

# ideas with IMPACT







Ford Motor Company Fund

**Monthly Money Matters** 

## Monthly Money Matter\$

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## Goals and Objectives

The goal of this lesson is that students will develop a deeper understanding of financial literacy and smart budgeting by applying this knowledge, as well as knowledge of generating spreadsheets and visual representations of data (pie charts, bar graphs, plot graphs, etc.) into other cross-curricular projects, such as science projects, history projects, or inquiry-based projects.

#### **Objectives**

Through successful participation and completion of this project students will:

- 1. Be informed and prepared to present a strategic financial plan that delineates resources, enabling them to achieve long and short-term financial goals.
- 2. Be engaged and knowledgeable about the formulas used to analyze income and spending.
- 3. Demonstrate an understanding of personal financial planning and comprehensive money management skills.





## **Standards**

#### **Language Arts Florida Standards**

LAFS.6.W.3.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate

LAFS.6.SL.1.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

LAFS.6.SL.2.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

#### **Math Florida Standards**

MA.912.F.4.1 Develop personal budgets that fit within various income brackets

MAFS.6.NS.2.2 Fluently divide multi-digit numbers using the standard algorithm.

MAFS.6.NS.2.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

MAFS.6.EE.1.2 Write, read, and evaluate expressions in which letters stand for numbers.

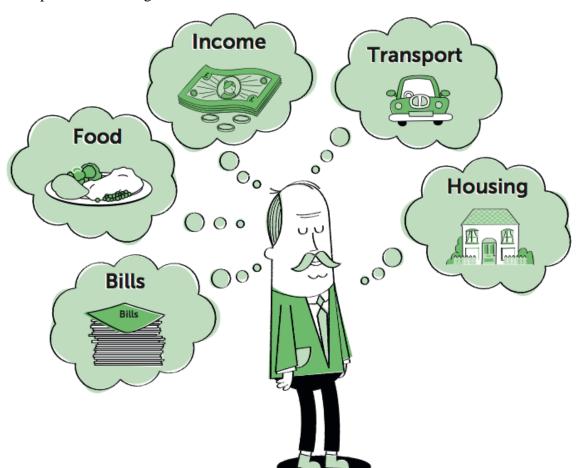
MAFS.6.EE.2.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

#### **International Society for Technology in Education (ISTE) Standards:**

- 3. Research and Information Fluency
  - D. Process and report results
- 4. Critical thinking, problem solving, and decision making
  - A. identify and define authentic problems and significant questions for investigation.
  - B. Plan and manage activities to develop a solution or complete a project
  - C. Collect and analyze data to identify solutions and/or make informed decisions.

#### **Social Studies Standards**

SS.8.FL.2.5 Discuss the fact that people may revise their budget based on unplanned expenses and changes in income.

