SET UP YOUR OWN STORE (LEVEL 2 AND 3)

Ages 8 to 10 (Level 2)

Description:	The learner will be able to identify the cost of basic household items. The learner will be able to add the cost of different household items.
Leading question:	How much do the things around your home cost? Which cost more?
Age group:	8-10 years old
Subjects:	Mathematics, Art
Total time required:	~45-60 min a day over 4 days
Self-guided / Supervised activity:	Medium to high supervision
Resources required:	Pencil, paper, color pencils (optional)

Day	Time	Activity and Description
1	5 minutes	Ask the learner to imagine they are creating a small shop. The shop will be filled with items typically found around the home. This can include food items like a bag of beans, clothes, and household items such as a pot.
	10 minutes	The learner will decide on a theme for their store, then will create a list of 10-15 items they would like to include in their shop.
	20 minutes	The learner will ask an older sibling or family member what each item typically costs. Using the list of items the learner just created, write the cost of each item next to its name. Use simple whole numbers e.g. $10, $210, $3000, etc. unless the learner is comfortable with decimal places e.g. $10.50. E.g. Pot, $20 T-shirt, $10
	15 minutes	The learner will write a welcome message for customers and a brief description of the types of items that can be found in their store.
2	60 minutes	Ask the learner to imagine they are going to be drawing the small shop and the items in it. Underneath the drawing of each item, they will write the name and cost of the item. E.g.

Item 1	Drawing of item 2 *Name of item, Cost*	Drawing of item 3 *Name of item, Cost*

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		 *T-shirt, $10* |		
		Drawing of item 4 *Name of item, Cost*	Drawing of item 5 *Name of item, Cost*	Drawing of item 6 *Name of item, Cost*
		On a sheet of paper, the learner will draw each item. If possible, have the learner place the item in front of them as they draw it. They may also choose to color and/or decorate the items they draw. Under each item, the learner will write the name of the item and the cost of the item (refer to the list the learner created yesterday).
3	5 minutes 20 minutes 30 minutes	Using the "store" the learner created the day before, an older sibling or family member will point to each item and ask, "how much does <name of item> cost?" The learner should state the cost of each item e.g. 10 dollars. Using the "store" the learner created the day before, an older sibling or family member will point to 2 items and ask, "how much does <name of item> and <name of item> cost altogether?" The learner should add the cost of both items and state their total cost e.g. "A pot costs $20 and a t-shirt costs $10. Together they cost $30." Repeat this exercise at least 10 times using different combinations of items. If the learner finds it easy to add the cost of 2 items, increase the number of items selected e.g. ask the learner to add the cost of 3 to 4 items. The learner will repeat this exercise on their own. They will select 2 to 3 items from their "store" and write down their total cost e.g. if a pot costs $20 and a t-shirt costs $10, they might write "$20 + $10 = $30" or "a pot and a t-shirt cost $20 plus $10, which is $30 total".
4	5 minutes 20 minutes 30 minutes	Using the "store" the learner created, an older sibling or family member will point to 2 items and ask which item costs *more*. Using the "store" the learner created, an older sibling or family member will point to 2 items and ask, "how much *more* does <name of item> cost compared to <name of item>? The learner should subtract the cost of the lower item and state the difference in cost e.g. "The pot costs more than the t-shirt. $20 minus $10 is $10. The pot costs $10 more than the t-shirt." Repeat this exercise at least 10 times using different combinations of items. The learner will list the items in their "store" according to price, from most expensive to least expensive. E.g. Pot, $20

		T-shirt, $10 Pencil, $1 They will then write the difference in cost between the items. E.g. Pot, $20 } *$10* T-shirt, $10 } *$7* Pencil, $3
5	45-60 minutes	Tell the learner that you are entering the store with $<an amount you decide>. You want to know the different combinations of items you can buy with this amount of money. Ask the learner to list each combination of items where the total cost gets close to (but does not exceed) the total amount of money you have. Repeat 2-3 times.
Assessment Criteria:		- The "store" from Day 2 is created. 10-15 items are drawn and labeled with their name and cost. - The learner can add the cost of at least 2 items correctly. - The learner can determine which of 2 items cost more. - The learner can correctly subtract the cost of 1 item from another. - The learner can apply both addition and subtraction concepts together to figure out what they can purchase with a fixed amount of money.

Learning outcomes:	- Learner will review the concept of money - Learner will be able to state the typical cost of everyday items - Learner will be able to add the costs of 2 or more everyday items - Learner will sketch everyday objects
Required previous learning:	- Whole numbers - Basic addition - Basic subtraction - Understand the concept of money
Inspiration:	N/A
Additional enrichment activities:	- The learner can repeat the exercise with more household items. - The learner can add or compare the cost of multiple items. E.g. select 3 items, identify which item costs the *most*, and how much more it costs compared to the other two items.

Ages 11 to 14 (Level 3)

Description:	The learner will be able to apply concepts of addition, subtraction, multiplication, division, and greater than/less than within the context of purchasing. The learner will be able to apply concepts of addition and subtraction in the context of profits and loss.
Leading question:	What are the expenses (costs) of running a store?
Age group:	11-14
Subjects:	Mathematics, Accounting
Total time required:	~50-60 min a day over 4 days
Self-guided / Supervised activity:	Moderate
Resources required:	Pencil, paper

<table>
<tr><td>Day</td><td>Time</td><td>Activity and Description</td></tr>
<tr><td>1</td><td>20 minutes

10 minutes</td><td>Ask the learner to imagine they are setting up a small shop or stall in the community. On a sheet of paper, the learner should write out the theme of the shop (e.g. sports, kitchen, etc.) and the items they will sell in the shop (about 10-20 items). Next to each item, ask the learner to indicate the original price of the item and the price they will sell the item for. Finally, calculate the profit (i.e. how much the learner will make) of each item based on the selling price

If your learner is very comfortable with whole numbers, encourage them to stretch themselves by including prices in dollars and cents (E.g. $2.80 instead of $2).

