TERM THREE MATHS NOTES

Introduce the standard unit of weight the kilogram (kg)

Emphasise that the standard unit helps to give accurate measurements.

Talk about the smaller units and their equivalent

1kg = 1000gm

$\frac{1}{2}$ kg = 500gm ($\frac{1}{2}$ of 1000)

Refer to $\frac{1}{2}$ of 10 then 100 then 1000.

$\frac{1}{4}$ kg = 250gm

(Not easy to teach)

Talk about different weighing scales. Carryout a practical exercise of children weighing themselves using a weighing scale.

Note

As you carry out the exercise, emphasise the use of heavier than, 'lighter than', the 'same as' or none of them is heavier because they have the same weight.

Use another weighing scale which uses stones. (usually used in shops)

Practical work

Pupils will weigh the above stones.

A stone of 1kg, 2kg, 5kg, 500gm e.g stones, sand, grass, e.t.c.

Written exercise **MK Primary MTC Bk 2 pgs 146 – 147.**

Converting units of weight

Note: To change from a big unit to a smaller unit you multiply e.g change from kg to grams.

Example

Pupils should know that 1kg = 1000gm

Change from kg to g

1. 3kg = ------ g

   1kg = 1000g

   3kg = 3 x 1000g

   3kg = 3000g

2. 4kg = ------ g

   1kg =1000g

   4kg = 4 x 1000g

   4kg = 4000g

3. 10kg = ----- g

   1kg = 1000g

   10kg = 10 x 1000g

   10kg = 10,000g

Give an exercise

Add weight (and this can be given as early morning exercise because it is the same concept of addition)

Examples

1. 10kg + 13kg = 23kg

10kg

+13 kg

23kg

2. $\frac{1}{2}$ kg + $\frac{1}{2}$ kg = $\frac{1+1}{2}$ = $\frac{2}{2}$ = 1kg

3. (You can include numbers involving re-grouping for revision purposes)

16kg + 8kg =

T	**O**
1	6kg
+	8kg
2	4kg

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Give some few word problems to help pupils read and interpret e.g

1. Sarah weighs 45kg and her sister Norah weighs 50kg. Who is heavier (or who is lighter)?

   Norah is heavier than Sarah or ……..

2. Find their total weight.

	4	5kg
+	5	0kg
	9	5 kg. Their total weight is 95 kg.

Reference:

Primary Mathematics for Uganda bk 2 pgs 50-52.

Subtraction (can be done as an early morning exercise)

Examples

1. 18kg - 4kg=

   1 8kg

   - 4kg

   1 4 kg

2. 4 2kg

   - 2 0 kg

   2 2 kg

3. 2 3 6 kg

   - 1 2 3 kg

   1 1 3 kg

Give some word problems.

Primary Mathematics for Uganda bk 2 pg 52 – 53.

E.g

1. A sack of potatoes weighs 50kg. If 20kg of the potatoes are sold, what weight of potatoes will be left?

   50 kg

   - 20 kg

30 kg

2. 28 kg of sugar take away 14kg of sugar.

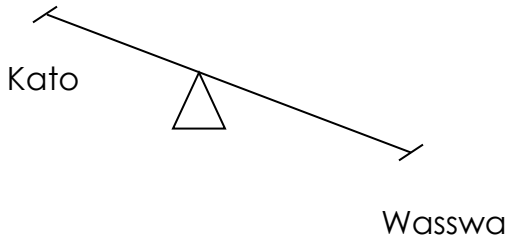
2 8 kg

\- 1 4 kg

1 4 kg e.t.c

TOPICAL TEST

1.



a) Who is heavier?

b) Who is lighter?

2. Change to kg

a) 7kg - g

1kg - 1000g

7KG - 7 X 1000g

7kg - 7000g

b) 4kg - g

1kg - 1000g

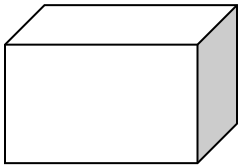
4KG - 4 X 1000g

4kg - 4000g

3. Which is heavier, a kilogram of sugar o a kilogram of grass?

None of them is heavier.

They have the same weight (equal)

4. a) 

12kg

b) 

11kg

a) Find the total weight of the two objects.