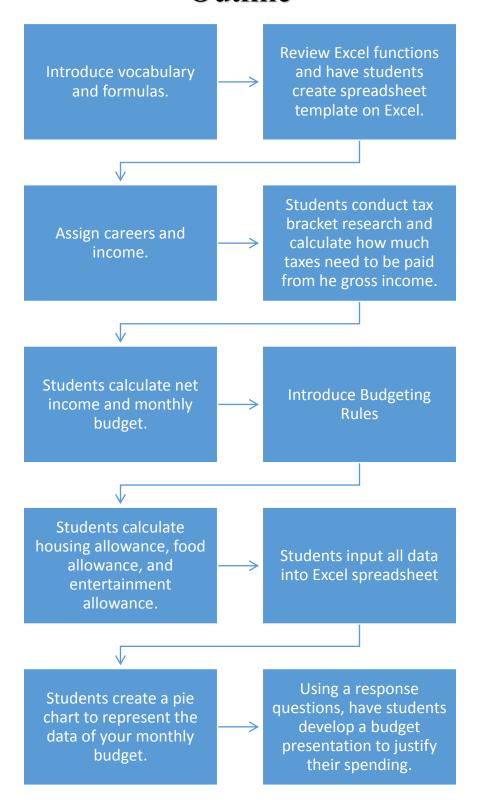


### Overview

The purpose of this project is to teach students financial literacy, functions of Microsoft Excel, as well as researching and problem solving skills. The lesson begins with an introduction to pertinent vocabulary, mathematical equations required for budgeting, and the review of functions f create spreadsheets and charts on Excel. Students are then randomly assigned professions and given a yearly gross income amount. The students are given resources to research what their tax bracket would have been for the previous fiscal year according to their income. Next, they calculate their net income and their monthly budget thus learning prudent finance rules that will help them budget responsibly. With provided links, students find an apartment or house in the local areas that they can afford using their fictitious income. They are encouraged to roommate with each other if they cannot comfortably afford their own place and are provided with a list of 20 expenses they must include in their budget. When calculated the percentage of each expense represents the monthly budget, with a pie chart to visually represent how their monthly budget was spent using Microsoft Excel. Students are assessed through a presentation of their data and budgeting plan.



## Outline



## Lesson Plan Guide

Title of Lesson: Money Matters

**Grade Level(s)**: 6-8

**Goal**: Students will develop a deeper understanding of financial literacy, generating spreadsheets, visually representing data, and justifying financial decisions through formal presentations.

Objectives	Standards/Anchors	Formative Assessment
Be informed and prepared to present a strategic	LAFS.6.W.3.7	Presentation rubric.
financial plan that delineates resources, enabling	LAFS.6.SL.1.2	ruone.
them to achieve long- and short-term financial	LAFS.6.SL.2.5	
goals.	ISTE.3.D	
	ISTE.4.A, B, C	
Be engaged and knowledgeable about the formulas	MAFS.6.NS.2.2	Excel workbook rubric.
used to analyze income and spending.	MAFS.6.NS.2.3	
	MAFS.6.EE.1.2	
	MAFS.6.EE.2.6	
Demonstrate an understanding of personal financial	SS.8.FL.2.5	Post-project reflection
planning and comprehensive money management		questions.
skills.		

**Rationale**: The purpose of this project is to teach students financial literacy, functions of Microsoft Excel, as well as researching and problem solving skills.

Content Knowledge: In order to successfully participate in this lesson students need to be familiar with Microsoft Excel. It is not recommended to use this as an introductory lesson to Excel. They should also have an understanding of how to calculate percentages and use basic formulas, and how to navigate the internet for academic research. Briefly reviewing these mathematical concepts prior to the lesson is recommended.

#### **Procedures**:

#### **Lesson Beginning**

#### Introductory Review-

- Students need to understand the meaning and context of the following vocabulary words:
  - a. Budget
  - b. Gross income
  - c. Net income
    - d. Tax
    - e. Bracket
    - f. Credit
    - g. Debit
  - h. Allowance
  - i. Fixed expense vs Variable expense

- 2. Students will need to know and understand how to use the following formulas:
  - a) GI-T=NI

Gross income (GI) minus Taxes to be paid (T) equals net income (NI).

b) NI/12=MB

Net income divided by 12 equals the monthly budget (MB)

c) MBx.20=RA

Monthly budget multiplied by .20 equals the rental allowance (RA)

3. Review Excel functions and have students create spreadsheet template on Excel.

Students must create a functional and accurate spreadsheet that delineates incomes (gross, net, monthly, taxes, etc.). This table should also have cells for career information, and link for housing.

\*student reference sheet can be found on page 16.

#### Motivation/Focus-

The focus of this phase is to help students gain a firm understanding of how they are going to present their budget on a spreadsheet. Students will also focus on learning financial terminology, formulas, and review Excel functions.