E.g. Stationery store
<table>
<tr><td>Item for Sale</td><td>Original Price</td><td>Selling Price</td><td>Profit (selling price - original price)</td></tr>
<tr><td>Notebook</td><td>$4</td><td>$7</td><td>$3 ($7-$4)</td></tr>
<tr><td>Pencil</td><td>$0.50</td><td>$1.50</td><td>$1 ($1.50-$0.50)</td></tr>
<tr><td>Pen</td><td>$1.20</td><td>$3</td><td>$1.80- ($3-$1.20)</td></tr>
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Ask the learner to list the possible costs of setting up the shop or stall. Things to consider include rent, salaries (if hiring help), utilities (e.g. electricity, water). The</td></tr>
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	20 minutes	learner may ask an adult for help in estimating these costs or may take a best guess themselves. Total up these costs. Ask the learner to create scenarios or profiles of customers entering the shop to purchase items. The learner should create 8-10 profiles. Under each profile, list the name of the customer (optional), what item or items they want to purchase, how many of each item(s) they want to purchase, and the amount of money they are bringing with them into the store. The items the customer is seeking to purchase should be listed as items in the learner's store. *For more advanced learners, challenge them to include more items on the customer's list (instead of buying 4 pencils, more advanced learners could use more complex combinations such as 3 pencils, 9 notebooks, 13 pens).* E.g. Customer 1 - Ali Wants to purchase - 5 notebooks and 8 pencils Has - $50 dollars
2	60 minutes	Using the store and profiles from Day 1, ask the learner to calculate the amount of money each customer will need to purchase the items desired. Use the prices of the items in the learner's store for these calculations. E.g.: Using the examples above, Ali wants to purchase 5 notebooks and 8 pencils. The cost of a notebook in my store is $7. The cost of a pencil in my store is $1.50. Ali will therefore need 5x$7=$35 to purchase the notebooks. He will need 8x$1.50=$12 to purchase the pencils. In total, he will need $35+$12=**$47**. Next, the learner should determine if the customer has enough money to purchase what they need. E.g. Ali has $50. $50 is greater than $47 ($50>$47). He has the money to purchase what he needs. Finally, ask the learner to calculate either (a) how much more money the customer needs or (b) how much money the customer will have left over after making their purchase. E.g. Ali will be able to purchase all the items he wants. He will have $50-$47=**$3** leftover. For customers with money left over, ask the learner what they would recommend the customer purchase with that money. E.g. with $3 leftover, Ali could purchase 1 pen for $3 each or 2 pencils for $1.50 each

3	45 minutes	Using the store and profiles from Day 1, ask the learner to come up with different combinations of items each person could purchase in the store before their money runs out. The learner may not come up with all the possible combinations for each customer, but they should try to come up with 3-5 different combinations per customer where possible. E.g. Ali has $50. In my store he could purchase: - $7x7 notebooks = $49 - $3x15 pens + $1.50x3 pencils = $45 + $4.50 = $49.50 - $7x3 notebooks + $3x9 pens + $1.50x1 pencil = $21 + $27 + $1.50 = $49.50
	15 minutes	Ask the learner to imagine they were going with you to the market or a stall/shop with a certain amount of money. Using a rough estimate of the cost of items, what are some combinations of things the learner could buy with that amount of money?
4	15 minutes	Ask the learner to imagine that all the customers (using the customer profiles from Day 1) purchased everything they needed from the store. Calculate the total profit from selling these items (the learner may find it useful to use the table from Day 1 calculating the profit from each item). Was the total profit greater or less than the cost of setting up the store (also calculated in Day 1)? Ask the learner to describe or write down what it means for the profit from the sales of the items to be greater or less than the cost of setting up the store.
	15 minutes	Ask the learner to consider what would happen if they raised the selling price of the items. First, ask them to anticipate what would happen to the profit by describing or writing it down. Next, calculate the changes to profit using the higher selling price. How much more would they make from the sale of the items?
	15 minutes	Reflection: Ask the learner to discuss or write down responses to the following questions: - What are some possible consequences for raising or lowering the price of the items? (E.g. if the learner was the customer, how would they react to the prices being raised or lowered? How would their behavior change? Would their reaction be the same for all kinds of items?) - What are some (creative) strategies the learner would use to promote the sale of their items?
Assessment Criteria:		- Multiple and add to calculate the total cost of a combination of items - Multiple, divide, add, and subtract in combination to calculate what a set amount of money can purchase - Loosely explain the concept of a profit

Learning outcomes:	- Apply concepts of multiplication, addition, and subtraction in combination with money to: - Determine the cost of a set of items and whether they have sufficient money to complete the purchase - determine the different combination of items a fixed sum of money could purchase - apply these skills to decision-making in a real-life shopping scenario - Broadly explain the costs of setting up a store, the concept of profit, and possible consequences for adjusting the cost of items.
Required previous learning:	- Addition, subtraction - Multiplication, division - Decimals (optional)
Inspiration:	N/A
Additional enrichment activities:	- Encourage the learner to use larger or more complicated numbers e.g. $257.68 or $49.60 vs. $200 or $4 - Have the learner create a sketch of a business plan. If the goal is to make a profit, what must they consider?