

Control Your Money

- Teacher's guide

A financial literacy teaching resource for mathematics and interdisciplinary courses in primary and secondary school.

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Introduction

The role of children and young people in our consumer society is in flux. New products arrive on the market, new methods of payment become available and marketing campaigns tempt kids and young people to spend money.

At the same time, surveys find that children and young people have low financial literacy and that their parents are often not the best advisers due to own lack of knowledge about personal finances.

Therefore, Northern Bank has developed teaching materials to use in school education as well as *Teaching Financial Literacy* (www.controlyourmoney.co.uk) to support teachers' teaching of financial literacy.

Financial literacy has a great teaching potential in math education and gives teachers the opportunity to work with mathematical competencies in a context relating to children and young people's everyday lives.

The aim of the teaching resources is to increase the level of financial literacy among pupils in schools so that they become capable of managing their personal finances in the future – a fundamental skill in all people's lives.

Overview

Control Your Money is an online teaching resource for primary and secondary school. *Control Your Money* consists of three parts:

- A pupil's section
- A teacher's section
- A parents' section

The pupil's section consists of a fictional part, *Control Your Money*, and a practical, *The Real Deal*.

Control Your Money consists of two parts; one addressing primary school and one addressing secondary school.

Every section includes:

- An introduction
- A presentation of the main characters of the four missions
- Four missions

The Real Deal contains team-oriented projects dealing with finances to work with in class. For instance, these projects could be organizing a school trip, a school party or carrying out a charity project.

The teacher's section includes:

- Online tools to
 - set up a class and give access to the *Control Your Money* missions
 - evaluate how well the pupils do in the missions
 - online discussion tool to use in between or having completed the missions
 - set up a project and give access to *The Real Deal*.
- This teacher's guide containing didactic considerations as well as a professional and pedagogical overview of the missions
- Open tasks to evaluate the pupils' knowledge and understanding of the different concepts.

The parents' section consists of

- A short description of *Control Your Money*.

Didactic considerations

In *Control Your Money*, pupils work with financial literacy as a subject divided into different themes. The themes take their point of departure in the pupils' already acquired mathematical knowledge as well as what they are about to learn. The teaching material is intended for use in math teaching and in cross-curricular projects with mathematics as the central focus.

The teaching material consists of two parts. A fictional part, *Control Your Money*, which consists of eight missions, where the pupils can work individually or in groups, and a practical part, *The Real Deal*, where the teacher and pupils choose one of three practical courses. In both, the pupils are guided to make a series of choices and evaluations, based on mathematics and their financial literacy.

In this connection, financial literacy refers to how pupils, through working with the topics of mathematics and economics mentioned below, value, estimate, prioritise and argue for their choices and solutions, going through the eight missions. In each mission, the pupils must prioritise how, and on what, to spend their money. The pupils may base their evaluations on either subjective opinions or objective mathematical facts.

Learning goals

The aim of *Control Your Money* is for pupils to work with

Primary level	Secondary level
<p>Finances</p> <ul style="list-style-type: none"> • Making a budget • Offering services/shopping • Repaying debt • Prioritising/valuing • Spending • Commitments to others <p>Mathematics</p> <ul style="list-style-type: none"> • Mathematical competencies with focus on mathematical modelling • Applying the four arithmetic operations by means of calculator, spreadsheet etc. • Calculating money • Recognising and applying percentage calculations in connection with fractions • Recognising and applying simple functions • Recognising the system of coordinates – understanding the connection between numbers and graphs. • Collecting, dealing with and communicating data in tables and diagrams • Conducting simple statistical studies • Describing and interpreting data and pieces of information from tables and diagrams • Working with financial issues from everyday life and the local community. 	<p>Finances</p> <ul style="list-style-type: none"> • Valuing finances • Comparing earnings • Repaying debt • Valuing • Consumption/over-consumption • Comparing loan options • Interest/investment • Commitments to society <p>Mathematics</p> <ul style="list-style-type: none"> • Mathematical competencies with focus on mathematical modelling • Knowing and applying numbers • Understanding and applying the concept of percentages • Applying functions to describe connections and changes • Graphically portraying solutions • Conducting simple statistical studies • Reading, understanding and valuing the use of statistics in different media • Working with everyday life issues regarding personal finances and economics.