#### **Lesson Development**

#### Instruction-

 Randomly assign careers and income. Select a variety of careers and fictitious, yet reasonable, gross yearly incomes. You will need the same number of careers and incomes as you have students in the class. Create a spreadsheet with four columns and as many rows as you have students. In one column, number the columns 1 through x (x representing the number of students you have in the class). In the next column put a word to describe the career (i.e. doctor, lawyer, teacher, officer). In the following column put the gross yearly income that corresponds with that career. Leave the last column blank, as this is where you will write the names of the students. Have students choose a number 1 through x, not allowing students to choose a duplicate number if it has already been chosen. As students call out the numbers, write their names in the corresponding columns.

- \*A sample career and income assignment sheet can be found on page 17.
- 2. Students conduct tax bracket research and calculate how much taxes need to be paid from the gross income. This is a good opportunity to do a mini lesson on determining reliability from search engine results. When students google search the term "2016 tax bracket" a variety of hits will come back. You will want to direct student's attention to an article from the IRS such as this one: <a href="https://www.irs.com/articles/projected-us-tax-rates-2016">https://www.irs.com/articles/projected-us-tax-rates-2016</a>
  - a. Using the information found on the internet, students will calculate
    how much they have to pay in taxes from their gross income and input
    the information in their spreadsheet.
  - Using that information, students will calculate their net income and input the information in their spreadsheet.
  - c. Using that information, students will calculate their monthly budget and input the information in their spreadsheet.

- d. Using that information, students will calculate their rental allowance and input the information in their spreadsheet.
- 3. Introduce budgeting rules.
  - a. Split students into four groups. Have each group read one of the articles below and list three financial rules they discovered from the article that they could apply to their monthly budget.
  - b. Once all groups have identified their rules, they will present them to the class and explain why those rules were chosen. All rules will remain displayed in the classroom.
  - Students will choose three or more of the rules presented to the class to apply to their own budgets.
    - i. <a href="http://business.time.com/2012/12/28/9-handy-financial-rules-of-thumb/">http://business.time.com/2012/12/28/9-handy-financial-rules-of-thumb/</a>
    - ii. <a href="http://twocents.lifehacker.com/10-good-financial-rules-of-thumb-1668183707">http://twocents.lifehacker.com/10-good-financial-rules-of-thumb-1668183707</a>
    - iii. <a href="http://www.huffingtonpost.com/learnvest/how-to-budget-your-money-">http://www.huffingtonpost.com/learnvest/how-to-budget-your-money-</a> <a href="http://www.huffingtonpost.com/">http://www.huffingtonpost.com/</a> <a href="http://www.huffingtonp
    - iv. <a href="http://www.getrichslowly.org/blog/2011/05/02/how-to-build-a-better-budget/">http://www.getrichslowly.org/blog/2011/05/02/how-to-build-a-better-budget/</a>
- Using their rules and finance information students will create formulas to calculate their food, travel, entertainment, and transportation allowance.
   Students must provide a justification for each.

- 5. Students will use <a href="www.realtor.com">www.realtor.com</a> to find a house or apartment to **rent**. Once housing is found that meets your financial needs and desires, the link will be inputted into the Excel workbook.
- 6. Students will create a table (Table A) delineating the monthly allowance for their expenses and the percentage of their income that could be used for this expense, as well as the dollar amount.
- 7. Students will create a pie chart to represent the data in Table A. The pie chart will have an overlay title, best fit labels showing the dollar amount, and an accurate legend that is mapped to show the title of each category.
- 8. Students will delineate all monthly expenses in a table (Table B). The chart will include a title for each expense (there should be at least 12), the monthly cost and the percentage of the monthly budget.
- 9. Students will create a pie chart to represent the data in Table B. The pie chart will have an overlay title, best fit labels showing the dollar amount, and an accurate legend that is mapped to show the title of each category.

#### Practice and Feedback

 Students will be encouraged to share and explain their budgets with their classmates in order to check for mistakes and perhaps provide some creative advice for cutting spending and saving money.

