questions based on the child’s school grade

- Level 1 = basic wants/needs (3rd and 4th graders)
- Level 2 = advertising influence (all grades)
- Level 3 = pricing/marketing layer (5th graders)

The computer should ask a variety of random questions, the number to be determined from the INI file or other control process.

Level 1 - Basic wants/needs (3rd and 4th graders)

NEED	WANT
1. Milk	Soda
2. Apple	Candy
3. House	Tree house
4. Clothes	Costume
5. Math book	Comic book
6. Telephone	Walkie talkie
7. Trees	Swing set
8. Sleep	TV
9. Doctor visit	Carnival ride
10. Pencils	Toys

Level 2 - Advertising influence (all grades)

YES	NO
1. Happy Meal	Burger and fries
2. Buy 2, Get 1 Free	
3. Logos	Sweatshirt in multiple colors
4. "Get them all"	
5. 3 pizzas at \$5 each, just \$3 more for special topping	
6. Buy this get \$ off that item	\$ off coupons
7. Jeans that "make you cool"	Jeans that fit
8. Free gift with \$20 purchase	Free gift with coupon
9. Free trial, then purchase	
10. Additional 5% off w/ min. purchase	

Level 3 - Pricing/marketing layer (5th graders)

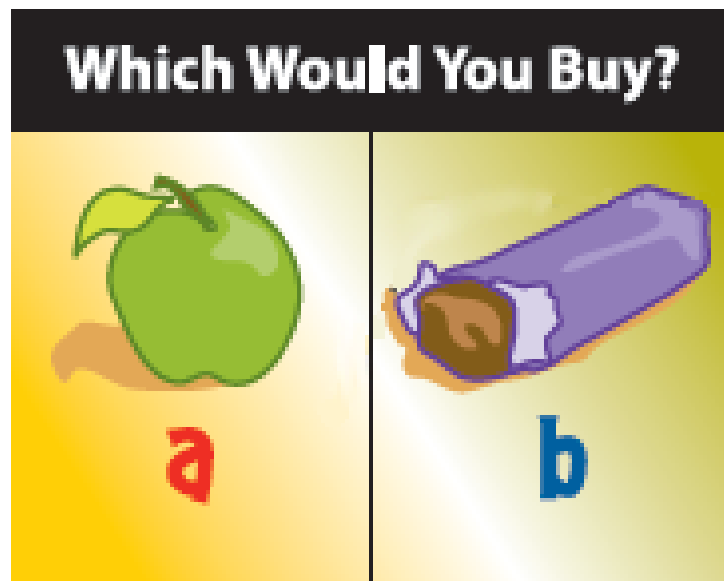
LESS	MORE
1. \$2.50	2 for \$4.50
2. \$2.50	10% off of \$3.00
3. Combo meal for \$3.75	Burger @ \$1.75 + drink @ \$.75 + fries @ \$1.50
4. \$.35 off \$2.05	\$1.75
5. 25% off \$5.25	20% off \$5.00
6. \$8.75 each	2 for \$18.00
7. x for \$2.50	x free with \$3.00 purchase
8. 3 for \$1.00	\$.35 each x 3
9. Save \$5.00 off \$15	Save 20% off \$15

Procedure:

- The student initiates the game by inserting the debit card into the magnetic stripe reader.
- The child is presented with various images of needs and wants.
- The needs and wants options are leveled by grade
- The child indicates his or her answers by rolling a ball down one of two chutes – one for Need and one for Want.
- Children answer as many questions as possible in an allotted time.
- After the completion of the game, scores are tallied and various amounts of money may be deposited into their savings account based on the number of correct answers.

Technology: Screen, LED display, card reader

Example image from current Wants/Needs



Example image from current Wants/Needs
(Current screenshots are included for illustration purposes only)

Current Photo Booth INI file (included for illustration purposes only)