Content

The eight missions, four addressing pupils in primary school and four addressing pupils in secondary school are the essential part of *Control Your Money*.

In each mission, we follow a person dealing with financial issues in connection with, for instance, planning a class trip, furnishing a room and collecting money for charity. During the course of the mission, the user has to make calculations as well as consider financial issues.

The eight missions are:

- Missions for primary level
 - School party (Emma)
 - School trip (Laila)
 - Furnish room (Jacob)
 - The dream buy (Adam)

- Missions for secondary level
 - Charity (Victoria)
 - Living on your own (Sarah)
 - Trip to New York (Martin)
 - Investment (Jamil)

In the end of this guide, you will find a professional and pedagogical overview of each mission.

The courses of the missions are organised in such a way that the pupils can work with them without any class introduction and discussion. However, it is recommended that the teacher:

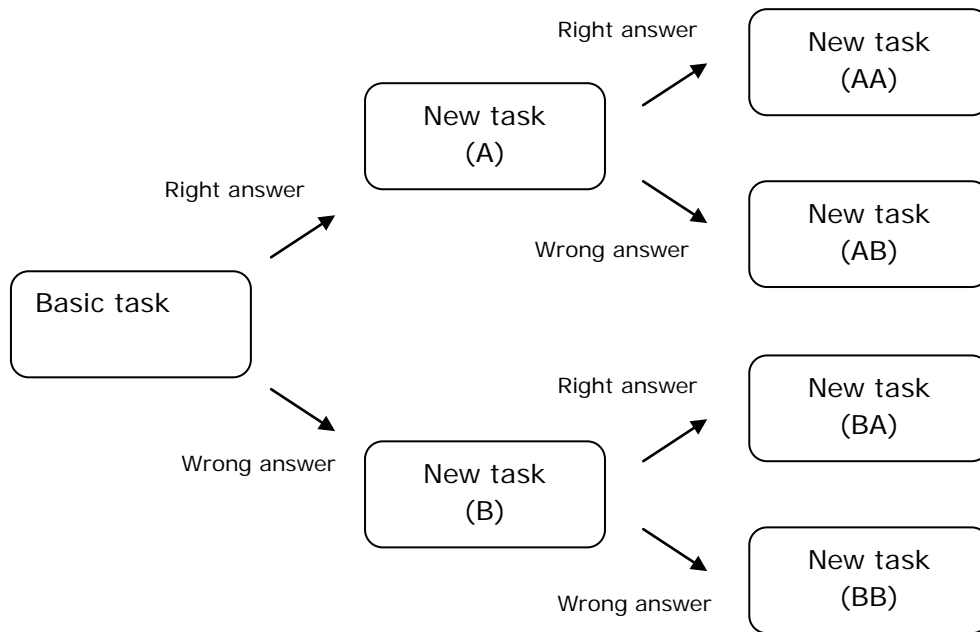
- Introduces and discusses the learning goals of the overall course of the missions
- Introduces the economic and mathematical concepts that the pupils work within the missions
- Gathers the class to discuss specific situations that may appear in the mission
- Discusses each mission in class when the mission is completed.

The four missions to each target group can be completed independently – the order of which one goes through the missions does not matter.

In every mission, there are four different types of tasks. Depending on how the task is solved, the user receives a number of points, which, by the end of the mission, are added up and shown in the teacher's section as the number of right answers out of how many possible.

The four tasks are:

- **Single basic tasks.** The pupils are presented with one task usually dealing with estimating sizes of amounts.
- **Adaptive tasks.** The pupils are presented with a basic task, followed by two tasks within the same mathematical context. The degree of difficulty adjusts according to how well the pupils have managed the previous tasks. The pupils score 10 points for every right answer and 0 points for every wrong answer:



- **Time-adjusting tasks.** These tasks appear in-between scenes if the pupil goes through the mission faster than the time estimated. Thus, not all pupils are presented with (all) time-adjusting tasks.
- **Open tasks.** These tasks reflect on the topics that the pupils have worked with. After each mission, the pupils can solve the open tasks. These can be downloaded from the teacher's section and handed out to the pupils as print sheets.