#### **Lesson Ending**

#### Review and Closure

- Students will develop a presentation to explain and justify the decisions they
  made in creating their budget. The following questions must be addressed in
  the presentation:
  - a. How did I make my tables? Are they on one page or separate pages?Why did I choose to present the information this way?
  - b. How and where did I present my pie charts? Why did I choose to present them this way?
  - c. What are my expenses and how much am I allocating for them? Why did I choose to set this up this way?

A general rule of thumb for purchasing a home is that you should have at least 20% of purchase price to put down as a down payment. Go back to <a href="www.realtor.com">www.realtor.com</a> and find your ideal home. What is the price of this home? How much is 20% of the price? Using your budget, figure out how long it would take for you to save that amount.

### Resources





## Supplies & Supplemental Materials

#### **Supplies**

- Computer with Microsoft Office 2010 or better
- Internet connection in order to complete this project.
- Paper
- Writing utensils
- Smart or Promethean board is also very useful for guiding students through using Excel's formulas and functions.

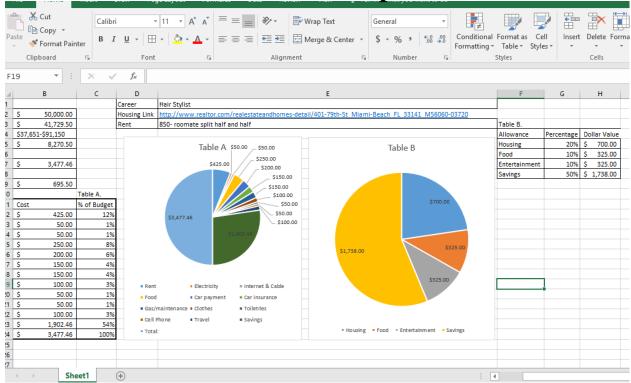
## **Student Reference Sheet**

Formulas			
Function	Formula	Explanation	
To calculate net income	GI-T=NI	Gross income (GI) minus  Taxes to be paid (T) equals  net income (NI).	
To calculate monthly budget	NI/12=MB	Net income divided by 12 equals the monthly budget (MB)	
To calculate rental allowance	MBx.20=RA	Monthly budget multiplied by .20 equals the rental allowance (RA).	
To calculate food allowance			
To calculate entertainment allowance			
To calculate travel allowance  To calculate savings			

## Sample Career Selection Sheet

Student Name	Profession	Yearly Income
1. Virginia	Movie Star	1.5 Mil
2. Julian	Physician	300K
3. Patrick	Lawyer	150K
4. Dominick	Graphic Artist	100k
5. Will	Professor	150K
6. Jason	Software Developer	1 Mil
7.Shai	Publix Manager	60k
8. Morgan	Code Developer	250k
9. Jameson	School Principal	80k
10. Shawn	Mechanic	75k

Student Sample



## **Excel Workbook Rubric**

Student Name:	
Student Name:	

CATEGORY	3	2	1	
Taxes, Net Income, Monthly Budget, Rental Allowance	Workbook reflects accurate tax, net income, monthly budget, and rental allowance calculations. The correct tax bracket was selected and the equations were executed accurately.	Workbook reflects accurate tax, net income, monthly budget, and rental allowance calculations although the correct tax bracket was selected and/or the equations were not executed accurately.	Workbook does not reflect accurate tax, net income, monthly budget, and rental allowance calculations	
Other allowances and expenses	Workbook reflects accurate calculations for other allowances and expenses. The equations were executed accurately and the percentage of the monthly budget is correct. This information is all presented in its own table.	Workbook reflects accurate calculations for other allowances and expenses. The equations were executed accurately and the percentage of the monthly budget is correct. This information is all presented in its own table.	Workbook does not reflects accurate calculations.	
Tables	Workbook contains multiple tables of data with formatted columns that are appropriate to the data type.	Workbook contains one or two tables of data with formatted columns that are appropriate to the data type	Workbook contains no tables of data with formatted columns that are appropriate to the data type.	
Pie Chart Relationships	Workbook contains two pie charts that have mapped relationships with the tables of data.	Workbook contains one pie charts that have mapped relationships with the tables of data.	Workbook contains no pie charts that have mapped relationships with the tables of data.	
Chart Requirements	Each pie chart has an overlay title, best fit labels that show a dollar amount and an accurate legend that shows the axis categories of each table.	Pie charts have two of the three following elements: An overlay title, best fit labels that show a dollar amount and an accurate legend that shows the axis categories of each table.	than two of the three following elements: An overlay title, best fit labels that show a dollar amount and an	