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[MagTek]  
Port="COM5"  
[USBIO]  
Port="COM3"  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
[PriceToPlay]  
Price="2.00"  
;-----  
;set Sound volume from 0 to 255  
[SoundLevel]  
Set="100"  
;-----  
;TIMEOUT SETTINGS:  
; ShortMSG - instructions or error messages      - (typically 5-10 seconds)  
; LongMSG   - more complex instructions          - (typically 10-15 seconds)  
; Activity  - The time that the game or activity is idle - (typically more than a minute)  
; Decision  - any decision the child may make      - (typically 15-45 seconds)  
;  
[Timeouts]  
ShortMSG = "6"  
LongMSG = "10"  
Activity = "60"  
Decision = "45"
```

Donation Concentration



At "Donation Concentration," a touch-screen computer game with a simple two minute, 12 images, 2 each of 6, memory board game with community organizations is presented to students. Once a match is made, simple information about the organization is displayed on the screen. After the organizations have been matched, the computer asks the student if he or she wants to make a donation of their virtual money to any of the organizations listed, which promotes the concept of philanthropy or sharing. This exhibit costs \$1 to play.

The "Donation Concentration" exhibit contains a LED panel that displays the total amount of contributions made by the children of that school for that session.

The charity choices are American Red Cross, Habitat for Humanity, Make a Wish Foundation, UNICEF and the World Wildlife Fund. There is also a sixth one showing the Money Bus logo which represents local community groups or charities.

A short introduction at the start of the game states that...

"Giving money helps a lot but there are other ways to help too. What else can you do?"

Time – Walk dogs at the animal shelter.

Talent – Sing songs at the nursing home.

Treasure – Give your old coat to a homeless shelter.

The children initiate the game by swiping their card. They are then presented with a touch screen computer game with a simple Memory Board Game (Concentration).

The children use the touch screen to match the pairs. When a match is made symbols remain and a pop-up explains what charity the symbol belongs to and what it does. If the match is not made the symbol

reverts to the “back” of the card. The screen also displays a countdown of how many seconds are left before the game ends.

Currently the brief information given for each charity is...

American Red Cross: American Red Cross helps people who have been in floods, fires and other disasters.