Organizing the missions

The pupils may work with the missions individually or in groups. It is important for every group to have access to a computer. To challenge the quick pupils, a number of time-adjusting tasks are included in the missions. It is recommended that the pupils work two and two together since the dialogue increases the understanding of the topics. The pupils will be forced to argue their views – both mathematical and subjective, relating to the different issues dealt with in the missions.

It is a good idea for the pupils to complete the missions prior to working with *The Real Deal*. In this way, the pupils will feel better prepared to solve the practical tasks of planning a school party, a school trip or a charity project in real life.

It is also a good idea to complete a mission in its total course. There is estimated time consumption for each mission, even though it may vary – discussions in class may take up more or less time depending on the time available.

TIP:

Control Your Money automatically saves the pupils' answers and it will, thus, be possible to go back to a mission if it is not completed. The pupils just log on and choose the mission they were working with to continue where they left off.

Evaluation

As mentioned, there are four different types of tasks in the missions:

- Basic tasks
- Tasks in adaptive courses
- Events
- Time-adjusting tasks
- Open tasks

In each of the eight missions, a number of adaptive missions of mathematical character are included to shed some light on the pupils' financial literacy. Adaptive means that if the pupil solves the first task; the basic task with a medium degree of difficulty, he will get a new task with a higher degree of difficulty. If the pupil does not solve the basic task correctly, his next task is easier. Having completed all three tasks, the pupil is placed on one of four levels, depending on his score.

It can be tracked whether the task is right or wrong, but not if a given mistake is due to lack of skills or a wrong keying on the calculator.

If the adaptive tasks in the missions are to give a basic insight into the individual pupil's skills, they must be solved individually.

As a tool to shedding some light on the pupils' mathematical and financial skills, the teacher's section includes a number of problem-oriented tasks for download, which the pupils can solve according to their level of understanding.

All pupils should solve the problem-oriented tasks. Which problem-oriented tasks are selected does not affect the evaluation of the pupils, but the tasks help put together an overall insight into the pupil's skills and knowledge. The tasks thus indicate the pupil's level of understanding and ability to make use of his skills. Going through the open tasks, the pupil gets a chance to show his ability to read and understand the content, extract important pieces of information as well as make use of relevant mathematical and financial concepts.

Evaluating

Evaluating your pupils' skills and ability to solve the open tasks can be carried out in many ways – here is an example that is easily applied in school.

Pupils can have different needs when getting started with a task; while some may need full support, others do not need any support at all. There are different ways for the pupil to solve the task.

How the pupil chooses to solve the task is a way for the teacher to evaluate the pupil's level of understanding and, in this way, plan his teaching to be as effective and relevant as possible.

If the pupil answers the question wrongly or otherwise fails in his try to solve the task, you should try to find out what went wrong. You can start out by giving the pupil a chance to solve the task again. If he still does not succeed, you can ask the pupil to think of a similar task or make a suggestion as to how to solve the task. If the pupil still cannot solve the task, you can explain how the task is solved and after this let the pupil explain the solution in his own words.

You can enter how many "hints" the pupil needs in order to solve the task. You can use the number of hints to estimate how well the pupil did. Though this relies on the teacher's individual perception and opinion, these hints may prove useful reference points.

The higher a number, the more help and support the pupil needs. This indicates a low teaching potential.

1. OK means that the pupil has come up with a solution without any help or support.
2. The pupil is notified about the mistake, tries again and completes the task.
3. The task is repeated and completed with a hint about how to begin.
4. After talking with the teacher about the task, the pupil solves it.
5. The teacher explains how the task is solved after which the pupil solves it.
6. The teacher shows how the task is solved and supports the pupil, while he does the same.
7. No matter how much support the pupil receives, he does not solve the task.

The Real Deal

In *The Real Deal*, pupils can work with their financial understanding in relation to specific problem areas. The purpose with *The Real Deal* is for pupils to apply the knowledge they have gained through working with the missions in *Control Your Money* to plan and complete a project in real life.