Date Created: Sep 08, 2016 10:21 am (CDT)

## **Presentation Rubric**

Student Name:		

CATEGORY	4	3	2	1
Comprehension	Student is able to accurately answer almost all questions posed by classmates about the topic.	Student is able to accurately answer most questions posed by classmates about the topic.	Student is able to accurately answer a few questions posed by classmates about the topic.	Student is unable to accurately answer questions posed by classmates about the topic.
Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Listens to Other Presentations	Listens intently. Does not make distracting noises or movements.	Listens intently but has one distracting noise or movement.	Sometimes does not appear to be listening but is not distracting.	Sometimes does not appear to be listening and has distracting noises or movements.
Time-Limit	Presentation is 5-6 minutes long.	Presentation is 4 minutes long.	Presentation is 3 minutes long.	Presentation is less than 3 minutes OR more than 6 minutes.
Speaks Clearly	Speaks clearly and distinctly all (100- 95%) the time, and mispronounces no words.	Speaks clearly and distinctly all (100- 95%) the time, but mispronounces one word.	Speaks clearly and distinctly most ( 94- 85%) of the time. Mispronounces no more than one word.	Often mumbles or can not be understood OR mispronounces more than one word.
Vocabulary	Uses vocabulary appropriate for the lesson. Includes all the technical budgeting and Excel terms that were taught tin the lesson.	Uses vocabulary appropriate for the lesson. Includes 3-5 of the technical budgeting and Excel terms that were taught tin the lesson.	Uses vocabulary appropriate for the lesson. Includes less than three of the technical budgeting and Excel terms that were taught tin the lesson.	Does not use vocabulary appropriate for the lesson. Includes none of the technical budgeting and Excel terms that were taught tin the lesson.
Stays on Topic	Stays on topic all (100%) of the time.	Stays on topic most (99-90%) of the time.	Stays on topic some (89%-75%) of the time.	It was hard to tell what the topic was.
Content	Shows a full understanding of the topic.	Shows a good understanding of the topic.	Shows a good understanding of parts of the topic.	Does not seem to understand the topic very well.



## APPLY FOR AN IMPACT II ADAPTER GRANT!

M-DCPS teachers, media specialists, counselors or assistant principals may request funds to implement an IMPACT II idea, teaching strategy or project from the Idea EXPO workshops and/or curriculum ideas profiled annually in the *Ideas with IMPACT* catalogs from 1990 to the current year, 2016-17. Most catalogs can be viewed at The Education Fund website at www.educationfund.org.

- Open to all K-12 M-DCPS teachers, counselors, media specialists
- Quick and easy reporting requirements
- Grants range from \$150 \$400
- Grant recipients recognized at an Awards Reception

To apply, you must contact the teacher who developed the idea before submitting your application. Contact can be made by attending a workshop given by the disseminator, communicating via email or telephone, by visiting the disseminator in their classroom, or by having the disseminator visit your classroom.

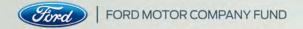
Project funds are to be spent within the current school year or an extension may be requested. An expense report with receipts is required by Friday, May 5, 2017.

## **APPLICATION DEADLINE:** Monday, December 12, 2016

Apply online at www.educationfund.org

For more information, contact:

Edwina Lau, Program Director 305.558.4544, ext. 113 elau@educationfund.org



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