



Induction Training Programme

Lesson Plans of Workshop 2
Topic: Financial Mathematics



A Family Learning Model to
Promote Financial Literacy

INTRODUCTION

The Piggy Bank project team has created a series of eight half-day workshops for parents and guardians. The goal of workshops number 1 to 6 is to develop the financial literacy capacity of parents and guardians. The purpose of workshops number 7 and 8 is to support parents and guardians in their role as facilitators of family learning.

Welcome to workshop number 2!

The topic of this workshop is ‘Financial Mathematics’. After completing this workshop, parents and guardians will be able to:

- Play a more active role in the education of financial literacy to children.
- Give explanations to questions relating to the topic of the workshop – ‘Financial Mathematics’.
- Utilise new modern online educational tools, namely, Escape Room number 3 and 4 of the Piggy Bank project.
- Mention and explain the positive and negative scenario related to the topic “Percentages and their importance in the financial world”.
- Describe a positive and negative scenario regarding the topic “Financial mathematics in everyday life”.
- Talk about and discuss with children, especially teenagers, some of the various topics surrounding financial literacy.
- Use practical tips on how to develop children’s financial literacy.

In addition, during the workshop, parents and guardians will exchange practical experiences with other parents and guardians on the topic of raising children and the financial literacy of children. Simply stated, the workshop will make them better parents and guardians.



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10 min

ACTIVITY 1

Opening of the workshop; introduction of the learning objectives

At the beginning of the workshop, the trainer should welcome the participants and briefly acquaint them with the workshop schedule and the learning objectives. The learning objectives of this workshop are as follows.

Learning objectives

After completing this workshop, parents and guardians will be able to:

- Play a more active role in the education of financial literacy to children.
- Give explanations to questions relating to the topic of the workshop – ‘Financial Mathematics’.
- Utilise new modern online educational tools, namely, Escape Room number 3 and 4 of the Piggy Bank project.
- Mention and explain the positive and negative scenario related to the topic “Percentages and their importance in the financial world”.
- Describe a positive and negative scenario regarding the topic “Financial mathematics in everyday life”.
- Talk about and discuss with children, especially teenagers, some of the various topics surrounding financial literacy.
- Use practical tips on how to develop children’s financial literacy.



30 min

ACTIVITY 2

Percentages and their importance in the financial world – Positive and negative scenario

In this part of the workshop, the trainer will introduce the topic and a positive and negative scenario. Participants will discuss both scenarios. During the discussion, they will realise what they are doing well and what they are doing wrong in their family. Through this learning activity, participants will also exchange practical experiences related to the upbringing of children and teenagers.

A trainer can say a few words as an introduction to a topic, for example:

Percentages are essential in the financial world. A percentage is a number or ratio that represents a fraction of 100. It is often denoted by the symbol "%" or simply as "percent" or "pct." When we

say percent, we are actually saying “per 100”. Percent means out of one hundred. For example, 5 percent means 5 out of one hundred. In the financial world, all institutions (businesses, banks, governments) use percentages in their everyday calculations, transactions, payments etc. Moreover, percentages are essential in many cases in our life, such as:

- an increase in your salary,
- the interest rate of your loan,
- the interest rate on your savings account,
- percentage of the taxes you pay on your gross income.



Negative scenario: When you ask people if they understand percentages, most will say yes, of course. And this situation is not surprising. After all, everyone learns percentages at school and should know them well. When it comes to practical calculations with percentages, the truth will come out. And it is often not very optimistic. The product costs €135 in the store. Today they offer a 35% discount. How much will I pay at the cash desk for this product?

In one supermarket, sociology students did a small experiment. They offered customers two discounts side by side at the same time. Customers could buy a washing gel in two variants. Either get a 50 percent more washing gel for the same price or get a 40 percent price reduction of the washing gel. Students asked customers to choose a better deal. And what did students find out? They found out that the vast majority of customers do not calculate, but people look at the percentage numbers and the higher number wins.

Moreover, many people are not able to calculate percentages. Unfortunately, sellers, marketers and bankers know it.

The trainer will ask the participants to try to calculate the following two tasks. In this way, the trainer will find out how the participants can calculate the percentages. Afterwards, the trainer will explain the correct calculations so that even participants who did not calculate the tasks correctly learn to calculate percentages well.

Task 1.

The product costs €135 in the store. Today they offer a 35% discount. How much will I pay at the checkout for this product?

Calculation:

The whole amount is €135.

1 percent of the whole amount is 135 divided by 100, which is €1.35.

35% is 35 times 1.35, which is €47.25.

The discount 35% is therefore €47.25.

The price after the discount is €135 minus €47.25, which is €87.75.

