

ACTIVITIES IN NUMERACY TEACHER'S GUIDE

FOR KINDERGARTEN

1

Evelyn Quartey-Papafio



© Evelyn Quartey - Papafio, 2020

All rights reserved. No part of this book may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system without permission from the copyright holders.

ISBN: 978 - 9988 - 649 - 26 - 6

Published and Printed in Ghana
By Masterman Publications Ltd.
P. O. Box AN 19720
Accra - North
Ghana

Tel: +233 - 302 - 325057 / 8 / 05473232344
Email: masterman48@yahoo.com / info@mastermanpublications.com
Website: www.mastermanpublications.com

DEDICATION

This book is dedicated to my children Marian, Richard, Theresa and Edward

PREFACE

The Teacher’s Guide for Activities in Numeracy for Kindergarten 1 has been designed to provide explanation on how the Strand and Sub-strand of various Activities under all 7 Themes can be conveniently handled by the teacher/parent.

The Guide provide a step by step procedure for each Activity under its Strand, Substrand and indicators/Objectives.

The Workbook – Activities In Numeracy has carefully selected Practical activities based on the 7 themes of the Ghana Education Service Standards-Based Curriculum for Kindergarten of September 2019. (All About me, My Family, Values and Beliefs, My Local Community, My Nation Ghana, All Around us and My Global Community).

The activities in the workbook are graded to match the growing needs in Numeracy Activities for the Kindergarten one child. The procedures in teaching Numeracy Activities use the integrated approach and as such connects all learning areas of language, creative art and Our World and Our People to make the learning holistic.

It is expected that the teacher/parent will carefully and patiently go through each Strand and Sub-strand playfully with a lot of fun as suggested by the Teacher Guide to make the learning enjoyable to the child; while taking cognisance of the competencies expected to be developed by the child.

THEME 1: ALL ABOUT ME

STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Number	<i>1 and 2</i>	Whole Numbers: Counting and Representation and Cardinality – <i>Counting Objects 0 to 5</i>	1 - 4
Geometry and Measurement	<i>3 and 4</i>	Line and Shapes – <i>Shapes</i>	5 - 8
Number	<i>5</i>	Whole Numbers: Counting and Representation and Cardinality – <i>How Many? Counting Objects 1 to 5</i>	9 - 10
Handling Data	<i>6</i>	Data (Collection, Presentation, Analysis and Interpretation – <i>Classify: Colour</i>	11 - 13
Number	<i>7</i>	Whole Numbers: Counting and Representation and Cardinality – <i>Matching: Part of the body to tools used for caring for the body</i>	14 - 16
	<i>8, 9, 10, 11 and 12</i>	Whole Numbers: Counting and Representation and Cardinality – <i>Count and Match</i>	17 - 18
Handling Data	<i>13, 14 and 15</i>	Data (Collection, Presentation, Analysis and Interpretation – <i>Classify and Count</i>	19 - 21
Number	<i>16</i>	Relationship Between Numbers – <i>More than '>', Less or Fewer than '<', Same as '='</i>	22 - 25
	<i>17</i>	Data (Collection, Presentation, Analysis and Interpretation – <i>Classify and Count the word by Colour and Length</i>	26 - 28
Geometry and Measurement	<i>18, 19, 20 and 21</i>	Lines and Shapes – <i>3 Dimensional Objects</i>	29 - 34
Number	<i>22</i>	Whole Numbers: Counting and Representation and Cardinality – <i>Counting Syllables</i>	35 -36

	23	Lines and Shapes – <i>3 Dimensional Objects and Plane Shapes</i>	37 - 38
THEME 2: MY FAMILY			
STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Number	25 and 26	Whole Number Operations – <i>Subtraction (Take away)</i>	39 - 43
Handling Data	27 and 28	Data (Collection, Presentation, Analysis and Interpretation – <i>Count and Compare</i>)	44 - 46
Number	29, 30, 31 and 32	Relationship Between Numbers – <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	47 - 49
	33 and 34	Relationship Between Numbers – <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	50 - 52
Algebra	35	Non-numerical Pattern and Relationships – <i>One More</i>	53 - 56
Number	36, 37 and 38	Whole Numbers Operations – <i>Addition</i>	57 - 59

THEME 3: VALUES AND BELIEFS

STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Number	30 and 40	Relationship Between Numbers – <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	60 - 62
Geometry and Measurement	41	Lines and Shapes – <i>Patterns with Shapes</i>	63 - 64
	42, 43 and 44	Measurement – <i>Telling the Time of the day</i>	65 - 66
Number	45	Whole Number: Counting and Representation and Cardinality – <i>Counting Letters in Words</i>	67 - 69
	46 and 47	Relationship Between Numbers – <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	70 - 72
Geometry and Measurement	48, 49, 50 and 51	Lines and Shapes – <i>2D and 3D Shapes</i>	73
Number	52 and 53	Whole Number: Counting and Representation and Cardinality – <i>Count the Number of Sounds in a Word</i>	74 - 76
	54 and 55	Relationship Between Numbers – <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	77 - 79
Handling Data	56, 57 and 59	Data (Collection, Presentation, Analysis and Interpretation – <i>Classification: Sorting by Colour</i>	80 - 82
Number	58	Whole Numbers Operations – <i>Addition</i>	83 - 84

THEME 4: MY LOCAL COMMUNITY

STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Number	<i>60 and 61, 66, 70, 71 and 73</i>	Whole Numbers Operations – <i>Subtraction: Take away (-) 1 to 9</i>	85 - 90
	<i>62, 63, 64 and 65, 74, 75 and 76</i>	Whole Numbers Operations – <i>Addition: How many all together</i>	91 - 96
	<i>67, 68, 69 and 72</i>	Whole Number: Counting and Representation and Cardinality – <i>Counting words in Sentences</i>	97 - 99

THEME 5: MY NATION GHANA

STRAND		SUB-STRAND/ACTIVITY	PAGE
Number	<i>77 and 78</i>	<i>Whole Numbers Operations – Addition</i>	100 - 102
		<i>Whole Numbers Operations – Addition and Subtraction</i>	75 – 76
		Relationship Between Numbers – <i>Compose and Decompose 1 to 9</i>	77 – 78

THEME 6: ALL AROUND US			
STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Handling Data	79, 80 and 82	Data (Collection, Presentation, Analysis and Interpretation – <i>Classification</i>)	103 - 106
Algebra	81, 83 and 84	Non-numerical Patterns and Relationships – <i>Patterns</i>	107 - 109
Geometry and Measurement	85, 86, 87, 90, 91, 95	Lines and Shapes – <i>3D and 2D Shapes</i>	110 - 113
	88, 89, 92	Positions – <i>Telling Positions of Objects in Space: Left, Right, On top of</i>	114 - 117
	93, 94	Positions – <i>Telling Positions of Objects in Space: Position of Given Numbers</i>	118 - 119
	96, 97, 98 and 100	Lines and Shapes – <i>2D and 3D Objects</i>	120 - 127
	99 and 105	Positions – <i>Telling Position of objects in Space: Position and motion of objects in relation to others</i>	126 - 130
Handling Data	101, 108 and 109	Data (Collection, Presentation, Analysis and Interpretation – <i>Classify and Count up to 9</i>)	131 - 134
Number	102	Relationship Between Numbers – Sort and <i>Compare: More than '>', Less or fewer than '<', Same as '='</i>	135 - 137
	103 and 106	Whole Number: Counting and Representation and Cardinality – <i>Matching Objects</i>	138 - 140

THEME 7: MY GLOBAL COMMUNITY

STRAND	ACTIVITIES	SUB-STRAND/ACTIVITY	PAGE
Number	<i>104, 107 and 110</i>	Whole Numbers Operations – <i>Addition and Subtraction</i>	141 - 145

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITY 1 – K1.1.1.1.7 and Activity 2- K1.1.2.1.4 (Pages 1 - 2)

COUNTING OBJECT

Content Standard: Demonstrate the understanding that all learners are wonderful and have unique features that make them different from other people and other God’s creation in the environment.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking, Creativity and Innovation.

Introduction

Recognition of numbers support the development of other number skills such as Counting. Teaching Counting at the kindergarten level improves the child’s readiness for other numeracy concepts, that will be taught in the future such as addition and subtraction. By the kindergarten age, children have learnt some number rhymes and songs which teach them some number names before they enter kindergarten. However, to be able to count correctly, children need to pay attention to the number names in order. Children can thus count their biscuits and play things (for example) correctly. Matching and sorting are some of the child’s earlier skills learnt before counting.

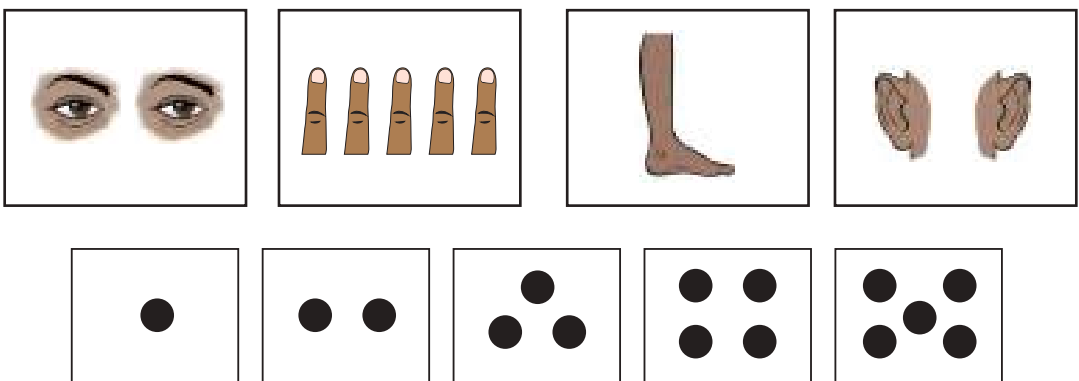
Key Words- Number Names -one, two, three, four, five
Count, how many. Head, ears, eyes, mouth, fingers, leg.

Indication/Objectives

Create sets of human parts that are similar and represent them with numbers up to 5.

Materials/Resources

Countable objects- cups, ball, pebbles, picture cards, dot cards



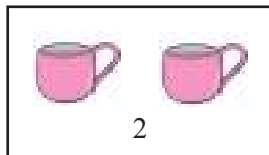
Procedure /Methods

Practical Activities A

1. Have learners stand in a semi-circle or horse shoe shape.
2. Learners say or sing (with actions)
 - I have one head; how about you? 3x
Touch, touch, touch your head like I do.
Let's count one.
 - I have two eyes, how about you? 3x
Blink, blink, blink, as I do .
Let's count them, one, two.
 - I have one mouth, how about you? 3x
Smile, smile, smile with your mouth as I do.
Let's count , one
Continue with:
 - I have two shoulder...,
move ,move move your shoulders.
I have five fingers.....
Wriggle, wriggle, wriggle them as I do....
3. Have learners sit in a semi-circle.
Clap and say.. 1,2,3,4,5, as learners clap at each number.
4. Put a collection countable objects into a bowl- 2 red cups, 2 yellow cups and two pebbles .
5. Have learners sort the objects into groups.
6. Have a learner arrange the 2 red cups horizontally on a mat in front of the group.



7. Sit on the mat with learners. Say: We will count the cups. We will touch as we count from left to right.
Have learners use their right hand to point to the left side of the classroom; then (in turns) touch the cup on the left.
8. Say: We will start counting with the number 1 (one) as we touch the first red cup (from the left).



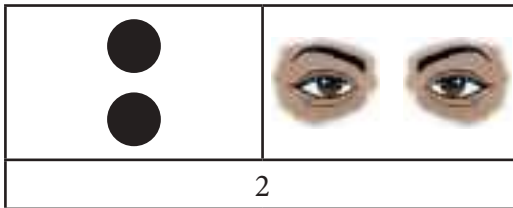
Ask: how many cups do we have in the bowl?

Answer: 2 cups.

9. Follow the above procedure to count the 2 yellow cups.

Practical Activities B

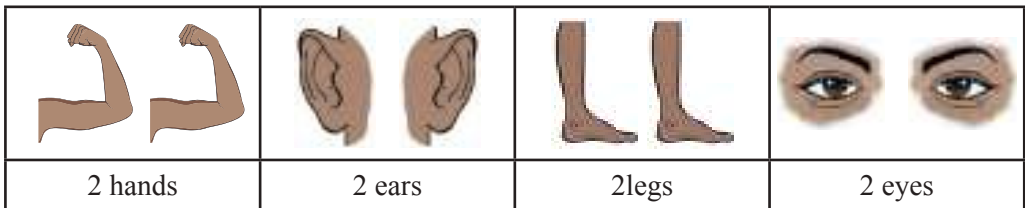
1. Do physical activities with learners as they count 2.
Have learners jump, clap and stomp their feet alternately.
2. Have each learner pick a small bowl/box and count two objects into it.
3. In pairs, learners identify and count parts of their bodies that are 2 in number. –legs, ears, hands, shoulders, eyes.
4. In turns, learners pick cards of the parts of the body that are 2 in number and match each one with the corresponding dot card.
5. Show the number card 2.



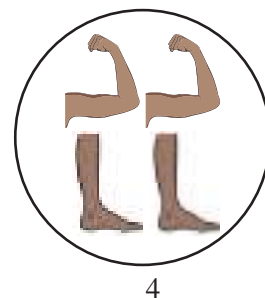
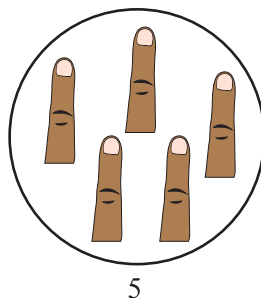
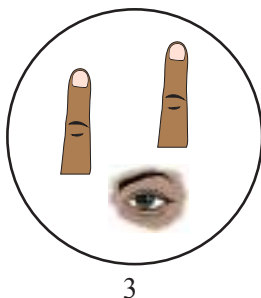
Note: Use the procedure in Practical Activity B to teach other numbers- 1, 3, 4, 5.

Assessment

1. Draw any parts of your body that are 2.



2. Draw and write the correct number underneath. 2 fingers and 1 eye, 5 fingers, 2 arms and 2 legs.



WORK BOOK:

Activities In Numeracy Kg1

Activity 1 – K1.1.11.7 and Activity 2- K1.1.2.1.4 after Practical Activities and Assessment exercises.

- Read and explain the instruction to the learner
- Let the learner work independently
- Support learners who need individual attention

Sub Strand: Lines and Shapes

Activities 3 and 4 – K1.1.2.1.7 (Pages 3 - 4)

SHAPES

Content standard: Demonstrate the understanding of appropriate names of the part of the body and describe the function of each part.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

In the early years, the child explores, and plays with things around him/her. He/she comes into contact with play things and objects of varied shapes, sizes, lengths and colours. These include leaves, plants, buildings, clothes, ropes, fruits and vegetables.

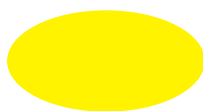
Teaching the child about shapes, sizes, lengths and colours is a great way to give him/her some vocabulary for describing the world around him/her. As children learn to identify shapes and colours, they can sort and classify objects based on these attributes. (Learning about shapes and colours open the way for verbal communication, sorting and classifying). The child notices that the big blue ball is different from the small brown one(colour).

Indicators/Objectives: Compare lines and other shapes that are same and different

Materials/Resources: Countable objects of varied shapes and colours- cups, balls, empty packets, Fruits and vegetables (real or modeled).



square



oval



triangle






rectangle

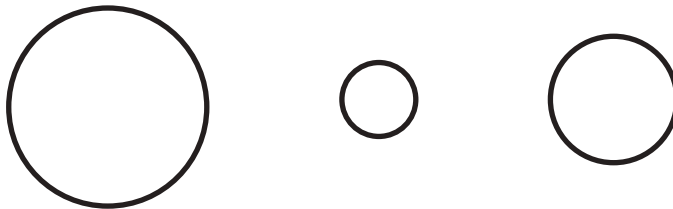


star

Procedure/Methods:**Practical Activity A- Shape**

1. Sit learners in a semi-circle on a mat on their chairs.
2. Have them sing- ' I have one head' (Refer to Appendix).
3. Put a collection of countable objects in a bowl/on a table in front of learners- empty packets, toilet roll tubes, empty milo cans, balls; plane shapes (rectangle, triangle, square, oval, circle). Fruits such as orange, banana and sugarcane.
4. Pick an item of a particular shape, example , a ball. Talk about it – it rolls, it is round. Have others pick other objects that are round. Draw the ball on the board or a large sheet of paper.

5. Present the plane shapes and have a learner identify a shape that is round and can roll like the ball on the board. 
6. What other thing looks round in the things around you?  orange
7. Which parts of our bodies look round?  Head
- 8.
9. What other things are round or have round parts?
Plate, edges and base of cups, bowls and jars.
10. Provide sheets of papers and have learners trace the bases and edges of the objects in point 8. They will get circles of various sizes. Have them colour the circles.



Have learners talk about the colours, and sizes of their circles.
My circle is big. It is blue. It is bigger than Kwesi's circle.

11. In a separate activity, have learners use clay or play dough to model round objects; have learners paint their objects
Have learners talk about (a) Shape of their objects-round . You will get a circle when you trace round it.
(a) sizes – big and small, bigger than and smaller than.
(b) colours of their objects- green, yellow, brown, red.....

Practical Activity B

1. Display the objects under Materials/resources
2. Have learners manipulate the materials.
3. Pick and show a (box)- fruit drink packet.
4. Invite other learners to pick other packets like that.
5. Provide sheets of papers and have learners trace their empty packets.
6. Have learners colour their drawings and talk about shape, colour and size.
Rectangles; big, small, red , blue ...



7. Have learners look around the classroom /school compound and identify solid objects like the empty packets – the cupboard, window, note book, crayon packets....
8. The face of each of the objects is a rectangle: the face of the cupboard, teacher's table, exercise book...

Practical activity C

1. Show boiled egg, and a large modeled egg to learners.
2. Have a learner trace round the modeled egg on the board. –An oval shape would emerge.
3. Say: This is an oval shape. An egg has the same shape.
4. In pairs, have learners look at each other’s faces and the parts of their bodies they can see.
Can you see any part of your friend’s body that is oval in shape? Eyes
What food item is oval in shape? -----Pawpaw
5. Have learners trace oval shaped cards.
6. Learners use clay/play dough to model eggs of different sizes and paint them

Practical Activity D

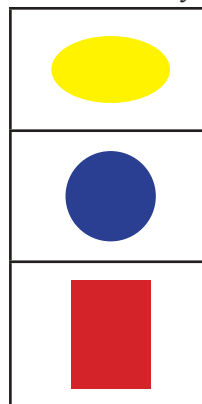
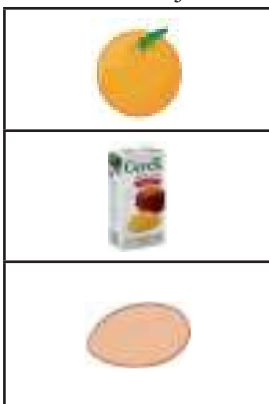
Materials and resources: Sticks of varied length-3 feet, 1 ½ feet, 6 inches; cut up long and short ropes and cards, (between 5 to 10 of each length) long and short sweeping brooms and brushes with handles, perforated bottle tops, and large beads for threading.

Procedure/Methods

1. Show a 3 feet stick (blue)and say: This is a long stick.
2. Have learners repeat. “This is a long stick”
3. Show a 1 ½ feet long stick (red), held against the 3 feet stick from the same point/ places on a table from the same point. Say the red stick is short.
4. Learners repeat.
5. In comparing the two sticks- The blue stick is longer than the red stick,
6. Also – The red stick is shorter than the blue stick.
7. In pairs, learners pick any two lengths of objects, compare and talk about them.
8. Have learners compare and sort long and short items from the collection.
9. Have learners sort and classify various lengths.
10. Pick same lengths of sticks, ropes or cut –outs and teach –as long as, as short as or same lengths.

Assessment:

1. Match each object to its plane shape (After Practical Activity 1)



After Practical Activity 2

2. Have learners thread one long row of bottle tops and one short row of bottle tops.

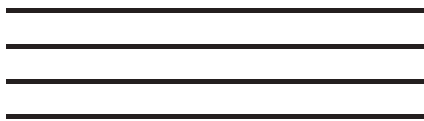


In pairs have learners compare and talk about their items, using the appropriate vocabulary - Long, short, longer than, shorter than and as long as/as short as.

3. Draw a long line and a short line.



4. Draw 4 lines that are equal in length.



WORKBOOK:

Activities In Numeracy Kg1

Activity 3 – K1.1.21.7 (after Practical activity A-C)

Activity 4- K1.1.2.1.7 (after Practical activity D)

- Read and explain the instruction to the child
- Let the child work independently
- Support learners who need individual attention

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITY 5 –K1.1.3.1.2 (Page 5)

HOW MANY? COUNTING OBJECTS 1 – 5

Content Standard:

Demonstrate the understanding of the importance of personal hygiene and how to take care of my body parts.e.g. hand, feet, finger nails-washing, face washing, nose

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction: Refer to Activity 1 – K1.1.1.1.7

Indicators/Objectives

Watch a short video clip and talk about how to care for the various parts of the body.(Count the materials used to clean the body)

Materials/Resources:

- Empty packets of tooth paste and soaps, tooth brushes, chewing stick, towels.
- Materials under Activity 1 – K1.1.1.1.7

Procedure/Methods:Refer to Activity 1 K1.1.1.1.7

Song: ‘This is the way we wash our face’

1, 2, 3, 4, 5 We are counting mangoes’

Objects to be counted to include cleaning materials under materials and resources.

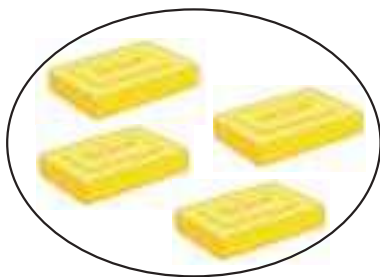
Assessment

1. Mention a body part, and one material used in cleaning it.

Example: Body part-Hands.

One material for cleaning- Soap

Mention a number of the materials to be counted. (Example: Count 4 cakes of soap)



WORKBOOK

Activities In Numeracy Kg 1

Activity 5- K1.1.3.1.2

- Do the exercise after Practical Activity A and B.
- Activity 1-K1.1.1.1.7.(use the cleaning materials in the counting process)
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

ACTIVITY 6 – K1.1.3.1.2 (Page 6)

CLASSIFY: COLOUR

Content Standard

Demonstrate the understanding of the importance of personal hygiene and how to take care of my body parts.e.g. hand, feet, finger nails-washing , face washing, nose.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction: Refer to Activity 1 – K1.1.1.17

Indicators/Objectives

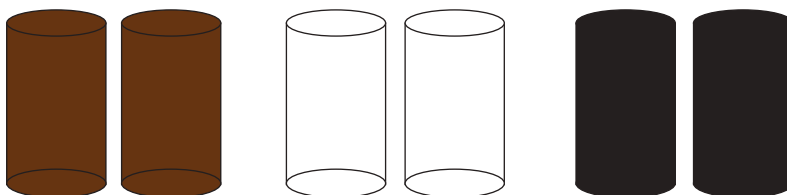
Watch a short video clip and talk about how to care for the various parts of the body. (Classify cleaning materials according to their colour)

Materials/Resources:

- Empty packets of tooth paste and soaps, tooth brushes, chewing stick, towels, sheets of papers in varied colours- to include colours of empty packets and other materials.



- Toilet roll tubes wrapped with papers of various colours.



- Large bowl/box;
- Materials under Activity 1 – K1.1.1.1.7

Procedure/Methods:

Practical Activity A

Revise Practical Activities under -Activity 1 - K1.1.1.1.7

1. Sing: ‘This is the way we wash our face’
and ‘ 1, 2, 3, 4, 5 We are counting mangoes; 6, 7, 8, 9, 10 eating merrily.
2. Put objects to be sorted/classified (including objects for cleaning the body) into a large bowl.
3. Learners sing (‘ 1, 2, 3, 4, 5. We are counting mangoes’) as they pick an item each from the bowl.
4. Show a red sheet of paper to learners: Say this is a red sheet of paper. The colour of the paper is red.
5. Learners repeat the sentences, emphasizing the colour red.
6. Say: look at the item you have picked. If it is red or has the colour red on any part, come and stand in front of the door. Each learner points at the colour(red) on her item.
7. Ask: look round the room and touch, point or name anything that has red in it-
Answer:-- bags, shoes, ribbons in children’s hair, plates, cups...

* Use the step 1 to 7 to teach other colours.

Practical Activity B

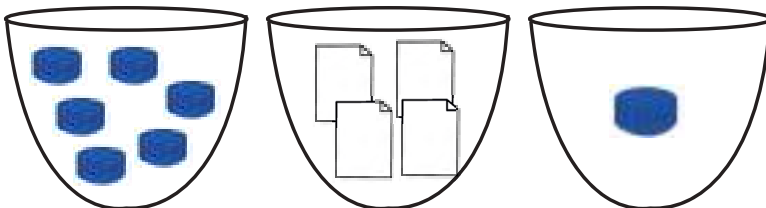
1. Have learners sort the items in the large bowl according to colours.(the items are grouped on tables, boxes, or bowls) – red, green, blue, pink, orange, yellow etc).
2. Learners describe each item by name of colour.

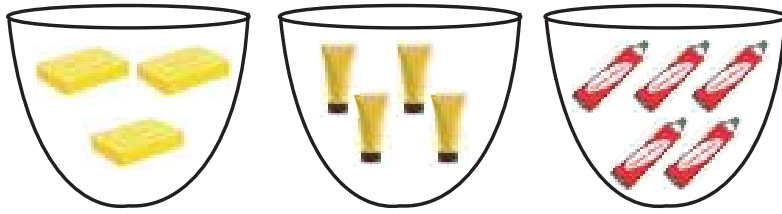
Assessment

1. Draw 4 items and use the following colours in colouring them.(One colour for each drawing) – blue, orange, yellow, and green.



2. In groups of 4, give learners a bowl of bottle tops, cut-out sheets of colourful papers and tubes to classify according to colours





WORKBOOK

Activities In Numeracy Kg1

Activity 6 – K.1.1.3.1.2

- Do the exercise after Practical Activity A and B
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

*ACTIVITY 7 – K1.1.3.1.6 (Page 7)***MATCHING PARTS OF THE BODY TO THE TOOLS USED FOR CARING FOR THE BODY**

Content Standard: Demonstrate the understanding of the importance of personal hygiene and how to take care of my body parts.e.g. hand, feet, finger nails-washing, face washing, nose

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

Recognition of numbers support the development of other number skills such as Counting. Teaching Counting at the kindergarten level improves the child's readiness for other numeracy concepts,that will be taught in the future such as addition and subtraction. By the kindergarten age, children have learnt some number rhymes and songs which teach them some number names before they enter kindergarten. However to be able to count correctly, children need to pay attention to the number names in order .Children can thus count their biscuits and play things (for example) correctly. Matching and sorting are some of the child's earlier skills learnt before counting.