Habitat for Humanity: Habitat for Humanity brings people together to build houses for those who don't have one.

Make a Wish Foundation: Make a Wish Foundation cheers up very sick children by granting their wishes.

UNICEF: UNICEF improves the health education and safety of children all over the world.

World Wildlife Fund: World Wildlife Fund works to protect wild animals and their homes.

Once the children have made all the matches or the countdown reaches zero the children are shown how many matches they made and are asked if they would like to donate to one of the charities. If they do not then the exhibit ends, If they do then a further screen asks to which charity they want to donate, and another screen asks them how much. They are then asked from which account, savings or checking the money should come and thanked for their donation. A “Go Back” button is there should the child want to reconsider their last answers.

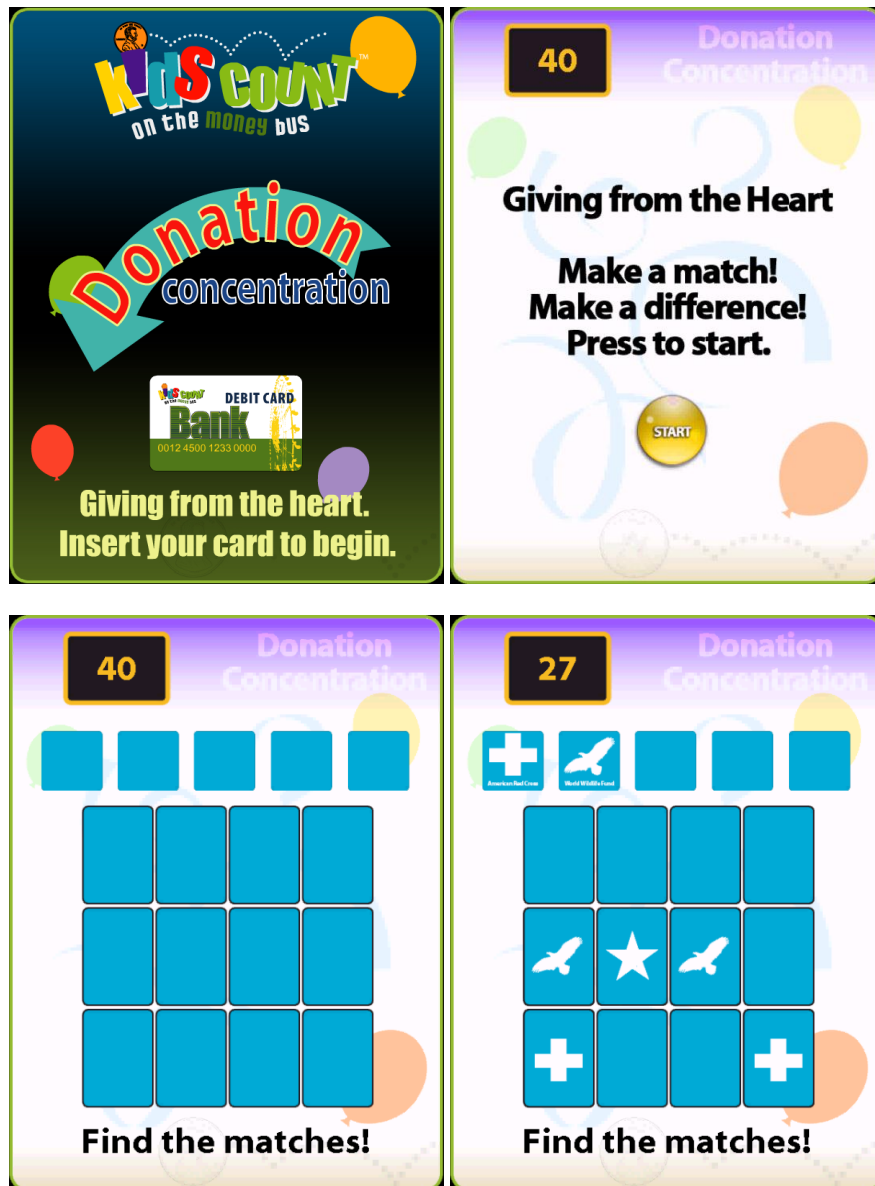
Procedure:

- The student initiates the game by inserting the debit card into the magnetic stripe reader.
- The child touches a red start button on the screen.
- As the child plays he or she is introduced to the names and purposes of the various charity organizations.
- The child is presented with a 4 x 3 concentration game and 40 seconds to complete.
- The child touches the screen to turn the cards over to reveal a simple graphic “icon” representing an organization.
- When a match is made, one sentence of information about the organization is noted on the screen and the child touches the screen when prompted to return to the game.
- The matched pairs are noted at the top of the touch screen game board.
- When all the matches have been made or time runs out, the child is asked if he or she wants to donate to one of the organization he or she learned about during the game.
- If the child chooses “yes,” he or she is asked which organization to donate to and how much: \$1, \$5, \$10.
- The child chooses the amount and is given a total of the donation.
- If the child chooses “no,” the game ends, however, another screen appears that reminds the child that donating doesn't have to be just money. It can be time and talents as well.

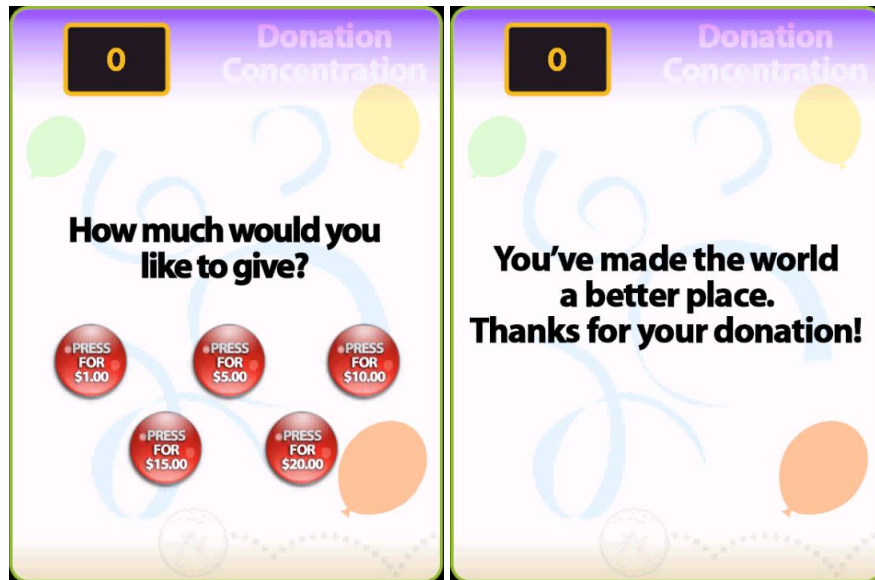
- If a child chooses to donate, his or her account will be debited that amount and the game ends.

Technology: Touch screen, card reader, LED display

“Donation Concentration” screenshots (Current screenshots are included for illustration purposes only)







Current Donation Concentration INI file (included for illustration purposes only)