1 2 kg

+ 1 1 kg

2 3 kg

Their weight is 23 kg

b) Subtract the weight of object b from object a.

1 2 kg

- 1 1 kg

0 1 kg

The answer is 1 kg.

Measures

Time (revision work of primary one)

Telling time by the hour.

A clock face may have 2 or 3 hands. Emphasise the two i.e The minute hand and the hour hand.

The long hand is the minute hand.

The short hand tells us the hour.

Explain the second hand and the number of seconds in an hour.

The clock face has numbers 1 – 12

Note: 1 hour = 60 minutes

1 min = 60 seconds

$\frac{1}{2}$ hour = 30 minutes

$\frac{1}{4}$ hour = 15 minutes

1 day = 24 hours

$\frac{1}{2}$ a day = 12 hours

A day starts at midnight and ends at ……..

Practice telling time by the hour using individual clock faces.

Reference:

Fountain Mathematics pupils bk 2 pg 146 – 152

Primary Mathematics for Uganda bk 2 pg 100 (check 33)

LESSON THREE

Telling time in half hours (Revision)

Note:

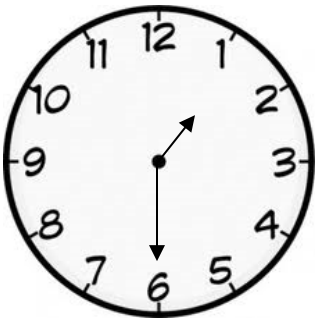
In one hour the minute hand goes all round the clock face and these are sixty minutes, (60)

From one number to another these are five minutes. (You can practice counting in fives)

In an hour, the hour hand moves from only one number to the next on the clock face.

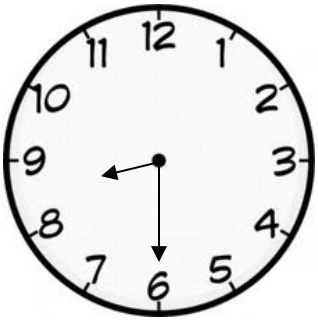
When the minute hand goes half way the clock face, the time is half past the hour.

e.g



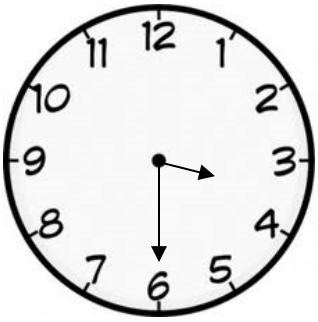
It is half past 1

It is $\frac{1}{2}$ past 1.



It is half past 8

It is $\frac{1}{2}$ past 8



It is half past 3

$\frac{1}{2}$ past 3.

When it is half past the position of the minute hand is always 6. The hand is half way past the hour.

Reference:

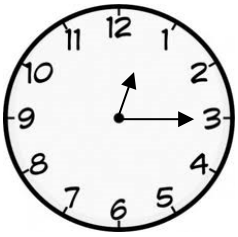
Primary Mathematics for Uganda bk 2 pg 101.

MK Primary Mathematics bk 2.

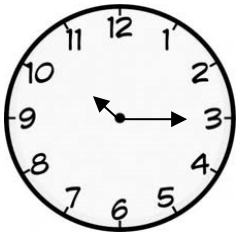
Telling time (a quarter past)

Children will be helped to count the small marking between each to figures showing minutes.

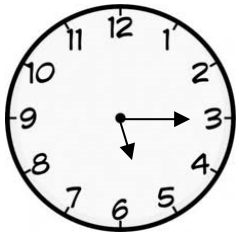
When they count by to 15 minutes teach them the word a quarter past.



It is a quarter past 12.



It is a quarter past 10



It is a quarter past five.

When it is a quarter past, the minute hand always points at 3 and the hour hand is slightly past the hour.

The proper movement of the hands is clockwise.

Tell the time practically before doing a written exercise.

NOTE: Practice the use of to and past in the top streams.

Reference: ***E A E P – Primary Mathematics bk 2 pg 57 - 59.***

Mk Primary Mathematics bk 2 pg 131 – 132.