Matching helps us identify same or similar objects based on common properties. Matching helps to improve concentration, improves the ability of finding similarities and differences between objects, increases attention level given to an object by paying more attention to the details on it .

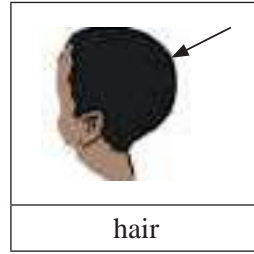
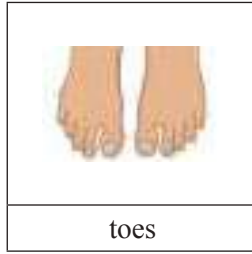
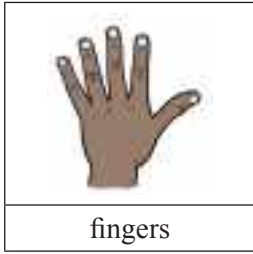
- Learning matching skills in pre-school will support children to match letters and sounds in Reception class.
- Being able to match items and explain why they go together is important for cognitive skills and ability.
- Matching skills are involved in visual discrimination- same and not the same.

Indicators/Objectives

Match the parts of the body to the tools we use in caring for the body and colour them with the same colour.

Materials/Resources:

- Empty packets of tooth paste and soaps, tooth brushes, chewing stick, towels, sponge(net and local), brushes and combs.
- Picture cards of parts of the body – body, fingers and toes, hair



Procedure/Methods:

Practical Activity A

Have learners form a circle and sing.

1. Song: ‘This is the way we wash our face’
‘ 1, 2, 3, 4, 5 We are counting mangoes’
2. Revise Practical Activities under Activity 6- K1.1.3.1.2
3. Talk about parts of the body and the tools used for caring for them.
 - Whole body.....soap, sponge, towel.
 - Hairsoap, sponge, towel, comb, brush.
 - Finger and toe nails.....nail clipper, nail file.
 - Teethtooth brush, tooth paste, chewing sponge/stick.
4. Put learners in groups of 4. Give each group a collection of tools for caring for the body and one picture card each of body parts
5. Spread a sheet of old news paper/calendar/brown paper. Have learners put out a body part on one side and the tools for caring for the body part directly opposite the body part.

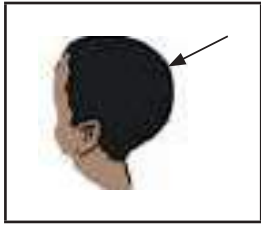


6. Have each group talk about their activity.

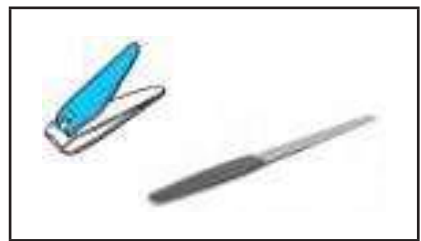
Assessment

1. Draw one body part and colour.
Draw the tools for caring for it.
Draw a line to match the body part and the tools for caring for it.

Example :haircomb.brush



2. Mention a body part, and the tools used in cleaning it.
Example: Body part- Teeth.
Tools for caring for it- tooth brush, tooth paste, local chewing sponge/stick.
3. Draw one body part and the tools used in caring for it.



WORKBOOK

Activities In Numeracy Kg1

Activity 7 – KI.13.1.6

- Do the exercise after the Practical Activity .
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITIES 8 K1.1.3.1.7, 9 - K1.1.3.1.7, 10 - K1.1.3.1.8, 11 - K1.1.4.1.3, 12 - K1.1.4.1.4
(Pages 8 - 12)

COUNT AND MATCH

Content Standard: Demonstrate the understanding of the importance of personal hygiene and how to take care of my body parts.e.g. hand, feet, finger nails-washing, face washing, nose

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

Children learn some number names especially through rhymes and songs well before they are formally taught to count things in the correct order. Recognition of numbers (through matching/sorting activities- where the child identifies pictures, colours, shapes and numbers that are the same according to a given criteria) support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child’s readiness for other numeracy concepts, which will be taught in future ,such as addition and subtraction. As the child matches, he/she develops the skill of is identification and discrimination. Example , that 5 fingers matches another group of 5 body parts - 2 eyes, 2 ears and 1 neck. (Matching by quantity)

Other criteria could be by size, kind, colour, and shape.

Indicators /Objectives

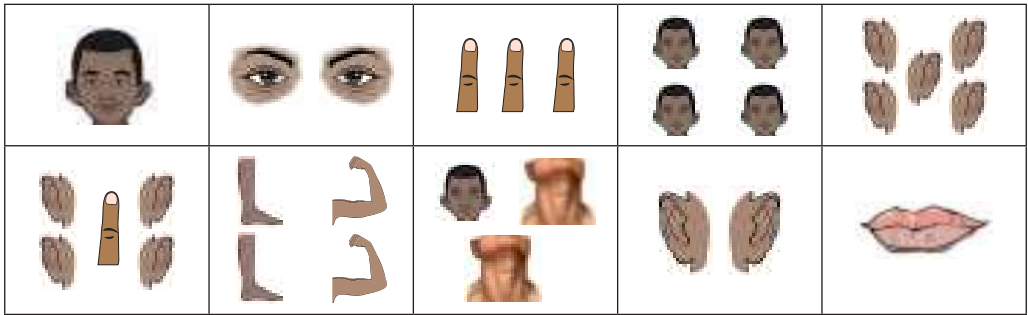
Use number names to count, find out how many and match body parts with other part with the same number-1 to 5.

Materials/Resources

- Number cards -

1	2	3	4	5
---	---	---	---	---

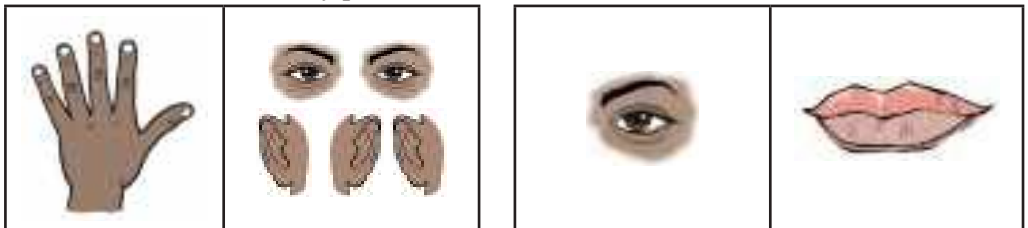
1 to 5 in the small boxes
- Cards showing 1 hand, 2 eyes, 3 fingers, 4 heads, 5 ears, 4 ears and 1 finger, 2 hand and 2 legs, 1 head and 2 necks, 2 ears, 1 mouth
- Countable objects- balls, cups, sticks



Procedure/Methods

Practical Activities A

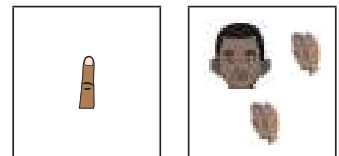
1. Have learners stand in a circle and say with actions: '1, 2, 3, 4, 5, Once I caught a fish alive...'
2. Have learners sit in a semi-circle.
3. Revise counting. 1-5. Call out numbers and have learners pick out that number of countable objects (any kind of objects)
Call out learners as other count – 2 learners; 5 learners (call numbers at random).
4. Have individuals pick and count body parts on cards.
5. Show a card of body part –example with 5 fingers. Ask a learner to pick and match it with another card with body parts that are also 5 in number.



Assessment

Mention a number. Example: 3

1. An individual is invited to pick a card with that number of body part.
He/she calls another learner to pick the matching card.



WORKBOOK

Activities In Numeracy Kg1

Activity 8 – K1.1.3.1.7

Activity 9 – K1.1.3.1.7

Activity 10 – k1.1.3.1.8

Activity 11 – K1.1.4.1.3

Activity 12 – K1,1,4.1.4

- Do the exercise after the Practical Activities .
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

ACTIVITIES:13 – K1.1.4.1.6, 14 and 15- K.1.1.4.1.7 (Pages 13 – 15)

CLASSIFICATION: SORT AND CLASSIFY

Content Standard: demonstrate the understanding that eating good food and taking all my childhood vaccinations will keep me growing healthy and strong.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

One of the child's early activities involves Sorting - Identification and Discrimination. The ability of the child to see things that are the same and those not the same.- choosing own shoes from among those of other family members; choosing favourite play things from among a collection/group of playthings, choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as colour and shape or size; make matches- figure out same items; and identify sets of objects; recognize and create patterns ; and compare sets for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count classified items and go on to draw and also build graphs from the classified items.

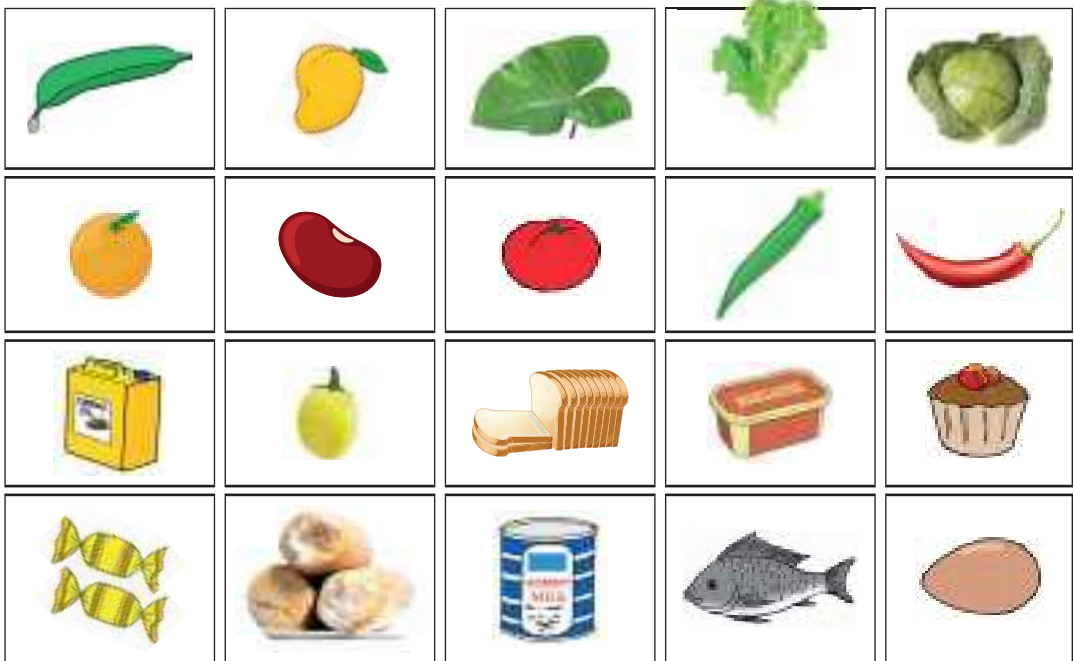
These are interesting activities when made playful and fun for the learner.

Indicators /Objectives

Sort and classify different food items under the six food groups and sort the food items that keep the body healthy into shape.

Materials/Resources

- Real food/Picture cards of food items- plantain, mango, kontomire, lettuce, cabbage, orange, beans, tomatoes, okro, pepper, sugarcane, watermelon, cooking oil, bread, kenkey, cake, toffees, garden egg, milk, fish, eggs – 5 of each picture card.
- (Teacher to provide available real foods)



Procedure/Methods

Practical Activities A

1. Have learners sit in a circle, with teacher as part of the circle.
2. Pick and show real food items to learners (one after the other). Have learners name and talk about them - either in learner's own language or English .
3. Learners say with actions:
Food makes you grow strong and healthy.
Food gives you energy to go, go, go.
Drink plenty of water and milk.
Eat some kontomire, oranges, bread, fish and some meat.
Food is what you need, all lifelong.
4. In a file, each learner picks a 'food picture card' .
5. Call out learners to stand in the following groups- those with:
 - Fruits and vegetables (orange, watermelon, kontomire, lettuce ...)
 - Protein foods- egg, fish, milk
 - Carbohydrate foods- kenkey, bread, yam, rice
 - Fats and oil - cooking oil, cakes , toffees.
6. Have learners name the food items in the group; repeat the beginning sound /letter of the name; and talk about what they do for the body.
7. Guide learners to mention other example of foods in the group.

Fruits and vegetables give us vitamins and fibre, protect us from illness and also keep our digestive system healthy.

Carbohydrates give us energy and nutrients – vitamins and minerals

Protein builds our body and repairs tissues – builds our bones, skin, muscles and blood makes our sores heal.

All the food types are required in our bodies to give us energy, build the body and make us grow, protect us from diseases, and give us good health.

Different food items give us different nutrients.

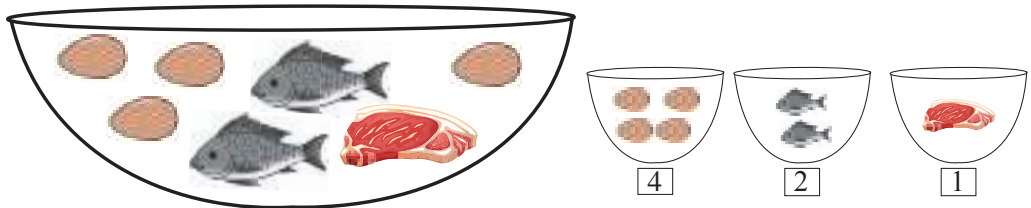
Note: The lesson must be taken in a language the child will very well understand.

Assessment

1. Draw and colour one food item from the various food groups classified. Copy the name and circle the beginning letter.



2. In groups of 4 give learners food picture cards.
3. Let them classify and count, and write the number on a card and place underneath.



WORKBOOK

Activities In Numeracy for Kg 1

Activity 13 K1.1.4.1.6

Activity 14- K1.14.1.7

Activity 15- K1.14.1.7

- Do the exercises after the Practical Activities. There should be two practical activity sessions before workbook exercises.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITY 16 – K1.1.4.1.7 (Page 16)

COMPARE: MORE THAN >; LESS OR FEWER THAN < AND SAME AS (EQUAL TO =)

Content Standard: Demonstrate the understanding that eating good food and taking all my childhood vaccinations will keep me growing healthy and strong

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

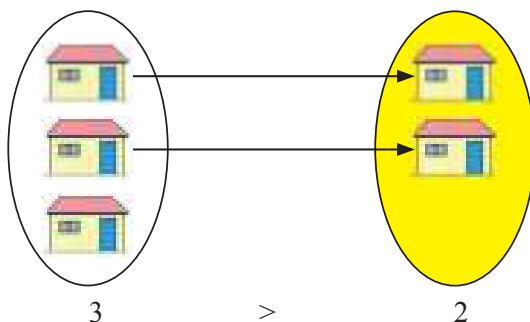
In the children’s daily experiences, they handle playthings and their snacks. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more sweets even without counting.

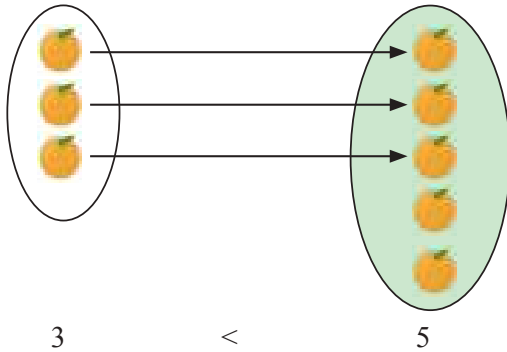
One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people).

Children are able to compare weights – the big bucket is heavy, the small bucket is less heavy.

They can compare sizes, colours, and shapes of clothes and other items .
To help children compare items and quantities they have to be taken through activities in pairing/ one-to –one correspondence.

Example :





- When pairing /one-to-one correspondence is not possible, the results are that one group of the items being compared is either more or less than the other.
- When the two quantities being compared are the same, then the quantities are equal in number/quantity.

The concepts of more than, fewer or less than, same as or equal to, are also key to beginning to understand addition and subtraction.

Indicators/Objectives

Sort and classify different food items under the six food groups and sort the food items that keep the body healthy into shape.

Materials/Objectives

Countable Objects- balls, empty packets, bottle tops, wooden /plastic blocks, sticks.

Procedure/Methods:

Practical Activities- A

Play musical Chairs.-

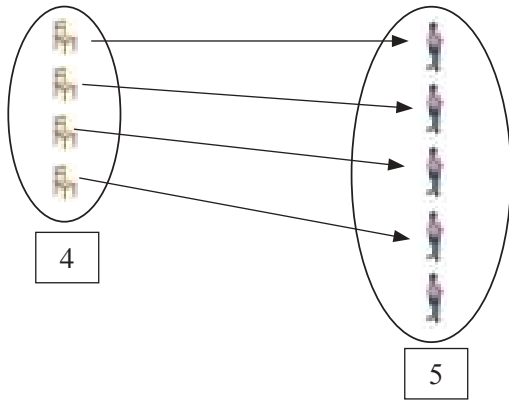
1. Put 5 chairs in front of the class. Call out 4 learners.
2. A song will be sung while they dance round the chairs.
3. At a clap the singing stops and each dancer tries to get a chair to sit on.
4. 4 chairs and 5 learners mean all learners will not have seats.

Ask: Look at the learners. What do you see?

Answer: They all didn't get seats; one person is standing.

The chairs are not enough. The children are too many.

- When we compare the chairs and the children, we say the chairs are fewer than the children;
- The children are more than the chair.
How many chairs are there? 4
How many children are there? 5



$4 < 5 =$ The chairs are fewer than the children

Practical Activities B

Use the countable objects to teach the concepts; teach one concept at a time; a, b then c. Have as many learners as possible go through the practical activities

Learners work in pairs.

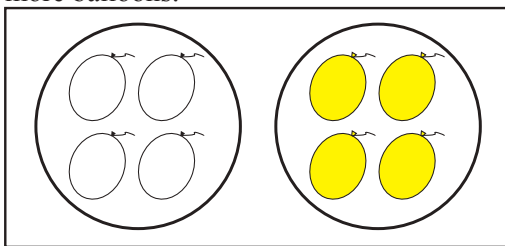
Give each pair 2 sets of countable objects in the following quantities to practise the concepts

- a. 5 balls and 2 bottle tops – More than $>$
- b. 1 empty packet and 4 sticks – Less than $<$
- c. 3 empty packets and 3 balls – same as (equal to) $=$

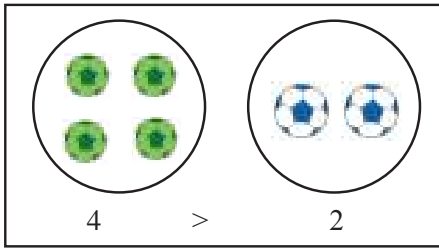
Each learner count his/her items. They then arrange them horizontally or vertically, and doing a one-to- one correspondence. The two then compare their quantities and describe them. They count and write the quantity of each group. They also compare the numbers.

Assessment

1. Draw 2 sets of balloons, one group more than the other. Colour the group/set with more balloons.



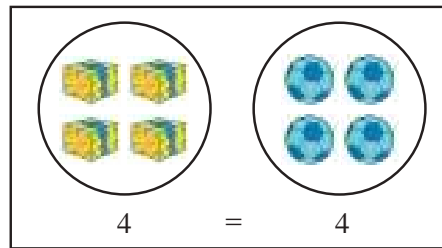
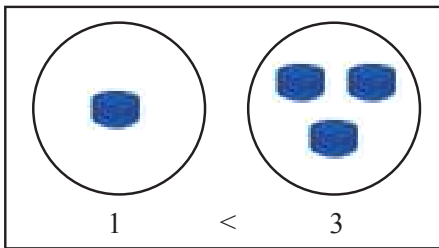
2. Draw 4 balls and 2 balls. Write the number of each group underneath. Compare the 2 groups. Complete your answer with 'more than, fewer or less than, same as or equal to'.



3. Draw the following sets and compare: 'more than', 'fewer or less than', 'same as' or 'equal to'.

1 bottle top and 3 bottle tops.

4 empty packets and 4 balls.



WORKBOOK

Activities In Numeracy for Kg1

Activity 16 - K1.1.4.1.7

- Do the exercise after the Practical Activities. There should be two practical activity sessions and assessment before workbook exercises
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

ACTIVITY 17 – K1.1.5.1.4 (Page 17)

CLASSIFICATION: SORT AND CLASSIFY

Content Standard: demonstrate the understanding of how keeping our home and school environment clean can keep us healthy and strong.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

One of the child's early activities involves Sorting- Identification and Discrimination. The ability of child to see things that are the same and those not the same.- choosing own shoes from among those of other family members; choosing favourite play things from among a collection/group of playthings; choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as colour and shape or size; make matches- figure out same items and identify sets of objects, recognize and create patterns and compare sets for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count classified items and go on to draw and also build graphs from the classified items.

These are interesting activities when made playful and fun for the learner.

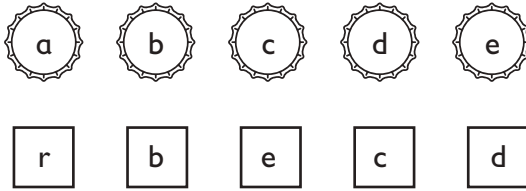
Indicators /Objectives:

Compose their stories about pictures in the book to be read to enable them to understand that important messages are hidden in books.

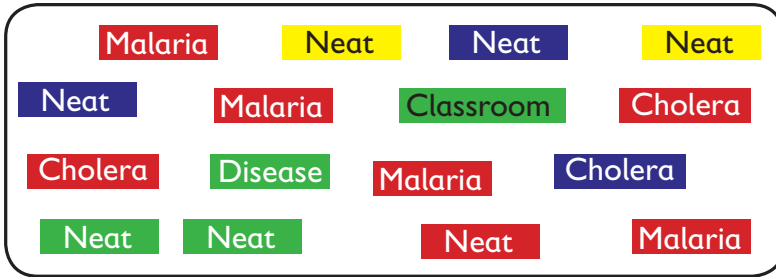
Have learners count and classify words by colour and length.

Materials And Resources

Strips of coloured papers -4-6 colours; bottle tops labeled with letters of the alphabet; small letter cards (10 of each letter on cards and bottle tops)



Word cards in colours 6 of each word, as in the Activity K1.15.1.4 example - Cholera, Neat, classroom.



Procedure/Methods

Practical Activities B

1. Collect coloured paper strips put in a box and placed on a low table.
2. Learners pick the coloured strip of papers as they move round the box with a song :
How green you are? (3x)
How green ?
How green you are? (3x)
How green?
Note: Replace green with other colours in the song. red, blue..
3. Boxes are arranged in front of the class. Each with a coloured strip (colours learners picked)
4. learners move round to drop their coloured paper strip into the box that has their colours. At the end, the various coloured papers are counted.

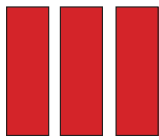
Practical Activities B

1. Learners sit in a semi-circle on their chairs.
2. The letter cards are shown and read to learners.
The word cards are fixed on the board (Low enough for learners to see) and read again for learners to repeat many times. – four word cards are treated.-
3. Learners are put in groups of 4. Each group is given a quantity of either letter cards or lettered bottle tops and one word card.
4. Learners pick and place a word card on the table in front of each group.
5. In turns, members of the group pick out the letters that form the word.;they arrange it to form the word. Teachers assist learners to read their word. Learner count.
The group also name the colour of their word card.

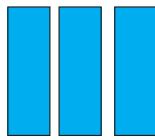
- The groups exchange their word cards and do the activity with the new words.
- The word cards are classified according to colour.
Teacher raises a word card colour –example red.
All learners with red word cards walk up to put their cards into a box in front of the board. The word cards are counted.
The number of each colour of word card is recorded.

Assessment

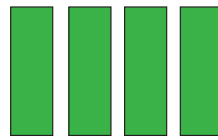
- Classify the cards according to colours. Count and write
Each learner is given a collection of coloured strips of papers, word cards, and letter cards of varied colours – in colours of red, blue, green , yellow to classify according to colours. The classified items are counted.



3



3

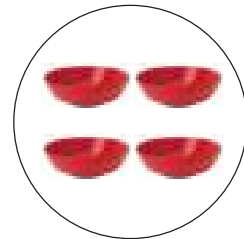
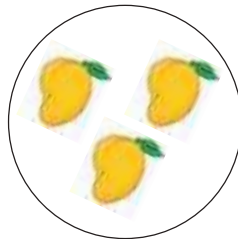
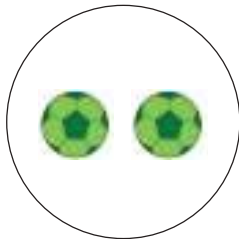


4



2

- Draw 2 balls; 3 mangoes; 4 bowls – colour the balls green, the mangoes yellow and the bowls red.



WORKBOOK

Activities In Numeracy for Kg1

Activity 17 - K1.1.5.1.4

- Do the exercise after the Practical Activities.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Lines And Shapes

ACTIVITIES , 18, 19, 20, 21 – K1.1. 5.1.8; 24-K1.1.6.1.6 (Pages 18 - 21)

3 DIMENSIONAL OBJECTS

Content Standard: demonstrate the understanding of how keeping our home and school environment clean can keep us healthy and strong.

Core Competencies:Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction






3D shapes take up space, they have 3 dimensions- length, width and height. The world is made up of 3d shapes. They are all the things we can hold – our bags, fruit drink, balls, ice –cream, ice-cubes. Oranges and watermelon, tooth paste, cakes, parcels, fridge, and cupboards.

3D objects/shapes have faces, edges and corners.

The faces of 3D shapes often contain 2D shapes.

In the child’s day to day life, he/she comes into contact with solid objects - sees buildings, eats from a bowl or plate, drinks from a cup, water bottle, or fruit drink packet, buys biscuits in packets or boxes, handles and eats fruits like mango, apple and orange. He/she also plays with balls and various blocks and empty packets of various shapes and sizes. The above objects are referred to as 3 –dimensional objects –These are solid objects. These are objects the child touches or handles both at home or school.

3-dimensional objects/figures

				
cube	cone	rectangular prism	sphere	cylinder

2-Dimensional object/figures are plane shapes (the faces of 3D shapes) they have 2 dimensions- length and width.

Examples are circle from sphere, square from cube, rectangle from a rectangular prism or cuboid, triangle from a cone or triangular prism.

