## Financial Literacy: Cash Flow

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| Lesson Background | NRS Levels |
| :--- | :--- |
| Use financial literacy context to teach or reinforce <br> mathematic calculations (addition, subtraction, <br> percentages) while introducing learners to the use of cash <br> flow logs. This lesson can be used as a standalone, with a <br> related math lesson, or when covering cash flow concepts <br> in a personal finance unit. | Beginning or Low Intermediate Basic Education, Low to |

## Recommendations for Direct Instruction

Identified standards are practiced but not taught. Texts are not rigorous enough for a standards-aligned lesson. Supplemental texts and materials should be added for Level D and E learners. For an HSE math class, teacher should add more work involving procedural skill and fluency.

| Project Title | Approximate Instruction Time |
| :--- | :--- |
| Household Cash Flow | 60 Minutes |

## Instructional Objectives

(written in teacher language primarily derived from content standards and includes evidence of mastery):

By the end of this project, students will be able to:
Content objectives:

- Understand how a cash flow log tracks spending and saving.
- Complete calculations of cash flow in various scenarios.

Language objective:

- Draw on the vocabulary of personal finance to talk about the calculations related to cash flow in different scenarios.


## Learning Target Statements

(written in student-friendly language and helps learners reflect on what they are able to do as a result of the project) for learners' exit tickets, learning logs, or reflection:

## Content objectives:

- I can read a cash flow log and analyze expenses and income.
- Given information about a family's income and expenses, I can complete a cash flow log.
- I can make recommendations to balance a family budget.

Language objective:

- I can talk about personal finances and make recommendations.

| Lesson Area | Lesson Information |
| :---: | :---: |
| ELA/Mathematics/ELP <br> Standard(s) <br> Addressed: | Main Standards Addressed: <br> CCR Levels B and C: <br> R1: Read closely and identify key details. <br> S/L1: Engage in collaborative discussions. <br> Math, Number and Operations, Level B: Use place value understanding to perform multi-digit arithmetic. |
| Central Skills Taught: | Adaptability and Willingness to Learn <br> Communication <br> Critical Thinking <br> Interpersonal Skills <br> Navigating Systems <br> Problem Solving <br> Processing and Analyzing Information <br> Respecting Differences and Diversity <br> Self-awareness |
| Language Demands: <br> (Include academic language, language skills, etc.) | Language of recommendations using modal verbs, such as I think he should spend less on ..., He really must save more by ..., and They could use money from ... |


| Lesson Area | Lesson Information |
| :---: | :---: |
| Assessing Mastery of the Objective(s) and Central Skills: <br> Indicate when and how assessment - formative and/or summative - will occur during the project. | Proof of Learning: Via observation of a team task (e.g., discussion, work on project) Via team self-assessment Via individual self-assessment Via team product Via individual product Other (Please list): <br> Proof of Learning Tools: Rubric Checklist Quiz <br> ® Other (Please list): Cash Flow Worksheets <br> Ongoing Formative Assessment Nonverbal responses to comprehension questions (e.g., answer cards, Kahoot!) Peer-to-peer quizzing Exit/admit tickets KWL charts Other (Please list): Cash Flow Worksheets |

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\begin{array}{|l|l|}\hline \text { Lesson Area } & \text { Lesson Information } \\
\hline \text { Adaptations } & \begin{array}{l}\text { For lower-level students, use visuals and interactive word tasks to introduce and practice } \\
\text { and/or }\end{array}
$$ <br>
vocabulary related to personal finance. Students less familiar with budgeting and finance <br>

will benefit from a brief level-appropriate reading to gain practice with these concepts and\end{array}\right] $$
\begin{array}{l}\text { Hocabulary as well. }\end{array}
$$\right]\)| How will you increase access |
| :--- |
| to the content of the project? |
| Identify differentiation |
| strategies. |$\quad$| For higher-level students, give more complex scenarios. Upon completing these tasks have |
| :--- |
| stur example. |


