MONEY in ACTION

A guide to personal financial management

SENIOR PHASE
GRADE 7-9

This project is a consumer education initiative by the Financial Services Consumer Education Foundation.

FINANCIAL SERVICES CONSUMER EDUCATION
plan your financial future

This resource is based on the three booklets viz.:

- Make the most of your money;
- Use your money wisely ; and
- Make your money work for you

that was developed by the FSB, Financial Industry Bodies and other interested parties under the Financial Services Consumer Education logo

SAIA

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Contents

Introduction

Money in Action is a resource for teachers and learners which aims to familiarise them with money in terms of:

- Taking care of needs
- Budgeting
- Prioritising
- spending Saving
- Dangers of borrowing
- Buying wisely
- Banking
- Making provision for the future

What does the resource consist of?

There are two components to the resource.

This book which provides
- worksheets for activities for each grade in the phase
- tips for teachers in implementing the activities
- guidelines for assessment

A compact disc which
- provides background information to the topic
- provides suggestions for conducting a lesson on the topic
- gives suggestions for activities other than those found in this book
- is used by the teacher as a resource for him/herself as well as for the learners

NB

It is important to remember that the worksheets are *not* the lesson. The ideas for the lessons will come from the CD. The worksheets are to be done once the learners have had one or more lessons on the topic. The worksheet activities may be used as assessment tasks, i.e. if the learners complete them successfully they will have met the relevant assessment standard.

How does the resource fit in with the NCS?

The focus of the programme is on Economic and Management Sciences. Both the Learning Outcomes for the Senior Phase as well as the Assessment Standards for those Learning Outcomes are addressed.

In addition, as money is part of the Mathematics Learning Area, the Learning Outcomes relating to calculations with money are also addressed and integrated with the activities relating to Economic and Management Sciences. Many of these worksheets have a mathematical basis, but they are set in the context of Economic and Management Sciences.

We hope that this resource will be a welcome addition to your learning programmes and make it possible for your learners to achieve the necessary assessment standards.

How do I use the resource?

The resource should be used in conjunction with other resources in your work schedule per grade.

- We suggest that it should be introduced in the second or third term of the year.
  However, the point at which the resource is introduced will depend on each school's individual work schedule per grade. If your school has allocated weeks in the third and fourth terms to money and money calculations, it would be better to introduce the resource in those two terms.

- Many of the activities in these worksheets are in the form of word problems, or number stories – essential for giving context to mathematical problems. When doing this kind of activity with your class, follow these steps:

  - Go through the instructions with the learners
  - Ensure that they understand what the problem is. They should be able to explain it in their own words, e.g. "They want us to say how many there are altogether."
  - Ask if they know how to solve the problem on their own – if not, where can they go for assistance?
  - Ask what basic operations they will need to use to solve the problem
  - Once they have solved the problem, ask learners how they did this. If their answers are incorrect, ask them to see whether they can identify where they went wrong. If they can do so, give them a chance to work it out again.
  - Ask the learners whether they would solve the problem in the same way again. If not, what would they change?

Language

Before going to the CD to do the activities there, ensure that learners know some of the vocabulary for the topic involved, especially learners whose mother tongue differs from the target language. It is no use talking about debt and budgets unless learners have had these terms explained to them with examples.

How do I use the resource to assess my learners?

The worksheet activities can be done after the lesson and can then be assessed based on the relevant assessment standard.
In addition, there is an assessment guideline at the back of this book to give you ideas of different ways of assessing and recording when using this resource.

Teacher Guide – Grade 7

Lesson 1: Needs and Wants

Teacher's Tips:

The purpose of these activities is threefold – to assess learners' ability to distinguish between needs and wants, to assess their knowledge and understanding of fractions, decimals, percentages and ratio and their ability to use them. Learners should be able to draw up a list of items that meet needs and wants, within the amount specified. The focus of this lesson is on percentages, fractions, decimals and ratio.

This kind of problem should be set over and over again to give context to mathematical concepts and calculations.

Answers:

1.

Fractions	Decimals	Percentage
$\frac{1}{100}$	.01	1%
$\frac{1}{10}$	.1	10%
$\frac{1}{5}$	.2	20%
$\frac{1}{4}$	.25	25%
$\frac{1}{3}$	.33	$33\frac{1}{3}\%$
$\frac{1}{2}$	.5	50%
$\frac{2}{3}$	.67	$66\frac{2}{3}\%$
$\frac{3}{4}$	.75	75%

2.

rent	R625
transport	R250
clothes	R625
entertainment	R200
Total	R1 700

Left over R2 500 – R1 700 = R800

Assessment:

These activities do not deal with large or complex numbers. What you will be assessing is learners' understanding of fractions, decimals, percentages and ratio. If they satisfactorily complete the worksheet, you will know that they are able to use these concepts and skills in more complex problems.

Lesson 2: Budgets

Teacher's Tips:

In this activity, learners are using their knowledge of fractions to apportion money to different costs in order to work out a household budget.

Answers:

1.

Rent	R875.00
Food	437.50
Savings	437.50
School Fees	350.00
Total	R2 100.00

2. 60%
3. R3 500 – R2 100 = R1 400

Assessment:

Ask learners whether they think this is the best way to allocate the money and listen to their responses, which may differ widely depending on their own family circumstances. If their answers are reasonable and logical and show an understanding of the priorities when spending money on a household, that is fine.

→ Lesson 3: Saving and borrowing

Teacher's Tips:

This activity highlights the importance of good money management and the cumulative dangers of borrowing. In this activity, Celeste starts with a debt of R100 and in a few months ends up with a debt greater than her salary, while Jonah saves R100 a month.