Oval – elongated circle, and diamond from 2 triangles.

They are drawn from solid shape - (Circle from a ball; Square - from a die; Rectangle – from an exercise book; Triangle – from ice-cream cone, Oval – from egg; Diamond –from 2 triangles)

Attributes of 3-D shapes

Faces are the flat surfaces

Edges are where 2 or more faces meet

Corners are where 2 or more edges meet

Cone – one flat face, 1 curved surface, 1 edge, no corners

Rectangular prism – 6, rectangular faces, 12 edges, 8 corners

Cube – 6 identical faces, 12 edges, 8 corners

Cylinder – 2flat faces and 1 curved surface,2 edges, no corners

Sphere – 1curved surface ,no faces, no edges, no corners

Triangular prism – 5faces, 9 edges , 6 corners.

Indicators /Objectives

Describe the attributes of 3-D objects to learners.

Materials /Resources

Balls, cups, bowls, empty packets and cans of varied shapes and sizes, wooden/plastic blocks. Boiled egg, cone shaped hats made from paper, cube sugar, box with square sides only,die, box with rectangular faces.

Key words: Shapes, objects, 3-dimensional shape, Rectangular prism, cube, sphere, cone, cylinder, oval.

Procedure/Methods

Practical Activities - A

- Have learners sit in a semi-circle with their tables in front of them.
Have them stand and let them perform the following activities as teacher calls out:
- raise your hand up.
 - Clap over your head, and count 1, 2, 3, 4, 5
 - Hands down, shake your hands.
 - Bend and touch your knees, and up.
 - Jump two steps backwards, now two steps forward.
 - Sit down, hands up, hands on your chest, now hands on your table.
- 1. Have learners manipulate/handle the materials
Introduce the shapes one after the other.
- 2. Pick a wooden rectangular block-rectangular prism, show and say this shape is called a rectangular prism.
- 3. Ask a learner to pick a box of the same shape and say, this box has the same shape. It is also a rectangular prism. All sides are rectangles (not the same sizes of rectangles).

- Have learners pick other box from the materials- fruit juice, and biscuit packets, sugar boxes. Have learners say what packets they have picked.
- Have learners repeat the name rectangular prism several times. Write rectangular prism on a piece of card and put it against the collection.
4. Sphere: Pick 4 balls, pass them round the class for learners to manipulate them. Have learners talk about it.- it is round. It rolls.
Say: This shape is called a sphere.
Have learners repeat 'sphere' several times.
 5. Ask : what other foods or objects look round like the ball?
 6. Learners: orange, watermelon, banku
They all have the same shape as the ball.- sphere.
Write 'sphere' on a piece of card and put it against the collection
 7. Cube :A cube is similar to a rectangular prism. But all the sides are the same size of squares.
Follow procedure 1 to 3 to teach the shape-Cube.
 8. Use the procedure 4 to 6 to teach cone, cylinder, and oval.
 9. Have learners read out the names of the shapes as a learner moves from one group of shape to the other.

Practical Activities - B

Attributes of 3-D

Teach one shape in a lesson.

Faces are the flat surfaces

Edges are where 2 or more faces meet

Corners are where 2 or more edges meet.


1. Have learners sit in a semi-circle with their tables in front of them.
2. Put a box (rectangular Prism) on a low table in front of the whole group.
3. Ask: What shape is this box? Answer: Rectangular Prism.
4. Say: This part of the box is called a-face- as you rub your palm on a face.
5. In turns have learners come up to show the class other faces. The class repeat face/ faces,
6. Together have learners count the faces of the rectangular prism. = 6
7. Teach learner – edge ; an edge is where 2 or more faces meet. Learners repeat the sentence as teacher runs her finger along one edge.
8. In turns, have learners come out to show other edges. Let the class count the edges of the box, =12
9. Teach corners- where 2 or more edges meet is a corner. Learners repeat corner as it is pointed.
10. In turns, have learners come out to show other corners. Learners repeat ' corner' as each one is touched. Let one learner lead the class to count the corners =8
11. Open up a rectangular prism and let learners talk about the faces- they are all rectangles.; the opposite sides are the same In size,
12. Have learners pick other rectangular prisms from the materials and from around the classroom. The class may go outside to look out for other like shape.


13. Cube: use the procedure in Practical Activities B-1 to 12 , to teach the attributes of a cube.
14. Show learners a cube and a rectangular prism- all have 6 faces, 8 corners and 12 edges.
15. Have learners open up a cube and compare the faces to that of a rectangular prism.- faces of the cube are the same while only the opposite sides of the rectangular prism have the same size.

Cone – follow the above procedure to teach ‘Cone’.


16. Make a cone with learners. –sheets of paper, glue or celotape.


- Cut a circle about the size of a child-size plate.

- Fold into 4 equal parts.

- Cut off one quarter of the paper to the centre.

- Fold one opening over the other.(if you want a higher cone, you make the paper overlap more.

- Use the celotape to hold the ends of the cone together.

- A shallow cone is like a Japanese hat.

- Show the hollow cone to learners and ask while running your finger round the edge: what shape do you see? – circle.
- Place the hollow part on another sheet of paper and trace the circle .
- Place the cone on the circular paper you have cut and fix together to get the face .
- Distribute papers for learners to make their own hollow cones. Assist them to trace and fix the surface.
- Have learners talk about their cones. The cone has one flat face, 1 curved surface, 1 edge, no corners.

Sphere

- Put learners in groups of 4; give each group a ball.
- Move outside with the group. Have the groups play with the ball in ways they like.
- Back in the classroom, ask each group to say what they did with their ball - throwing and catching, playing football, rolling and catching;
- What can we say about the ball? – it rolls; it is round.
- How many faces has the ball? –none
- How many corners? – none. How many edges? –none.

The ball is a sphere.

A Sphere has – 1 curved surface, no faces, no edges, no corners.

- Have learners make spheres –balls, oranges – with clay or play dough, paint and talk

about the sizes and colours.

Cylinder: Put learners in groups of 4; give each group a can – fruit drink, milk, powdered milk can, milo can.

- Move outside with the group. Have the groups play with their cans in ways they like.
- Back in the classroom, ask each group to say what they did with their object-throwing and catching; rolling and catching; using it as drums, opening and putting items in.
- What can we say about a can? – it rolls on it's side; it has flat surfaces. It can stand on both sides.
- How many faces has the can? –2
- How many corners? – none. How many edges? –2 round edges.
- The shape of the can is called a cylinder.
- A Cylinder - 2 flat faces and 1 curved surface, 2 edges, no corners

Oval

- Have learners sit in a circle with you.
- Pass a cooked egg round for learners to manipulate.
- Say: the egg has an oval shape.
- Have learners make: eggs and oval shaped beads
Use: Play dough, or clay.
Paint with different colours.

How is a (sphere) ball different from an (oval) egg?

A ball is round and can easily roll around




An egg is round and long, but cannot roll around easily like a ball.

An oval shape has one round surface, no edges. No edges and no corners.

Assessment

Practical Activities A

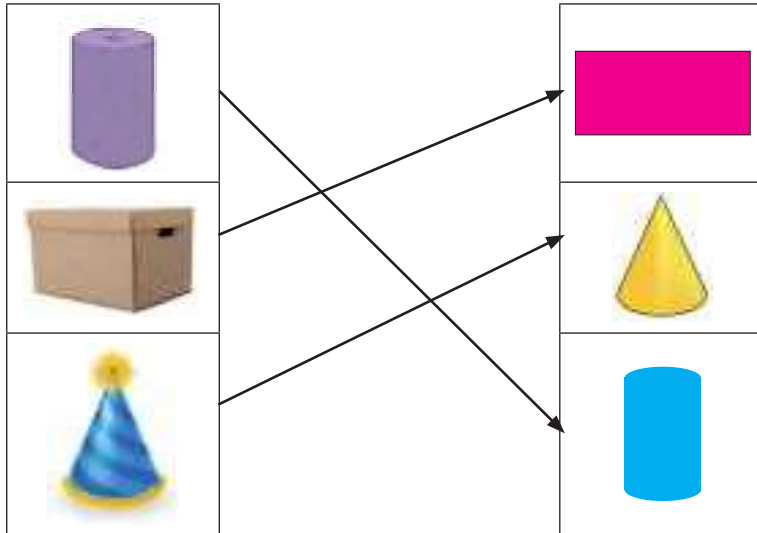
1. Draw one food or item of each of these shapes

Oval	sphere	cube
		

2. Draw these objects rectangular prism, cone, cylinder



3. Match the solid shape to its plane shape



WORKBOOK

Activities In Numeracy Kg1

Activity 18-K1.1.5.1.8 After Practical Activities A

Activities 19, 20, 21- K1.1.5.1.8 and 24- k1,1.6.1.6After Practical Activities B

- Do the exercise after the Practical Activities.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITY 22 – K1.1.6.1.4 (Page 22)

COUNTING SYLLABLES

Content Standard: Demonstrate the understanding of measures to take to keep safe (from accident, hurts and harms)

Core Competence: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

Children learn some number names especially through rhymes and songs well before they are formally taught to count things in the correct order. Recognition of numbers (through matching/sorting activities- where the child identifies pictures, colours, shapes and numbers that are the same according to a given criteria) support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child’s readiness for other numeracy concepts, which will be taught in future, such as addition and subtraction.

Indicators /Objectives

Clap and count syllables in longer words.

Materials/Resources

- Countable objects- balls, cups, sticks
- Word cards – 2, 3, 4, 5 syllable words

Wa/ter;	stran/ger;	ma/la/ria;	com/mu/ni/ca/tion	Ba/na/na,
---------	------------	------------	-------------------	-----------

- Number cards -

**Procedure/Methods****Practical Activities**

1. Have learners stand in a circle and say with actions: ‘1, 2, buckle my shoe...’
2. Have learners sit in a semi-circle.
3. Revise counting. 1-5. Call out numbers and have learners pick out that number of countable objects (any kind of objects)
4. Show a word card showing the syllables that form the word –example cho/le/ra. Lead learners to clap the syllables. 1, 2, 3.

5. Put the word card cho/le/ra on a table and call a learner to match it with the number card showing 3



6. Have learners mention other words, clap and count the syllables; then pick the correct number card to match it.
7. Have 2 learners pick 2 word cards – me/di/cine and wa/ter. Teacher practices the syllables of the words with the class.
8. Put the rest of the class into two groups, A and B. One child holds out his/her word. Group A mentions it, breaking it into syllables. Example: me/di/cine. As Group A claps, Group B marks the number of claps with pencil/crayon on pieces of paper. The above activity is repeated with the second word- wa/ter. (Group B continues with marking out the strokes)
9. Group B counts aloud all the strokes from the 2 word cards.-me/di/cine and wa/ter = 5 syllables
- * The groups alternate to count and add pairs of word cards.

Assessment

Give each child 2 word cards, with the words broken into syllables.

Ta/ble; win/dow; mar/ket; elec/tri/ci/ty; rec/tan/gle; me/di/ca/tion

Have the the child counts the syllabes and add.

Ta/ble + Win/dow

$$2 + 2 = 4$$

Mar/ket + elec/tri/ci/ty

$$2 + 4 = 6$$

rec/tan/gle + me/di/ca/tion

$$3 + 4 = 7$$

WORKBOOK

Activities In Numeracy for Kg1

Activities 22 – K1.1.6.1.4 After Practical Activities

- Do the exercise after the Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data(Collection, Presentation, Analysis And Interpretation)

ACTIVITY 23 – K1.1. 6.1.6

LINES AND SHAPES

Content Standard: Demonstrate the understanding of measures to keep safe (from accidents, hurts and harm)

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction – Refer to K.1.1.5.1.4 Activities 17;18 and 19. K1.1.5.1.8)

Indicators /Objectives: describe the attributes of 3-D objects and sort objects into planes and 3-d objects.

Key words: Square, cube, sphere, cylinder, rectangle, roll, oval, triangle, circle, plane shape, solid shapes

Materials/Resources

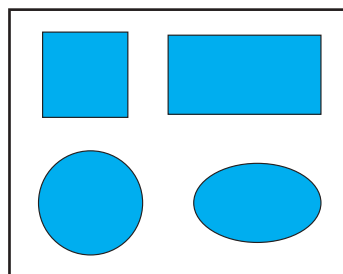
Balls, bowls, empty packets and cans of varied shapes and sizes, wooden/plastic blocks. Boiled egg, cone shaped hats made from paper, cube sugar, box with squares sides only, die, box with rectangular faces. Cut-out plane shapes- square, rectangle, oval, circle, triangle.

Procedures/Methods

Refer to Activities 17, K1.1.5.1.4 and 18 ;19 –K1.1.5.1.8 for revision on 3-D objects and Plane shapes.

Assessment

1. Pick a solid object and trace a face. Name the plane shape you have drawn.
Example: match box- rectangle; Paper cube- square
2. Put a collection of 3-D objects and plane shape into a box/bowl and give to learners.
Each learner sorts according to 3-D objects and Plane shape.



WORKBOOK

Activities In Numeracy for Kg1

Activities 23 – K1.1.6.1.6 After Practical Activities

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers-Operations

ACTIVITY 25 and 26 –K1.2.1.1.3 (Pages 25 - 26)

SUBTRACTION

Content Standard: Demonstrate the understanding of the importance, roles and responsibilities of family members

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

When children learn to count, they are able to tell how many things there are or they have. Learners daily experience the concept of subtraction when they open a pack of biscuits and begin to eat or give some away to a friend. Another example is when a friend goes out of a play activity.

Subtraction means to take something away, or remove something from a group. Addition and Subtraction are opposites. While addition adds on to a group, subtraction takes away from a group.

Indicators/Objectives

Have learners count all the members of the family read about and subtract (take away) the learners from the number and tell how many members will be left.

Key words: Subtract, take away, count

Materials/Resources

Countable objects-dolls, balls, sticks, crayons, empty packets and cans

Procedure/Methods

Practical Activities A

1. Learners form a circle and say with actions.
(Learners hold 5 short sticks. They drop them one after the other at – ‘one fell out’)
There were 5 in bed,
The little one said roll over, roll over,
They all rolled over and one (1) fell out.

There were 4 in bed,
The little one said roll over, roll over,
They all rolled over and one (1) fell out.

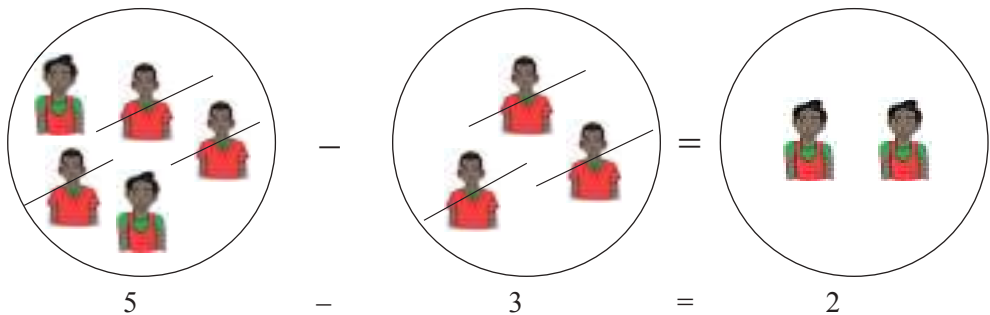
Continue till There was one (1) in bed
 The little one said roll over, roll over,
 He rolled over and there were no more children in bed.

2. Have learners sit down.
3. Call out 5 learners by their names, to the front of the class (3 boys and 2 girls).
4. Put 3 chairs by the teacher's table.
5. The whole class counts the learners. 1, 2, 3, 4, 5. Ask one learner to draw the 5 children on the board and write 5 underneath.
6. Ask the boys in the group to sit on the chairs
7. Have the class count the boys-3.
8. Ask one learner to cross out the 3 children on the board.
9. Question: how many children are left standing?

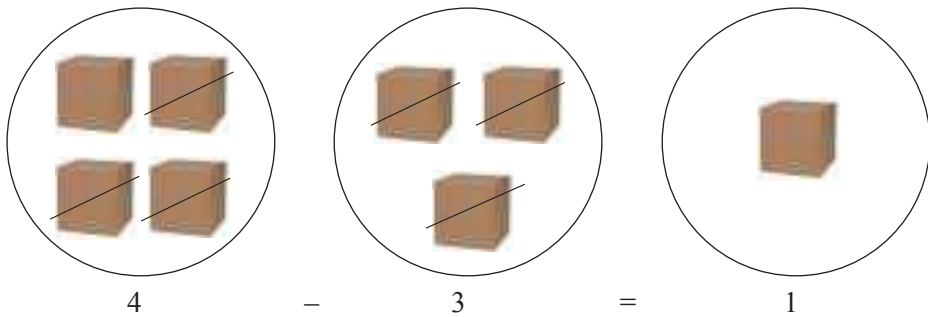
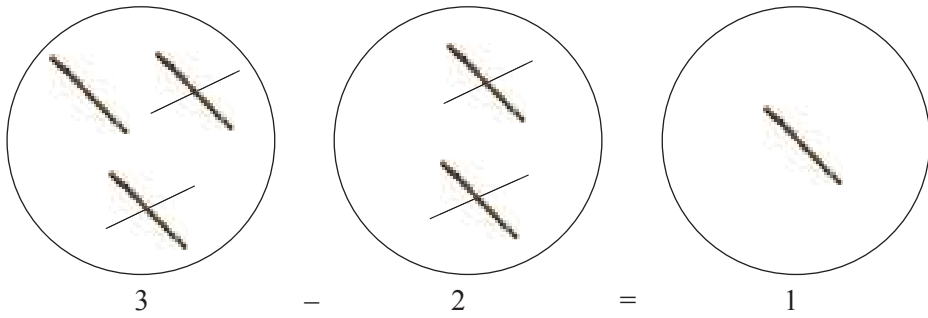
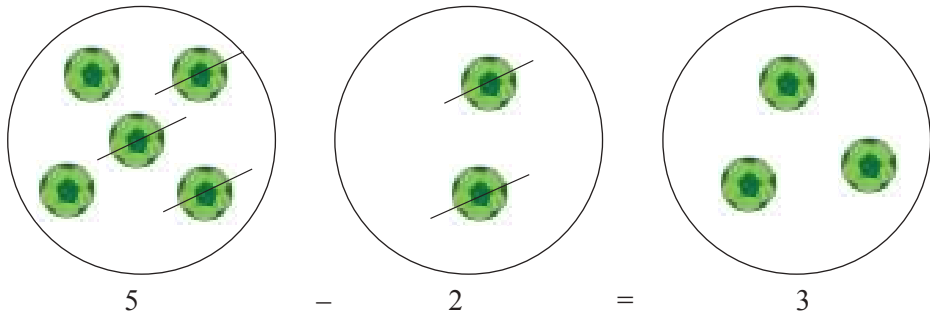
Answer: 2

The three boys are drawn and '3' is written underneath.

10. Introduce the take-away/subtraction and equal to signs (-) ; (=)
 When the children sit down, we can still talk about their activity as represented on the board.
11. We can complete it by putting in the correct signs

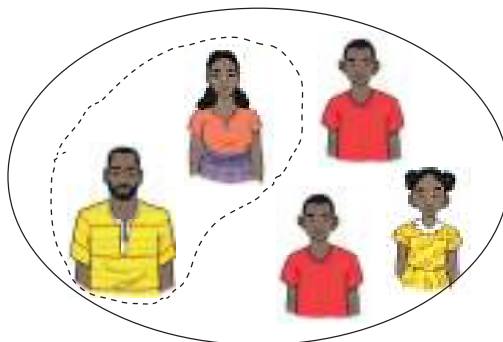


12. Have all learners sit behind their tables in a semi-circle. Pour out the materials on a low table in front of them. Give each learner 8 to 10 objects on his/her table.
13. Mention a number; example 4. Every learner counts.
 Say: take away 2. (the 2 objects are pushed away from the group.
 How many are left? 2
14. Continue with other numbers:
 Count 5 objects; take away 2 of them. Answer = 3
 Count 3 objects; take away 1 of it. Answer = 2
 Count 4 objects; take away 3 of them. Answer = 1
15. Have learners represent their objects with strokes, ball and blocks and write the sums.

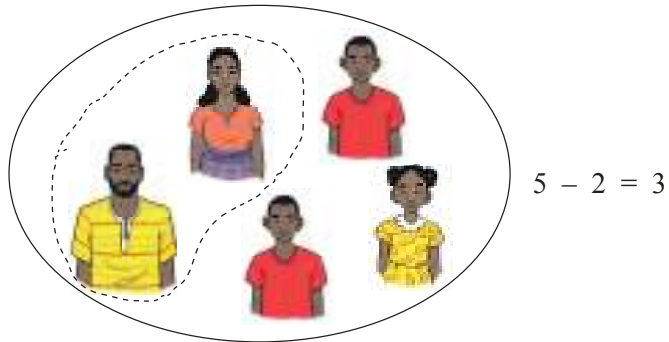


Practical Activities B

Separation is another way of expressing subtraction or take-away. It is moving away/taking away/subtracting a smaller group of items from a larger one.



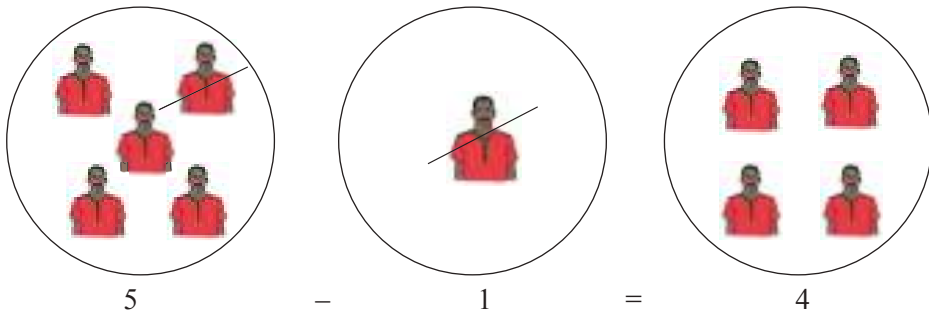
The sum: A number of objects/persons are put in a circle and recorded. A circle (in broken lines) is drawn around the group of objects/persons to be separated/subtracted from the larger group, (this is counted and recorded), The objects/persons outside the broken lines are counted, and that is the answer.



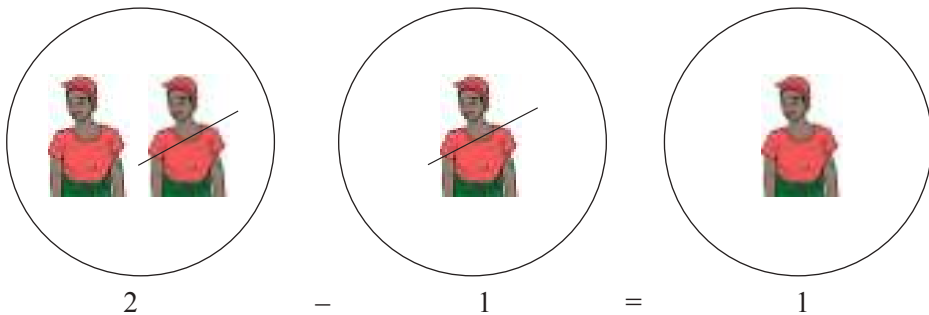
Assessment

Work out the following

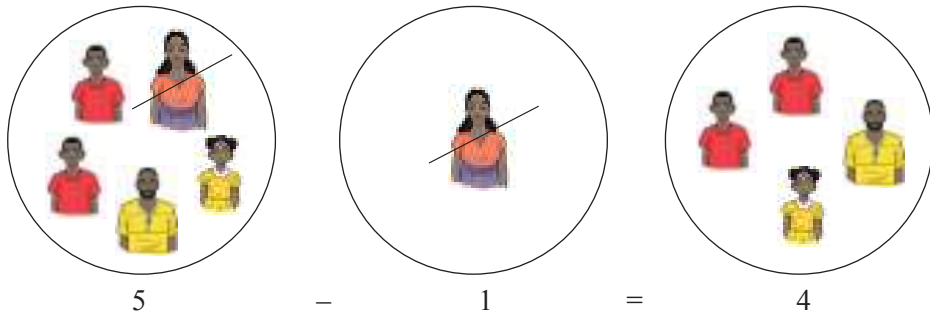
- 5 men – 1 man;



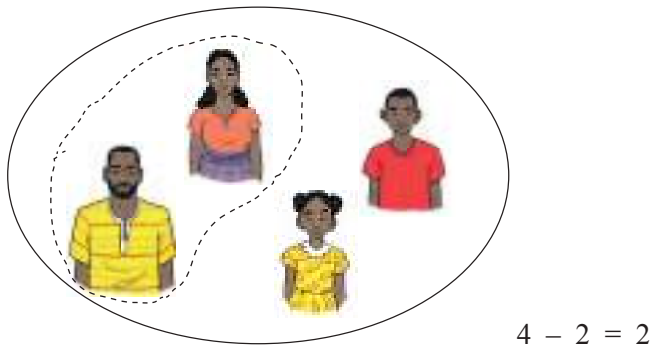
- 2 women – 1 woman;



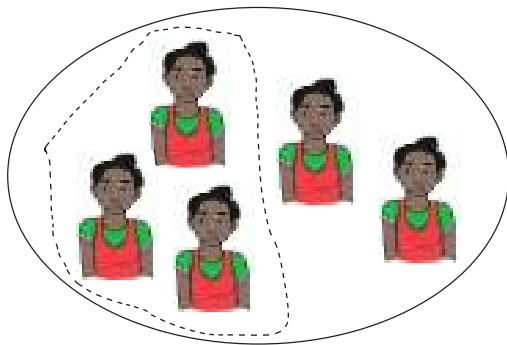
- 2 boys, 1 girl and 1 man – 1 woman.



4. Write the sum



5. Separate 3 girls from 5 girls. Illustrate with circles.



WORKBOOK

Activities In Numeracy for Kg1

- Activities -25 and 26-K1.2.1.1.3 After Practical Activities A and B
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

ACTIVITY 27 and 28 – K1.2.1.1.4 (Pages 27 - 28)

CLASSIFICATION: SORT,COUNT AND COMPARE

Content Standard: Demonstrate understanding of the importance, roles and responsibilities of family members.

Core Competencies:Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

One of the child's early activities involves Sorting- Identification and Discrimination. The ability of child to see things that are the same and those not the same.- choosing own shoes from among those of other family members, choosing favourite play things from among a collection/group of playthings, choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as colour and shape or size, make matches- figure out same items and identifies sets of objects, recognize and create patterns and compare sets for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count classified items and go on to draw and also build graphs from the classified items.

These are interesting activities when made playful and fun for the learner.