| Procedure | Description | Central Skills | Materials |
| :---: | :---: | :---: | :---: |
| Introduction: <br> How will you introduce the lesson objective and how it fits into the unit/LOI? Identify its relevance to learners' needs and goals. <br> Timing: 10 minutes | To get students ready for this activity, begin with a "Speedy Lists" activity to energize the group, activate background knowledge, and find out what they already know on the topic. Students work in pairs or trios while performing the following steps: <br> 1. Take out a blank sheet of paper and give these instructions: "I will say a phrase or category, and you write down all the words you can think of associated with that phrase or category as quickly as possible. Decide who is going to be the recorder right now. You have 30 seconds per word. Ready?!" (Note: In a group of lower proficiency or ESL students, allow one or two minutes.) <br> 2. Read words aloud, giving the students one minute to generate the speedy list. Words you might read include these: ways I spend money, ways I earn money, saving money, cash flow. <br> 3. Ask for a few shout-outs from the group for each, asking follow-up questions and for definitions or examples of some of the items they listed that directly relate to today's lesson. Note individuals who seem to be struggling to keep up with the concepts. <br> If not all the key terms or topics have emerged, introduce and review key vocabulary words required to talk about personal finance: | - Communication <br> - Critical Thinking <br> - Processing and Analyzing Information | - Blank paper <br> - Pencils |


| Procedure | Description | Central Skills | Materials |
| :---: | :---: | :---: | :---: |
|  | - Cash inflow: money you received (e.g., paycheck, savings interest, payment for sale of item) <br> - Cash outflow: money you spent, saved, invested, donated, or used to repay what was borrowed (introduce "fixed" if the word does not come up organically, as it will be needed later). <br> - Net cash flow: difference between total cash inflow and total cash outflow <br> - Cash flow log: a record of cash inflows and cash outflows |  |  |
| Explanation and Modeling: <br> What type of direct instruction do learners need? Are there ways for learners to access the new content independently? What types of models will you provide and when? <br> Timing: 5 minutes | Introduce the activity by explaining that a cash flow log is a tool used to track spending and saving habits for an individual or household using information from previous months. When outflows exceed inflows, a person is losing money! Cash flow information can be analyzed to identify options for changing spending and earnings in order to stop losing money or to save more. If inflows exceed outflows, we can look at how the extra money might be best spent or how it might be saved or used to pay back debts. <br> Refer to the opening activity on "how we spend money" and remind students that these are our "expenses." As needed, use photos or graphics to represent types of expenses, such as housing, transportation, utilities, etc. | - Navigating Systems <br> - Problem Solving <br> - Processing and Analyzing Information |  |


| Procedure | Description | Central Skills | Materials |
| :---: | :---: | :---: | :---: |
| Guided Practice: <br> Which tasks and learning activities will you use to engage learners with the content and skills? How will you structure the tasks or other learning activities to support learners' success? Timing: 15 minutes | Hand out the cash flow scenarios (Appendices A to C). Ask students to focus on Case 1 (Appendix A), and give them a couple of minutes to read it quietly. They should mark places that are unclear. They may read with a partner if they prefer. <br> As a whole group, read through the case together and clarify any language that is unclear. On a screen if possible, model for students how to complete the calculations to tally cash outflows, compare outflows to inflows, and perform calculations for "what if" scenarios. <br> An answer key with possible answers has been provided (Appendix D). <br> Display the results for Case 1 so that the work teams can reference them as they work through Case 2 (Appendix B). | - Navigating Systems <br> - Problem Solving <br> - Processing and Analyzing Information | - Cash Flow Scenarios Case 1 (Appendix A) <br> - Cash Flow Scenarios Case 2 (Appendix B) <br> - Cash Flow Scenarios -Case 3 (Appendix C) <br> - Cash Flow Scenarios Answer Key (Appendix D) |
| Application/Extended Practice: <br> What will learners do to demonstrate their acquisition of content knowledge, basic skills, and key soft skills? <br> Timing: 20 minutes | Arrange students into partner pairs or trios. Have each team work to complete calculations for Case 2 (Appendix B) in same way as was done for Case 1. <br> As students are deciding what outflows to adjust, guide them to identify and circle the types of outflows that can be expected to be the same every month. Point out that these "fixed" amounts must remain the same for all three scenarios in the case study. | - Adaptability and Willingness to Learn <br> - Communication <br> - Navigating Systems <br> - Problem Solving <br> - Processing and Analyzing information | - Cash Flow Scenarios Case 2 <br> (Appendix B) <br> - Cash Flow Scenarios Case 3 (Appendix C) <br> - Cash Flow Scenarios - |