Answers:

1. October. At end of March, she has borrowed R900 and repaid R600. This means she is R300 short. Each month she is another R100 short. In 7 months time the total shortfall will be R1 000, i.e. another R700. This means in October she will owe her entire salary of R1 000.
2. Ten months
3. Answers will vary but learners' responses should indicate that they understand constant borrowing will only help in the short term whereas dedicated saving will bring about a positive result.

Assessment:

Assess the learners on their calculations and their understanding of which operations are needed in order to solve the problems. Their answers to the final question should establish whether or not they understand the concepts of borrowing and saving.

→ Lesson 4: Preparing for your future

Teacher's Tips:

In this activity learners are shown some of the options for saving and investment and are asked to choose the best and worst options, based on potential growth. There are some calculations involved here, but they do not have to calculate the compound interest as they are told in the question that the money will double in six years.

Answers:

1. R1 000.
2. R1 000 invested per year at 12% yields R120 per year.
   Interest earned after 6 years = 6 x 120 = R720
   Total at end of 6 years = R1 000 + R720 = R1 720
3. 1 000 $(1 + 0.12)^6$ = R1 973
4. His best option is saving with compound interest. His worst option is saving at home

Assessment:

Assess learners on the basis of their calculations but also on their reading and understanding of the questions and their choices in Question 4.

Grade 7 – Learning Outcomes, Assessment Standards & Summative Assessment

Learning Outcomes and Assessment Standards for this programme

These are the Learning Outcomes for Senior Phase that have been covered in the programme. In brackets are the Lesson Numbers for the worksheet activities.

Economic and Management Sciences

Learning Outcome 1: The Economic Cycle

The learner will be able to demonstrate knowledge and understanding of the economic cycle within the context of the economic problem.

Assessment Standards

We know this when the learner:

- Compares and discusses the difference between savings and investments (Lesson 3, Lesson 4)

Mathematics

Learning Outcome 1: Numbers and relationships

The learner will be able to recognise, describe and represent numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems.

Assessment Standards

We know this when the learner:

- Recognises, classifies and represents the following numbers in order to describe and compare them:
  - decimals (to at least three decimal places), fractions and percentages; (Lesson 1)
- Solves problems in context including contexts that may be used to build awareness of other Learning Areas, as well as human rights, social, economic and environmental issues such as:
  - financial (including profit and loss, budgets, accounts, loans, simple interest, hire purchase, exchange rates)(All Lessons)

Learning Outcome 5: Data handling

The learner will be able to collect, summarise, display and critically analyse data in order to draw conclusions and make predictions and to interpret and determine chance variation

Assessment Standards

- Uses simple questionnaires (with a variety of possible responses) and designs and uses questionnaires (with yes/no type responses) in order to collect data (alone and/or as a member of a group or team) to answer questions. (All Lessons)
  Draws a variety of graphs by hand/technology to display and interpret data (grouped and ungrouped) including:
- bar graphs and double bar graphs;(All Lessons)
- pie charts (All Lessons)

Group Project

Tell learners that they are now going to do a project on the work that they have done in this programme. Make sure that they are given clear instructions as to how to proceed:

They must draw up a questionnaire to:

- Find out how many people in their community have bank accounts (They need to use a sample of at least twenty people)
- Find out from people with no bank accounts why this is so
- Show the results on a frequency table
- Draw up a graph or pie chart representing the responses
- Present their findings to the class

Individual Assessment

Learners write a paragraph on each of these:

- the dangers of debt
- the importance of saving

They complete Maths worksheets that focus on ratio, percentages, fractions and decimals (especially those showing equivalence and conversion). You may use exercises from their Mathematics textbooks for these.

GRADE 7

Lesson 1 – Needs and wants Worksheet

1. **The table below shows the equivalence of fractions, decimals and percentages. Complete the table.**

Fractions	Decimals	Percentage
$\frac{1}{100}$		1%
	.1	
$\frac{1}{5}$		
$\frac{1}{4}$		25%
	.33	
	.5	
		$66\frac{2}{3}\%$
	.75	75%

2. **If you are earning R2 500 a month and you are spending:**

- **0.25 on rent**
- **10% on transport**
- **25% on clothes**
- **R200 on entertainment**

How much do you have left over?

Lesson 2 – Budgets
Worksheet

1. **Mrs Fakude earns R3 500 a month. She needs to spend 25% of that on rent, $\frac{1}{8}$ on food, $\frac{1}{8}$ on savings and 10% on school fees. How much will she spend on each?**

   Write your answers next to the items. Then add them up and write the total.

   Rent _____
   Food _____
   Savings _____
   School Fees _____

   Total _____

   Working out space:

2. **What percentage of her salary has Mrs Fakude spent?**

3. **How much money does she have left?**

Lesson 3 – Saving and borrowing Worksheet

1. **Celeste earns R1 000 a month and has no budget so she is always running out of money.**

   This is what happened from January:

January	**Paid back R100 borrowed in December**	**Borrowed R200**
February	**Paid back R200**	**Borrowed R300**
March	**Paid back R300**	**Borrowed R400**

   If Celeste goes on like this, when will she find that she owes her whole salary as soon as she gets it?

2. **Jonah saves R100 a month. How long will it take him to save R1 000?**

3. **Write a paragraph saying what Jonah is doing right and Celeste is doing wrong.**

Lesson 4 – Preparing for the future Worksheet

1. **Mr Oliphant has R1 000 to invest.**
   If he saves it at home for 6 years how much will he have?
   Work it out below and write in your answer

Answer:

2. **Mr Oliphant could invest his money in an account that pays simple interest of 12% for six years. How much will he have at the end of six years?**
   Work it out below and write in your answer.