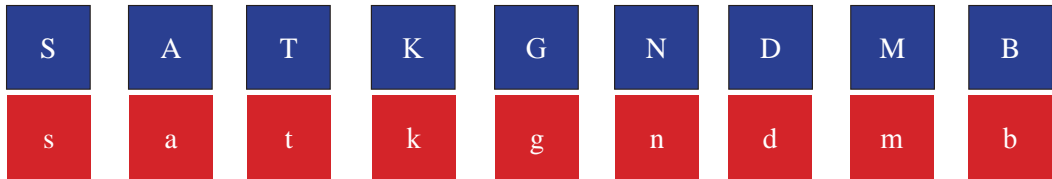
Indicators/Objectives

Identify the names and words with similar beginning sounds (count the number of persons/ places in each group)

Key words: Letter sounds-names and words beginning with the sounds- S, A, T, K, G, N
Sam, Abena, Tara, Kumasi, Gretel, Nelly , ant, table, kite, nose, gate- emphasizing the beginning sounds

Materials/Resources

Letter cards - S, A, T, K, G, N → s, a, t, k, g, n



Procedure/Methods

Practical Activities A

1. Learners form a circle to sing and dance.
O, Sammy is my name, my name.(2x)
My name's Sammy (3x)
Sammy is my name, my name.
- All the other learners sing with their own names.
- Each child repeats his/her own name and the initial sound of the name. Example- Sammy, /s/
2. Call out learners whose names begin with the initial sounds in the key words.- Example: Aku, Kojo, Talata, Salome, Nora, Grace.
3. Each child mentions his/her name, and then all learners repeat the initial sound. Aku - /a/
4. The letter of each sound is written on the board. /a/
5. Display all name cards on a table. (names under materials)
6. The learner looks through the displayed name cards to find 2 name cards with the letter (of the initial sound). Ago, Accra.
7. Put all name cards and letter cards in to a box/bowl.
8. Put learners in groups of 8. One person from each group picks and shows one letter card.

9. All members of each group goes through their box to pick out/sort all names that begin with the letter card picked and shown.
10. Each group counts their name cards and write the number on a piece of card.
11. Invite 3 groups to compare their total number of cards, and say which group of names has the highest or lowest number.

Example 'K' Kwame, Kofi, Kojo, Kumasi , Kwao = 5

'S'- Sandra , Sam, Salaga= 3

'A'- Abu, Ama= 2

The 'K' group has the highest number of name cards.

'A' has the lowest number of name cards.

Example 2: 'D' – Dunkwa, Dansoman, Drobo, Daboase = 4

'M' – Mangoase, Mali, Mamfe = 3

'B' – Brekum, Boiman = 2

The 'D' group has the highest number of name cards.

'B' group has the lowest number of name cards.

WORKBOOK

Activities In Numeracy for Kg1

Activity 27, and 28 -K1.2.1.1.4 After Practical Activities

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

*ACTIVITIES 29 K1.2.1.1.6 AND 30 K1.2.2.1.6
ACTIVITIES 31 AND 32 K1.2.2.1.7 (Pages 29 - 32)*

COMPARE: MORE THAN > ; LESS OR FEWER THAN < AND SAME AS (EQUAL TO) =

Content Standard: Demonstrate knowledge of the origin and history of our families

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

In the children's daily experiences, they handle playthings, and their snacks. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more sweets even without counting.

One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people)

Children are able to compare weights – the big bucket is heavy, the small bucket is less heavy – (light).

They can compare sizes, colours, and shapes of clothes and other items .
To help children compare items and quantities, they have to be taken through activities in pairing/ one-to –one correspondence.

Key words

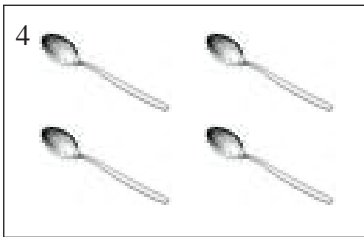
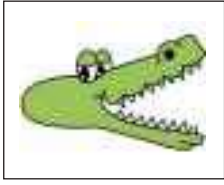
More than; greater than; fewer than; less than; same as; equal to.

Indicators/Objectives

Use comparative language/phrase ‘more than’, ‘less than’ or ‘same as’ to describe relationship between quantities.

Materials/Resources

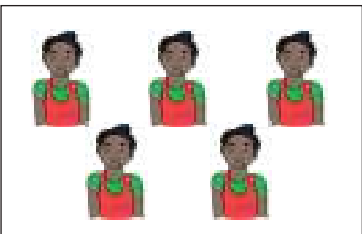
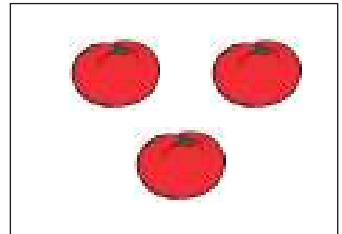
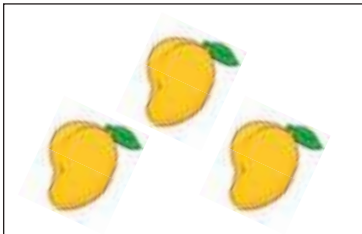
Countable objects- bowls, balls, spoons, sticks,
The greedy crocodile card, sets of objects card.



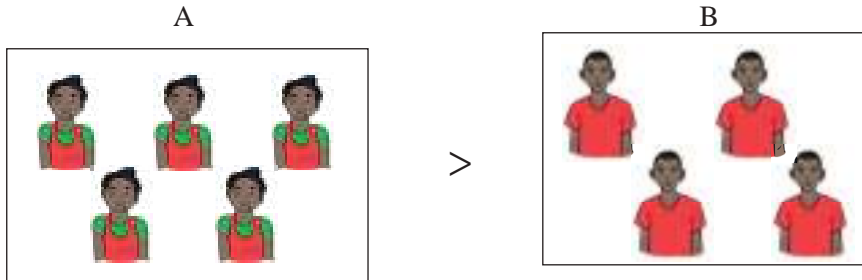
Procedure And Methods

Refer to Practical Activities A & B under Activity 15 - K1.1.4.1.7

Assessment

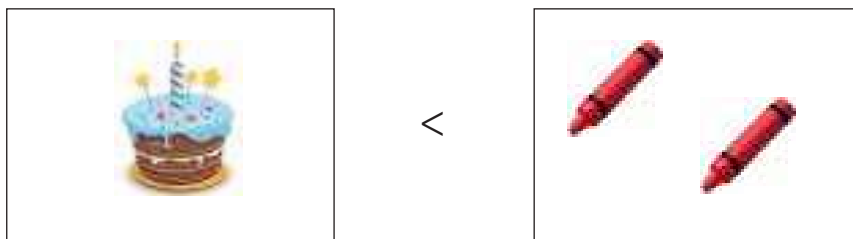


1. Compare 4 boys and 5 girls. Which is more?



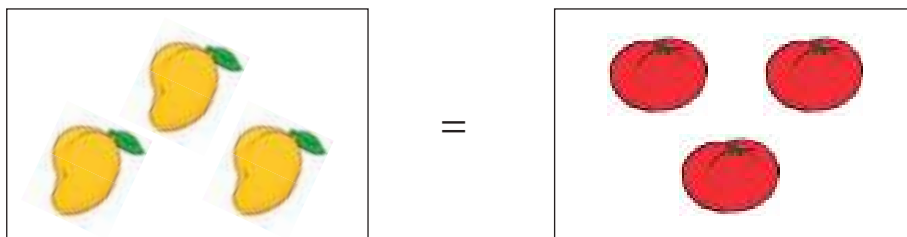
The (5 girls on a card A) is more than (4 boys on card B)

2. Compare 1 cake and 2 crayons. Which is fewer?



The (cake) is fewer than the (2 crayons)

3. Compare 3 mangoes and 3 tomatoes



The number of mangoes is the same (equal) as the number of tomatoes.

WORKBOOK

Activities In Numeracy for Kg1

Activities 29 – K1.2.1.1.6 and 30 -K1.2.2.1.6

Activities 31 and 32 – K1.2.2.1.7 After Practical Activities

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITIES 33 - K1.2.3.1.5 and 34 - K1.2.3.1.6 (Pages 33 - 34)

COMPARE: MORE THAN > ; LESS OR FEWER THAN < AND SAME AS (EQUAL TO) =

Content Standard: Demonstrate knowledge of celebrations and festivals that the individual families celebrate.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction: Refer to Activities 31 and 32- K.1.2.2.1.7

Key words

More than; greater than; fewer than; less than; same as; equal to.

Months – March, April, July

Indicators/Objectives

Use comparative language/phrase ‘more than’, ‘less than’ or ‘same as’ to describe relationship between quantities/ numbers.

Materials/Resources

Countable objects – bowls, balls, spoons, sticks, letter cards.

The greedy crocodile card,

Procedure And Methods

Practical Activities-A

1. Revise Practical Activities A & B under Activity 15 - K1.1.4.1.7
2. Put all letter cards into a box or bowl.
3. Have learners sit in groups of 5. (5 groups do the activity at a time)
4. Pick one of each letter card, place it upside down.
5. Have the group select one person from among them to pick a card.
6. He/she shows the letter he/she has picked to the group.
7. Each group reads out their letter.
8. Mix the various groups up and let them form one long queue.
9. Amidst singing, learners pick their group's letter cards. Learners return to their individual groups. Example; If the 1st letter picked is m, the all members in the group will pick m cards.
10. Learners in the various groups compare their letter cards to make sure they are all the same.
11. Each group counts the number of cards they have and write on a piece of card.
12. The groups compare their quantities to see which letter cards are more or less than the other.

Example



5 cards



3 cards



1 cards

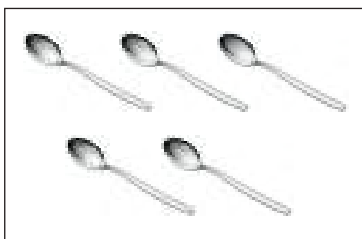
The 'a' is more than the 'o'

'a' is more than 'm'

The 'o' is less than the 'm'

Assessment

1. Compare 5 spoons and 3 balls. Which is more?



>



5 spoons are more than 3 balls

2. Compare 1 bowl and 2 sticks. Which is fewer?



<

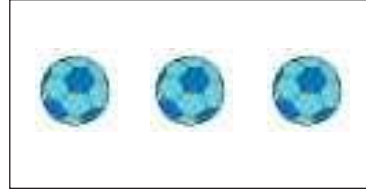


1 bowl is less than 2 sticks.

3. Compare 3 sticks and 3 balls



<



3 sticks and 3 balls are the same in number.

WORKBOOK

Activities In Numeracy for Kg1

Activities 33 - K1.2.3.1.5 and 34 - K1.2.3.1.6 After Practical Activities

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Non –Numerical Patterns And Relationships

ACTIVITY 35 – K1.2.4.1.3 (Page 35)

‘ONE MORE’

Content Standard: Demonstrate understanding of the rules and regulations that governs the members of the school.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Key words: Count, one more, what number next?

Introduction

Patterns are formed when a set of shapes, colours and numbers are repeated over and over. Patterns can be found all around us. In our clothes, biscuits and toffee wrappers. Skin of animals, art works, wall and floor tiles .

Patterns are fundamental sequences and logical ways in which things occur. Patterns help the child to understand the world around him- days of the week, textures on clothes, home and school routines, designs on buildings, shapes and colours of windows and doors.

Indicators /Objectives

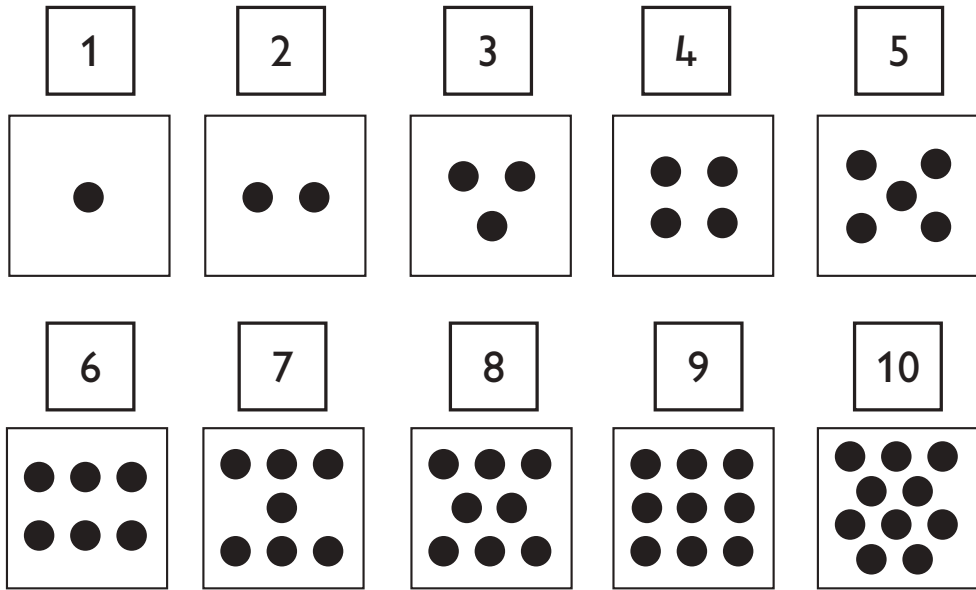
Using number line, have learners play “one more” to show the number of rules made to guide behaviour in the classroom.

Key words: Number names in order – one, two, three, four, five, six, seven, eight, nine, ten. ‘one more’

Materials/resources

Bottle tops

Number cards – 1 to 10; dot cards 1 to 10.



Number strip:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Procedure/Methods

Practical Activities A

1. Have learners sit in a semi-circle and sing
One, you dig,
Two, you sow,
Three, you water,
Four, they grow,
And five, you harvest.

1, 2, 3, 4, 5, once I caught a fish alive,
6, 7, 8, 9, 10, then I let it go again.

Why did you let it go?

Because it bit my finger so,

Which finger did it bite?

The little finger on my right.

2. Put learners in groups of 10, and have each group form a queue.

Have learners count themselves, from the first as 1 then 2, 3, 4, 5, 6, 7, 8, 9, 10

Learners vocalize the numbers.

Practical Activities B

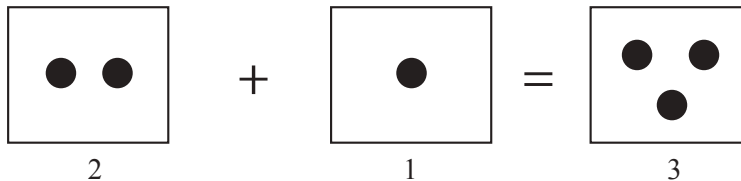
Discuss classroom rules with learners.

1. Ask questions on classroom rules. When a child answers a question, he /she picks a number card, from 1 to 10 turned upside down. Thus, the 1st child could pick the number 5 card.

- a. What should we do when we want a crayon from a friend? We ask for it politely.
 - b. What word shows that we are polite? Please.
 - c. What should we do if we accidentally push a friend? – We say sorry.
 - d. What would you say when someone is standing in the doorway and you want to pass through? – Excuse me please
 - e. What do you do when you play and your hands are dirty? Wash them
 - f. What do we use in washing our hands? Soap, water, and a towel
 - g. What would you say when your teacher helps you to open your biscuit? Thank you.
 - h. Call out the numbers from 1 to 10 in order. Learners move out as their numbers are called to join in a queue.
2. Order the cards 1 to 10. Put the corresponding number of dots under each number. Have learners read numbers 1 to 10 on a number strip.
 3. Put one dot and two dots down for learners to observe. Say : 2 is one more than 1. Place the one bottle top on the two dots. Learners would see that there would be one dot that is not covered, showing that the 2 dots are more than the one dot.

Ask, what do we get if we add one more dot to 2 dots – Answer- 3 dots.

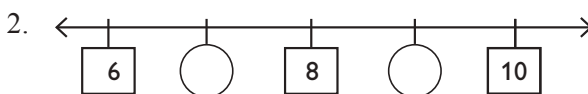
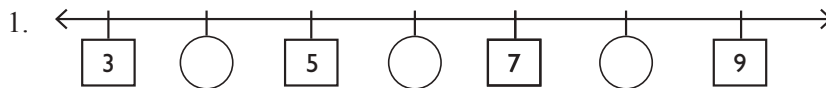
When learners mention the answer, let them count the new set of dots and match it with the correct number card.



Arrange numbers 1 to 10 horizontally. Randomly remove some of the numbers. Ask learners to answer the question

Example:

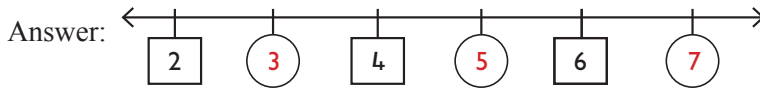
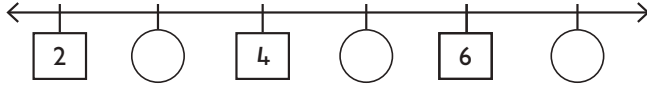
What is one more than the numbers on the line?





Assessment

Fill in the black spaces with the correct number.



WORKBOOK

Activities In Numeracy for Kg1

Activities 35 -K1.2.4.1.3 After Practical Activities and exercises on assessment.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers Operations

ACTIVITIES 36, 37, 38 - K1.2.4.1.4 (Pages 36 - 38)

ADDITION

Content Standard: Demonstrate understanding of the rules and regulations that governs the members of the school.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking and Relating well with the people with different beliefs.

Introduction

When children learn to count they are able to tell how many things there are or they have. Learners daily experience the concept of addition when they pick one more play thing to add on to what they already have. Another example is when a friend joins in a play activity.

Addition means to add on something /persons to a group of other things or persons. Addition and Subtraction are opposites. While addition adds on to a group, subtraction takes away from a group.

Indicators/Objectives

Count the number of items in different sets and add them.

Key words

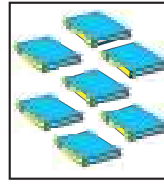
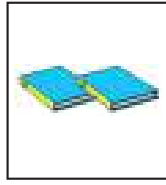
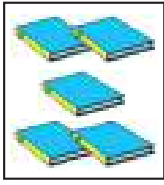
Add, Addition, Put together, Plus, Count

Materials/Resources

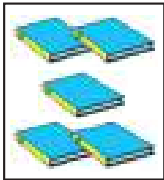
Countable objects- toys, empty containers and packets, balls, bowls-3 for each group of three learners.

Procedure/Methods

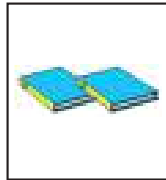
1. Have learners stand in a circle. They clap a rhythm and count- one, two.
One, two, three, four, five. Repeatedly
2. Have learners sit in a semi-circle with a low table in front of them.
3. Put out 3 bowls. Two containing two different sets of objects (5 and 2), with the third one empty.



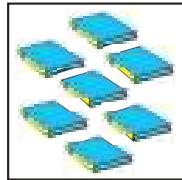
4. Invite 3 learners to the table. The first 2 learners count the content of the first two bowls. They all pour them into the third bowl.
5. The third learner leads the whole class to count the objects in the bowl onto the table. The class vocalizes as they count. 5 exercise books and 2 exercise books = 7 exercise books
6. Have each learner draw his/her bowl with objects on the board.
7. Introduce the plus sign (+) to show addition of the 2 sets of objects, and the equal to sign (=) to show total number of objects added.
- 8.



+



=



5

+

2

=

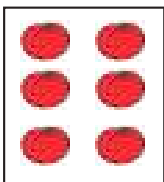
7

9. Have class count 2 sets of learners (5 and 3) and add.
10. Have learners draw step 8 in sheets of papers.
Explain to learners that by pouring the objects in the 2 bowls into the third bowl, we say we have added the objects or put them together.

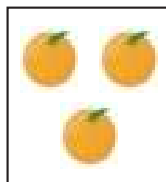
Assessment

Draw and put together

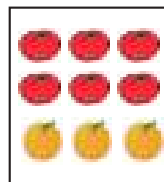
1. 6 tomatoes and 3 oranges



+



=



6

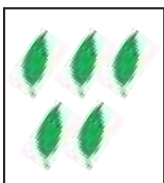
+

3

=

9

2. 5 leaves and 2 sticks



+



=



5

+

2

=

7

3. 8 crayons and 1 bottle top



WORKBOOK

Activities In Numeracy for Kg1

Activities 36, 37, 38 – K1.2.4.1.4

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITIES 39 and 40 – K1.2.4.1.6 (Pages 39 - 40)

COMPARE: MORE THAN > ; LESS OR FEWER THAN < AND SAME AS (EQUAL TO) =

Content Standard: Demonstrate the understanding that eating good food and taking all my vaccinations will keep me growing healthy and strong.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

In the children's daily experiences, they handle playthings, and their snacks. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more sweets even without counting.

One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people)

Children are able to compare and say whether he/she has more biscuit than his/her friend; whether they are more or less in a group.

They can compare sizes, colours, and shapes of clothes and other items .
To help children compare items and quantities, they have to be taken through activities in pairing/ one-to –one correspondence.

Key words

More than; greater than; fewer than; less than; same as; equal to.

Indicators/Objectives

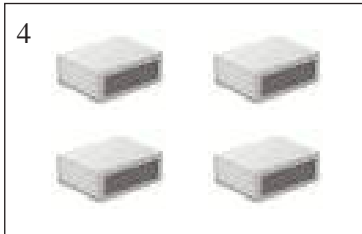
Use comparative language/phrase 'more than', 'less than' or 'same as' to describe relationship between quantities.

Materials/Resources

Countable objects- bowls, balls, spoons, sticks,

The greedy crocodile card, sets of objects cards

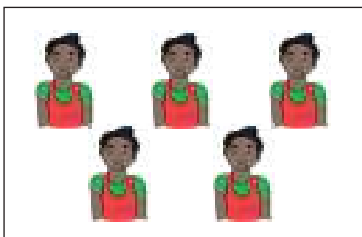
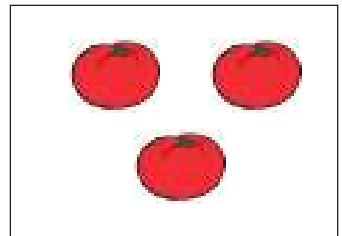
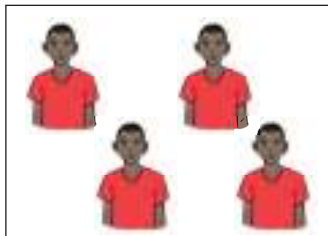
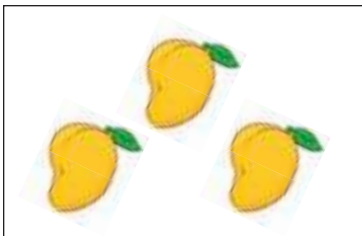




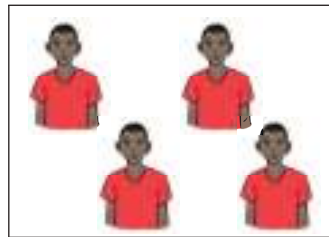
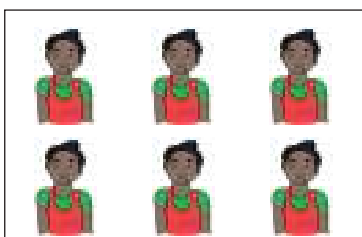
Procedure and Methods

Refer to Practical Activities A & B under Activity 16 - K1.1.4.1.7

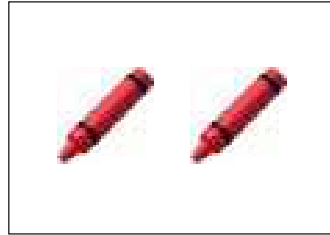
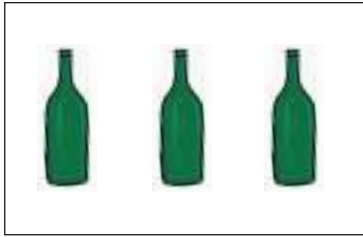
Assessment



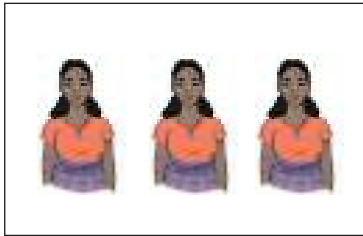
1. Compare 6 girls and 4 boys. Which is more?



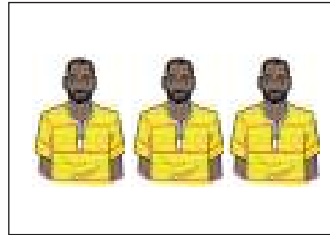
2. Compare 3 bottles and 2 crayons. Which is fewer?



3. Compare 3 women and 3 men



=



WORKBOOK

Activities In Numeracy for Kg1

Activities 39 and 40 – K1.2.4.1.6

- After Practical Activities A and B of
- Activity 16 - K1.1. 4.1.7

Sub Strand: Lines and Shapes

ACTIVITY 41– K1.3.1.1.5 (Page 41)

PATTERNS AND SHAPES

Content Standard: Demonstrate understanding of the good manners that our families value and why they value them.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Our environment is full of patterns, arrangement of windows on buildings, arrangement of flower vases or plants at home or school, and textures in clothing provide beauty around us. In the classroom, learners fix legos or arrange their blocks in patterns that appeal to them. Patterns provide a sense of order in our lives, understanding and being able to identify recurring patterns helps us to develop important skills of critical thinking and logic.

Learners display the use of patterns in their drawing and colouring, in stacking shapes and other activities.

They later come to realize that letters and numbers come in an order, and altering the arrangement of letters make meaningful words we can read. Example; cat.

Also, the altering of the position of numbers gives varied meanings. For instance, when 1 and 2 change positions and are written together, the number becomes 21.

Indicators/Objectives: create simple patterns with 2, 3, 2 2, 2 3, 2, etc

Key words

Before, after, between, first, second..

Materials/Resources

Cut –out shapes- circles, triangles, squares, oval (20 of shape)
Letter cards- multiple letters(10 of each letter).

Procedure/Method

1. Have learners form a circle in the following arrangement-girl, boy, girl, boy.. They hold hands and sing: ‘Ring- a- ring- a- roses, A pocket full of poses
Atishew, atishew, we all fall down.
2. Draw learners attention to their arrangement.

3. Have learners change arrangement to 2 girls, 1 boy..
4. Have learners describe the arrangement.
5. Have one learner use stick men to illustrate their standing arrangement on the board.-2

girls, one boy.