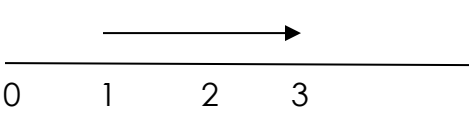
Talk about duration

Duration is the time taken for an activity to be done.

Duration is got by subtracting the end time from the starting time.

Examples

1. Baby Norah slept at 1:00 o'clock and woke up at 3:00 o'clock. For how long did the baby sleep?



The baby slept for 2 hours.

2. Dumba left school at 5:00 o'clock and reached home at 6:00 o'clock. How long did this journey take?

   6:00 – 5:00 = 1 hour.

3. If today is Monday, what day will it be after 2 days?

   Write word procedures showing duration. (Written exercise)

Reference:

Revision of P.1 work.

Talk about Days of the week and months of the year.

A week begins on Sunday and ends on Saturday.

Write the days in full and in short.

Sunday - Sun

Monday - Mon

Tuesday - Tues

Wednesday - Wed

Thursday - Thur

Friday - Fri

Saturday - Sat

Exercise revise table 7 and complete the table to show the numbers of weeks and days.

Months for the year and their days

January - 31

February - 28 or 29

March - 31

April - 30

May - 31

June - 30

July - 31

August - 31

September - 30

October - 31

November - 30

December - 31

Children will learn the rhyme.

- Thirty days have September, April, June and November.

All the rest have thirty one except February alone.

For it has 28 days or 29 in a leap year.

Reference:

Mk Primary Mathematics of bk 2 pgs 133 – 134.

Primary Mathematics for Uganda bk 2 pg 40.

Calendar

Use the calendars in class or send for old calendars from home.

Let pupils observe / study the calendar and note the following;

The months shown

The next month

The month before the next shown.

The first and last day of the month.

Dates which are highlighted. (public holidays)

Reference

MK Primary Mathematics 2000 page 138.

E.A.E.P Primary Mathematics bk 2 pg 56.

TOPICAL TEST

1. What is the first day of the week?

   Sunday.

2. How many days are there in 3 weeks?

   1 week = 7days

   3 weeks = 3 x 7 days

   = 21 days

3. Write these short forms in full.

   Tue – **Tuesday** Aug – **August**

   Wed – **Wednesday** Dec – **December**

4. How many months are there in one year? **12 months**

5. Write two months which have thirty days. **April, June, September or November.**

6. How many hours make a day?

7. Show the time.

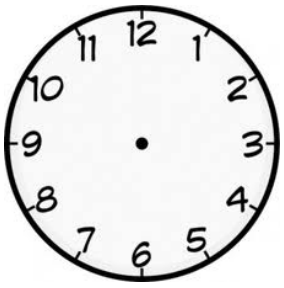
a) Two o'clock c) quarter past 11 o;clock

b) half past 7.

Telling time in quarter to:

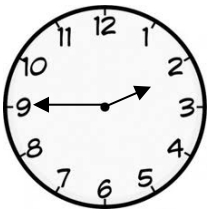
The time after half past any hour can be told using "to"

When the minute hand points to 9, we say " 15 minutes to or a quarter "to" the next hour.

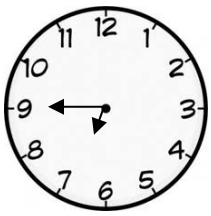


The hour hand is slightly pointing to the next hour.

Example

i) 

It is a quarter to 3.

ii) 

A quarter to 7.

Reference:

MK Primary bk 3 page 132.

Algebra

Algebra are equations in multiplication.

1. Emphasize recitation of tables to recall and be able to apply this knowledge when solving the equation.

Examples

1. $\boxed{5} \times 3 = 15$

   $= 15 \div 3$ Check $5 \times 3 = 15$

   $= 5$

2. $\square \times 4 = 12$

   $= 12 \div 4$ Checking $3 \times 4 = 12$

   $= 3$

When you are looking for the first gap, you divide the answer by the given number.