```
;-----
; DO NOT ALTER THESE SCRIPTS
;-----

[DatabaseLoc]
Connection =
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"
[MagTek]
Port="COM5"
;-----
; THE USER CAN ALTER THESE SCRIPTS
;-----

[PriceToPlay]
Price="1.00"
;-----

;TIMEOUT SETTINGS:
; ShortMSG - instructions or error messages - (typically 5-10 seconds)
; LongMSG - more complex instructions - (typically 10-15 seconds)
; Activity - The time that the game or activity is idle - (typically more than a minute)
; Decision - any decision the child may make - (typically 15-45 seconds)
;

[Timeouts]
ShortMSG = "5"
LongMSG = "10"
Activity = "60"
Decision = "45"
```

Wild Rider



At “Wild Rider,” students will experience an audio-video sensory ride- a combined video, light and sound experience. The ride makes a number of stops along the way to ask specific multiple-choice questions about financial literacy. The students have the chance to earn money for their savings accounts based on the questions they answer correctly.

There is only one ride experience. The ride costs \$2.

The child sits in the roller coaster chair and will insert their card for the \$2 fee. They are then presented with a series of questions. For every question they get correct, they get 40 cents deposited into their savings account. While the roller coaster video is running the chair vibrates slightly by means of a motor located in the base of the chair, and a hidden fan blows air to simulate movement. At pre-determined times (5 stops), the video stops and a multiple choice question appears on a third screen asking them to choose the correct answer via a pushbutton on the joystick device. Questions are directly relating to the classroom curriculum. They continue the ride even if they answer incorrectly.

If an incorrect answer is chosen a screen appears with information about the correct answer.

After answering the question, the next roller coaster segment of video plays until the next question is due. This loops until five questions have been asked. Then a final screen shows the total correct/incorrect answers and the amounts to be credited to the student’s account. At the end, children are told the total number of questions they got right. The Welcome Guy and/or Gal will end the ride by thanking them and asking them to spend wisely etc.

The original roller coaster ride footage was used with permission from <http://themeparkreview.com/>.

General Savings - 3rd and 4th Grade

You want to buy a bike, but you don't have enough money. What should you do?

- A. Ask your parents to use their credit card to buy a bike for you.
- B. Save money from your job until you have enough to buy the bike you want.
- C. Ask for money instead of gifts from your family during your birthday and holidays until you have enough to buy the bike you want
- D. B and C

Why is it best to save your money in a bank?

- A. Your little brother or sister might find it if you keep it at home.
- B. The bank will pay you interest for letting them use your money.
- C. If anything happens to the bank, the U.S. government will make sure you get your money back.
- D. All of the above

When you take money out of your account, what is this called?

- | | |
|--------------|---------------|
| A. Removal | C. Deposit |
| B. Discharge | D. Withdrawal |

General Savings - 5th Grade

When you use a debit card to make a purchase, which account is the money taken from?

- | | |
|-------------|----------------------|
| A. Savings | C. Credit |
| B. Checking | D. None of the above |

You want to see how much money is left in your bank account. What is this number called?

- | | |
|-----------|------------|
| A. Total | C. Balance |
| B. Amount | D. Credit |

Your parents used a credit card. At the end of the month, they received a statement telling them how much money they have borrowed for purchases and need to repay to the credit card company. What should they do next?

- A. Pay the minimum amount due
- B. Pay for all of the purchases they have made
- C. Never charge more than they can afford to pay at the end of the month.
- D. A and B
- E. B and C

Math Related - 3rd and 4th Grade

You want to buy a comic book for \$3.00. How many quarters is this?

- A. 9 B. 10 C. 10 D. 12

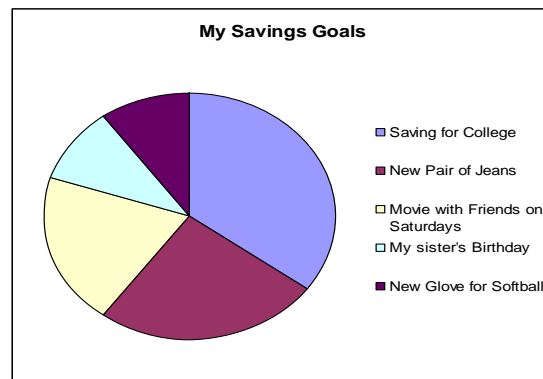
Your savings goal is to save $\frac{1}{4}$ of your earnings, to spend $\frac{1}{4}$ of your earnings, to donate $\frac{1}{4}$ of your earnings, and to invest $\frac{1}{4}$ of your earnings. You earn \$2,500 per year. How much money will you put towards each goal?

- A. \$300 B. \$400 C. \$500 D. \$600

You earn \$5.00 per hour babysitting. You babysit for 10 hours every month. How much money will you earn in one year?

- A. \$600 B. \$700 C. \$800 D. \$900

Math Related - 5th Grade



Jenny works in her mother's bakery. The pie chart represents Jenny's savings goals for each month. If Jenny makes \$500 each month, how much of her earnings is she saving for a new pair of jeans?

- A. \$100 B. \$125 C. \$150 D. \$200

American youth (ages 8-21) earned \$231 billion dollars in 2002. Choose the number that equates to \$231 billion dollars.

- A. \$2,301,000,000 C. \$2,031,000
B. \$2,031,000 D. \$231,000,000

Procedure:

- The child is seated in the roller coaster chair and inserts the debit card to pay the two dollar fee.
- The child is then presented with a series of questions. For every question they get correct, they get 40 cents deposited into their savings account.
- The ride begins by showing roller coaster footage. While the roller coaster video is running the chair vibrates slightly, and a hidden fan blows air to simulate movement.