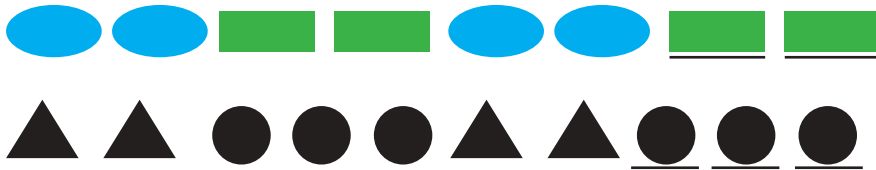


6. Distribute cut out shapes and letter cards to learners.
7. In pairs, ask learners to do their own arrangement with cut out shapes. Those with the letter cards to do same.
8. Have each group talk about their arrangement.
9. Make an arrangement on a low table. Let learners observe and do same with different shapes.



Assessment

1. Continue the pattern



WORKBOOK

Activities In Numeracy for Kg1

Activity 41– K1.3.1.15

- Do the exercise after Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Measurement

ACTIVITIES 42, 43 and 44 – K1.3.1 .1.6 (Pages 42 – 44)

TELLING THE TIME

Content Standard: Demonstrate understanding of good manners that our families value and why they value them

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Learners follow some daily routines at home and school.

Home: waking up, eating breakfast, lunch and supper, going to bed; News time and time for other TV programmes.

School: arrival time, activity time, toileting, snack time, lunch time, and departure time from school.

Learners may often hear adults and the question- what time is it? Answer- 6 o'clock, 8 o'clock etc. Learners go also through various periods of the day- morning, afternoon and evening and various activities associated with them; such as waking up, day time and bed time. Learners who have musical clocks could count the hours as the clock-chimes. Some learners own and play with toy clocks.

It thus becomes interesting for the child to learn that what he/she hears as time for various periods of the day or activities are represented on the clock. Learners will also be able to relate daily activities to time on the clock face.

The clock is used to tell time- seconds, minutes and hours.

Teaching learners to tell the time by hours is the easiest.

Indicator/Objective

Showing the time of the day using clock face.

Key words

Morning, afternoon, evening, clock, hour hand, minute hand, 1 o'clock, 2 o'clock...

Materials/Resources

Improvised clock face/School clock.

One improvised clock for each group of six children.

Pictures of activities of various periods of the day.

Example: going to school, waking up in morning, break time at school.

Procedure/Method Assessment

1. Discuss with learners the various activities they engage in daily.
Example: When they wake up in the morning.

Kofi woke up at 6 o'clock.

2. Set the clock (face) at 6 o'clock and draw learners attention to it.

3. Discussion:

The clock has 3 hands.

The very long tiny hand that moves very fast is called the seconds hand.

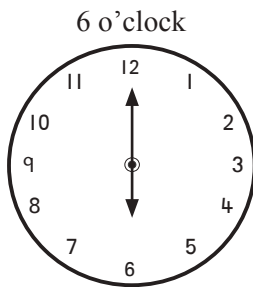
The thick short hand is the hour hand.

The other thick long hand is the minute hand.

We will focus attention on the minutes and hour hands.

Note: Point to the various clock hands as you explain how they work.

Let the learner look at the clock face showing 6 o'clock in the diagram

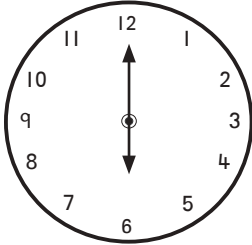


4. Have learners say "Kofi wakes up at 6 o'clock in the morning.
5. Have each child says when he/she wakes up in the morning.
I wake up at _____ o'clock in the morning.
6. Relate other periods/activities of the day to various times (hours) on the clock.
7. Have learners say "Snack time" is at 10 o'clock.
Move the clock hands to show 10 o'clock.
Note: Draw learners attention to 10 o'clock on the school clock when it is snack time at school.
8. Let individuals/whole class say "When it is 10 o'clock, the minute hand (long hand) is on 12 and the hour hand (short hand) is on 10.
9. In pairs have learners (individual) move the clock hands to indicate various times (in hours). On child indicates the time and another learners says what time (hour) it is.

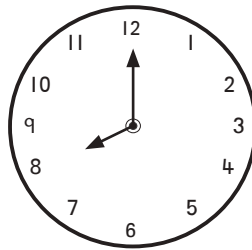
Assessment.

Mention various times hours and let each learner draw the clock face to indicate it.

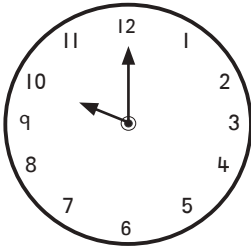
1. 6 o'clock



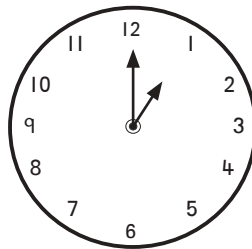
2. 8 o'clock



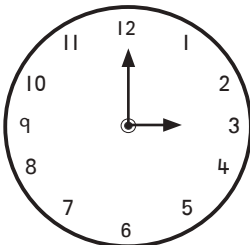
3. 10 o'clock



4. 1 o'clock



5. 3 o'clock



WORKBOOK

Activities In Numeracy for Kg1

Activities 42, 43 and 44- K1.3.1.1.6.

- Do the exercise after the revision on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITY 45 K1.3.2.1.2 (Page 45)

COUNTING LETTERS IN WORDS

Content Standard: Demonstrate understanding of good manners that our families value and why they value them.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

Children learn some number names especially through rhymes and songs well before they are formally taught to count things in the correct order. Recognition of numbers (through, identification, matching/sorting activities – where the child identifies pictures, colours, shape and numbers that are the same according to a given criteria) support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child’s readiness for other numeracy concepts, which will be taught in future such as addition and subtraction.

Indicators /Objectives

Count the number of letters used to fill in spaces of words and represent the number of letters on a number line.

Key words

Respect, polite, thank you, please, may happy

Materials/Resources

- Countable objects- balls, cups, sticks.
Word cards with letters of a word labeled with numbers

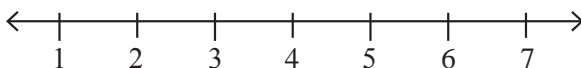
r	e	s	p	e	c	t
1	2	3	4	5	6	7

p	o	l	i	t	e
1	2	3	4	5	6

m	o	t	h	e	r
1	2	3	4	5	6

h	a	p	p	y
1	2	3	4	5

- Number lines labeled with numbers on the board.

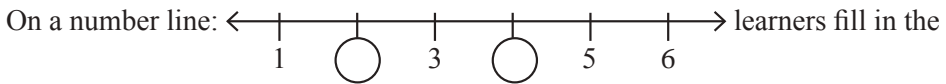


Procedure/Methods

Practical Activities

- Learners stand in a semi-circle and clap while moving their hands (in the air) from their left to their right side while counting: 1, 2.
1, 2. 3. 4, 5. Repeatedly
Then 6,7
6, 7, 8, 9, 10
- Teacher assist learners to read key words from the board repeatedly.
and talk about when and how each word or phrase is used.
- A word from the key words is written on the board twice, the 2nd word has two letters omitted. Learners identify the missing letters and use it to complete the word. Learners count the number of letters used. Example Polite

P-l-te =Polite number of letters used =2

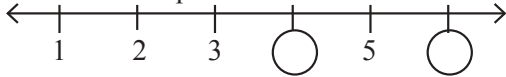


missing number that represent the letters.

P	o	l	i	t	e
1	2	3	4	5	6

- Other letters in the word 'polite' are mentioned. Example 'i and e' in polite. The learner says – 'i and e' are 2 letters in the word.

The word is represented on a number line for the numbers to be filled in.

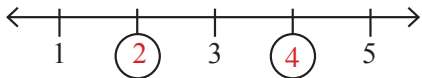


Assessment

- Happy = 2 letters

Count and write the number of letters omitted.

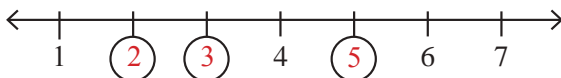
- Fill in the spaces of the missing letters on the number line



- Respect = 3

Count and write the number of letters omitted.

- Fill in the spaces of the missing letters on the number line.



WORKBOOK

Activities In Numeracy for Kg1

Activity 45 - K1.3.2 .1 .2

- Do the exercise after the Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers*ACTIVITIES 46 AND 47 – K1.3.2.1.5 (Pages 46 - 47)***COMPARE: MORE THAN > ; LESS OR FEWER THAN < AND SAME AS (EQUAL TO) =****Content Standard:** Demonstrate the understanding of the good manners our families value and why they value them**Core Competencies:** Communication and Collaboration; Personal Development and Leadership; Critical Thinking.**Introduction**

In the children’s daily experiences, they handle playthings and their snacks. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more fruits even without counting.

One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people).

Children are able to compare and say whether he/she has more biscuits than his/her friend; whether they are more or less in a group.

They can compare sizes, colours, and shapes of clothes and other items . To help children compare items and quantities, they have to be taken through activities in pairing/ one-to –one correspondence.– Putting one thing against the other.

Key words

More than; greater than; fewer than; less than; same as; equal to, mangoes, flowers ,eggs, balls, tomatoes.

Indicators/Objectives

Use comparative language/phrase ‘more than’, ‘less than’ or ‘same as’ to describe relationship between quantities.

Materials/Resources

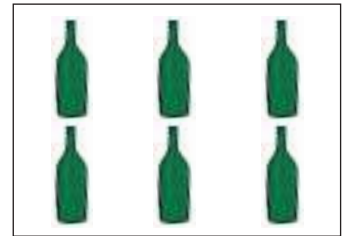
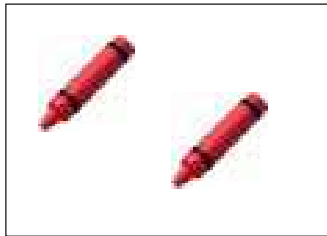
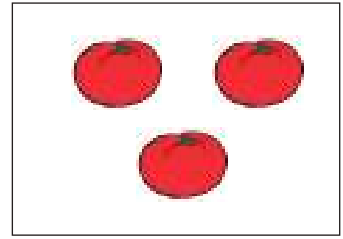
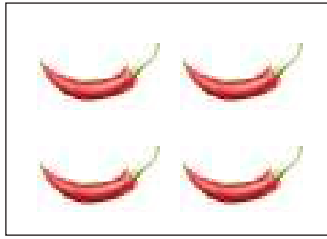
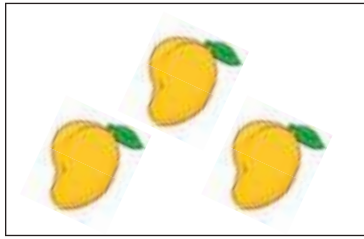
Countable objects- bowls, balls, spoons, sticks,

The greedy crocodile card,



sets of objects cards.

Assessment

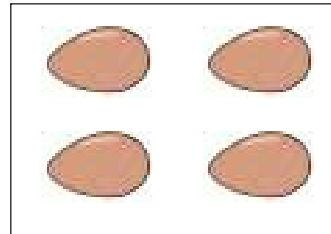
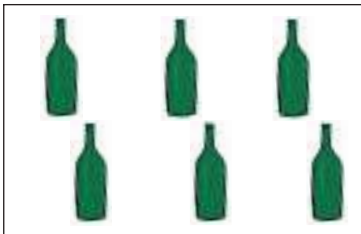


Procedure And Methods

Refer to Practical Activities A & B under Activity 16 - K1.1.4.1.7

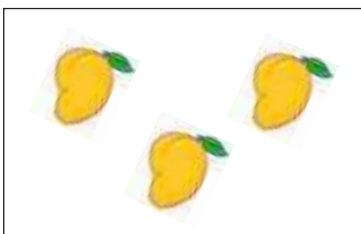
Assessment

1. Compare 4 eggs and 6 bottles. Which is more?



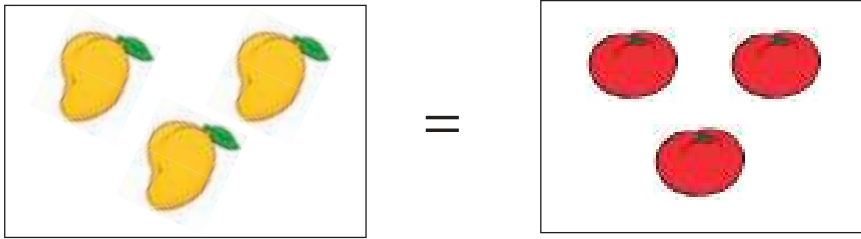
The bottle are more than the eggs.

2. Compare 3 mangoes and 2 crayons. Which is fewer?



The crayons are fewer than the mangoes.

3. Compare 3 mangoes and 3 tomatoes



The number of mangoes and the number of tomatoes are the same.

WORKBOOK

Activities In Numeracy for Kg1

Activities 46 and 47- K1.3.2.1.5

- After Practical Activities A and B of
- Activity 16 - K1.1. 4.1.7.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Lines and Shapes

ACTIVITIES 48 – K1.3.3.1.2 ; 49, 50,51 – K1. 3.3.1.3 (Pages 40 - 51)

2 DIMENSIONAL AND 3 DIMENSIONAL SHAPES

Content Strand: demonstrate the understanding of religious and moral values and virtues we need to exhibit as good Christians and Muslims.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction: Refer ACTIVITIES 18, 19, 20, 21 – K1.1. 5.1.8

Indicators /Objectives

Explain 2D and 3D shapes and have learners describe them (2D/3D shapes)

Have learners identify the 2/3 Dobjects in illustrations and have them group them into 2 categories (2D and 3D) and use comparative signs $<$, $>$, $=$ to describe the data

Key words

2 dimensional shapes – plain shapes (example –circle, triangle, rectangle, square, oval....)

3Dimensional shapes- solid objects . They have faces, edges and corners (example – balls, boxes, oranges, milk tins...) cuboid, cube, sphere, oval, cone...

Procedure/Methods and Assessment: Refer ACTIVITIES 18, 19, 20, 21 – K1.1. 5.1.8

WORKBOOK

Activities In Numeracy for Kg1

Activities – 48 K1.3.3.1.2 and 49, 50 and 51 K1.3.3.1.3

- After Practical Activities.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITIES 52 –K1. 3.3.1.4 AND 53 – K1.3.3.1.6 (Pages 52 and 53)

COUNTING THE NUMBER OF SOUNDS IN A WORD

Content Standard: demonstrate the understanding of religious and moral values and virtues we need to exhibit as good Christians and Muslims.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Children learn some number names especially through rhymes and songs well before they are formally taught to count things in the correct order. Recognition of numbers (through identification, matching/sorting activities- where the child identifies pictures, colours, shape and numbers that are the same according to a given criteria) support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child's readiness for other numeracy concepts, which will be taught in future, such as addition and subtraction.

Indicators /Objectives

Stretch and count the number of sounds in a word.

Key words

Imam, pastor, Muslim, love, cake mosque, window.

Materials /Resources

Learners own name cards

Pocedure/ Methods***Practical Activity A***

Have learners form a circle, they clap and sing.

1. 1, 2, 3, 4, 5, weare counting mangoes.
6, 7, 8, 9, 10, eating merrily.
2. Have each learner mention his or her name slowly, then break into syllables and clap and count the sounds in the name, example : Lareba –la..re..ba = 3 sounds ; Yaaba – yaa...ba = 2 sounds
3. Lead learners to read the key words, then stretch each word and count the number of sounds that makes the word.- pas. tor, (2 sounds) Im..am,(2 sounds) Mus...lim (2 sounds).

4. They extend the activity to things around them
Table –ta...ble (2 sounds), pencil –pen...cil (2 sounds), Mankesim –man...ke.....sim (3 sounds).

Practical Activity B

1. A name or word card is placed on the board. Learners count the number of letters in the name or word.

Example

Mosque

How many letters? = 6

2. Assist learners to read the following words- love, pray, faith, altar, angel and child
3. Copy the words one after the other and have learners count the number of letters.
Example: faith = 5 letters.
4. Have a learner pick a word card. Read the word for learners to repeat. Place the card on the board and have all learners count the number of words.
5. Other learners can mention their own names to be written of the board, for the letters to be counted.

Assessment

After Practical Activity A

In pairs, one learner mentions his/her name, the name of any object or a place. The 1st Learner claps the number of syllables that make the name. The 1st learner counts and says how many. The learners change over and go through the activity. Learner A becomes Learner B.

Example:

Learner A: Abokobi

Learner B: A...bo...ko...bi

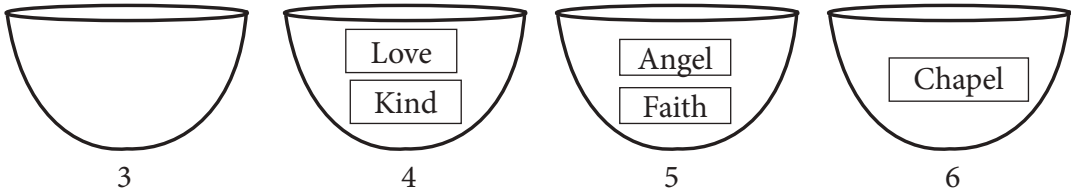
Learner A: Counts the sounds – 1, 2, 3, 4 = 4 sounds

Assessment after Practical Activity B

Angel	love	faith	table
mosque	chapel	kind	

Teacher prepares multiple of each word card. Other words including names could be included (20 of each card)

Provide 4 bowls / boxes labeled with numbers 3, 4, 5 and 6



In turns a learners pick a word card. He/she counts the letter. He/she shows to the class for confirmation, then places it in the appropriate labeled bowl.

WORKBOOK

Activities In Numeracy for Kg1

Activity 52 – K1.3.3.1.4 after Practical Activities A and 53 – K1.3.3.1.6, After Practical Activities B.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITIES 54 AND 55 – K1.3.4.1.3 (Pages 54 -55)

COMPARE: MORE THAN > ; LESS OR FEWER THAN < AND SAME AS (EQUAL TO) =

Content Standard: Demonstrate the understanding of relating well with people with different beliefs.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

In the children's daily experiences, they handle playthings, and their snacks. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more sweets even without counting.

One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people).

The child is able to compare and say whether he/she has more biscuits than his/her friend; whether they are more or less in a group.

They can compare sizes, colours, and shapes of clothes and other items .

To help children compare items and quantities, they have to be taken through activities in pairing/ one-to –one correspondence. (putting one group of objects against another group to see which group is more or less or if the two groups are the same in quantities).

Indicators/Objectives

Count the letters in at least 2 religious book

Use comparative language/phrase 'more than', 'less than' or 'same as' to describe relationship between quantities.

Key words

More than; greater than; fewer than; less than; same as; equal to, Chapel, Bible, Prophet, Quran.

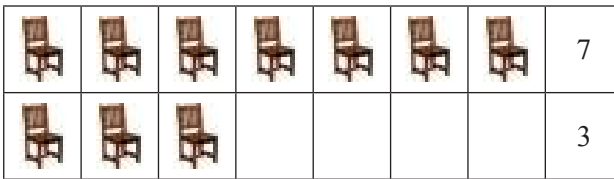
Materials and Resources



Procedure /Methods

Practical Activity

1. Put out 10 chairs in two groups – 7 and 3.
2. Have the class count each group and write on the board.
3. Find out which group is more.- the 7 chairs are arranged horizontally. The 3 cups are paired so that each of the 3 chairs is in front of another chair.
4. Ask: do all 7 chairs have partners? No
5. The 7 chairs are more than the 3.



6. Repeat the activity with other quantities (pairs of numbers example 2 and 5; 8 and 3; 5 and 2)

Practical Activity B

1. Two name or word cards are placed on the board. Learners count the number of letters in each name or word.

Example



How many letters? = 4



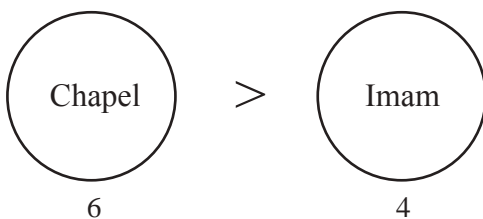
How many letters? = 6

2. The two words are written boldly on the board, one under the other.

C h a p e l

I m a m

Learners compare the quantities and say which word has more letters. “Chapel” has more letters than Imam.

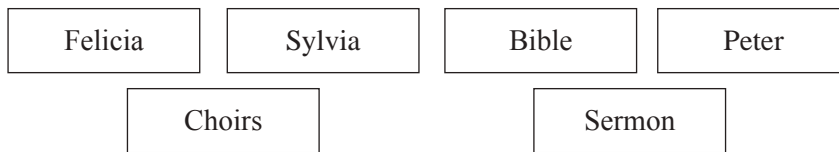


Assist learners to read the key words.

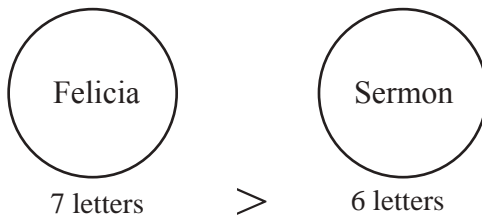
- Copy pairs of words on the board and have learners count the number of letters.
Example: Mosque = 6 letters and Prophet = 7 letters.
- Compare the number of letters in each word and say which is more or less.
- Mosque = 6 letters and Prophet = 7 letters
- Mosque < Prophet.
- Have a learner pick pairs of word cards. Read the word for learners to repeat. Place the card on the board and have all learners count the number of words and compare the set.

Assessment

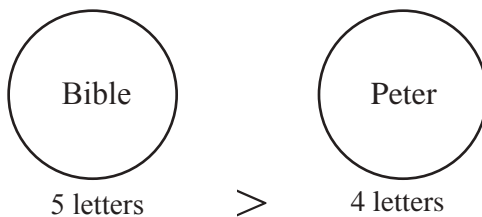
Pick two sets of word cards, count the letters on each card. Compare the 2 quantities > , < or =



- Felicia and sermon



- Bible and Peter



WORKBOOK

Activities In Numeracy for Kg1

Activities 54 and 55 – K1.3.4.1. 3

- After Practical Activities.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

*ACTIVITIES 56 –K1.3. 4.1.3; 57 – K1.3.4.1.4; and 59 –K1.4.1.1.1 (Pages 56 - 59)***CLASSIFICATION: SORT, COUNT AND COMPARE****Content Standard:** Demonstrate understanding of relating well with the people with different beliefs.**Core Competencies:** Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

One of the child's early activities involves Sorting-Identification and Discrimination. The ability of the child to see things that are the same and those not the same.- choosing own shoes from among those of other family members; choosing favourite play things from among a collection/group of playthings; choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as colour and shape or size; make matches- figure out same items; and identify sets of objects; recognize and create patterns ; and compare sets for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count classified items and go on to draw and also build graphs from the classified items.

These are interesting activities when made playful and fun for the learner.

Indicators/Objectives

Sort drawings according to given criterion (religion; colour; size)

Key words

Red, blue, green, yellow, black, brown, orange

Big, small.

Materials/Resources

- Cans painted in different colours (as in key words)
- Empty packets of different sizes, countable objects – cups, balls.

Procedure/Methods

Collect painted cans and put in a box and placed on a low table.

1. Learners pick the cans as they move round the box with a song :
How green you are? (3x)
How green ?
How green you are? (3x)
How green?
*Replace green in the song with other colours, red, blue..
2. Boxes are arranged in front of the class, labeled with the colour name. (colours of the cans to be picked)
3. learners move round to drop their cans into the labeled boxes marked with their colours.
At the end, the coloured cans are counted. Learners compare the groups they have sorted (two colours at a time) They describe with $>$, $<$, $=$.
4. Learners are drilled on the names of the colours in the key words (as they talk about the colours they have sorted)

Practical Activity B

1. Put a collection of big and small empty packets onto a low table where learners can see
2. Pick a big packet show to learners and say ‘this is a big packet’
3. Pick a smaller packet, show to learners and say, ‘this is a small packet’.
4. Put the two packets on separate tables.
5. Invite learners to sort the collection of packets.- Big packets and small packets.
6. Have learners sit in pairs. Give each group a collection big and small objects to sort, count and compare the quantities. They describe with $>$, $<$, $=$.

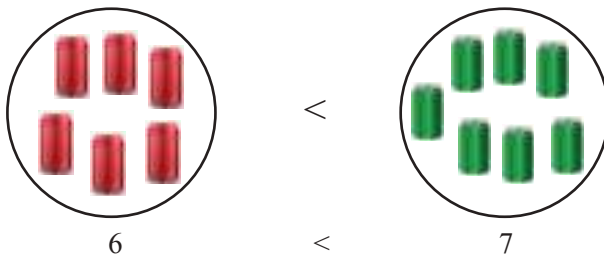
Assessment

A

1. Draw and colour circles of – red, black, green and blue.

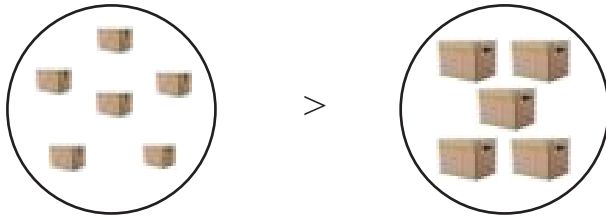


2. Count and compare.



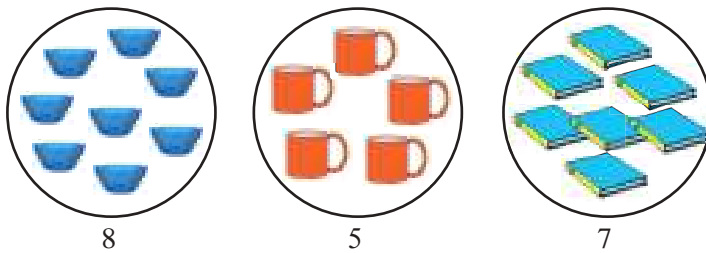
B

1. Draw a big cup and a small one.
2. Count, compare 6 small packets and 5 big packets



C

Count and write



WORKBOOK

Activities In Numeracy for Kg1

Activities 56 – K1.3.4.1.3 ; 57-K1.3.4.1.4; 59 –K1.4.1.1.1

Activity – 56- K1.3.4.1.3 After Practical Activity A and Assessment Exercise A

Activity - 57- K1.3.4.1.4 After Practical Activity B and Assessment Exercise B

Activity 59 – K1. 4.1.1.1 after Assessment Exercise C

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers Operations

ACTIVITY 58 – K1.3.4.1.5 (Page 58)

ADDITION

Content Standard: Demonstrate the understanding of relating well with the people with different beliefs.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

When children learn to count, they are able to tell how many things there are or they have. Learners daily experience the concept of addition when they pick one more play thing to add on to what they already have. Another example is when a friend joins in a play activity. Addition means to add on something /persons to a group of other things or persons. Addition and Subtraction are opposites. While addition adds on to a group, subtraction takes away from a group.