The Real Deal contains three types of projects:

1. **School trip**

Where are you going on your school trip? Planning a school trip involves many choices. Are you leaving for one or several days? Are you going abroad or staying at home? What do you want to see? And how will you finance the trip? A school trip involves a lot of planning, and it is up to you and your class to take everything into consideration.

2. **School party**

You have decided to have a party. But there are many things to take into consideration before you can host a party. What is the purpose of your party? Do you have anything to celebrate? Do you want to strengthen your social relationships? Or do you want to create awareness of a specific project? Let your pupils help decide on everything from funding to coordination of food, location and activities.

3. **Charity**

Your class has decided to make a charitable contribution. But what kind of project do you want to support? And how? You can plan an event such as, for instance, a concert, a flea market, fundraising campaign or a party where the profit goes to your project. You decide, as long as you keep an eye on the finances.

When you set up a project in the teacher's section, you are well under way. Often, the whole class will be working with the same project but you can also set up small projects. To each project, the pupils can upload a photo which you must approve in the teacher's section.

When a project has been chosen, you can prepare the pupils by discussing how to best carry out the project. Following this, the pupils can follow the course of the project in *The Real Deal*.

On the website, the pupils go through six phases of planning:

1. **Objective** – Project title, description and photo
2. **Narrowing down** – Starting amount and estimating the costs of the project
3. **Planning** – Mind maps of possible earnings and expenses
4. **Expenses** – List of planned and actual expenses
5. **Income** – List of planned and actual earnings
6. **Evaluation** – Evaluating the project plan and considering the possibilities of completing the project.

The pupils can update the different expenses and earnings of their project. When the project is completed, a graph displays the balance between earnings and expenses. Finally, the pupils can share their experience of the project with other users of *The Real Deal*.

It is a good idea to work with *The Real Deal* on a big screen or a projector in class.

Teaching tools

In the teacher's section, you can get an overview of what *Control Your Money* and *The Real Deal* contain. First, you have to be registered user to access the teaching tools. When you are logged in, you have access to the teaching tools mentioned below.

To *Control Your Money*

Classes/groups

With this tool, you can set up a class – click “set up new class” and add a name and level. Then, split up the class in a number of groups. (Tip: It is a good idea to place 2-3 pupils by each computer to generate a good discussion. If you want your pupils to work individually, you can set up a group for each pupil). There has to be one computer for each group. Having set up the groups, you get a complete list of the groups and passwords. Here, you can add the names of your pupils to get an easy view of who is part of which group. When you have set up the groups, you can print out the complete list of groups, usernames and passwords and give every group a password.

When the class/group is set up, it will be visible in the list of classes and groups.

IMPORTANT: To provide access to the individual missions, you must choose which mission each group may access.

Evaluation

Here, you can get an insight into how well the pupils do in the missions. By each scene in a mission, you can see the pupils' score. It is possible to track the scores of both individual groups and the whole class. The site is continuously updated as the pupils go through the missions.

Discussion tool

With the discussion tool, you can set up questions for discussions in class on a big screen or projector. The questions are categorised according to each mission. Thus, you can use the discussion tool to fuel discussions both after each mission and when all missions have been completed. You can find the questions in the instructions for each mission in this teacher's guide.

Open tasks

When working in groups, it can be difficult to get an overview of the individual pupil's skills and understanding of the material. The open tasks can be solved individually on print sheets and challenge the individual pupil's argumentation, skills and methodological approach. In the teacher's section, you can download tasks for primary and secondary level, respectively.

To The Real Deal

Projects

Here, you can set up a project by clicking "set up new project", choosing project type and adding the names of the pupils partaking. When the project is set up, it is visible in the complete list of projects. You can open the project in the pupil's section or use the group's login to enter the project.

IMPORTANT: If a group has uploaded an image to their project, you must approve it before it can be shown on the website. You will be able to see if any images are uploaded on both the projects' page as well as the introduction page. If you cannot recognise the image, you can reject it by clicking "reject".