Answer:

3. **Mr Oliphant could also invest his money at compound interest for 6 years.**
   With compound interest, he will double his money in six years.
   How much will he have at the end?

Answer:

4. **Which is Mr Oliphant's best option? What is his worst option?**
   Write your answers below.

→ Lesson 1: Needs and Wants

Teacher's Tips:

The purpose of these activities is threefold – to assess learners' ability to distinguish between needs and wants, to assess their knowledge and understanding of fractions, decimals, percentages and ratio and their ability to use them. Learners should be able to draw up a list of items that meet needs and wants, within the amount specified. The focus of this lesson is on percentages, fractions, decimals and ratio.

This kind of problem should be set over and over again to give context to mathematical calculations.

Answers:

1.

Fractions	Decimals	Percentage
$\frac{1}{100}$	.01	1%
$\frac{1}{10}$	.1	10%
$\frac{1}{5}$	.2	20%
$\frac{1}{4}$	.25	25%
$\frac{1}{3}$	.33	$33\frac{1}{3}$ %
$\frac{1}{2}$	.5	50%
$\frac{2}{3}$	.67	$66\frac{2}{3}$%
$\frac{3}{4}$	.75	75%

2.1. 33%

2.2. R900 (15% of R6 000)

3. $\frac{400}{1200} = \frac{1}{3}$ = 1:3

Assessment:

These activities do not deal with large or complex numbers. What you will be assessing is learners' understanding of fractions, decimals, percentages and ratio. If they satisfactorily complete the worksheet, you will know that they are able to use these concepts and skills in more complex problems.

→ Lesson 2: Budgets

Teacher's Tips:

In this activity, learners are using their knowledge of percentages to apportion money to different costs in order to work out a household budget.

Answers:

1.

Rent	25%	R3 125	$\frac{3\,125}{12\,500}$ x 100 =25%
Savings	10%	1 250	$\frac{1\,250}{12\,500}$ x 100 =10%
Electricity & phone	15%	1 875	$\frac{1\,875}{12\,500}$ x 100 =15%
Food	20%	2 500	$\frac{2\,500}{12\,500}$ x 100 =20%
School fees	15%	1 875	$\frac{1\,875}{12\,500}$ x 100 =15%
Clothing	15%	1 875	$\frac{1\,875}{12\,500}$ x 100 =15%
Total:		12 500	

Yes

2. R8 000 x 20% = R1 600.
R8 000 + R1 600 = R9 600

➔ Lesson 3: Saving and borrowing

Teacher's Tips:

This case study gives learners the opportunity to see what two different people do with the same amount of money. It is not meant to invoke guilt or embarrassment but rather to point out that the amount of money one earns is less important than what is done with it.

Answers:

1. Jenny saves R300. She pays R1 200 (40% of R 3 000) on bills and school fees.
   Her food bill is R500.
   Total: R2 000
   Left over: R1000

2. Angie repays R450 of debt. She spends R400 on a new outfit. She then spends R200 on groceries and R400 on takeaway food. Angie then pays R450 for concert tickets.
   Total: R1 900

3. Left over: R1 100

   Bills to pay: R1 200

   Angie has not got enough money for her bills or any other expenses, such as transport.

4.&5. Answers will vary but learners should be able to say that borrowing money does not fix financial problems and that spending on unnecessary items before taking care of essentials is not a good idea. They should also note that Jenny saves before she pays any bills or buys anything.

Assessment:

Assess learners on their ability to calculate the amounts involved and also on their written responses which show their level of understanding of the concepts of saving and borrowing. Instead of asking them to write their answers to Question 4, it is a good idea to have a class discussion on the subject to ascertain learners' attitudes towards borrowing. If they come from a culture of borrowing and poor money management, they may not know that there is any other way.

➔ Lesson 4: Preparing for your future

Teacher's Tips:

This activity is intended to make learners aware, even before they leave school, that money grows in different ways and that when choosing investments for security in the future they should choose those that will show the most growth.

Answer:

1. Current salary = R7 000.00
   Invests 20% = R1 400.00
   Year 1 = R1 400.00 x 12 = R16 800.00
   Year 2 = R1 400.00 x 1.10 x 12 = R18 480.00
   Year 3 = R1 400.00 x 1.10 x 1.10 x 12 = R20 328.00

   Interest on year 1 balance = 10% x R16 800.00 = R1 680
   Interest on year 2 balance = 10% x (R18 480 + R18 480) = R3 696.00
   Interest on year 3 balance = 10% x (R16 800 + R18 480 + R20 328 + R 1 680 + R3 696.00) = R6 098.40

   Balance in account = R16 800 + R18 480 + R20 328 + R1 680 + R3 696 + R6 098.40
   = R67 082.40

2. Amount invested: = R67 082.40
   FV = $(67\,082.40 + 1.12)^7$
   = R148 297.80

3. Contributions of 5% of salary for 3 years for 2 people, which means 2.5% per person:

   Contributions: Year 1: R84 000.00 x 2.5% = R2 100.00
   Year 2: R92 400.00 x 2.5% = R2 310.00
   Year 3: R101 640.00 x 2.5% = R2 541.00

   Total contributions = R6 951.00

   Funeral cost = R15 000.00

   Stokvel paid out = R11 250.00

   Yes it was beneficial since the payout exceeds the contributions by R4 299.00

Assessment:

Learners should have been introduced to these concepts in their mathematics class but the focus of this activity is less on the maths calculations and more on being able to see which options for growth are best. Assess learners on their ability to recognise and explain this.