- The video pauses and a multiple choice question appear on the screen asking them to choose the correct answer via a pushbutton on the handheld controller.
- The questions are leveled by grade and the child answers three of them.
- They continue the ride even if they answer incorrectly.
- If an incorrect answer is chosen a screen appears with information about the correct answer.
- After answering the question, the next roller coaster video plays until the next question is due.
- Then a final screen shows the total correct/incorrect answers and the amounts to be credited to the student's account.

Changes: The questions need be randomized, so the children waiting to play don't see the questions. The final screen needs to be less time on the display. We would like to offer the children different video experiences. For example, "A trip around the solar system", a submarine trip, and a car or motorbike racing scenario.

We also have a new set of questions...

New Wild Racer Rollercoaster Questions

Wild Racer Questions for THIRD Grade Level:

1. Why is it smart to save your money in a real bank account?
 - A. The bank will pay you more money, called interest, for letting them use it.
 - B. The bank will keep your money safe.
 - C. You may be tempted to spend the money unwisely if you leave it at home.
 - D. All of the above*
2. When you put money in your account it's called...
 - A. Deposit*
 - B. Withdrawal
 - C. Endorsement
 - D. None of the above
3. You want a new bike but don't have the money. What's the best choice for you?
 - A. Ask your parents to pay for it using their credit card.
 - B. Save the money that you earn doing jobs and receive as gifts until you have enough.*
 - C. Ask your parents to put it on their credit card

- D. Wish upon a star
- 4. What is the best way to save more money?
 - A. earn less money
 - B. spend less money*
 - C. spend more money
 - D. donate more money
- 5. Which term describes an impulse purchase?
 - A. an item you don't buy, but want
 - B. an item you save money for, but don't buy.
 - C. an item you buy because you really need it.
 - D. an item you buy without really thinking it through*
- 6. What do commercials try to get you to do?
 - A. buy the company's product*
 - B. sell the company's product
 - C. improve the company's product
 - D. think about the company's product

Wild Racer Questions for FOURTH Grade Level:

- 1. You buy a comic book for \$3.00-but you want to pay with quarters! How many quarters do you need?
 - A. 9
 - B. 10
 - C. 12*
 - D. 16
- 2. You want to see how much money is left in your bank account. What is this number called?
 - A. Total
 - B. Amount
 - C. Balance*
 - D. None of the above
- 3. Your parents used a credit card. When they get the bill at the end of the month, what is the best option for them to do?
 - A. Pay the least amount they have to
 - B. Pay the whole amount*
 - C. Pay more than the minimum
 - D. None of the above
- 4. Which term describes something you must have to live?
 - A. A want
 - B. A need*
 - C. An extra
 - D. A choice

5. Which set of words means to put money in a bank account?

- A. deposit, add*
- B. goods, services
- C. endorse, signature
- D. withdrawal, subtract

6. Where is the safest place to save your money?

- A. In your room
- B. In your school locker
- C. In your own bank account*
- D. In your friend's bank account

Wild Racer Questions for FIFTH Grade Level:

1. You make \$2,000 a year. You want to save $\frac{1}{4}$ of the money, spend $\frac{1}{4}$, donate $\frac{1}{4}$ and invest $\frac{1}{4}$. How much money will you put toward each goal?

- A. \$300
- B. \$400
- C. \$500*
- D. None of the above

2. All together, American kids earn about \$231 billion a year! How would you write that with numbers?

- A. \$2,310,000,000
- B. \$231,000
- C. \$231,000,000,000*
- D. None of the above

3. When you buy something with a debit card, the money is taken out of which account?

- A. Savings
- B. Checking*
- C. Investment
- D. None of the above

4. Which form would you fill out to put cash in your checking/savings account?

- A. check
- B. deposit slip*
- C. signature card
- D. withdrawal slip

5. What information do you need to calculate the profit of a business?

- A. goods and services
- B. variable and fixed expenses
- C. Total income and total expenses*
- D. Savings and checking account balances

6. Which of these choices best describes an expense that changes each month?

- A. fixed expense

- B. variable expense*
- C. long term expense
- D. short term expense

Technology: Screen, card reader, game pad, vibrating seat



"Wild Rider" screenshot (Current screenshots are included for illustration purposes only)

Current Wild Rider INI file (included for illustration purposes only)

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=3DPC\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[MagTek]  
Port="COM5"  
[USBIO]  
Port="COM3"  
[Debug]  
Set="1"  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
[PriceToPlay]  
Price="2.00"  
;-----  
;set Sound volume from 0 to 255  
[SoundLevel]  
Set="50"  
;-----  
;TIMEOUT SETTINGS:  
; ShortMSG - instructions or error messages - (typically 5-10 seconds)  
; LongMSG - more complex instructions - (typically 10-15 seconds)  
; Activity - The time that the game or activity is idle - (typically more than a minute)  
; Decision - any decision the child may make - (typically 15-45 seconds)  
;  
[Timeouts]  
ShortMSG = "5"  
LongMSG = "10"  
Activity = "60"  
Decision = "45"
```