Technical specifications

Since *Control Your Money* and *The Real Deal* are computer-based projects and tools, it is a good idea to make sure that your school meets the following technical requirements:

- One computer for each group (it is a good idea to have an extra available computer if needed)
- Flash 9: It is required that a Flash 9 player is installed. If you can see the front page of *Control Your Money* on your computer, a Flash 9 player is installed. If not, you might have to contact the head of IT at your school, since the installation might require certain rights. A free version of the flash player can be downloaded from the internet on www.adobe.com.
- Additional software: Microsoft Windows 98 or a newer version, Internet Explorer 6.0 with JavaScript and (for teachers) Adobe Acrobat Reader.
- Screen resolution: At least 1024 x 768.
- Sound card: It is recommended that computers have sound cards and speakers since many sequences in *Control Your Money* involve speak.
- Internet speed: At least 512 Kbit.

Instructions to the individual missions

The four missions for primary school

Mission 1 – The Video Game Console (Adam)

1 lesson (approximately 40 mins.)

Adam is looking into the possibilities of borrowing money or saving up to buy the latest video game console, which he just has to own. After looking at prices, he searches his room for money in pockets etc. Jacob also makes an agreement with his mother that he receives extra pocket money in return of doing more chores at home. Finally, he also agrees with his neighbour to wash his car. After several weeks, he is able to buy the video game console earlier than expected thanks to a special bargain offer.

Course

Scenes	Finances	Mathematics	Comments
1 Selecting the cheapest console	Prices, pricing, quotation	Difference, simple percentage, simple conversion from pounds to dollars	Adam gathers different prices of the video game console
2-4 More pocket money	Pocket money compared to work effort	Calculation of how much extra money over how many weeks	Adam will do more household chores in return for getting more pocket money
5 Washing his neighbour's car	Hourly rate of pay	Calculation of hourly rate of pay in relation to fixed price	Washes his neighbour's car at a fixed price
6 Purchasing the console after 14 weeks	Special bargain offer	Simple percentage calculation	Adam can buy the console earlier thanks to a special bargain offer

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Pricing
- Currency
- Euro
- Offer
- Hourly wage

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Adam receives pocket money. Does anyone in class receive pocket money? How do you spend your pocket money?
2. Discuss whether it is fair to do chores in return of pocket money? What could these chores be? What do you do at home?
3. Adam buys a video game console on the Internet. Do you have any experience with buying on the Internet?
4. Adam is saving up to buy a video game console. Do you have any experience with saving up for something? And what do you want to save up for the most?

Mission 2 - The School party (Emma)

1 lesson (approximately 40 mins.)

Together with her class, Emma collects money for a huge party for the entire school. They estimate how much money to collect and plan how to do it (according to EU regulations on child labour). Both individually by mowing the neighbour's lawn and in class by selling cards for an organization or organizing a flea market.

Course

Scenes	Finances	Mathematics	Comments
1-2 How much money can be collected	Value, plan Making money	Dividing: Average calculation	The participants put forward a realistic estimate of how much they can collect collectively and individually
3-4 Individual jobs, including mowing the lawn	How much can be earned/collected by...	Multiplication: Number of hours needed to earn a specific amount of money	Considering and selecting between different ways of making money such as collecting bottles, mowing the lawn, babysitting etc.
5 Overview of time consumption doing individual work	Estimating time compared to profit	Reading a pie chart	Comparing the pupils' working effort
6-9 Collection in class	Considering joint collection options	Reading and comparing bars in a bar chart	Selling cards for an organisation and organising a flea market. In the end, we see the class having a party.

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Valuing
- Profit/income
- That the pupils work individually compared to having joint tasks
- Average
- Diagram (pie chart and bar chart)

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Emma and her class do a great job collecting money for a school party. Would you consider collecting money for such an event? If yes, how would you spend the money?
2. If everybody does not make an effort, how would you deal with it?
3. It takes time to collect money for a project. Discuss how much of your spare time you would spend on collecting money for a joint project.
4. Which options do you have for collecting money? And how much do you think it is possible to collect in, for instance, a week, a month or a year?
5. Discuss what you think a fair hourly wage is.

Mission 3 - Furnish Room (Jacob)

2 lessons (approximately 80 mins.)