So, I will pay €87.75 at the checkout.

Alternative calculation:

If the price reduction is 35 percent, it means that the product will cost 65% of the original price.

€135 times 0.65 equals €87.75 .
So, I will pay €87.75 at the checkout.

Task 2.

A supermarket offers a washing gel in two discount variants. Either you get a 50% more washing gel for the same price or get a 40% price reduction of the washing gel. Which variant offers a litre of gel for a better price?

The standard package of the gel is 5 litres, and its normal price is €6.

The first variant offers: 50% of the gel free - 2.5 litres free. So, you can get a larger 7.5 litre package for the same price of €6 in this variant.

The second variant offers: Standard package (5 litres) with the price reduction 40% off of €6.

Calculation:

Variant 1: You will get 7,5 litres of the gel for €6. **One litre costs** 6 divided 7,5 equals **€0.80**.

Variant 2: A discount of 40 percent of €6 means that you will pay 0.6 times €6, which is €3.60. You will get 5 litres of the gel for 3,6 Euro. **One litre costs** 3,6 divided 5 equals **€0.72**.

Variant 2 is more advantageous. **It is better to choose a 40% price reduction than to get 50% more product for the same price.**

Tip!

The trainer must be careful during this activity. No participant wants to feel that they are not intelligent enough. The trainer should emphasise that the percentage calculations are not entirely easy. What is important is the effort to improve.



Positive scenario: In the past, some people carry a calculator with them when shopping or going to a bank. Nowadays, everyone has a calculator on their mobile phone. Some people think carefully about offers, discounts and financial products; they are able to calculate the right option. If you want to make the right decisions, you need to be able to use financial mathematics and not be ashamed to ask for assistance. For example, banking products and contracts are full of strange words and various conditions. The devil is often hidden in the detail, but financial mathematics always reveals it.

The trainer asks the participants the following questions for discussion.

- Can your children calculate percentages?
- How can financial maths save you money?
- To what extent do banks or sellers abuse the lack of financial literacy of people in your country?

At the end of this educational activity, the trainer can summarise the discussion:

- What have we discovered together?
- What seems most important?
- What should we remember from this learning activity?



40 min

ACTIVITY 3

How to use Piggy Bank escape room no. 3 to increase the financial literacy of children

The trainer can say a few words at the beginning of the activity, for example:

Educating and communicating with adolescents is a demanding discipline. Most parents confirm this. Children and teenagers nowadays are still staring at their mobile phones and are not in the mood to discuss financial literacy with their parents. It is for these reasons the Piggy Bank project has created Escape Rooms. A total of 12 Escape rooms help parents engage their children and teach them financial literacy skills. It is excellent that children will not have to put away their beloved smartphones. All Piggy Bank escape rooms work on mobile phones, tablets and laptops. And these escape rooms create an opportunity for subsequent communication between parent and child on various topics related to finance and financial literacy. Firstly, parents must test out the escape rooms in practice and understand their functioning and content in order to be able to use this modern educational tool in the upbringing of children. Our workshops are an excellent opportunity to do so. So, your task will be to practically try escape room number 3 on your smartphone or tablet or laptop.

Role playing



The group of participants will be divided into pairs. Each pair will work independently. One from the couple will play the role of a teenager (let us say at the age of 15), and the other will play the role of a parent. Together, they will try to solve all the tasks of the escape room number 3. During or after the process of testing the escape room, they can ask each other various questions that come to their minds, with the teenager asking questions to the parent and the parent asking questions to the teenager.

Here is a link to the escape room:

https://docs.google.com/forms/d/e/1FAIpQLSfqvmNdLG6al2GF5XifN60DbRCqhsg_mNds5Pjqa-bJz_jxA/viewform

After finishing the role-play, all participants will come together in one group, and the trainer will ask them about their feelings, experiences, ideas relating to the activity.

The trainer can use relevant questions, for example:

- How did you manage the tasks of the escape room?
- How did you like the activity?
- What did you discuss?
- What questions asked the teenager and what the parent?
- How would you use this educational tool to raise your child?



Do not forget to thank the participants for their participation in the activity and providing their opinions at the end of each learning activity. And before the first break, tell the participants what refreshment is available, where the toilets are, and what time the next learning activity starts.



10 min

COFFEE BREAK



30 min

ACTIVITY 4

Financial mathematics in everyday life – Positive and Negative scenario

In this part of the workshop, the trainer will introduce the topic and a positive and negative scenario. Participants will discuss both scenarios. During the discussion, they will realise what they are doing well and what they are doing wrong in their family. Through this learning activity, participants will also exchange practical experiences related to the upbringing of children and teenagers.