Grade 8 – Learning Outcomes, Assessment Standards & Summative Assessment

Learning Outcomes and Assessment Standards for this programme

These are the Learning Outcomes for Senior Phase that have been covered in the programme. In brackets are the Lesson Numbers for the worksheet activities.

Economic and Management Sciences

Learning Outcome 2: Sustainable Growth and Development

The learner will be able to demonstrate an understanding of reconstruction, sustainable growth and development, and to reflect critically on its related processes.

Assessment Standards

We know this when the learner:

- Discusses the importance of savings for investments (Lesson 3, Lesson 4)
- Different methods of savings and investments (e.g. savings accounts, fixed deposits, shares, unit trusts,), and calculates the returns on a variety of investments (Lesson 3, Lesson 4)

Mathematics

Learning Outcome 1: Numbers and relationships

The learner will be able to recognise, describe and represent numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems.

Assessment Standards

We know this when the learner:

- Recognises, classifies and represents the following numbers in order to describe and compare them:
  - decimals (to at least three decimal places), fractions and percentages; (Lesson 1)
- Solves problems in context including contexts that may be used to build awareness of other Learning Areas, as well as human rights, social, economic and environmental issues such as:
  - financial (including profit and loss, budgets, accounts, loans, simple interest, hire purchase, exchange rates)(All Lessons)

Learning Outcome 5: Data handling

The learner will be able to collect, summarise, display and critically analyse data in order to draw conclusions and make predictions and to interpret and determine chance variation

Assessment Standards (Summative Assessment only)

- Designs and uses questionnaires with a variety of possible responses in order to collect data (alone and/or as a member of a group or team) to answer questions.
- Organises (including grouping where appropriate) and records data using tallies, tables and stem-and-leaf displays.
- Draws a variety of graphs by hand/technology to display and interpret data (grouped and ungrouped) including:
- bar graphs and double bar graphs;
- pie charts

Group Project

Tell learners that they are now going to do a project on the work that they have done in this programme. Make sure that they are given clear instructions as to how to proceed:

- Draw up a questionnaire to
- Find out how many people in their community have bank accounts (They need to use a sample of at least twenty people)
- Find out from people with no bank accounts why this is so
- Show the results on a frequency table
- Draw up a graph or pie chart representing the responses
- Present their findings to the class

Individual Assessment

1. Learners write a paragraph on each of these:

   - the dangers of debt
   - the importance of saving
   - different methods of savings and investments

2. They complete Maths worksheets that focus on ratio, percentages, fractions and decimals (especially those showing equivalence and conversion). You may use exercises from their Mathematics textbooks for these.

Lesson 1 – Needs and wants Worksheet

1. The table below shows the equivalence of fractions, decimals and percentages. Complete the table.

Fractions	Decimals	Percentage
$\frac{1}{100}$		1%
	.1	
$\frac{1}{5}$		
$\frac{1}{4}$		25%
	.33	
	.5	
		$66\frac{2}{3}\%$
	.75	75%

2. Jabu has bought a new car. The repayments are R2 000 a month. Jabu earns R6 000.

2.1 What percentage of his salary is Jabu spending on the car?

2.2 How much should Jabu be paying if he wants to spend 15% on his car?

3. Andile spends R400 on food and R1 200 on rent. What is the ratio of rent to food?

Lesson 2 – Budgets
Worksheet

1. **The Petersen family earns R12 500 a month. They need to draw up a budget and they have listed their needs and wants in order of importance and have decided what percentage they need to spend on each. This is their list:**

Rent	**25%**
Savings	**10%**
Electricity & phone	**15%**
Food	**20%**
School fees	**15%**
Clothing	**15%**

Work out the money value of these percentages and add them up. Do they add up to R12 500?

Answer:

2. **The Johnson family always seem to spend more than they earn, even without luxuries. Mr Johnson needs to earn at least 20% more than his current salary of R8 000. How much does he need to earn?**

Lesson 3 – Saving and borrowing Worksheet

Case Study

Jenny and Angie work together, and they each earn R3 000 a month.

Jenny

Before Jenny does anything else, she saves 10% of her salary. Then she pays her rent, electricity bills and school fees. This takes up 40% of her salary.
Her food bill is R500.

1. **How much money does Jenny have left for other expenses?**

Angie

Before Angie does anything else, she pays 15% of her salary to people she borrowed money from last month.
She then buys a new outfit for R400.
Angie then spends R200 on groceries and R400 on takeaway food. She also takes two friends to a rock concert and pays R450 for the tickets.

2. **How much has Angie spent?**

3. **Has Angie got enough to pay her rent, electricity bills and school fees which are the same as Jenny's?**

4. **Angie borrows R800 from a friend to pay her bills. Write a few sentences to say what Jenny is doing right and what Angie should be doing.**

5. **Is borrowing money a good way to get out of financial difficulty? Write a sentence giving your answer and explaining your reasons.**

Space for working out answers

Lesson 4 – Preparing for the future Worksheet

Thembi realizes that it is very important to prepare for the future and for a rainy day.

She currently earns a salary of R7 000.00 per month and she estimates her salary will increase by 10% every year for the next 3 years and thereafter by 15% per year for 7 years.

She decides that to prepare for her future that she needs to do various things.