Jacob's room has been severely damaged by water and his furniture has to be replaced. First, the room itself must be repaired. Then, on the basis of price quotations, the list must be prioritised. Jacob can use any money left over from the insurance sum, due to savings, to buy a cheap discount TV and his dream purchase: a mountain bike.

Course

Scenes	Finances	Mathematics	Comments
1 Measuring up the room	Basic understanding of the relationship between price and square metres	Measuring up square metres	In relation to square metres of the wall area
2 Purchasing paint	Purchasing paint Price comparison Quality assessment	Calculation of floor area, price per square metre. Assessing prices in relation to quality	Calculation of floor area to ensure purchase of the correct amount of paint
3 Independent assessment of the insurance sum	Insurance Valuation		Value is assessed on the basis of the original furniture and preferences
4 Assessing the price of second-hand furniture	Price assessment	Price comparison	Considering purchase of furniture in relation to insurance sum
5 Purchase of new and used furniture	Choosing between different offers	Finding the cheapest price from several offers Percentage calculation	Choosing the cheapest offer from a list
6 Price savings	Assessing the cheapest offer	Percentage calculation	Deciding which desk is the cheapest
7 Purchasing a TV	Calculating the cheapest price	Percentage calculation	Finding the cheapest TV
8 Buying a	Assessing the need	Difference	Work out how much is left over from the

mountain bike	for a loan or a gift		insurance sum and how much is needed to buy a mountain bike
9 The last bit of money	Where can you take out a loan?		Considering where to take out a smaller loan
10 Money as a birthday present	Money as a birthday present	Calculating the price of one part when you know the total price	Calculating how much money he will be able to get for his birthday

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Insurance
- Insurance sum
- Valuation
- Savings
- Offer/bargain
- Discount

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Is it a good idea to have insurance? Why? What is it a good idea to have insured?
2. What is great bargain? Have any of you bought something that was a great buy?
3. Jacob buys new stuff for his room. Discuss which five things you need in your room – perhaps you can make a prioritised list. And estimate how much money you wish to spend on these things?
4. Discuss the correlation between price and value. Why do you not always buy the cheapest item? For instance, the matters of quality, design and advertising can be discussed.
5. Jacob decides that he wants to “make” money by having a birthday party where his guests give him money. Discuss if this is fair. And do you need to have any rules regarding how much or little money to give?

Mission 4 - School Camp (Laila)

2 lessons (approximately 80 mins.)

Together with her class, Laila is planning a four-day school trip to a camp in her home country. Before going on the trip, the pupils must consider how much pocket money to bring. During the trip, they plan to visit several tourist sights, including a Medieval Centre. The issue of owing and borrowing money is addressed, when Laila borrows money from her twin brother, since her pocket money does not go far.

Course

Scenes	Finances	Mathematics	Comments
1-5 Estimating pocket money	Prices of candy, souvenirs etc. Budget estimate	Budget in spreadsheet Totals, comparing figures	Discussion of pocket money amounts on the basis of prices of candy, souvenirs etc.
6 Selecting sights	Planning, comparing prices	Calculation of total prices	Selecting what to do or which sights to visit on the basis of interests and prices
7-8 Visiting the Medieval Centre	Prices of souvenirs	Conversion from old pounds shillings and pence to the modern currency we use today Calculation estimate	Buying souvenirs in relation to budget
9 Borrowing money	Borrowing, owing, repayment	Compare figures, largest and smallest	Borrowing from Laila's twin brother who is in the same class to buy souvenirs/presents because of overspending

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Budget
- Currency: Old pounds shillings
- Borrowing money
- Owing money
- Repayment

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. How much pocket money do you wish to bring on such a school trip, and how do you wish to spend it?
2. Discuss if everyone should bring the same amount, when the class is going on a trip.
3. Laila accidentally spends too much money. Discuss if it is a good idea to borrow money from each other. And if there should be any specific rules when you borrow money from each other?
4. Laila puts aside money for each day in a table. Why is she doing that?
5. At the Medieval Centre, all prices are stated in shilling. Thus, Laila had to convert pounds to shilling. Have any of you ever tried doing the same?