3. When you're looking for the gap in the middle, you divide the answer by the given number.

   $8 \times \boxed{2} = 16$

   $= 16 \div 8$

   $= 2$

   $10 \times \boxed{2} = 20$

   $= 20 \div 10$

   $= 2$

Reference:

MK MTC bk 2 pg 103

Fountain primary mtc bk 2 pg 114

Money

Vocabulary

Money	change
Coins	buying
Notes	selling
Currency	cost
Denominations	price
Shillings	cheap
Trade	conversation
Barter	crested crane
Bargain	purchase

Money is what we use to buy things we need. It is in form of coins or proper notes with the value printed on them.

Background of money

People of long ago bused to get things they wanted through barter trade ie exchanging different items because they did not have money.

(Talk about the advantages and disadvantages)

Indians introduced rupees afterwards this money was replaced by the shilling which we use up to date.

Currency

Currency is the type of money that is used in a country. Different countries have different currencies e.g

Ugandan currency is shillings

Kenyan currency is shillings

Tanzanian currency is shillings

Nigerian currency is Naira

Rwandan currency Francs

American currency is dollar

UK currency is pound.

Ugandan currency is in two forms.

Coin and paper notes. These are of different denominations.

Coins	**notes**
Shs 50	shs 1000
Shs 100	shs 2000
Shs 200	shs 5000
Shs 500	shs 10,000
	Shs 20,000
	Shs 50,000

Each denomination has features. Children will look at real money or specimen from newspapers.

Currency

Shs 50 coat of arm

Shs 100	a cow, coat of arm
Shs 200	fish, coat of arm
Shs 500	crested crane head, coat of arms

Notes

Shs 1000	kobs, coat of arm, monument
Shs 2000	fish swimming, monument, river, parliament (part), coat of arms
Shs 5000	birds nest flying, monument, coat of arms, parliament, image of crested crane.
Shs 10,000	banana plantation, pottery, monument, waterfall, image of a crested crane.
Shs 20,000	river / lake, monument, cows grazing, coat of arm, image of crested crane, people holding a flag, coat of arms.
Shs 50,000	mountain gorillas, monument
T/Aids:	real money, text books, specimen chart.

Reference:

MK Primary MTC bk 2 pgs 122 – 123.

MK Primary MTC Bk 2 pg 176.

Getting equivalent amount of money (conservative) (use real money)

Changing bigger denominations to smaller denominations e.g

a) Two coins of shs 50 are equivalent to 1 coin of shs 100.

   Shs 50 + shs 50 = 100

b) Five coins of shs 100 are equivalent to sh 500.

Shs 100 + shs 100 + shs 100 + shs 100 + shs 100 = shs 500

Reference

Understanding Mathematics book 3.

Shopping

Vocabulary

Price list	customer
Balance	shopkeeper
Cost	cheap
How much	expensive
Change	expenditure

<u>Shopping game</u>

Using the shopping language

Customer: Good morning / afternoon Sir / Madam

Shopkeeper: Good morning ……

Customer: May I have ……

Shopkeeper: Yes, you may.

Customer: How much does it cost?

Shopkeeper: …….. e.t.c

Children will use the class shop and price list. They will discuss the price list and identify the cheapest item and most expensive item. (They will use the words "cheap" and "expensive" to build their understanding)

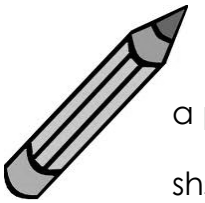
Buying and selling

Finding total expenditure basing on a price list.

Example

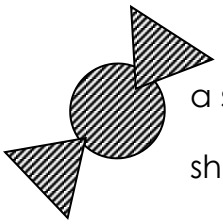
A book

Shs 200



a pencil

shs 100



a sweet

sh 50.

Pupils will study the price list then answer the questions.

a) How much will you pay if you buy a pencil?

b) How much will you pay for the 2 books?

One book = sh 200

Two books = sh 200 Or sh 200

X 2 + sh 200

Sh 400 sh 400

c) How much money will you pay if you buy a book and a pencil?

A book sh 200

A pencil + sh 100

Sh 300

I will pay shs 300 for a book and a pencil.

Finding (balance / change) (subtraction)

Change / balance is the money you get back after paying more than the cost of the items you have bought.

You have a price list in a shop

A bottle of soda	sh 700
A cake	sh 300
Biscuits	sh 500
A bun	sh 100

a) If I have sh 500 and I buy a cake, how much will I remain with?