This is what she does:

- **She invests 20% of her salary for the next 10 years in a savings account that pays 10% simple interest on the balance in the account at the end of that year. You can assume that any interest earned will remain in the account at the end of each year.**
- **She takes out an endowment policy with the accumulated balance at the end of 3 years and the insurance company invests the capital for 7 years at 12% compound interest. She continues to invest her salary in her savings account.**
- **She joins a stokvel recommended by her friends and invests 5% of her annual income into the stokvel to save up for funeral costs for herself and her mother who is 78 years old. She pays this monthly. The stokvel rules state that if someone dies it pays 75% of the funeral costs . Thembi's mother dies 3 years after she has made contributions and the funeral costs amount to R15 000.00**

1. **How much will Thembi have accumulated in her savings account at the end of 3 years assuming she does not withdraw any of the savings?**

2. **How much does the endowment policy pay out in ten years time?**

3. **Was it financially beneficial to Thembi to belong to the Stokvel when her mother died?**

Teacher Guide – Grade 9

➔ Lesson 1: Needs and Wants

Teacher's Tips:

The purpose of these activities is threefold – to assess learners' ability to distinguish between needs and wants, to assess their knowledge and understanding of fractions, decimals, percentages and ratio and their ability to use them. Learners should be able to draw up a list of items that meet needs and wants, within the amount specified. The focus of this lesson is on percentages, fractions, decimals and ratio.

This kind of problem should be set over and over again to give context to mathematical calculations.

Answers:

1.

Fractions	Decimals	Percentage
$\frac{1}{100}$	.01	1%
$\frac{1}{10}$	.1	10%
$\frac{1}{5}$	.2	20%
$\frac{1}{4}$	.25	25%
$\frac{1}{3}$	.33	$33\frac{1}{3}\%$
$\frac{1}{2}$	.5	50%
$\frac{2}{3}$	.67	$66\frac{2}{3}\%$
$\frac{3}{4}$	.75	75%

2. R350 000/12 = R29 166.67

Anton earns 29 166.67 per month.

R29 166.67 x 25% = R7 291.67

The monthly repayments are R5 600.

This means Anton can afford the house.

3.1. 2: 1 = R6 000: R3 000

3.2. 15% ($\frac{3\ 000}{20\ 000}$ =15%)

Assessment:

These activities do not deal with large or complex numbers. What you will be assessing is learners' understanding of fractions, decimals, percentages and ratio. If they satisfactorily complete the worksheet, you will know that they are able to use these concepts and skills in more complex problems.

➔ Lesson 2: Budgets

Teacher's Tips:

There are no calculations to be done in this activity. Learners are asked to use what they have learned in this programme to make good choices about spending and managing money.

Answers:

Borrowing money, cutting down on food and not paying monthly bills are not an option. Selling the house and car and getting something cheaper is a good option. Cancelling the cell phone contract on its own will not make up the shortfall.

Assessment:

Learners' answers should demonstrate that they understand where overspending occurs, and that staying within a budget may sometimes require difficult and painful choices. It is important that learners realise that borrowing, not paying bills and cutting down on needs at the expense of wants is not an option.

➔ Lesson 3: Saving and borrowing

Teacher's Tips:

In this worksheet, learners are asked to look at three different ways of paying for the same item. They need to calculate the final cost of the item in all three methods of payment and then to choose the one that cost them the least amount of money and give them ownership of the product.

Answers:

1. R2 400
2. Selina has R2 304 including her interest. (6 x 334 + 300). Yes, she can afford to buy the machine.
3. Thomas gets a discount of R300 (15% of R2 000). He can buy the washing machine and will have money left over.
4. • False
   • True
   • True

Assessment:

Assess the learners on their calculations and their understanding of which operations are needed in order to solve the problems. Their answers to the final question should establish whether or not they understand the concepts of borrowing, saving and paying cash.

→ Lesson 4: Preparing for the future

Teacher's Tips:

This activity is intended to make learners aware, even before they leave school, that money grows in different ways and that when choosing investments for security in the future they should choose those that will show the most growth.

Answers:

1. R 9 000.00
   7.5% of salary = 7.5% xR120 000 = R9 000.00

2. R 9 000.00
   7.5% of salary = 7.5% xR120 000 = R9 000.00

3. R807 300.00
   R120 000 x 1.120 = R807 300.00

4. R983 921.90
   Current living expenses = 85% x 120 000 = R102 000.00
   In 20 years time it will be 85% x (120 000 x 1.12)20 = R983 921.90

5. No, it will not be enough. R 1 993.49 will need to come from the pension fund each month

   Monthly income from retirement annuity fund = R80 000.00 per month or R960 000.00 per annum
   In 20 years time, the monthly living expenses will be R983 921.90/12 = R81 993.49
   There will thus be a shortfall of R23 921.90 per annum or R1 993.49 per month

6. Yes, he will since the interest earned on the pension fund will exceed the shortfall

   Let's estimate this:
   Mandla lives another 20 years.
   His annual shortfall which will need to come from the R300 000 pension fund is R23 921.90
   If we multiply this shortfall by 20 years we get R478 437.90
   The pension sum lump sum pays out R300 000.00
   The shortfall is R178 437.90 before taking the interest of 35% into account on the closing balance in each year.
   At the end of the 1st year, the account balance will be approx R277 000.00 and will earn interest of 35% of R96 950.00 leaving a balance of R373 950.00
   Approx R23 000.00 will be withdrawn from this in the next year and interest of 35% will be earned on the balance of R350 000.00 of R122 500.
   It would seem therefore that the balance is increasing each year because the interest exceeds the withdrawal, which means that Mandla will have enough to live for 20 years.

7. Learners will write a business letter that makes the point clearly and also uses language structures – grammar and terminology – that fit in with Languages: LO 3.

Assessment:

Learners should have been introduced to these concepts in their mathematics class but the focus of this activity is less on the maths calculations and more on being able to see which options for growth are best.