Indicators/Objectives

Add numbers – Combine amount of money collected at church services; Add objects

Key words

Add, Addition, Put together, Plus, Count.

Materials/Resources

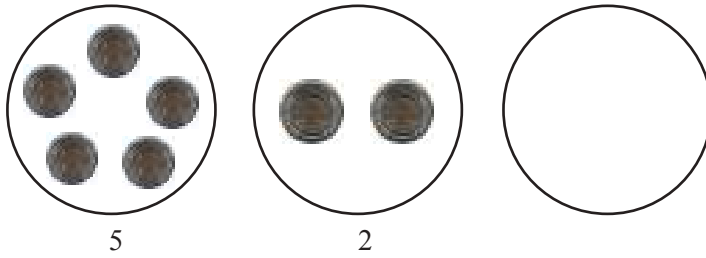
1. Play money – 1 cedi cards-(20) these are cut-out cards with one cedi written on each.



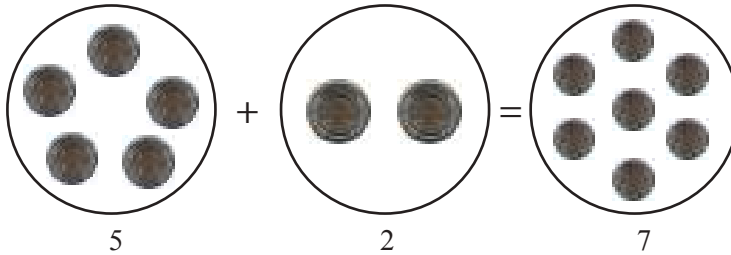
2. Countable objects- cups ,balls, bottle tops.

Procedure/Methods

1. Have learners stand in a circle. They clap a rhythm and count- one, two. One, two, three, four, five. Repeatedly
2. Have learners sit in a semi-circle with a low table in front of them.
3. Put out 3 bowls. Two containing two different amount of money- 5 cedis and 2 cedis, with the third one empty.



4. Invite 3 learners to the table. The first 2 learners count the content of the first two bowls. They all pour them into the third bowl.
5. The third learner leads the whole class to count the money in the bowl onto the table. The class vocalize as they count. 5 cedis and 2cedis =7cedis
6. Have each learner draw his/her bowl with objects on the board.
7. Introduce the plus sign(+) to show addition of the 2 sets of objects, and the equal to sign (=) to show total of the sets added.
8. $5 + 2 = 7$

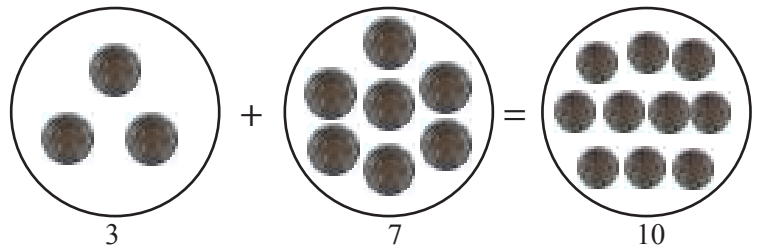


9. Have the class count 2 sets of learners (6 and 3) and add.
10. Have learners draw step 8 in sheets of papers.
11. Explain to learners that by pouring the objects in the 2 bowls into the third bowl, we say we have added the object or put them together.

Assessment

Draw and put together.

1. 3 cedis and 7 cedis
2. 5 cedis and 3 cedis
3. 8 balls and 1 cup



WORKBOOK

Activities In Numeracy for Kg1

Activity 58 – K1.3.4.1.5

- Do the exercise after the on Practical Activities and exercises on assessment.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers-Operations

ACTIVITIES 60 AND 61 – K1.4.1.1.1; 66 – K1.4.1.1.6; 70 – K1.4.2.1.6; 71– K1.4.2.1.7 and 73 –K1.4.3.1.6. (Pages 60, 61, 66, 70, 71, 73)

SUBTRACTION**Content Standard:**

K1.4.1.1 Demonstrate understanding of the local places in our communities.

K1.4.2.1.1 Demonstrate knowledge of the people in the community and their occupation

K1.4.3.1 Demonstrate understanding and knowledge of the special leaders and their roles in our communities.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

When children learn to count they are able to tell how many things there are or they have. Learners daily experience the concept of subtraction when they open a pack of biscuits and begin to eat or give some away to friends. Another example is when a friend goes out of a play activity.

Subtraction means to take something away, or remove something from a group. Subtraction is also expressed as separation of a smaller number of objects from a larger group. Addition and Subtraction are opposites. While addition adds on to a group, subtraction takes away from a group.

Indicators/Objective:

- K1.4.1.1.1 -Count drawings. Use numbers to teach subtraction. (Subtract smaller numbers of drawn objects from larger group).
- K1.4.1.1.6 -Learners use the concept of addition and subtraction.
- K1.4.2.1.7/K1.4.3.1.6 -Demonstrate understanding of the concept of subtraction as separating and finding out how many is left.

Key words

Subtract, take away, count, separate.

Materials/Resources

Countable objects-dolls, balls, sticks, crayons, empty packets and cans.

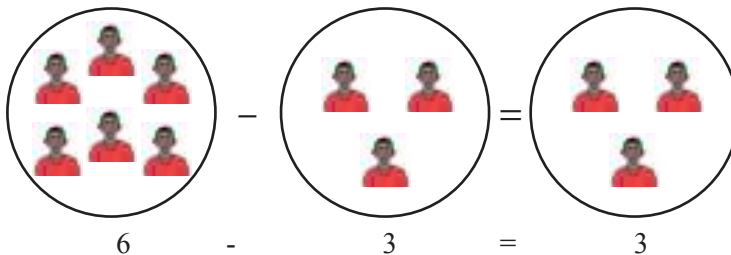
Procedure/Methods

Practical Activities A

1. Learners form a circle and say a rhyme with actions.
Learners hold 5 empty packets. They drop them one after the other at the expression – ‘one fell out’
There were 5 in bed,
The little one said roll over, roll over,
They all rolled over and one (1) fell out.

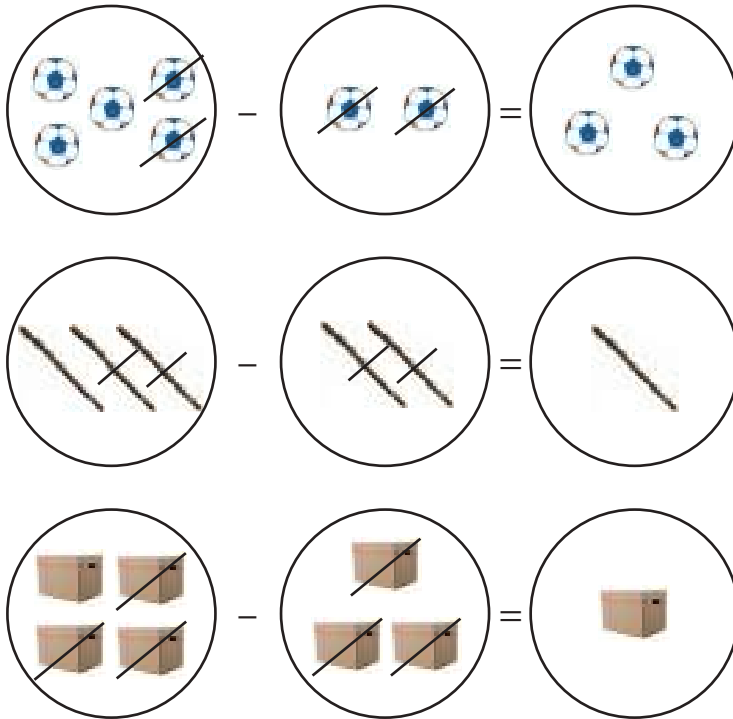
There were 4 in bed,
The little one said roll over, roll over,
They all rolled over and one (1) fell out.

Continue till
There was one (1) in bed
The little one said roll over, roll over,
He rolled over and there were no more children in bed.
2. Have learners sit down.
3. Call out 6 boys, by their names, to the front of the class.
4. Put 3 chairs by the teacher’s table.
5. The whole class counts the learners. 1, 2, 3, 4, 5, 6.
6. Ask a learner to draw the 6 children on the board and write 6 underneath.
7. Ask 3 boys to sit on the chairs.
8. Have the class count them - 3.
9. Ask one learner to cross out the 3 boys on the board.
10. Question: how many children are left standing?
Answer: 3
The three boys are drawn and ‘3’ is written underneath.
11. Introduce the take-away/subtraction and equal to signs to learners (-); (=)
When the children sit down, we can still talk about their activity as represented on the board.
12. We can complete it by putting in the correct signs.



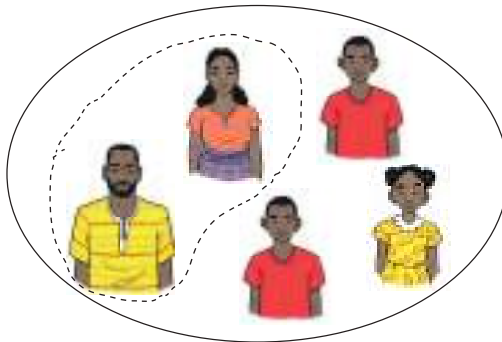
13. Have all learners sit behind their tables in a semi-circle. Pour out the countable materials on a low table in front of them. Give each learner 8 to 10 objects on his/her table.

14. Mention a number; example 4. Every learner counts.
Say: take away 2. (the 2 objects are pushed away from the group.)
How many are left? 2
15. Continue with other numbers:
Count 5 objects; take away 2 of them. Answer = 3
Count 3 objects; take away 1 of it. Answer = 2
Count 4 objects; take away 3 of them. Answer = 1
16. Have learners represent their objects with pictures and write the sums.

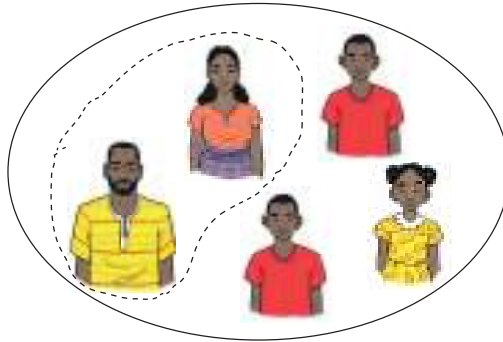


Practical Activities B

Separation is another way of expressing subtraction or take-away. It is moving away/taking away/subtracting a smaller group of items from a larger one.



The sum: A number of objects/persons is put in a circle and recorded. A circle (in broken lines) is drawn around the group of objects/persons to be separated/subtracted from the larger group, (this is counted and recorded), The objects/persons outside the broken lines are counted, and that is recorded as the answer.

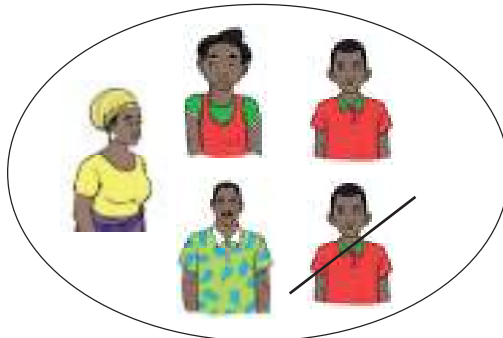


$$5 - 2 = 3$$

Assessment

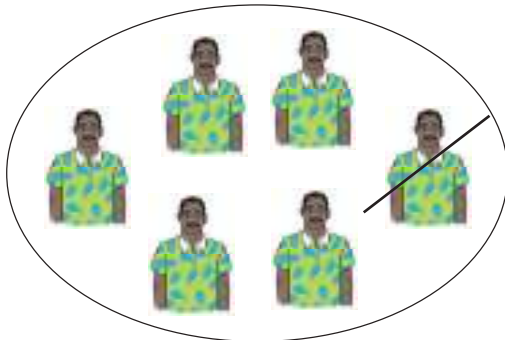
Work out the following

A

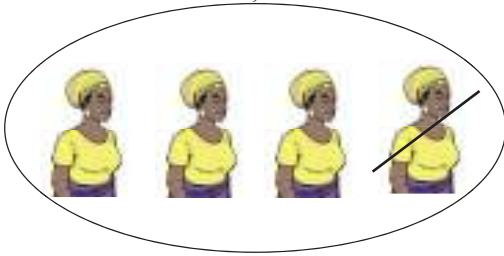


$$5 - 1 = 4$$

1. 6 men – 1 man;

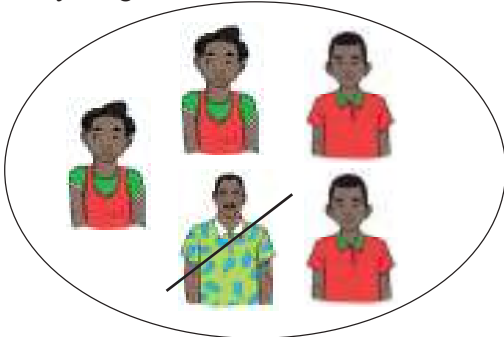


2. 4 women – 1 woman;



$$4 - 1 = 3$$

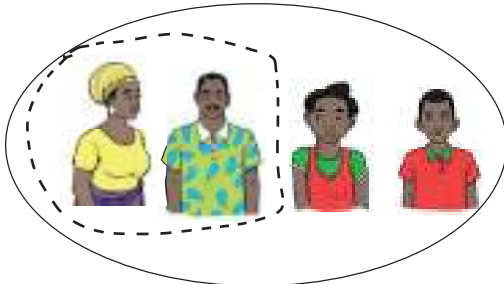
3. 2 boys, 2 girl and 1 man – 1 man.



$$5 - 1 = 4$$

B.

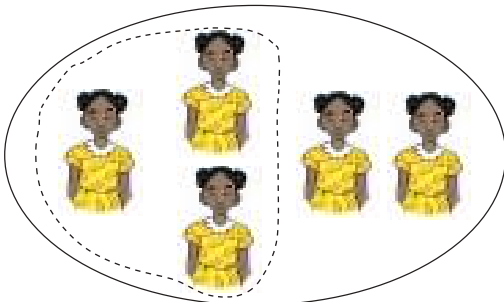
4.



$$4 - 2 = 2$$

C. Question : Write the sum

5. Separate 3 girls from 5 girls. Illustrate with circles.



$$5 - 3 = 2$$

WORKBOOK

Activities In Numeracy for Kg1

Activities 60 and 61 K1.4.1.1.1, 66- K1.4.1.1.6,

70 –K1.4.2.1.6 , 71 – K1.4.2.1.7 And 73 – K1.4.3.1.6 After Practical Activities

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers Operations

ACTIVITIES 62 – K1.4.1.1.3; 63 – K1.4.1.1.4 ; 64 and 65 – K1.4.1.1.6, 74 – K1.5.1.1.1, 75 and 76 – K1. 5.1.1.2, (Pages 62 - 65 and 74 - 76)

ADDITION**Content Standard**

K1.4.1.1.3/K1.4.1.1.4/K1.4.1.1.6- Demonstrate the understanding of the special places in our local communities.

K1.5.1.1.1/K1.5.1.1.2 –Demonstrate knowledge of the history and Independence of Ghana.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction: Refer to Activities 36, 37, 38 – K1.2.4.1.4

Indicators/Objectives

- K1.4.1.1.4 –Write and count words with the letter ‘K’
- K1.4.1.1.6-Demonstrate the understanding of the concept of addition by combining people and objects and finding how many altogether

Key words

Add, Addition, Put together, Plus, Count

The letter sound ‘k’ as in Kasoa, Krobo, Kofi

Add, Count, Subtract, Take away

Red, Blue, Green, Black, History, Region, Ghana, Independence, president.

Materials/Resources

- Word cards of words beginning with ‘k’.



- Collection of word cards that does not begin with ‘k’ Example- mango, cat, dog, fan, net, van, wet.
- Word cards

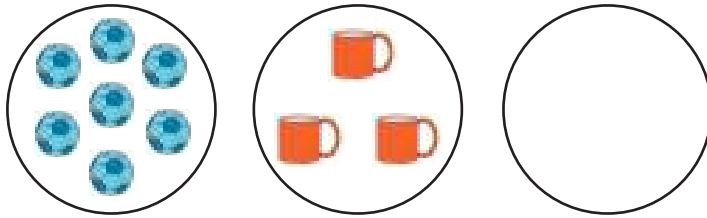
Independence	History	Ghana	President
--------------	---------	-------	-----------
- Collection of coloured cut-out (papers) –Yellow, Red, Blue, Green, Black (20 to 30 of each colour)
Countable objects- cups ,balls, bottle tops.

Procedure/Methods

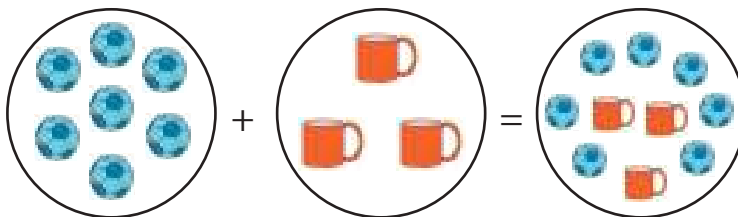
A

Refer to Activity 36, 37, 38 -K1.2.4.1.4 for revision

1. Have learners stand in a circle. They clap a rhythm and count- one, two. One, two, three, four, five. Repeatedly.
2. Have learners sit in a semi-circle with a low table in front of them.
3. Put out 3 bowls. Two bowls containing 7 balls and 3 cups respectively, with the third one empty.



4. Invite 3 learners to the table. The first 2 learners count the content of the first two bowls. They all pour them into the third bowl.
5. The third learner leads the whole class to count the objects from the 3rd bowl onto the table. The class vocalize as they count. 1,2,3,.....10 (7 balls and 3 cup =)10 objects.
6. Have each learner draw his/her bowl with objects on the board.
7. Introduce the plus sign(+) to show addition of the 2 sets of objects, and the equal sign (=) to show total of the sets added.
8. $7+3=10$

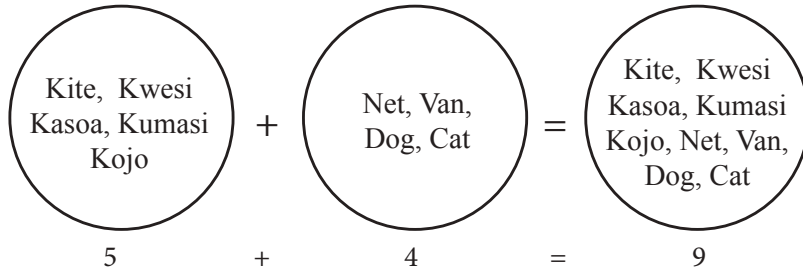


9. Have class count 2 sets of learners (4 girls and 5 boys) and add them.
10. Have learners draw step 8 in sheets of papers .
Explain to learners that by pouring the objects from the 2 bowls into the third bowl, we say we have added the object or put them together.

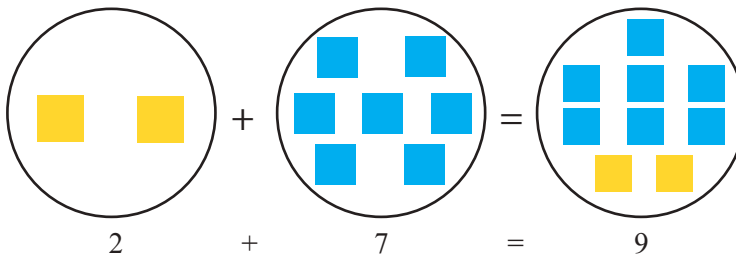
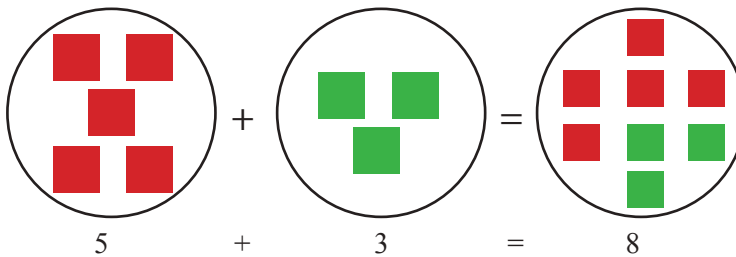
B

1. Write out some 'k' words on the board.
Kasoa, Kaneshie, Kojo, kite, king.
Drill learners on the sound 'k'- read the words repeatedly emphasizing the sound

2. Have learners mention other words with 'k' in them.
3. Mix up all the word cards.
4. Read the words with learners and have them sort out the 'k' words from non 'k' words.
5. Write out each group on the board. Have learners count them separately and write.



6. Have learners add any two colours different coloured papers.



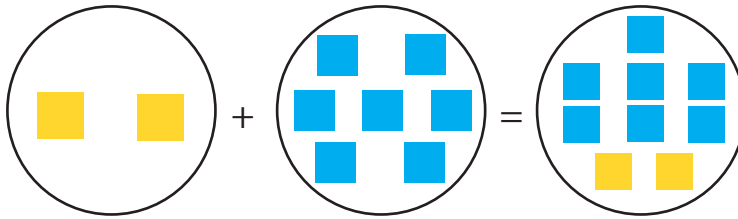
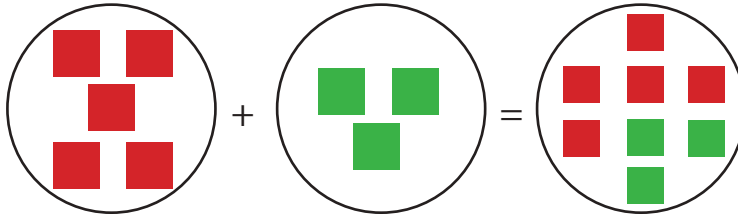
7. Have individuals count 2 sets of countable objects and add. 4 and 5; 6 and 3; 4 and 5

Practical Activities C

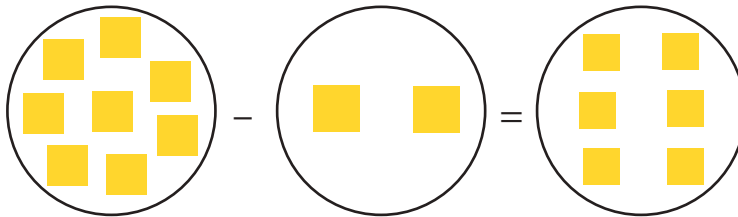
1. Have learners stand in a circle. They clap a rhythm and count- one, two One, two, three, four, five. Repeatedly with hands crossed, while they beat their shoulders.
2. Have learners sit in a semi-circle with a low table in front of them.
3. Put a collection of the different coloured cut-out cards into boxes or bowls.
4. Give each group of 5 learners a box of the assorted coloured cards to sort and count.
5. Learners sort and count the various coloured cards.
Example: red = 5; blue = 7, green = 3, blue = 8, yellow = 2
6. Have learners add any two colours.

Red and green cards: $5+3=8$

Yellow and Blue cards: $2+7=9$



7. Subtract 2 yellow cards from a group of 8 yellow cards; $8-2=6$



Practical Activities D

1. Write two words on the board- history and flag.
2. Have learners read the words, count the letter of each word, and add them.

History = 7 and flag = 4

$$7+4=11$$

Day = 3 and teacher = 7

$$3+7=10$$

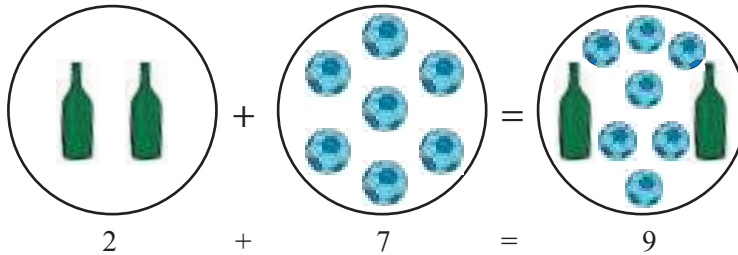
3. Have learners read other words (key words) and count the letters of the word.
4. Choose and add any two randomly selected.

Assessment

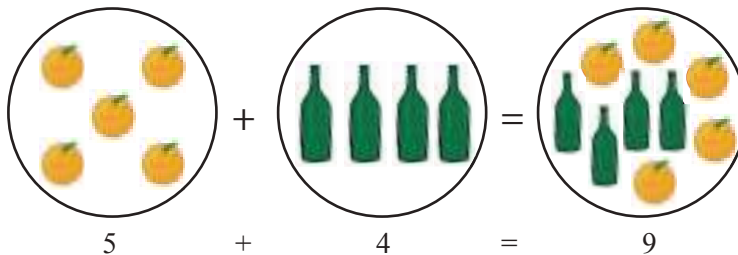
A

Draw and put together

1. 2 bottle and 7 balls = 9



2. 5 oranges and 4 bottles



B



C

Put pairs of coloured cut-out cards into small boxes or bowls. Have learners pick, count each colour of cards and add them.

Add: 3 red cards and 5 blue cards.

$$3 + 5 = 8$$

8 black cards and 1 green card.

$$8 + 1 = 9$$

Take away: 10 yellow cards take away 6 (yellow cards)

$$10 - 6 = 4$$

8 orange cards take-away 5 (orange cards)

$$8 - 5 = 3$$

D

Count the number of letters of each word. Add them

Farmer and Day

$$6 + 3 = 9$$

Cocoa and March

$$5 + 5 = 10$$

WORKBOOK

Activities In Numeracy for Kg1

Activities 62 - K1.4.1.1.3; after practical Activity A and Assessment exercise A

Activity 63 - K1.4.1.1.4 After practical Activity B and Assessment exercise B

Activities 64 and 65 - K1.4.1.1.6, After practical activity A and Assessment exercise A

74 - K1.5.1.1.1 After practical activity C and Assessment exercise C

75 and 76 - K1.5.1.1.2 after Practical Activities D and Assessment exercise A.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITIES 67- K1. 4.2.1.1, 68 - K1.4.2.1.5, 69 - K1.4.2.1.6 and 72 - K1.4.3.1.1 (Pages 67 - 72)

COUNTING THE NUMBER OF SOUNDS IN A WORD**Content Standard:**

- Demonstrate knowledge of the people of the community and their occupation.
- Demonstrate understanding and knowledge of the special leaders and their roles in our communities.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

Children learn some number names especially through rhymes and songs well before they are formally taught to count things in the correct order. Recognition of numbers (through matching/sorting activities- where the child identifies pictures, colours, shape and numbers that are the same according to a given criteria) support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child's readiness for other numeracy concepts, which will be taught in future, such as addition and subtraction.

Indicators /Objectives

- K1.4.2.1.1- Sort occupations into formal and informal and match the sets with their correct number.
- K1.4.2.1.5 Count words in sentences.
- K1.4.2.1.6- Count members of various professions.
- K1.4.3.1.1- Count Identified community leaders during a walk.