Exit ATM



After experiencing the Money Bus students will be accountable for their actions on the bus and their budgets. When the students leave the bus they will have to visit one last station and “swipe” their card for the last time indicating the end of the bus experience. This will be a simple station at the exit of the bus and will be labeled “Exit Statement.” Children will have the chance to make sure they have completed all the activities on the bus, the activities screen highlights the activities not yet completed. The child receives a final account statement of all transactions. This should appear both on screen and be printed.

There should be a method of closing an account if a child cannot finish all the activities on the bus, for example, due to illness or time constraints. At the moment there is an “invisible” button in the top left corner of the screen that marks all activities as “completed”, allows a final statement to be printed and closes the account. The magnetic card is kept by the child at the end of their visit.

Procedure:

- The child inserts the debit card into the magnetic stripe reader to access his or her account.
- The child can then check the activities that have been completed on the bus and the amount spent or earned on those activities.
- The activities screen highlights the activities not yet completed.
- After the child has closes his or her account the main PC sets up a print file for both the opening and closing statement.
- The child also has the option to make deposits to continue onto any activities he or she didn't get to.
- This is where the child will pick up his or her picture and receipt from the photo booth.

Changes: Can check which games played, what spent earned. Add an overdraft fee. Teacher's report - the word receipt misspelled on teacher and student balance statement. Changes: We want the entrance

and exit ATM exhibits to have the same functionality. This will the children to use either and reduce the queues at any one of them.

Technology: Touch screen, card reader, bill reader, printer

“Exit ATM” screenshots (Current screenshots are included for illustration purposes only)



KIDSCOUNT
on the money bus

Exit Station

Money Bus Activity

	Money You Spent	Money You Earned
Susan		
Arcade	\$2.00	\$0.10
Concession	\$3.00	\$0.00
Donation	\$0.00	\$0.00 *
Wild Racer	\$2.00	\$0.80
Say Cheese	\$0.00	\$0.00
TOTAL SAVINGS		\$70.00
TOTAL CHECKING		\$13.90
Money Deposited		\$0.00

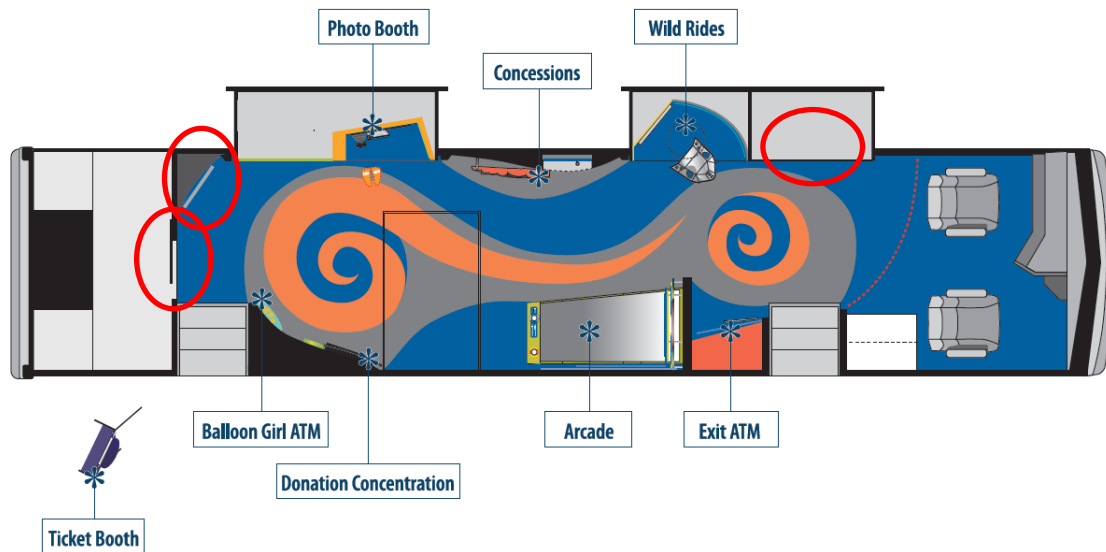
*** OOPS! You need to complete this activity to finish.**

PRESS TO RETURN TO BUS

Current Exit ATM INI file (included for illustration purposes only)

```
;-----  
; DO NOT ALTER THESE SCRIPTS  
;-----  
[DatabaseLoc]  
Connection =  
"Provider=SQLNCLI;Server=KC_SERVER\SQLEXPRESS;Database=KidsCount;Trusted_Connection=yes;"  
[MagTek]  
Port="COM5"  
;-----  
; THE USER CAN ALTER THESE SCRIPTS  
;-----  
;time in seconds  
[Timeouts]  
ShortMSG ="12"
```

New Exhibits



Internal layout of the exhibits in the Money Bus
showing the positions of the areas to be retasked

We want to retask the Photo Booth “Wall of Fame” and the Factoid exhibits. This will enable more children to use the bus’s exhibits at one time. The three new exhibits will be “Is A Puppy Really Free”, “That’s Your Dollar” and “Recycle Drive”.

Is a Free Puppy Really Free?

On board the Kids Count on the Money Bus, at the “Is a Free Puppy Really Free?” Exhibit, the students learn what it takes to care for a “free” puppy from the animal shelter. A puppy was born named Peso and he is available for adoption. Students explore the costs associated with having a pet. They visit a pet store and select needed supplies while staying within their budget.