Grade 9 – Learning Outcomes, Assessment Standards & Summative Assessment

Learning Outcomes and Assessment Standards for this programme

These are the Learning Outcomes for Senior Phase that have been covered in the programme. In brackets are the Lesson Numbers for the worksheet activities.

Economic and Management Sciences

Learning Outcome 2: Sustainable Growth and Development

The learner will be able to demonstrate an understanding of reconstruction, sustainable growth and development, and to reflect critically on its related processes.

Assessment Standards

We know this when the learner:

- Explains the role of savings and investments in economic prosperity and growth (Lesson 3, Lesson 4)

Mathematics

Learning Outcome 1: Numbers and relationships

The learner will be able to recognise, describe and represent numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems.

Assessment Standards

We know this when the learner:

- Recognises, classifies and represents the following numbers in order to describe and compare them:
  - decimals (to at least three decimal places), fractions and percentages; (All Lessons)
- Solves problems in context including contexts that may be used to build awareness of other Learning Areas, as well as human rights, social, economic and environmental issues such as:
  - financial (including profit and loss, budgets, accounts, loans, simple interest, hire purchase, exchange rates)(All Lessons)

Learning Outcome 5: Data handling

The learner will be able to collect, summarise, display and critically analyse data in order to draw conclusions and make predictions and to interpret and determine chance variation.

Assessment Standards (Summative Assessment only)

We know this when the learner:

Draws a variety of graphs by hand/technology to display and interpret data including:

- bar graphs and double bar graphs;
- pie charts

Project

Tell learners that they are now going to do a project on the work that they have done in this programme. Make sure that they are given clear instructions as to how to proceed:

- Draw up a questionnaire to
  - Find out how many people in their community have bank accounts (They need to use a sample of at least twenty people)
  - Find out from people with no bank accounts why this is so
- Find out how many people have hire purchase agreements
- Show the results on a frequency table
  - Draw up a graph or pie chart representing the responses
  - Present their findings to the class

Individual Assessment

Learners write a paragraph on each of these:

- the dangers of debt
- the importance of saving
- different methods of savings and investments

They complete Maths worksheets that focus on ratio, percentages, fractions and decimals (especially those showing equivalence and conversion). You may use exercises from their Mathematics textbooks for these.

Lesson 1 – Needs and Wants Worksheet

1. The table below shows the equivalence of fractions, decimals and percentages. Complete the table.

Fractions	Decimals	Percentage
$\frac{1}{100}$		1%
	.1	
$\frac{1}{5}$		
$\frac{1}{4}$		25%
	.33	
	.5	
		$66\frac{2}{3}\%$
	.75	75%

2. Anton wants to buy a house for R450 000. The monthly repayments will be R5 600. Anton does not want to pay more than 25% of his monthly salary on bond repayments. He earns R350 000 spread equally over a period of 12 months. Can Anton afford the house?

Work this out in the space below and then tick yes or no in the correct box.

☐ **YES** ☐ **NO**

3.1. Andile spends R6 000 on rent and R3 000 on car repayments. What is the ratio of rent to car?

3.2. Andile's salary is R20 000 a month. What percentage of this is he spending on his car?

Lesson 2 – Budgets
Worksheet

1. **Tim knows that he is spending more than he earns – R4 000. He has cut his budget down to the bare essentials and he is still R1 050 short every month.**
   This is his budget:

House repayments	**R2 000**
Car repayments	**1 500**
Food	**700**
Clothing account	**250**
Cell phone contract	**275**
Monthly bills	**600**
Total	**5 050**

What should Tim do? Write your answers (in order of the best option) in the space below and give reasons:

- **Borrow money**
- **Sell his house and buy a cheaper one**
- **Sell his car and buy a cheaper one**
- **Cut down on food bills**
- **Not pay monthly bills (electricity, school fees)**
- **Cancel cell phone contract**
- **Your own ideas**

Lesson 3 – Saving and borrowing
Worksheet 1

Matthew, Selina and Thomas are all friends. They each want to buy a washing machine, but they don't do it in the same way. The washing machine costs R2 000.

1. **Matthew has no cash so he decides to buy the washing machine on Hire Purchase over 6 months. The shop charges him 20% interest on the total amount. How much does Matthew pay altogether? Work it out in the space below.**

Answer:

2. **Selina decides to save for six months until she has enough money so she saves R334 a month for six months. She also earns interest of R300. But when she goes to buy the washing machine, the price has gone up to R2 100. Has she got enough to pay for it? Yes/No**

Work it out in the space below:

☐ **YES** ☐ **NO**

Lesson 3 – Saving and borrowing
Worksheet 1 Continued

3. Thomas has R1 800. He asks the shop owner if he will get a discount for cash. The shopkeeper says that he will give him a discount of 15%. Does Thomas have enough cash to pay for the washing machine at the discounted price? Yes/No

Work it out in the space below.

4. Say whether these statements are true or false. Give reasons for your answers.

- **Matthew made the best decision because he could use the washing machine while he was paying for it**

- **Selina made a good decision because she saved enough to pay cash even at the higher price and she had some money left over**

- **Thomas made the best decision, because he paid cash and he got a discount for cash**

Lesson 4 – Preparing for the future Worksheet

Statistics show that only six percent of South Africans will be financially independent when they retire. This is purely because of a lack of planning and because of people not saving enough for their retirement.

Research shows that the standard pension fund will not be sufficient to financially sustain the member upon retirement. More money should therefore be invested for one's retirement.

Consider the following information about Mandla.