| Procedure | Description | Central Skills | Materials |
| :---: | :---: | :---: | :---: |
|  | Learners can choose to adjust any of the other types of outflows to balance the cash flow. <br> Explain the 80/20 rule. Has anyone heard of it? If so, let a student talk first, then add or clarify the definition: <br> - 80/20 rule: A rule of thumb used as a guide to help individuals plan spending or analyze spending and saving habits. In general, using $80 \%$ of net income for living expenses and other discretionary spending leaves up to $20 \%$ of net income to be used to achieve savings goals or pay down debt. Note that this is a guideline only and will vary according to individual values, aspirations, and circumstances. Necessary financial obligations take priority over all other spending and saving. <br> As time allows, lead a whole-group discussion to help teams work through the first two questions and at least Scenario 1 of the third question for Case 3 (Appendix C). Expense adjustments will vary among the groups, as each group makes different assumptions based on information provided. <br> Encourage learners to perform calculations on their own using personal information. <br> Use research skills to investigate generally accepted rules of thumb for housing cost limits or transportation cost limits. Provide one or two |  | Answer Key (Appendix D) <br> - Websites <br> - Web access and computer |


| Procedure | Description | Central Skills | Materials |
| :--- | :--- | :--- | :--- |
|  | recommended websites for learners to facilitate this <br> task. | - Adaptability <br> and Willingness <br> to Learn |  |
| Student Reflection on <br> Learning Targets, <br> Closure, and <br> Connection to Future <br> Learning <br> Timing: $\mathbf{1 0}$ minutes | Ask learners to share observations and <br> assumptions about the data for each household. <br> As an extension, students compare the two <br> households' finances and discuss how these details <br> relate to their own finances. At the close of the <br> lesson, teacher revisits learning targets (projected <br> or shared on paper) and students give a "fist to five" <br> to indicate their self-assessment of their own <br> mastery of each objective. As time allows, students <br> share with a partner one thing they are proud of or <br> that they plan to do differently regarding their own <br> finances after learning about these cash flow <br> scenarios. | • Self-awareness |  |$\quad$| • |
| :--- |

## Appendix A. Cash Flow Scenarios - Case 1

Martin is single, lives in a one-bedroom apartment, and has two jobs. He has very little free time, but the time he has is spent going out to eat and playing video games with friends.

## Directions:

Complete the following tasks for Martin:
Scenario A: Calculate Martin's cash outflow and compare it to his cash inflow. Which is greater? How would you adjust the outflow to balance the amounts? Report your choice to the class.

Scenario B: Imagine that Martin's rent goes up by $10 \%$ after he balanced his inflow and outflow in scenario A. Calculate his outflow with this increase. What additional adjustments should he make to his cash outflow or inflow? Explain your thinking.

Case 1: Single Person
Monthly Cash Inflow \$2,030
Scenarios

| Monthly Cash Outflow | Now | Rent After 10\% Increase |  |  |  |
| :--- | :---: | :--- | :---: | :---: | :---: |
| Rent and Renters' Insurance | $\$ 750$ |  |  |  |  |
| Utilities | $\$ 75$ |  |  |  |  |
| Health Care | $\$ 65$ |  |  |  |  |
| Transportation | $\$ 120$ |  |  |  |  |
| Food | $\$ 400$ |  |  |  |  |
| Clothing and Personal Effects | $\$ 200$ |  |  |  |  |
| Technology | $\$ 220$ |  |  |  |  |
| Entertainment | $\$ 150$ |  |  |  |  |
| Gifts and Charity | $\$ 40$ |  |  |  |  |
| Savings | $\$ 40$ |  |  |  |  |
| Credit Card Payments | $\$ 70$ |  |  |  |  |
| TOTAL Outflow: |  |  |  |  |  |

## Appendix B. Cash Flow Scenarios - Case 2

Joe's parents have moved in with him and his wife, Suzie and now live in their three-bedroom home. This will make it easier for Joe and Suzie to help take care of his parents as they grow older.

## Directions

Complete the following tasks for Joe and Suzie:
Scenario A: Calculate Joe and Suzie's cash outflow and compare it to their cash inflow.
Which is greater? How would you adjust the outflow to balance the amounts? Report your choice to the class.
Scenario B: Imagine that Joe and Suzie's health care costs increased by $25 \%$ after they balanced their inflow and outflow in scenario A. What additional adjustments should they make to their cash outflow or inflow? Explain your thinking.