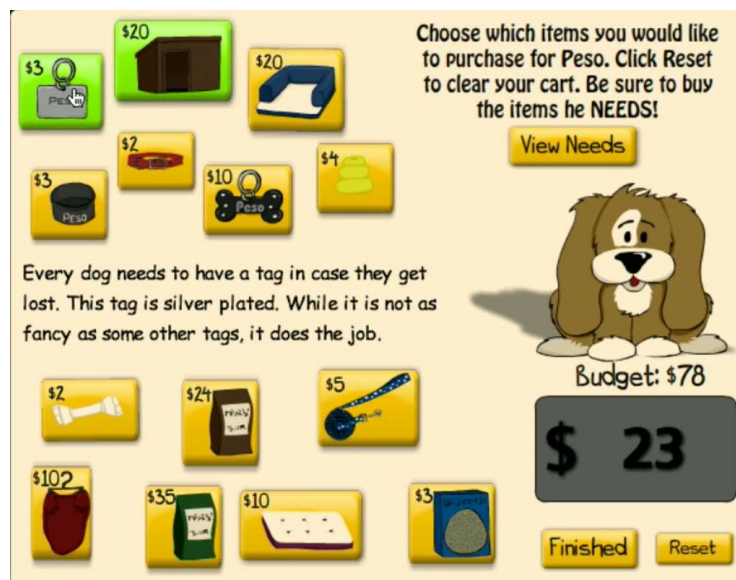
The exhibit is comprised of a touch screen monitor and card reader. Students will insert their cards to activate the exhibit and utilize the touch screen to maneuver through the game. There will be \$1.00 debited from the student’s account upon playing. Students can only use this exhibit once throughout their visit on the Money Bus.

The original Flash files are owned by NFI and will be used to create this new exhibit. Some development will need to be done to the beginning and ending segments of the exhibit in order to make it complete and fully functional as well as in keeping with the overall Festival like look and feel of the Money Bus.

Procedure:

- The student inserts the debit card into the magnetic stripe reader to activate the game.
- The student sees a welcome screen setting up the scenario for the puppy.
- The student is presented with a list of needs for the puppy.
- The student is shown several options of needs and wants and is given a budget of \$78.
- The student touches the items on the screen to add them to the cart
- The student can roll the curser over the item to read a description.
- If the student is over budget, an error message will appear and the child will be given the option to change their choices.
- If the student forgets some of Peso's needs, an error message will appear and the child will be given the option to change their choices.
- When the student completes the needs and wants for Peso the Puppy, a congratulations message appears and the game is over.

Technology: Card reader, touch screen



Example screen: Is a Free Puppy Really Free?

That's Your Dollar!

At That's Your Dollar!, the students participate in an exciting game show through which students learn about fixed and variable expenses within a family budget. There are two games played at this one station; Fixed or Variable and The Balancer.

The exhibit is comprised of a touch screen monitor, a card reader and a calculator. Students will insert their cards to activate the exhibit and utilize the touch screen to maneuver through the game. There will be \$1.00 debited from the student's account upon playing. Students can only use this exhibit once throughout their visit on the Money Bus.

The original Flash files are owned by NFI and will be used to create this new exhibit. Some development will need to be done to the beginning and ending segments of the exhibit in order to make it complete and fully functional as well as in keeping with the overall Carnival like look and feel of the Money Bus.

Procedures:

- The student inserts the debit card into the magnetic stripe reader to activate the game.

Fixed or Variable

- The student sees a welcome screen introducing him to the rules of the game
- The student is presented with screens that show monthly costs
- The student must then decide which are fixed and which are variable.
- After completing four challenges, the student moves on to the next game

The Balancer

- The student is given three questions behind three doors.
- The questions center around fixed or variable expenses.
- The student will have to do math to complete this game, so a calculator is needed.
- The student answers the questions behind all three doors and is congratulated on his or her work.
- The game ends.

Technology: Card reader, touch screen, calculator



Example screen: That's Your Dollar!

Recycle Drive

At Recycle Drive, the students participate in philanthropy helping the common good. There was an event around town, and the streets have become littered with trash. The student, using his/her bike to drive around town, can take the job of helping to recycle the trash to earn some extra money in this fun **Recycle Drive** game.

The exhibit is comprised of a touch screen monitor, a card reader and a rolling ball or arrows for maneuvering the bike. Students will insert their cards to activate the exhibit and utilize the touch screen to navigate through the game. There will be \$1.00 debited from the student's account upon playing. Students can only use this exhibit once throughout their visit on the Money Bus.

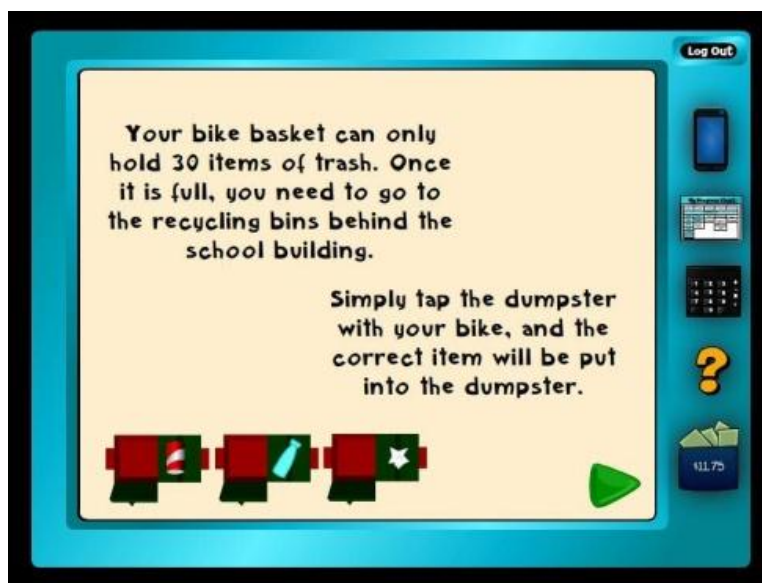
The original Flash files are owned by NFI and will be used to create this new exhibit. Some development will need to be done to the beginning and ending segments of the exhibit in order to make it complete and fully functional as well as in keeping with the overall Carnival like look and feel of the Money Bus.