Key words

Farmer, lawyer, banker, fisherman, doctor, fish monger
Secretary, fireman.

Materials/Resources

- Word cards of occupations in the key words and the following

Ice-cream man

Policeman

Army officer

Trader

Carpenter

- Costumes of various occupations- as above.
- Countable objects – bottle tops, sticks, cups and crayons.

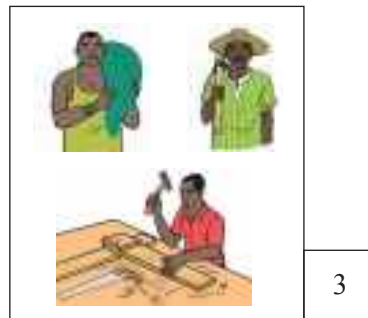
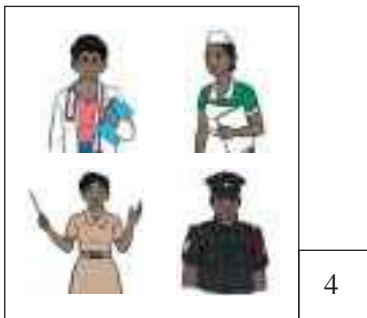
Procedure/Methods

Practical Activities A

1. Have learners dress in various costumes- lawyer, teacher, fisherman, banker, carpenter, army officer, trader and policeman.
2. Learners sit in a semi-circle.
3. Talk about each occupation with learners- where they work and what they do.
4. Formal occupation registered with government- The people work for companies, hospitals etc – Example-Banker, works in the bank. The bank keeps people’s money. They go to take the money when they need it.
Informal occupation – A person owns his/her job.
Example -a farmer, grows food.
5. Learners sing, and as an occupation is mentioned, the person dressed in that costume comes up to mime an activity of that occupation.

*Song: when I was a farmer, a farmer, a farmer,
When I was a farmer, a farmer was I.
And this way, and that way,(action of the job-weeding)
When I was a farmer, a farmer was I
The other occupations are substituted in the song.*

6. As the song is sung, learners stand in two groups. Formal and informal occupations,
Formal Occupations: Jobs in banks and other offices, hospitals, banker, lawyer, doctor, policeman, teacher. They do not own the jobs. They work for salaries.
Informal Occupations: Farmer, trader, ice-cream man, carpenter. The people on these jobs own the jobs.
7. Learners count and write the number of each group.



Practical Activity B

1. Have learners sing Old McDonald had a farm’
2. Ask learners to mention names of some occupations. – trader, mason, teacher, doctor.
3. Have learners form sentences with the names they have mentioned. Write on the board
Example: My mummy is a trader.
Papa Kofi has a big farm.
Pat is a nurse at the clinic
4. Have learners count the number of words in each sentence and write the number

beside it.

- My mummy is a trader =5 words
- Papa Kofi has a big farm =6 words
- Pat is a nurse at the clinic =7 words

Assessment

A

- Sort the occupations into formal and informal. Count each group:
Carpenter, farmer, lawyer, banker, fisherman, doctor, fish monger

Formal

Doctor Banker Lawyer Teacher
4

Informal

Fish monger Fisherman Farmer
3

B

Read the sentence. Count the number of words in each sentence.

The taxi driver is kind. 5 words

A nurse works in the hospital. 6 words

WORKBOOK

Activities In Numeracy for Kg1

Activities 67 - K1.4.2.1.1 and 68 - K1.4.2.1.5 after practical Activity A and Assessment exercise A

Activities 69 - K1.4.2.1.6 72 - K1.4.3.1.1 after Practical Activities B and assessment exercise B.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITIES 77 AND 78 – K1.5.1.1.7 (Pages 77 - 78)

COMPOSE AND DECOMPOSE 1-9

Content Standard: Demonstrate knowledge of the History and Independence of Ghana

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Decomposing and composing numbers is breaking apart numbers and then putting them back together. This is also known as ‘part, part, whole’; understanding that you have a whole amount and you can break it into parts.

Learners understand that a whole number can be broken into smaller parts (decomposing) and when brought together (composing) will be the sum of that whole number.

Example: 6 is the same as 2 and 2 and 2 or 3 and 3, or 1 and 5. ($2+2+2=6$); ($3+3=6$); ($1+5=$)

Composing and decomposing mirror addition and subtraction.

A child’s packet of biscuits containing 8 smaller biscuits can be separated into small groups. The separation does not however change the original number of 8 biscuits in the pack.

Example: $8 = 4 + 4$

Indicators/Objectives

Compose and decompose numbers up to 10

Key words

Compose, Put together; Decompose, Separate/break into parts; Equal to.

Materials/Resources

Countable objects- bottle tops, plastic bottles, cups, sticks. Cut-out shapes (cards of the size of a 50 pesewa coin)

Procedure/Method**Practical Activity**

1. Have learners form a circle and sing with actions:
Five little ducks that I once knew,
Fat ones, skinny ones they were too.

But the one little duck with the feathers on its back,
He led the others with a quack, quack, quack, qua....ck

2. have learners sit in a semi-circle
3. Call 4 learners to the front of the semi-circle.
4. Have the class count them.
5. Say: we want to separate the 4 children into two groups. Learners stand in groups of 2 and 2.
6. We have separated the 4 children into 2 groups; 2 and 2. (2+2)
7. By doing so we are decomposing the number 4.
8. Have learners repeat the word decomposing. When we decompose, we put the number apart.
9. Have the class decompose other groups of learners. Call them to the front, and say- decompose these groups- 5 as 3 +2; 7 as 3 +4
10. Distribute to learners (in pairs) countable objects- Example: bottle tops in a bowl.
6, 8, 9, 10, 2, 5, 4, 3
Example : $6= 1+5$; $8 = 2+6$; $10 = 7+3$; $2=1+1$; $3=2+1$
11. 10. Have learners decompose the quantities of countable objects above.

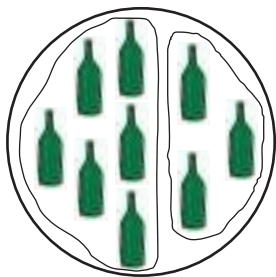
Practical Activities B

1. Call 8 learners to the front of the class. Have them decompose into 2 groups. Example $8=5+3$
2. Have the rest of learners count each group, 5 and 3 ($5+3$)
3. Have learners put the two parts (groups) of the 8 children- 5 and 3, together. Compose 5 and 3. This will be 8.

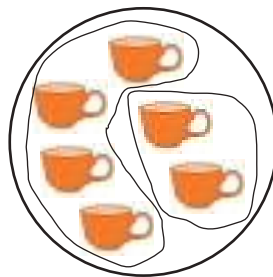
Compose \longrightarrow Put together
Decompose \longrightarrow break apart/separate

Assessment

1. Decompose the following. Draw a ring around two groups of objects that add up to the number of objects in the group.

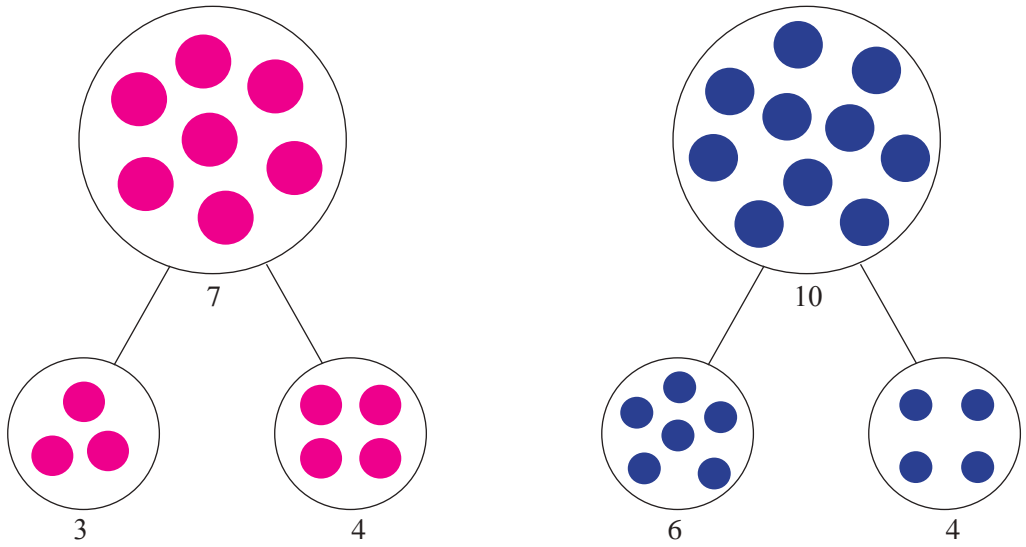


$$9 = 6 + 3$$

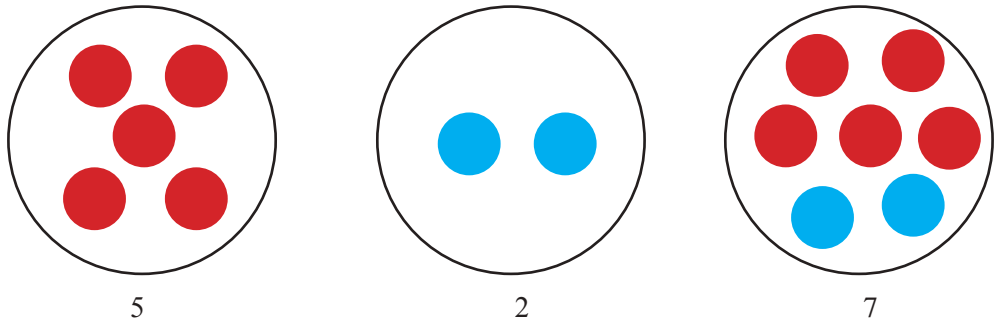


$$6 = 4 + 2$$

2. Decompose the following. 7, 10



3. Compose the following- 5 red cards and 2 blue cards



WORKBOOK

Activities In Numeracy for Kg1

Activities 77 and 78- K1.5.1.1.7 after practical Activities and Assessment exercises

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Data (Collection, Presentation, Analysis And Interpretation)

ACTIVITIES: 79 – K1.6.1.1.2; 80 – K1.6.1.1.3 82 – K1.6.2.1.1 (Pages 79 - 82)

CLASSIFICATION/COUNT AND COMPARE

Content Standard: Demonstrate understanding of Living and Non-living Things.

K1.6.2.1.1 Demonstrate understanding of Domestic and wild animals.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

One of the child's early activities involves Sorting-Identification and Discrimination. (The ability of child to see things that are the same and those not the same).- choosing own shoes from among those of other family members; choosing favourite play things from among a collection/group of playthings; choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as kind, colour and shape or size; make matches- figure out same items; and identify sets of objects; recognize and create patterns ; and compare sets of objects for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count classified items and go on to draw and also build graphs and patterns from the classified items.

These are interesting activities when made playful and fun for the learner.

Indicators/Objectives

K1.6.1.1.2 Classify and count living and non- living things.

K1.6.1.1.3 Classify and count words according to syllables and use comparative language to describe each group-more than >, less than < and same as =

K1.6.2.1.1- sort and count domestic animals.

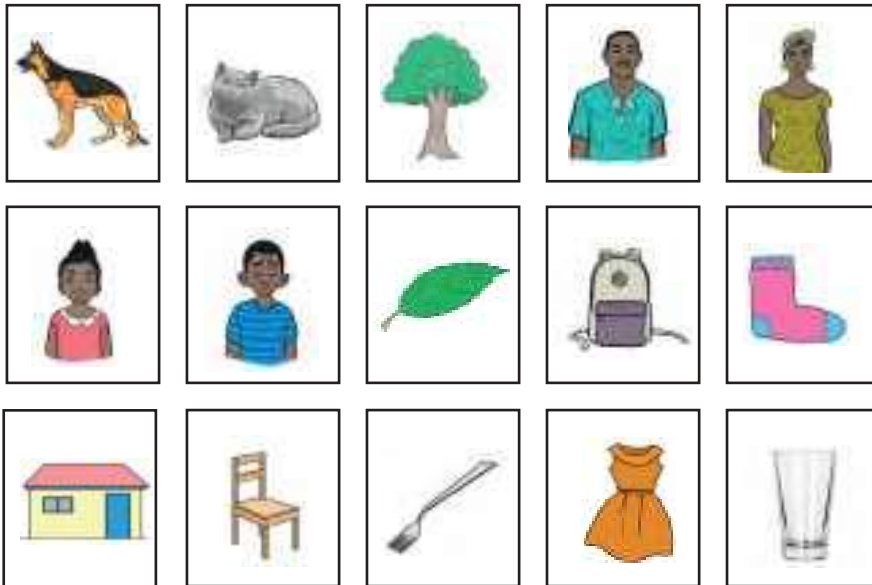
Key words

Living things- people/animals/plants

Non-living things- things that do not breathe/made by man – houses, cake, shoes, spoon, bag, fruits.

Materials/Resources

Countable objects –cups, balls, sticks, picture cards.



Word cards



Procedure/Methods

Practical Activity A

1. Have learners form a circle and sing “Old MacDonald had a farm”/“Five little ducks went swimming oneday”
2. Explain the following to learners and have them give examples of (a) living things and (b) non-living things.
Living things- All things created/made by God- ourselves/humans-girl, boy, man, woman, tree, fish, cat, dog. They all breathe, move, and grow. They need air, water and food to grow.
Non-living things- All things made by human beings, they do not move by themselves – house, pencil, shoes, bag, cup, ball, toys.
3. Put all the picture cards-living and non- living things.
4. Have learners form two queues. Mark the groups as (1) and (2).
5. All those in group 1 are to pick pictures of living things. Group (2) are to pick pictures of non-living things
6. Each group counts the pictures collected.
7. Group 1 puts out her picture cards horizontally on the floor. They count and write the number against it.

8. Group 2 put their picture cards against that of group 1. They count and write the number against it
9. Learners compare and say which group is more, less or same as.
10. The class discusses the findings

Example: L- living things and N- non- living things

L- dog, cat, fly, tree, man, woman, girl, boy. =8

N- Leaf, bag, house, chair, spoon, dress, = 6

$8 > 6$

The living things are more than the non-living things.

We can also say that $6 < 8$ the number of non-living things is less than the number of living things.

11. Pair learners and give each group a collection of picture cards of living and non-living things to classify, count and compare.

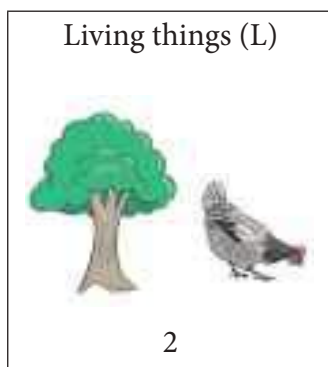
Practical Activities B

1. Have learners clap the rhythm – 1, 21, 2, 3, 4, 5 three times.
2. Copy the following words on the board.
3. Read through with learners. -goat, pencil, rabbit, bottle, water, table, coconut
4. Clap the syllables in the word with learners.
5. Goat=1 clap ; pen/cil = 2claps ; rab/bit =2 claps ; co/co/nut =3 claps
6. In turns, have learners mention names of other things and clap the syllables.- pa/per =2 claps , cro/co/dile= 3 claps
*the claps indicate syllables.

Assessment

A

1. Draw two living things and five non-living things.



$<$



$2 < 5$

Count and compare

$2 < 5$

B

2. Count and write the number of syllables in each word

Cabinet – ca/bi/net =3 syllables ; rubbish- rub/bish =2 syllables ; computer – com/pu/ter =3 syllables.

WORKBOOK

Activities In Numeracy for Kg1

Activities ACTIVITIES: 79-K1.6.1.1.2; 80- K1.6.1.1.3 82- K1.6.2.1.1 after practical

Activities and Assessment exercises 'A'

Activity 82- K1.6.2.1.1 after practical Activities and Assessment exercises 'B'

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Non-Numerical Patterns And Relationships

ACTIVITIES : 81 – K1.6.1.1.6; 83 – K1.6.2.1.3; 84 – K1.6.1.1.6 (Pages 81, 83, 84)

PATTERNS/ PATTERNS WITH SYLLABLES IN WORDS**Content Standard**

Activity 81 - K1.6. 1.1.6 Demonstrate understanding of Living and non-living things

Activities 83 K1.6. 2.1.3/ 84 - K1.6. 2.1.6 -Demonstrate understanding of domestic and wild animals

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Our environment is full of patterns, arrangement of windows on buildings, arrangement of flower vases or plants at home or school, and textures in clothing provide beauty around us. In the classroom learners fix legos or arrange their blocks in patterns that appeal to them. Patterns provide a sense of order in our lives, understanding and being able to identify recurring patterns helps us to develop important skills of critical thinking and logic.`

Learners display the use of patterns in their drawing and colouring, in stacking shapes and other activities.

They later come to realize that letters and numbers come in a particular order, and altering the arrangement of letters make meaningful words we can read. Example: cat.

Also the altering of the position of numbers can give varied meanings. For instance, when 1 and 2 change positions and are written together, the number becomes 21.

Indicators/Objectives:

Activities 81- K1.6.1.1.6; 84 - K1.6.1.1.6-Recognize, sort, classify, describe and extend non-numerical patterns.

Activity 83 - K1.6.2.1.3; Tap or clap and count syllables of names of animals.

Key words

Before, after, between, first, second..

Cat, fish, donkey, turkey, tiger

Materials/Resources

Cut –out shapes – red circles, blue triangles, green squares, black oval shape (20 of each shape).

Word cards cat monkey turkey tiger cow ant

Procedure/Method

1. Have learners form a circle in the following arrangement-girl, boy, girl, boy.. They hold hands and sing: ‘Ring- a- ring- a- roses, A pocket full of poses Atishew, atishew, we all fall down.
2. Draw learners attention to their arrangement.
3. Have learner change arrangement to 2 girls, 1 boy..
4. Have learners describe the arrangement.
5. Have one learner use stick men to illustrate their standing arrangement on the board.-2

girls, one boy

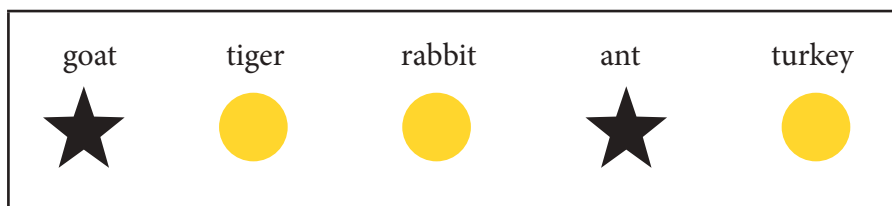


6. Distribute cut out shapes to learners.
7. In pairs, ask learners to do their own arrangement with the cut -out shapes , example, the xx ooo xx, ooo xx ooo xx arrangement, alternating shapes or colours .
8. Have each group talk about their arrangement.
9. Make an arrangement on a low table. Let learners observe and do same with different shapes/colours.



Practical Activities B

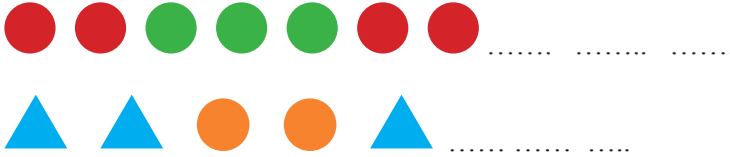
1. Have learners clap the rhythm – 1, 21, 2, 3, 4, 5 three times.
2. Copy the following words on the board.
3. Read through with learners. -goat, pencil, rabbit, bottle, water, cat, monkey, turkey, tiger, cow, ant.
4. Clap the syllables in the word with learners.
5. Cat=1 clap ; monkey = 2claps ; rab/bit = 2 claps ; tur/key = 2 claps
In turns, have learners mention names of other animals and clap the syllables.- rab/bit =2 claps , cro/co/dile= 3 claps, goat =1clap.
*the claps indicate syllables.
6. Represent the number of syllables with shapes. Example, one syllable word = star, two syllable word = circle.
7. Form a pattern of 1, 2, 2 1 2, 2 with the syllables.



Assessment







A

Continue the pattern



B

Create a pattern with the syllables. One syllable=square
2 syllable =triangle

Ant	cow	monkey	cat	dog	parrot
					

WORKBOOK

Activities In Numeracy for Kg1

Activities 81 - K1.6.1.1.6, 84 - K1.6.2.1.6

Do the exercise after Practical Activities and exercises on assessment A.

Activity 83 - K1.6.2.1.3 Do the exercise after Practical Activities and exercises on assessment B.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITIES: 85, 86, 87 – K1. 6. 3.1.3; 90/ 91– K1. 6. 3.1.6; 95 – K1.6.4.1.6 (Pages 85 - 95)

LINES AND SHAPES - 3D AND 2D SHAPES**POSITIONS - PEOPLE AND OBJECTS****DESCRIBE THE POSITION OBJECTS****POSITIONS - TELLING POSITIONS OF OBJECTS IN SPACE: OBJECTS IN THE AIR**

Content Standard: Demonstrate understanding of sources of water and its uses
K1.6.4.1.6. – Demonstrate understanding of presence of air and tell its importance.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Our environment is full of shapes and patterns. Various things in our world are in a particular shape or a combination of various shapes, arranged in varied positions. Arrangement of flower vases or plants at home or school, and textures in clothing provide beauty around us.

Letters of the alphabet and numbers come in a particular order. We alter the positions of letters of the alphabet to form meaningful words that can be read.

Numbers also have an original order. When the regular positions are altered numbers can give varied meanings in names and quantities. For instance, when 2 and 1 are combined (ie altering the regular positions), and written together as 21 , the number becomes twenty-one .

The child experiences differences in positions when they arrange/pack their play-things, change their positions in relation to objects, when positions of objects are changed for convenience, or when children queue. These situations give rise to expressions such as before, after, between, in front of, on, in , behind, 1st, 2nd,...

Indicators/Objectives

Activities -85/86/87-K1.6.3.1.3 :Tell the position of arranged cut-out papers and extend the activity with shapes and other objects.

Activities -90/91-K1.6.3.1.6 :Describe the position of objects.

Activity -95 – K1.6.4.1.6: Describe the position of objects.

Key words

Rectangle, triangle, circle, square, before, after, between, in front of, on, in, behind, 1st, 2nd,

Materials/Resources

- Cut-out coloured papers in shapes of square- red, circle-yellow, rectangle- green, triangle – orange, Jumbo sized shapes (as above) in red, yellow, orange and green.



- Countable objects- balls, sticks, cups, fruit juice packets, bell.
- Number cards

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Procedure/Resources

1. Have learners sit in a semi-circle and sing.
1, 2, 3, 4, 5, we are counting mangoes
6, 7, 8, 9, 10, eating merrily.
2. Have learners revise the names of the following shapes- square, circle, rectangle, triangle.
3. Have 4 learners pick up the jumbo shapes (above).
4. The 1st learner raises up his shape –Square.
5. A learner says the name and the rest of the class repeats.- This is a square. They count the sides- 1, 2, 3, 4. They count the corners -1, 2, 3, 4
6. Invite 6 learners to pick out squares from the smaller cut-outs and show to the class. Follow steps 2 to 5 to revise rectangle, triangle and circle.
7. A circle is round.
8. Write the numbers -1, 2, 3, and 4 on smaller pieces of paper. Have the learners with the jumbo sized shapes pick them in turns.
9. Call out the numbers for them to stand horizontally facing the class.



10. Have learners talk about the positions of the shapes.
The circle is first, square is second, triangle is third, rectangle is fourth
The square is between the circle and the triangle
The triangle is before the rectangle, etc
11. Sit learners in groups of four. Give each group a bowl containing 6 different cut-out shapes.
12. Have each group organize their cut-outs in various arrangements; and talk about the different positions (of the various shapes).- 1st, 2nd, 3rd, ... between, before, after.

Practical Activities B

1. Have learners sit in a circle, with the teacher as part of the circle.
2. Pour out 6 sets of cut-out numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
3. Have learners say the poem ‘one, two, three, four, five, once I caught a fish alive’
4. Pick the number 1. Show and have learners name it. Place it on one side in the centre of the circle.
5. Ask: what number comes after 1?
A learner answers: - 2. Have the learner pick and place after 1.
Continue till the numbers 1 to 10 are arranged.
6. Have learners sit in pairs; give learners number cards and have them arrange 1 to 10 on their table
Copy the numbers 1 to 10 (in order) on the board and have learners read.

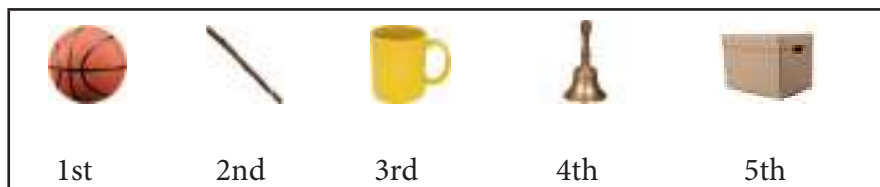
Practical Activities C

1. In pairs: give each group a bowl /box containing a collection of letter cards – ‘i’ a to m and ‘ii’ n to z jumbled up. Let the group sort and arrange in order.
2. Let the whole class go round to look at all the arrangements.
3. Copy the correct order on the board and have learners sing the alphabet song ‘a, b, c, d...’

Assessment

A

Write the correct positions underneath the objects



B

1. Re-arrange the numbers in the correct order
6, 4 5 3 2 7 1
Answer: 1 2 3 4 5 6 7
2. Which number is between 6 and 5? 7
Which number is after 1? 4
Which number is 5th in the row? 2

C

Rewrite in the correct order: e g a c h b d f

a b c d e f g h

WORKBOOK

Activities In Numeracy for Kg1

Activities 85/86/87 - K1.6.3.1.3 and 91- K1. 6. 3.1.6

Activity -95 – K1.6.4.1.6

Do the exercise after Practical Activities A and exercises on assessment .

Do Activity 90 - K1.6.3.1.6 after Practical Activities B and C and assessment exercises B and C.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

*ACTIVITIES 88 –K1.6.3.1.4 ; 89 – K1.6.3.1.5 ; 92- K1.6.3.1.6 (Pages 88 - 92)***ACTIVITY 88: TELLING POSITION OF OBJECTS IN SPACE: LEFT, RIGHT, ON TOP OF.****ACTIVITY 89: LINES AND SHAPES - 3D AND 2D SHAPES****ACTIVITY 92: TELLING POSITION OF OBJECTS IN SPACE: POSITION OF GIVEN NUMBERS****Content Standard:** Demonstrate understanding of sources of water and its uses**Core Competencies:** Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

Our environment is full of shapes and patterns. Various things in our world are in a particular shape or a combination of various shapes, arranged in varied positions. Arrangement of flower vases or plants at home or school, and textures in clothing provide beauty around us.