Sh 500

\- sh 300

Shs 200

Joyce will remain with sh 200.

Reference:

Mk Primary MTC bk 2 pg 126 – 7.

Fountain Primary MTC bk 2 pgs 142 – 144.

TOPICAL TEST

Match correctly

1.	Money	feature
	Shs 200	cow
	Shs 100	fish
	Shs 500	head of a crested crane

2. How much money do you have if you have 3 coins of shs 100?

Sh 100 + sh 100 + sh 100 = sh 300

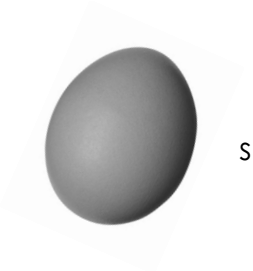
3. How many coins of sh 500 make one thousand shillings?

   Sh 500 + sh 500 = sh 1000

   2 coins of sh 500 make shs 1000.

4. If one apple cost shs 600, how much will two apples cost?

5. Study the price list.

 Sh 700  sh 500  sh 200

a) What is the cheapest item?

b) How much will you pay for 2 apples?

c) What is the total cost of a pineapple and an egg?

d) If you have shs 1000 and you buy one apple, how much money will you remain with?

e) What is the cost of 3 eggs?

<u>Algebric equations in division</u>

Apply the knowledge of tables

Note: To find the dividend, you multiply the quotient (answer) with the division or you can use the multiplication table.

Example

1. $\boxed{18} \div 3 = 6$

$= 6 \times 3$

$= 18$

x	3
1	3
2	6
3	9
4	12
5	15
6	18

The missing number is 18.

2. $\boxed{25} \div 5 = 5$

$= 5 \times 5$

$= 25$

x	5
1	5
2	10
3	15
4	20
5	25

The missing number is 25.

Finding the division

You divide the dividend by the quotients

E.g

1. 12 ÷ ☐ = 6

   = 12 ÷ 6

   = 2

The missing number is 2.

Reference:

MK MTC bk 2 pg 105 -106

Fountain Primary mtc bk 2 pg 114.

TOPICAL TEST

1. ☐ X 6 = 12
2. ☐ X 5 = 10
3. 7 X ☐ = 21
4. 11 X ☐ = 44
5. 15 ÷ ☐ = 5
6. 24 ÷ ☐ = 6
7. ☐ ÷ 7 = 2
8. ☐ ÷ 9 = 3

Word problem

9. What number do I multiply by 5 to get 30?

   ☐ X 5 = 30

10. Think of a number divide it by 4. Your answer is 4. What is the number?

Reference

Primary mathematics for Uganda bk 2 pgs 52 – 53.

MK MTC bk 3 pgs 173 – 174.

Measures

Measuring area using arbitrary units e.g match boxes, books, sheets of paper.

Definition

What is area?

Area is the number of square units which cover the surface of a figure.

It is the space a flat surface takes up.

2. To build understanding measure area using things like match boxes, papers, e.t.c

Use cut small squares of paper of the same size and fit them on a larger square piece of paper. Use glue to fix them.

How many small squares are there in the larger square?

Compare areas of different objects.

Pupils will be introduced to counting squares covering a surface.

Activity

Reference

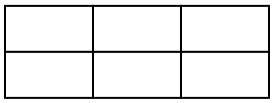
Fountain Primary mathematics bk 2 pg 159 – 160.

MK MTC bk 3.

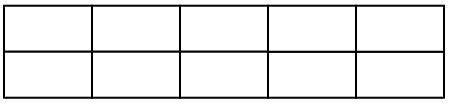
Primary mathematics for Uganda pg 107 – 109.

Examples:

Find the area of the following figures by counting squares.



Area = 6 squares

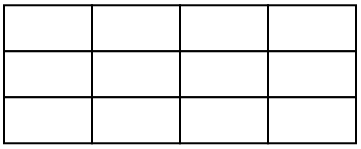


Area = 10 squares

Finding Area by multiplying

(Supplement the first exercise)

Multiply the number of squares across by the number of a square down words.



3 squares

4 squares cm

A = 4 sq cm x 3 sq cm

A = 12 sq cm.

Reference:

MK MTC bk 3 pgs 156 – 158.