Age:	**45 years old**
Retirement age:	**65 years old**
Current annual income:	**R120 000.00**
Expected annual salary increase:	**10%**
Current living expenses	**85% of salary**
Current equal contribution to pension fund and retirement annuity	**15% of salary**

Living expenses are expected to increase by 12% per annum

Based on the above amounts, the insurance company provides a schedule showing the estimated projected future amounts that will arise on retirement from the pension fund and retirement annuity.

These are:

The retirement annuity will produce a lump sum that will be re-invested to provide a fixed monthly income of R80 000.00 per month.

The pension fund will provide a lump sum payment after tax of R300 000.00 in 20 years time. This will be invested in the bank on a 32 day deposit account that is expected to pay fixed 35% interest on the year end closing balance in 20 years time.

1. **What is Mandla currently investing in the retirement annuity fund per annum?**

2. **What is Mandla investing in the pension fund per annum?**

3. **What will Mandla's annual salary be in 20 years time?**

4. **What will Mandla's living expenses be in 20 years time?**

5. **Will the monthly income provided by the retirement annuity fund be sufficient to cover Mandla's living expenses? If not, how much will Mandla need to withdraw from the pension fund savings each month to supplement his income?**

6. **Will Mandla have enough money to live off if he lives to 85 years of age?**

7. **If you were Mandla's financial adviser what advice would you give him? Write a letter to him making recommendations of what he could do differently to improve his plan.**

Use the reverse side of this sheet for your working out.

Senior Phase (Grades 7, 8, 9)

➔ Additional Worksheet 1

Answers:

Learners' answers will differ but they should be assessed on clarity of meaning and understanding of the question, as well as sentence construction, grammar and spelling.

(These activities are specially designed to assess learners' understanding of concepts and their ability to express themselves when explaining these. They are all based on English first additional language, LO4: Writing: The learner will be able to write different kinds of factual and imaginative texts for a wide range of purposes.)

You may use any or all of these with all grades in the Senior phase, depending on your learners' level of writing ability. Grade 9 learners should be able to answer all the questions.

➔ Additional Worksheet 2

Answers:

1.

1. Motor Insurance - essentially cover for collision, fire, theft and personal liability.
2. Household Contents - everything in your home, down to food in the freezer.
3. Home Owners - your house, its fixtures and fittings.
4. Personal Liability - things for which someone might sue you for.
5. All Risks - cameras, cell phones, sunglasses, bicycles… things more likely to be lost away from home than at home.
6. Personal Accident - this covers you against disablement (if caused by accident) and provides for your loved ones in the event of your death.
7. Travel - lost baggage, curtailed journey, medical treatment abroad.

You can insure these one by one, or in a vast variety of combinations. Some examples of overlaps include: for example, a Household Contents policy often gives some Personal Liability cover and items that may be covered under All Risks cover.

2. You take broker insurance when you
   -- see the broker as a security, alerting you to better options than you would find yourself;
   -- believe the broker's expertise helps minimise your costs, maximise your benefits, and free you of hassles.

   You choose direct insurance when you
   -- are confident that you can make informed decisions on your own;
   -- take the view that a middleman adds costs;
   -- fear that advisers advise according to their needs more than your needs.

3.1. Buildings $\frac{\text{Total value}}{10\,000} \times 13.50$

$= \frac{1\,340\,000}{10\,000} \times 13.50$

$=$ R1 809.00

Contents: $\frac{\text{Total value}}{1\,000} \times 5.60$

$= \frac{275\,000}{1\,000} \times 5.60$

$=$ R1 540.00

Total: $=$ R 1 809.00 + R 1 540
$=$ R 3 349.00

3.2. Monthly premiums:

R3 349 ÷ 12 = R279.08

→ Additional Worksheet 3

Answers:

1. Motor insurance essentially covers your motor vehicle against collision, fire and theft and person liability. When providing information to the consultant please provide accurate and as detailed information as possible to ensure that the correct information is given.

   Information needed by Insurer:

   Where is the vehicle parked? Be specific – is it parked in a locked garage, in a secure complex with a boom gate and security or out on the street, etc.
   Who normally drives it? Give the usual driver's age, gender, and circumstances, such as whether travel is mainly to and from work, to bridge-club at noon or night-club till dawn.
   Is the vehicle used for business? What business? Home-visit physiotherapy may be treated differently to debt-collecting.
   Does it have theft protection? Spell out what protection – immobilizer, gear lock, tracking system (as your insurer may well require certification by a rating body).

PLEASE NOTE: All motor insurance assumes that your vehicle is roadworthy. If it is not say, at claim time the tyres are found to be bald or the brake pads to be cardboard – then (let alone that you are open to prosecution) your insurance contract is void.
Never fear to ask your insurer questions. They're there to answer your questions, but they are regrettably unable to guess what you want to ask unless you help them out.

2. Household Contents covers what's in the house. Home Owners is bricks and mortar and roof and fittings and any improvements to the property.

The learning outcome and assessment standards that integrate with the questions below are as follows:

Economic and Management Sciences

Learning Outcome 3: Managerial, Consumer and Financial Knowledge and Skills

The learner will be able to demonstrate knowledge and the ability to apply responsibly a range of managerial, consumer and financial skills.

No assessment standards applicable

Assignment – Research / debate topic

Why do we need short-term insurance, what benefit does it provide to the average person.