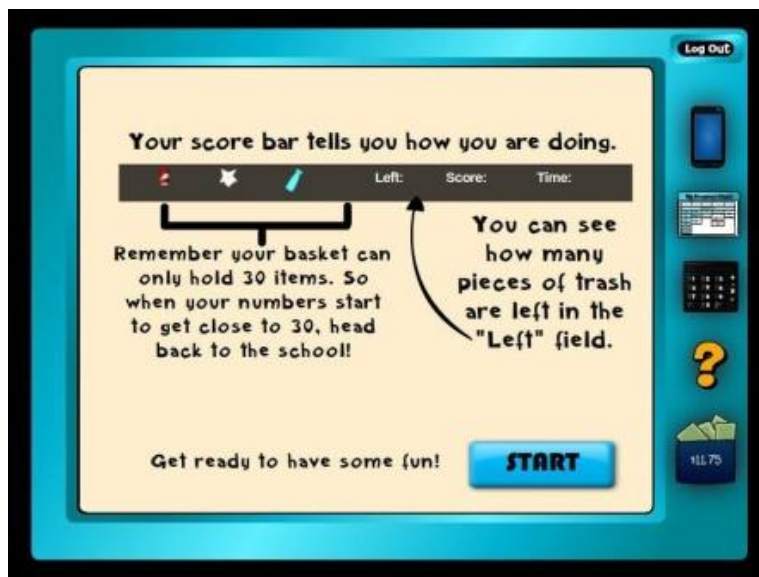
Procedures:

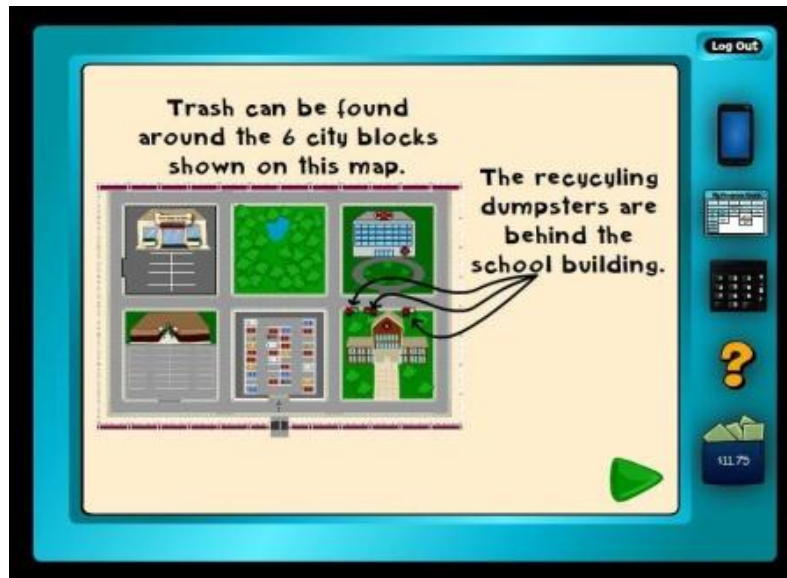
- The student inserts the debit card into the magnetic stripe reader to activate the game.
- The student is presented with a series of directions on how to play the game.
- The student uses the ball or arrows to move the bike around town to pick up trash
- When 30 pieces of trash are collected the student must drive the bike back to the dumpster to drop it off and continue picking up the rest of the trash.
- When all the trash is collected, the child is congratulated and the game ends.

Technology: Card reader, touch screen, and rolling ball mounted in the wall or arrow buttons.

Example Screens: Recycle Drive







Product & Documentation

All work product developed under this Agreement including but not limited to notes, source codes, video, audio, source documents, graphic designs, and working papers is the property of NFI; and, the Contractor shall provide all work product to NFI at the Conclusion of this Agreement. Work Product developed under this Agreement also applies to work product developed by or in conjunction with any sub-contractor(s), designers, etc. that the Contractor may decide to work with or employ.

Where video and audio is produced for the inclusion in the software then the video and audio files must be provided separately to NFI at the conclusion of the project.

The software source code produced must be provided to Indiana State University.

The Contractor is to provide documentation on the use of the hardware and software.

Money Bus: Software and Hardware: Upgrade and Replacement
Produced by Networks Financial Institute
June 2011