The trainer can say a few words as an introduction to a topic, for example:

We spend our money every day. We buy products and services. Every day we decide which products and services we will purchase or not. Making the right buying decision requires time and the ability to compare offers. Sometimes we lack time or information, and sometimes we lack the ability to make calculations. Our children learn from us how to make buying decisions. We pass on our patterns of behaviour to them.



Negative scenario: In some families, parents fully trust companies such as banks and sellers. Families buy their products and services without comparing them with competitive offers. These people do not realise that companies, sellers and banks strive primarily for profit. For example, these people do not compare exchange rates when they are exchanging currencies for a holiday abroad. When they see the sign "No commission" at the exchange office, they think that they have chosen the right exchange office and do not pay attention to the exchange rate. These people take out a mortgage depending on which bank has a lower interest rate on the billboard, without finding out how much other mortgage-related services cost, such as insurance and additional fees. As a result, they do not spend their money optimally. They are wasting their money.

The trainer asks the participants the following questions for discussion:

- Why does this negative scenario occur in some families?
- How can this scenario affect the future of children, such as their future financial situation in adult life?



Positive scenario: In some families, parents know they cannot believe everything the salespeople tell them. They understand that companies, banks and sellers use a variety of marketing tools and tricks to gain customers' money. In some sectors, the competition within the marketplace is

tough. These parents can compare competing offers. They understand that the time and effort spent making the right purchasing decisions can save a lot of money. These parents teach their children how to compare offers of products and services, how to calculate the total price, how to assess that an offer is advantageous or disadvantageous. In these families, all members know the basics of financial mathematics. As a result, they spend their money optimally and do not waste money.

The trainer asks the participants the following questions for discussion:

- What obstacles prevent this positive scenario from functioning in all families?
- How can this scenario affect the future of children, such as their future financial situation in adult life?

At the end of this educational activity, the trainer can summarise the discussion:

- What have we discovered together?
- What seems most important?
- What should we remember from this learning activity?



50 min

ACTIVITY 5

How to use Piggy Bank escape room no. 4 to increase the financial literacy of children

Role playing



The group of participants will be divided into pairs. Each pair will work independently. One from the couple will play the role of a teenager (let us say at the age of 15), and the other will play the role of a parent. Together, they will try to solve all the tasks of escape room number 4. During or after the process of testing the escape room, they can ask each other various questions that come to their minds, with the teenager asking questions to the parent and the parent asking questions to the teenager.

Here is a link to the escape room:

<https://docs.google.com/forms/d/e/1FAIpQLScJe20atzXgzzJSPxZfzWDe10iWZitrUk3ESoT0g5wUEICrBA/viewform>

After finishing the role-play, all participants will come together in one group, and the trainer will ask them about their feelings, experiences, ideas relating to the activity.

The trainer can use relevant questions, for example:

- How did you manage the tasks of the escape room?
- How did you like the activity?
- What did you discuss?
- What questions asked the teenager and what the parent?
- How would you use this educational tool to raise your child?



COFFEE BREAK

10 min



ACTIVITY 6

Good tips for parents on how to develop children's financial literacy

20 min

The Piggy Bank project has also developed an educational tool for younger children. This educational tool comprises of a suite of 12 comic books on various topics in the field of financial literacy. In this part of the workshop, the trainer will present the participants with one of these comic books. This comic book is on the topic of 'Currency'.

The trainer will hand out the comic book to the participants, and they will read it. After reading it, the trainer will initiate a short discussion. The trainer can use some of the following questions.

- How do you like the comics in terms of content and graphics?
- What is your opinion on the TIPS FOR PARENTS listed on the back of the comic?
- Do you have any tips or suggestions of your own that worked well in raising your children/teenagers to understand financial literacy better?

Tip!

Of course, the trainer can use other questions that will allow for the exchange of good practices between parents in raising children and developing their financial literacy.



ACTIVITY 7

Summary of the workshop

10 min

At the end of the workshop, the trainer should provide participants with an opportunity to summarise the knowledge and skills learned. The trainer should also ask the participants for feedback and a brief evaluation of the workshop. The trainer can use, for example, some of the following questions:

- Which topic interested you the most during the workshop?
- What new knowledge and skills have you learned?
- Why is topic "Financial Mathematics" important?
- How did you like the escape rooms?
- Is there anything you would like to change or improve in your family based on this workshop?
- How did you like the workshop?
- Which of the workshop activities did you enjoy the most and which the least?
- What would you like to learn in the next workshop?

Tip!

At the end of the workshop, don't forget to thank the participants for their participation and appreciate everything positive, such as the participants' activity, their opinions, creativity, practical experience of family life, cooperation with other participants, role-playing, etc.



PIGGY Bank

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