## Case 2: Couple's Parents Living with the Couple

Monthly Cash Inflow \$5,865
Scenarios:

| Monthly Cash Outflow | Now | Health Insurance After 25\% Increase |
| :--- | :---: | :--- |
| Home Insurance and Property Tax | $\$ 775$ |  |
| Utilities | $\$ 200$ |  |
| Health Care | $\$ 220$ |  |
| Transportation | $\$ 625$ |  |
| Food | $\$ 1,000$ |  |
| Clothing and Personal Effects | $\$ 300$ |  |
| Technology | $\$ 220$ |  |
| Entertainment | $\$ 200$ |  |
| Gifts and Charity | $\$ 100$ |  |
| Savings | $\$ 100$ |  |
| Credit Card Payments | $\$ 100$ |  |
| Home Loan | $\$ 1,725$ |  |
|  |  |  |

## Appendix C. Cash Flow Scenarios - Case 3

## Directions

1. Apply the $80 / 20$ rule to calculate a target amount for total living expenses and personal expenses based on inflow for:

Martin (Case 1): Target \$ $\qquad$

Joe and Suzie (Case 2): Target \$ $\qquad$
2. Calculate a target amount for total savings based on inflow for:

Martin (Case 1): Target \$ $\qquad$ -

Joe and Suzie (Case 2): \$ $\qquad$
3. Adjust the expense amounts below. Aim to match the guideline targets you identified above for Case 1 and Case 2. What do you notice?

Apply the 80/20 Rule

| Monthly Cash <br> Outflow | Martin (Case 1) |  |
| :--- | :--- | :--- |
| Rent and Renter's <br> Insurance |  | Joe and Suzie (Case 2) |
| Home Insurance <br> and Property Tax |  |  |
| Utilities |  |  |
| Health Care |  |  |
| Transportation |  |  |
| Food |  |  |
| Clothing Personal <br> Effects |  |  |
| Technology |  | Total Outflow: |
| Entertainment |  |  |
| Gifts and Charity |  |  |
| Savings |  | Savings: |
| Credit Card <br> Payments |  |  |
| Total Outflow: |  |  |

## Appendix D. Cash Flow Scenarios - Answer Key

Case 1: Single Person
Monthly Cash Inflow: \$2,030

| Monthly Cash Outflow | Now | Rent After 20\% Increase | Now | Health Care After 25\% Increase | Martin (Case 1) <br> Savings: \$406 | Joe and Suzie (Case 2) <br> Savings: \$1,173 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rent and Renter's Insurance | \$750 | \$825 | -- | -- | \$750 | -- |
| Home Insurance and Property Tax | -- | -- | \$775 | \$775 | -- | \$775 |
| Utilities | \$75 | \$75 | \$200 | \$200 | \$60 | \$160 |
| Health Care | \$65 | \$65 | \$220 | \$275 | \$65 | \$275 |
| Transportation | \$120 | \$120 | \$625 | \$625 | \$90 | \$450 |
| Food | \$40 | \$350 | \$1,000 | \$1,000 | \$274 | \$700 |
| Clothing Personal Effects | \$200 | \$200 | \$300 | \$300 | \$100 | \$130 |
| Technology | \$220 | \$205 | \$220 | \$220 | \$140 | \$180 |
| Entertainment | \$150 | \$125 | \$200 | \$200 | \$75 | \$130 |
| Gifts and Charity | \$40 | \$30 | \$100 | \$100 | -- | \$52 |
| Savings | \$40 | \$40 | \$100 | \$200 | -- | -- |
| Credit Card Payments | \$70 | \$70 | \$100 | \$150 | \$70 | \$100 |
| TOTAL Outflow: | \$2,130 | \$2,105 | \$5,565 | \$4,965 | \$2,030 | \$5,865 |

Case 1, Scenario A: Martin's outflow is greater by $\$ 100$. He could reduce the amount spent on things like food, clothing, technology, entertainment, and gifts by a total of $\$ 100$. (Note: Students may distribute this amount differently.)

Case 1, Scenario B: Martin's outflow increased by $\$ 75$. He could increase his inflow by finding another job or getting a raise, or he could decrease his outflow even more by reducing the amount spent on things like food, clothing, technology, entertainment, and gifts. (Note: Students may distribute this amount differently than in the table above, depending on the decisions they made in Scenario A, but the total should be the same.)

Case 2, Scenario A: Joe and Suzie's inflow is greater by $\$ 300$. They could increase the amount they put into their savings, put more toward their credit card payments, or increase the amount they use to pay off their home loan by a total of $\$ 300$. (Note: Students may distribute this amount differently.)