The four missions for secondary school

Mission 1 – Charity (Victoria)

1 lesson (approximately 40 mins.)

Victoria's class wishes to collect money to buy WROX computers (computers for developing countries) for their African friendship class. They look into the most favourable shopping options as well as how the class can collect enough money to buy the computers through work or sponsorship.

Course

Scenes	Finances	Mathematics	Comments
1-4 Calculation of price of WROX for everyone	Budget, price level, discount, splitting up product prices	Percentage of... Unit of	Considering the realistic possibility of buying as many computers as possible
5-9 Packing, store room cleaning, forest cleaning, bank sponsorship, distributing flyers	Production costs. Services, fees, hourly rate of pay	Accounts, calculation of several hours based on one hour	Different sources of income
10 Calculation of cash shortfall	Loans, gifts	Income minus costs	Find and select jobs, based on a description of salary and working hours

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Budget
- Price level
- Discount
- Pricing
- Production costs
- Fee
- Services
- Hourly wage and working hours

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Victoria and her class make a great effort collecting money for their friendship class. Would you consider doing the same, and if yes, who would you help?
2. Collecting money requires many people's time and resources. How much time would you spend on such a project?
3. How would you react if everyone does not make an effort?
4. In order to make money to such a project, you have to be willing to work. Consider what you can do or if there are any tasks you will absolutely not carry out.
5. Discuss what is a fair hourly wage when it comes to charity work? You can compare with individual after-school jobs.

Mission 2 – Trip to New York (Martin)

2 lessons (approximately 80 mins.)

Martin aged 16 (Scandinavia)/17 (Ireland/Northern Ireland) is planning a trip to New York, motivated by having won a ticket to a rap concert and the possibility of being able to travel with his uncle and aunt. In New York, he is going to meet up with some of the other participants of the competition. Before departing, Martin makes a budget, which he compares to the actual costs of the trip. These costs include choice of transport, sightseeing, exchanging currency, watching a baseball match, visits to restaurants and gift purchases.

Course

Scenes	Finances	Mathematics	Comments
1-2 Budget	Budget, price estimate	Totalling amounts	Choosing from available offers
3 Choice of transport, hotel etc.	Price comparison	Comparing amounts	Choices have consequences for your budget
4 Visiting a restaurant	Tips, foreign currency	Percentage calculation, foreign currency conversion	Tips
5 Baseball, withdrawing cash	Exchange rates, currency exchange fee	Currency calculations, percentage costs	Choose from three exchange options
6 Gift shopping	Prices, discount	Percentage calculation	Choice of purchases

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Budget
- Rate and currency
- Fee (exchange fee)
- Tips
- Discount

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. When selecting a hotel, you can choose between different accommodations. For instance, you can often choose from full board, half board, no board and a stay with breakfast included. Discuss the advantages and disadvantages of the different accommodations.
2. When you are travelling to another country, you need to exchange money. Talk about where you can exchange currency. When is it a good idea to exchange currency? And what do you need to pay particular attention to when buying foreign currency? And do you really need to exchange money?
3. As Martin did, it can be a good idea to make a budget. Discuss how much a trip may cost before departing. Which things should you take into consideration, as a minimum?
4. When Martin was in the USA, he had to tip various people as the tip was part of their pay. When do you think it is required to leave a tip? And are there any specific rules regarding how much to tip in your country? Do you have any experience with tipping when travelling to foreign countries?
5. Martin spends quite a lot of his pocket money on clothes. If you were on a trip to New York, how would you spend your pocket money?

Mission 3 - Living on your own (Sarah)

2 lessons (approximately 80 mins.)

17-year-old Sarah looks into the challenges of moving away from home. Sarah's father is going to work in Argentina for the next year. However, Sarah does not want to go because she does not want to leave her friends or school behind. Therefore, her family has agreed to let her share an apartment with her friend Mary in her home town. Sarah's aunt is living here as well so she can keep an eye on her. But for this to happen, Sarah has to find an affordable shared apartment and furnish it. She also has to find a job, assess the bank's advice about opening various accounts and make a realistic household budget.