Additional Worksheet 1

1. **Write two paragraphs stating the mistakes we make that get us into debt.**

2. **Explain the terms fixed and changing costs**

3. **Describe different ways of saving and give the advantages and disadvantages of these**

4. **Write a paragraph to explain what is meant by interest**

5. **Write a letter to a shop or a bank to complain about being overcharged**

Additional Worksheet 2

1. **Name the different types of short-term insurance available (name at least 5). And give a short description about each type.**

2. **What do you think is the difference between broker insurance and direct insurance?**

3. **When you spend a large sum of money on buying and furnishing a house, you need to protect your property and its contents. Theft or a disaster such as a fire or a flood could result in loss and cost a great deal of money to replace. In order to cope with such an occurrence, an insurance company will offer you a household insurance policy. When you insure your house and its contents, you pay a monthly premium based on the value of the buildings and the contents in the house.**

   Melanie Pillay insures her house valued at R1 340 000 and its contents valued at R275,000. The annual premiums for the insurance are:

   Buildings: R13,50 per R10 000 of cover

   Contents: R5,60 per R1 000 of cover

   3.1. Calculate the total annual cost of the insurance premium.
   3.2. Calculate the monthly premiums.

Additional Worksheet 3

1. **Your mom has purchased a vehicle recently. She needs to take out motor insurance. Write a letter to her as if you were her insurance adviser explaining to her the questions she will be asked by the insurance company when she takes out the insurance.**

2. **What do you think the difference is between Household Contents insurance and Home Owners insurance? Discuss this with your peers.**

Assessment Tools & Techniques

Assessment

There are many ways to assess learners, and as educators, we have to select the assessment tools and techniques that are most appropriate to the assessment task.
When we plan lessons we do so with assessment in mind, so we select the assessment standards and then plan a lesson around these, so that, at the end of a lesson, we can check to see that our learners have achieved the standard.

Baseline Assessment

This is the assessment that we do to assess what learners can and can't do at the beginning of a term, a year or when a new teacher takes over a class. Its purpose is to establish what learners can and can't do and to guide teachers, when planning lessons, as to which areas need to be addressed for the class as a whole and for individual or groups of learners who may have gaps in their knowledge and skills.

Continuous Assessment

We need to assess on an ongoing basis to ensure that we are monitoring and recording, not only learners' progress, but any problems that may arise and may need remediation. Observation books give us an ongoing record on which we can look back at the end of the year and see how well a learner has progressed.

Formal Assessment

In a formal assessment task, learners are told beforehand that they will be assessed in a particular way and they are told what they are expected to do in order to meet the standards. Tests and projects are examples of formative assessment.

Summative Assessment

When we do a summative assessment, we are looking at a whole section of work. A summative assessment could be a project, a pen and paper test or an interview, but it will cover all Assessment Standards addressed in that section.

1. Assessment techniques
   a) Teacher assessment

Teacher assesses learners according to the Assessment Standards chosen in planning the lesson. Be careful not to choose too many Assessment Standards for one lesson, but rather to *focus* on one or two. If there are many opportunities for integration in one lesson, don't try to assess all of them. Remember that in this programme the focus is on EMS with a strong link to Mathematics and the worksheets in this book are mainly number problems (Mathematics LO 1) while the activities on the CD have more of an EMS focus.

Remember, that when assessing, we look at the *verb* in the assessment standard. This tells us what it is that learners are expected to do to meet the requirements, e.g.

We know this when the learner:

- Recognises and uses equivalent forms of the rational numbers listed above, including:
  - percentages.

  This means that our learners must do activities that show us that they recognise and can use percentages in relevant situations.

  b) Self-assessment

Learners assess their own work. It is important to remember that learners cannot do this effectively unless they fully understand what the assessment standards mean and what is required.. However, they can become accustomed to reviewing and examining their work with simple rubrics such as this.

Self-assessment

Group participation Criteria	Always	Most of the time	Some-times	Never
I understood and followed the instructions				
I contributed to the work that the group did				
My group worked well together				
My group successfully completed all the tasks				

c) Peer/group assessment

Learners assess each other. This may be done in pairs, or it may be an assessment of the group as a whole. Again, the learners can not at this stage assess each other against the standard, but they can comment on participation and contribution and whether or not the task they were given was completed.

2. Assessment tools

In addition to rubrics, teachers may use any or all of these to assess learners

- Observation of learners' understanding and implementation of tasks, which can be recorded in an observation book
- Pen and paper tasks, such as the worksheets in this book
- Interviews/question and answers, which do not always require a 'right' answer, but rather an explanation of why the learner used a particular method, or where they thought they went wrong. This kind of technique is vital in establishing the learner's knowledge and values
- Projects and presentations, where groups or individuals are given time to design, plan and implement a project and to make a presentation of what they have done
- Drawings, painting and sculpture (using clay or Plasticine) where learners create a representation of something they have done or learned
- Rubrics which note learners' performance on a scale according to given criteria
- Drama where learners role play or dramatise a concept
- Portfolios, where any or all of learners' work can be kept as a physical record of progress. Remember that not only the best work should go into a portfolio. A learner who is performing badly at the beginning of the year should put inadequate work into the portfolio (dated) and as the year progresses, the learner's upward progress and improvement can be tracked.

Rating Code	Rating	Marks (%)
7	Outstanding achievement	80 – 100
6	Meritorious achievement	70 –79
5	Substantial achievement	60 – 69
4	Adequate achievement	50 – 59
3	Moderate achievement	40 – 49
2	Elementary achievement	30 – 39
1	Not achieved	0 – 29

These tools and techniques are more appropriate for some learning areas than for others but you should use as many of them as possible, in order to get an in-depth understanding of your learners' learning style, and to note which kind of activities they do best in.
For more information on Assessment refer to the Assessment Guidelines for each learning area where examples of rubrics, observation sheets and recording tools are clearly laid out.

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