Course

Scenes	Finances	Mathematics	Comments
1 Apartment prices	Rent, deposit, incl./excl. fixed overheads	Rule of three	Choice of shared apartment accommodation based on three different apartment ads
2 Buying furniture	Assess prices	Calculation estimate	Assess flat prices
3 Buying household effects	Assess furnishing prices	Calculation estimate. Price of several items when the price is known for one item	Furnish with things from home, and comparison of new and used items
4 Purchasing a TV	Hire purchase, cash	Comparison of values in pounds and percentages	Hire purchase
5 Rent	Square metre price	Rule of three	Understanding rent
6 Budget	Fixed and variable expenses	Prices, estimates	Understanding a budget
7 Job	Working hours, hourly pay, minimum wage	Price of several items when the price of one is known, reading graphs, listing of math equations	Understanding working hour regulations and wages
8 At the bank	Youth account, interest, deposits, cash card	Calculation of interest, percentage of...	Understanding a bank account

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Rent
- Deposit
- Inclusive/exclusive
- Pricing
- Instalment payment/hire purchase and paying in cash
- Fixed and variable expenses
- Working hours and hourly wage
- Minimum wage
- Interest rate
- Account and credit balance

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Sarah moves in with her friend. They share the rent. How do you think they should share the rent?
2. Discuss the difference between fixed and variable expenses and give examples of both.
3. Some choose instalment payment knowing that what they buy ends up being more expensive in the end. Why do you think that is? What is the alternative?
4. Sarah spends her money buying stuff for her room. What do you think is the minimum amount of money you can spend on furnishing and decorating your room?
5. Sarah does not quite control her spending. Do you think she would benefit from making a budget? And are there any of you who make a budget to keep control of your spending? And are there any of you who want to or consider making your own budget?

Mission 4 - Investment (Jamil)

1 lesson (approximately 40 mins.)

Jamil loves music and spends a lot of his spare time with his band. He also spends a lot of time with his uncle, who is a musician in addition to being a skilled investor. Jamil has actually started to find investments quite interesting. Dealing with investments is not a simple task, but luckily Jamil's uncle explains things well. Jamil wants to be just as good at investing money as his uncle is, so he decides to learn more with help from his uncle.

Course

Scenes	Finances	Mathematics	Comments
1 Presentation of investment options	Considering investments in consumer durables, art etc., shares, bonds and bank accounts		Possible investment options to invest 1,000 Pounds
2-3 Choice of investments	Investment or savings		Choice of investment based on uncle's knowledge
4-6 Shares	Buying and selling shares, return on investment, rise and fall in value	Calculation of market value (calculation of percentages), reading graphs	Jamil's uncle explains shares
7-8 Bonds	Buying and selling bonds, interest, price		Jamil's uncle explains bonds
9-11 savings accounts	Saving up, types of accounts, interest, compound interest	Percentage calculation in connection with interest and compound interest	Jamil's uncle explains savings
12 Investment	Investment in shares, bonds and saving up		The opportunity to simulate the investment of 1,000 pounds over a 5-year period

Before the mission

Before the pupils are put to work, it may prove useful to talk about concepts that may be unknown to them. However, it is not required that the teacher or the pupils know about all concepts when working with the missions.

In this mission, the following concepts are relevant:

- Investment
- Savings
- Profit
- Market value
- Rise in prices
- Compound interest
- Several of the above-mentioned concepts are dealt with in the mission. The mission also deals with shares and bonds.

After the mission

When the class has completed the mission, it is a good idea to talk about the tasks and how the pupils made sense of the mission. The following questions may function as inspiration:

1. Would you consider buying shares or bonds? And if any of you already own shares or bonds, how did you get them?
2. Jamil is saving up to buy an amplifier. Are any of you saving up for something? Would you consider saving up for something? And what should that something be? For how many years do you think you would put money aside?
3. Do any of you have money in the bank? Do you know what type of account you have? And do you know the interest rate?
4. If you each got 1,000 pound to invest, how would you invest your money? Discuss if you should make any ethical considerations prior to investing (weapons and tobacco versus green energy etc.)