Letters of the alphabet and numbers come in a particular order. We alter the positions of letters of the alphabet to form meaningful words that can be read.

Numbers also have an original order. When the regular positions are altered, numbers can give varied meanings in names and quantities. For instance, when 2 and 1 are combined (ie altering the regular positions), and written together as 21 , the number becomes twenty-one .

The child experiences differences in positions when they arrange/pack their play-things, change their positions in relation to objects, when positions of objects are changed for convenience, or when children queue. These situations give rise to expressions such as before, after, between, in front of, on, in , behind, 1st, 2nd,...

Indicators/Objectives

ACTIVITY 88 –K1.6.3.1.4 :Display a word grid with the sources of water and identify the position of a given source of water. Extend the activity to numbers/objects.

ACTIVITY 92- K1.6.3.1.6 :display a number grid and identify numbers in different positions around a chosen number. Extend activity to include other objects or items.

89 – K1.6.3.1.5 : Tell the position of selected drawing.

Key words

Before, after, between, left, right, on top of, 1st, 2nd...

Materials/Resources

- Countable objects- balls, sticks, cups, mango, orange, broom, bucket, chair, box...
- Number chart/grid

4	6	2
7	3	5
1	9	10

Letter cards: a to z ; 1 to 10

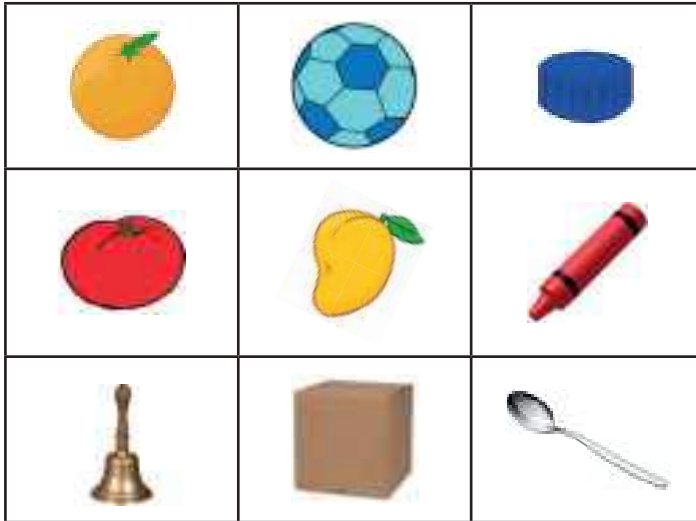
Procedure/Resources


Practical Activities A


1. Have learners form a circle and have them say:
Let us count the fingers on one hand
1, 2, 3, 4, 5
Let us count the fingers on two hands
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and clap, clap, clap.
We clap, clap, clap and turn around.
2. Create situations to teach the following vocabulary.-left, right, and on top of.
3. Place a bucket, a ball and a chair on one side of the compound. And place a box, a bag, a bowl and a broom on the opposite side.
4. Take learners out to the compound and have them stand in the middle of the objects you've arranged (so that they have the arrangements to their left and right)
5. Lead learners to raise their left hands and say ' this is my left hand. Have learners wave their left hand. Have learners point their left hand side.
6. Have them look towards their left hand side and name things they see in that direction.
There are a bucket, a ball and a chair. (they could mention other thing (not in the object placed there) in that direction .
7. Use steps 4 and 6 to teach the right hand side.- things to the right are a box, a bag, a bowl and a broom.

Practical Activities B

1. Have learners sit in a semi-circle on their chairs.
Put up a chart on the board



2. Point to the ball and let learners read the picture 
3. Ask the following questions:

Which object is to the left of the ball? 

Which object is to the right of the ball? 

4. Teach the position 'on top of'
Have learners read all the pictures.
5. Have learners look at the mango and the ball; and talk about the position of the ball in relation to the mango on the chart. We say 'the ball is on top of the mango.'
6. Look at the positions of the various pictures chart .
Mention any two pictures and say which one is on top of the other.
Example: .The orange is on top of the tomato; the crayon is on top of the spoon
7. Show the number grid and discuss the various positions
Number chart/grid

4	6	2
7	3	5
1	9	10

Which number is between 7 and 5 ? 3

Which number is to the left of 3? 7

Which number is on top of 1 ? 7

Assessment

A

1. Draw two objects-one on top of the other. Colour the object on top red.
- 2.



Which object is to the right of the girl ?

banana

Which object is to the left of the bell?

ball

Which number is on top of the bucket ?

banana

WORKBOOK

Activities In Numeracy for Kg1

ACTIVITIES 88 –K1.6.3.1.4 , 89 – K1.6.3.1.5; 92- K1.6.3.1.6 Do the exercise after Practical Activities and exercises on assessment .

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Positions

ACTIVITY 93 – K1.6.4.1.3; 94 – K1.6.4.1.4 (Pages 93, 94)

TELLING POSITIONS OF OBJECTS IN SPACE :POSITION OF GIVEN NUMBERS /LETTERS

Content Standard: Demonstrate understanding of the presence of air and tell its importance

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction: Refer to Activities 88 –K1.6.3.1.4 ; 89 – K1.6.3.1.5 and 92- K1.6.3.1.6

Indicators/Objectives

Activity 93 – K1.6.4.1.3 Tell the position of target sounds in selected words/shapes, objects.
 Activity 94 – K1.6.4.1.4 Write the position of letters in words (in bold prints)

Key words






First (1st) Second (2nd) Third(3rd).....

Materials/Resources

Word cards: flow, cold, blow, fan, wind, breath.
 Write the bold letters in green.







Procedure/Methods

1. Have learners sit in a semi-circle and say/sing:
 ‘1, 2, 3, 4, 5, once I caught a fish alive’
2. *Revise positions 1st to 5th with learners.
3. Have 5 learners form a queue facing the class and have the rest of the class call out their names from left to right.

Ama	Aba	Kofi	Lily	Sam
				
1st	2nd	3rd	4th	5th

Tell learners that you will give those standing positions.

- Touch Ama and say that, Ama is 1st in the row. Aba is 2nd , Kofi is 3rd, Lily is 4th and Sam is 5th.
- Have learners repeat 1st, 2nd, 3rd, 4th , and 5th.
- Put out countable items in a row and have learners identify the various positions of the objects

					
1st	2nd	3rd	4th	5th	6th

Ask : which object is 4th in the row? Tree
Which object is 1st in the row? Chair

- Show the word card one after the other.

flow	cold	blow	fan	wind	breath
------	------	------	-----	------	--------

Assist learners to first mention the word, count the letters that make the word; then assign them positions .E xample: flow – f -1st, l-2nd o -3rd w- 4th
What is the position of the highlighted/coloured letter? Answer -3rd.

- Continue with the other words in step 7. Learners answer the question:
What is the position of the highlighted/coloured letter in each word?

Assessment

What is the position of the highlighted/coloured letter in each word?

- Water 3rd
- boy 2nd
- soil 4th
- ant 1st
- fan 3rd
- wind 4th

WORKBOOK

Activities In Numeracy for Kg1

Activity 93 – K1.6.4.1.3; 94 – K1.6.4.1.4

- Do the exercises after Practical Activities and exercises on assessment .
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Lines and Shapes

ACTIVITIES 96, 97, AND 98 – K1.6.5.1.3 AND ACTIVITY: 100 –K1.6.6.1.2 (Pages 96 - 100)

2D AND 3D SHAPES

Content Standard: ACTIVITIES 96, 97, AND 98 – K1.6.5.1.3: Demonstrate the understanding of parts of plants and their functions.

Activity 100 –K1.6.6.1.2 Demonstrate understanding of how plants grow.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

3D shapes take up space, they have 3 dimensions- length, width and height. The world is made up 3d shapes. They are all the thing we can hold – our bags, fruit drink, balls, ice –cream, ice-cubes. Oranges and watermelon, tooth paste, cakes, parcels, fridge, and cupboards.

3D objects/shapes have faces, edges and corners.

The faces of 3D shapes often contain 2D shapes.

In the child’s day to day life, he/she comes into contact with solid objects – sees/lives in buildings, eats from a bowl or plate, drinks from a cup or fruit drink packet, buys biscuits in packets or boxes, handles and eats fruits such as mango, and orange. He/she also plays with balls and empty packets of various shapes and sizes. The above objects are referred to as 3-dimensional objects or solid objects.

3-dimensional objects/ shapes
(Dice, boxes with same size of faces- cube

Ice-cream - cone;



Boxes - rectangular prism;



Ball - sphere;



Drink can - cylinder;



2-Dimensional object/figures are plane shapes (the faces of 3D shapes) they have 2 dimensions- length and width.

Example: circle, square, rectangle, triangle

Oval –elongated circle ,and diamond from 2 triangles.

They are drawn from solid shapes- {Circle from a ball; Square - from a die; Rectangle – from an exercise book, Triangle – from ice-cream cone, Oval – from egg, Diamond – from 2 triangles).



Attributes of 3-D shapes

Faces are the flat surfaces.

Edges are where 2 or more faces meet.

Corners are where 2 or more edges meet.

Cone – one flat face, 1 curved surface, 1 edge, no corners.

Rectangular prism - 6 rectangular faces, 12 edges, 8 corners.

Cube – 6 identical faces, 12 edges, 8 corners.

Cylinder - 2 flat faces and 1 curved surface, 2 edges, no corners.

Sphere – 1 curved surface, no faces, no edges, no corners

Triangular prism – 5 faces, 9 edges, 6 corners.

Indicators /Objectives

Activities 96, 97 AND 98 – K1.6.5.1.3 -Discuss the attributes of 2D and 3-D objects with learners using real objects and drawn shapes.

Activity 100 – K1.6.6.1.2 -Discuss the attributes of 2D and 3-D objects with learners using real objects and drawn shapes and compare some of the objects according to given attributes/colour outline of cut-out shapes.

Materials /Resources

Balls, bowls, empty packets and drink cans of sizes, wooden/plastic blocks. Boiled egg, cone shaped hats made from paper, cube sugar, box with square sides only, box with rectangular faces.

Key words: Shapes, objects, 3-dimensional shape, Rectangular prism, cube, sphere, cone, pyramid, cylinder, oval.**PROCEDURE/METHODS**

Practical Activities - A

- Have learners sit in a semi-circle with their tables in front of them. Have them stand and perform the following activities as teacher calls out:
- raise your hand up.
 - Clap over your head, and count 1, 2, 3, 4, 5
 - Hands down, shake your hands.
 - Bend and touch your knees, and up.
 - Jump two steps backwards, now two steps forward.
 - Sit down, hands up, hands on your chest, now hands on your table.

Revise activities on 3D and 2D shapes with learners.

Have learners pick, manipulate/handle the materials and talk about the shapes one after the other.

1. Learners manipulate a fruit drink pack/rectangular block.
Ask: what is this shape called?
2. Have learners answer or tell them: This shape is a rectangular prism.
3. Ask a learner to pick a box of the same shape and say, this box has the same shape. It is also a rectangular prism. All sides are rectangles.
4. Have learners pick other boxes from the collection of materials- other fruit juice and biscuit packets, sugar boxes.
5. Have learners repeat the word rectangular prism several times. Write rectangular prism on a piece of card and put it against the collection.
6. Have learners read out the names of the shapes as a learner moves from one group of shapes to the other.

Practical Activities - B

Attributes of 3-D

Session One

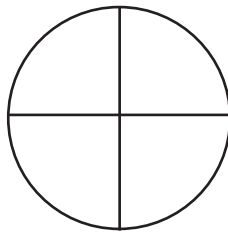
1. Faces are the flat surfaces.
2. Edges where 2 or more faces meet.
3. Corners where 2 or more edges meet.
4. Have learners sit in a semi-circle with their tables in front of them.
5. Put a box (Rectangular Prism) on a low table in front of the whole group.
6. Ask: What shape is this box? Answer: Rectangular Prism.
7. Say: This part of the box is called a face, as you rub your palm on a face.
8. In turns, have learners come up to show the class other faces. The class repeats face/faces.
9. Together have learners count the faces of the rectangular prism. = 6
10. Teach learner – edge; an edge is where 2 or more faces meet. Learners repeat the sentence as teacher runs her finger along one edge.
11. In turns, have learners come out to show other edges. Let the class count the edges of the box = 12.
12. Teach corners- where 2 or more edges meet is a corner. Learners repeat corner as it is pointed.


13. In turns, have learners come out to show other corners. Learners repeat ‘corner’ as each one is touched. Let one learner lead the class to count the corners =8
14. Open up a rectangular prism and let learners talk about the faces- they are all rectangles. Opposite sides are the same in size.
15. Have learners pick other rectangular prisms from the collection of materials and from around the classroom. The class may go out side to look out for other like shapes.
16. Cube: use the procedure in Practical Activities B-1 to 16, to teach the attributes of a cube.
17. Show learners a cube and a rectangular prism- all have 6 faces, 8 corners and 12 edges.
18. Have learners open up a cube and compare the faces to that of a rectangular prism.- faces of the cube are the same while only the opposite sides of the rectangular prism have the same size.

Session Two: Cone/Triangular Prism /Triangular Pyramid – follow the above procedure to teach Cone and triangular prism and a triangular pyramid.


Cone

19. Make a cone with learners. –sheets of paper, glue or celotape.
 - Cut a circle about the size of a child size plate.
 - Fold into 4 equal parts.



- Cut off one quarter of the paper to the centre.  Both the $\frac{3}{4}$ and $\frac{1}{4}$ parts can make cones. (a smaller cone from the $\frac{1}{4}$ of the circle and a larger cone from the $\frac{3}{4}$ circle).
- Fold one opening over the other. (if you want a higher cone, you make the paper overlap more)..
- Use the celotape to hold the ends of the cone together.



- A shallow cone (form the $\frac{3}{4}$ circle) is like a Japanese hat.  (big) and a pointed cone –small and more pointed).

- Show the hollow cone to learners and ask while running your finger round the edge: what shape do you see? – circle.
- Place the hollow part on another sheet of paper and trace the circle .
- Place the cone on the circular paper you have cut and fix together to get the face .

- Distribute papers for learners to make their own hollow cones. Assist them to trace and fix the surface.

Have learners talk about their cones. The cone has one flat face, 1 curved surface, 1 edge, no corners.

20. Triangular prism – Has 5 faces, 9 edges, 6 corners.
21. Triangular Pyramid - Has Faces 4, corners 4, edges 6.
22. Sphere

Session Three

- Put learners in groups of 4; give each group a ball.
- Move outside with the group. Have the groups play with the ball in ways they like.
- Back in the classroom, ask each group to say what they did with their ball - throwing and catching, playing football, rolling and catching.
- What can we say about the ball? – it rolls, it is round.
- How many faces has the ball? –none.
- How many corner? – none. How many edges? –none.

The ball is a sphere.

A Sphere has– 1 curved surface, no faces, no edges, no corners.

- Have learners make spheres –balls, oranges – with clay or play dough, paint and talk about the sizes and colours.
23. Cylinder: Put learners in groups of 4; give each group a can – fruit drink, milk, powdered milk can, milo seal off any rough or sharp edges.
 - Move outside with the group. Have the groups play with their cans in ways they like.
 - Back in the classroom, ask each group to say what they did with their object-throwing and catching, rolling and catching, using it as drums, opening and putting items in.
 - What can we say about a can? – it rolls on its side, it has 2 flat surfaces. It can stand on both sides (surface).
 - How many faces has the can? –2
 - How many corners? – none. How many edges? –2 round edges.

The shape of the can is called a cylinder.

Cylinder- 2 flat faces and 1 curved surface, 2 edges, no corners.

Oval

24. Have learners sit in a circle with you.
 - Pass a cooked egg round for learners to manipulate.
 - Say: the egg has an oval shape.
 - Have learners make:
eggs and oval shaped beads.
Use: Play dough, or clay.
Paint with different colours.

How is a (sphere) ball different from an (oval) egg?

A ball is round and can easily roll around.

An egg is round and long, but cannot roll around easily like a ball.


An oval shape has one round surface, no edges. No edges and no corners.

Practical Activity C

2D SHAPES

The face of a 2D shape is a plane shape. A plane shape has 2 dimensions- length (longer side) and a width or breadth(shorter side)

1. Have learners open up 3D shapes and trace faces to get plane faces. Learners work on one shape at a time.
2. Trace each face of a 3D shape to get a plane face.
3. put up a jumbo plane shape. Label appropriately and have learners repeat the name.
4. have learners identify other plane faces in the classroom.

Example: the surface of a note book-  rectangle

surface of a cube shape box –  square

The surface underneath a can –  circle

- A face of a Rectangular Prism – Rectangle.
- A rectangle has 4 sides, and 4 corners. Two opposite sides of a rectangle are the

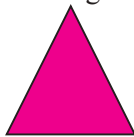


same.

- A face of a cube – square
- Square has 4 sides and 4 corners. All 4 sides of a square are the same
- A face of a triangular pyramid –triangle

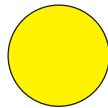


A triangle has 3 sides, and 3 corners.



A tracing round a curved surface/surface of a cylinder - circle.




A circle is round.



Assessment

Practical Activities A

1. Draw one food or item of each of these shapes

Oval	sphere	cube
		
egg	orange	cube sugar

2. Draw these objects of these shapes rectangular prism, cone, oval, cylinder.



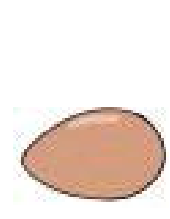
rectangular box



ice-cream,



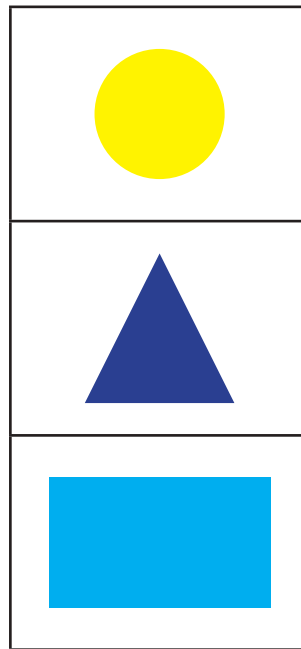
milo container



egg

B

1. Match the solid shape to its plane shape



C

1. Draw and colour the following shapes



WORKBOOK

Activities In Numeracy for Kg1

Activities 96, 97, and 98 – K1.6.5.1.3 and Activity 100 –K1.6.6.1.2 After Practical Activities, A, B and C

- Go through all Practical Activities thoroughly.
- Do the exercises after the Practical Activities.
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Position

ACTIVITIES 99 –K1.6.5.1.6; 105 – K1.6.9.1.2 (Page 99 and 105)

ACTIVITY 99: TELLING THE POSITION OF OBJECTS IN SPACE- POSITION AND MOTION OF OBJECTS IN RELATION TO OTHERS.

ACTIVITY 105: TELLING POSITION OF NUMBERS.

Content Standard:

Activity 99- K1.6.5.1.6- Demonstrate understanding of the parts of plants and their functions
Activity 105 –K1.6.9.1.2 -Understanding of changing weather conditions and seasons

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

The child experiences differences in positions when they arrange/pack their play-things change their positions in relation to objects, when positions of objects are changed for convenience, or when children queue. These situations give rise to expressions such as before, after, between, in front of, on, in , behind, 1st, 2nd, 3rd, ...

Letters of the alphabet and numbers come in a particular order. We alter the positions of letters of the alphabet to form meaningful words that can be read.

Numbers also have an original order. When the regular positions are altered, numbers can give varied meanings in names and quantities. For instance, when 2 and 1 are combined (altering their regular positions), and written together as 21, the number becomes twenty-one . The values change.

Indicators/Objectives

Activity 99 –K1.6.5.1.6 :Describing the position and motion of objects in relation to others.
Activity 105- K1.6.9.1.2 : Describe position of given numbers/ objects/ etc.

Key words

Before, after, between, left, right, on top of, 1st, 2nd...

Materials/Resources

- Countable objects- balls, sticks, cups, mango, orange, broom, bucket, chair, box...
- Number chart/grid

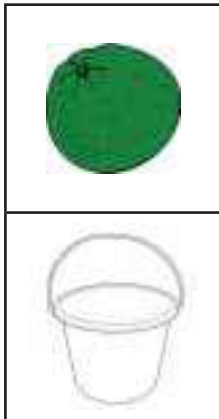
3	4	2
8	5	10
1	9	10

- Number cards 1 to 10

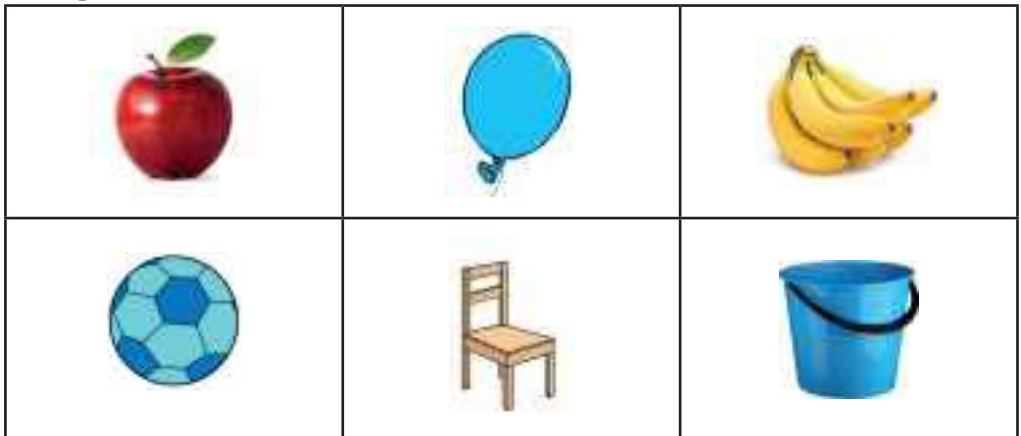
Procedure/Resources: Refer to ACTIVITIES 88 –K1.6.3.1.4 ; 89 – K1.6.3.1.5 ; 92- K1.6.3.1.6

Assessment

1. Draw two objects-one on top of the other. Colour the object on top green.



Answer the questions



Which object is to the right of the balloon?	banana
Which object is to the left of the chair?	ball
Which number is on top of the bucket ?	banana

WORKBOOK

Activities In Numeracy for Kg1

Activities 99 –K1.6.5.1.6 and 105- K1.6.9.1.2 Do the exercise after Practical Activities and exercises on assessment

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention

Sub Strand: Data (Collection, Presentation, Analysis and Interpretation)

ACTIVITY 101- K1.6.6.1.6, 108 - K1.7.1.1.1, 109 - K1.7.1.1.3 (Pages 101, 108, 109)

CLASSIFICATION: SORT, COUNT AND COMPARE**Content Standard:**

Activity 101-K1.6.6.1.6 -Demonstrate the understanding of how plants grow

Activities 108-K1.7.1.1.1, 109- K1.7.1.1.3- Demonstrate understanding of different ways we connect and communicate with the global world.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking

Introduction

One of the child's early activities involves Sorting-Identification and Discrimination. The ability of the child to see things that are the same and those not the same.- choosing own shoes from among those of other family members, choosing favourite play things from among a collection/group of playthings, choosing a favourite fruit from a bowl of different fruits.

These choices could be by type, colour, size, or a given criteria/attribute. A child who has developed strong sorting skills finds it easier to classify items by multiple attributes such as colour and shape or size, makes matches- figures out same items, and identify sets of objects, recognize and create patterns, and compare sets for differences and similarities.

In numeracy activities, the child is asked to sort and classify items according to given attributes /criteria.

They can count and compare classified items.

These are interesting activities when made playful and fun for the learner.

Indicators/Objectives

- Activity 101 - K1.6.6.1.6, - Classify objects and count the number in each category up to 9
- Activity 108 - K1.7.1.1.1 and 109 - K1.7.1.1.3 - Classify, count and compare

Key words

Fruits, sort, count, compare- more than, less/fewer than, equal to or same as.

Materials/Resources

Countable objects: 8 each- balls, cups, packets of crayons, match boxes

Picture cards- car, horse, motor bike, bicycle, aeroplane, train (10 each).

Procedure/Methods

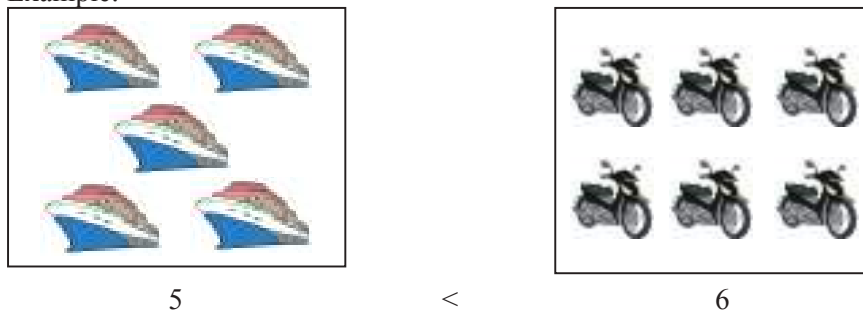
1. Put a collection of countable objects into a box/bowl. (8 balls, 6 cups, 5 packets of crayons and 3 match boxes.
2. Arranged boxes in front of the class, labeled with the names of the countable objects.– balls, cups etc.
3. Have learners pick the objects as they move round the box (containing all the objects) with a verse of the song :
The wheels on the bus goes round and round
Round and round, round and round
The wheels on the bus goes round and round
All day long.
4. Learners drop the various objects they have picked into the labeled boxes.
At the end, each group of objects are counted. Learners compare the groups they have sorted (two colours at a time) They describe with $>$, $<$, or $=$.

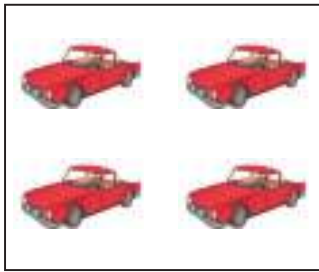
Example:

**Practical Activity B**

1. Place sets of the picture card upside down on a table. 5 trains, 6 motor bikes, 4 cars, 3 aeroplanes, 1 horse and 7 bicycles.
2. Have learners move round to find cards with the same pictures cards to form groups. (all trains, all cars, etc)
3. Have one person from each group show his/her picture and mention the name of the object. Example 'car'(teacher assists where necessary). The rest of the class repeat the name. All the members of the group show their pictures. They all say 'these are cars'
4. Have all groups show and name their objects on the picture cards, then count .
5. Have the groups sit in pairs. Have each group count and compare their sets of picture cards; and describe as $>$, $<$, or $=$.

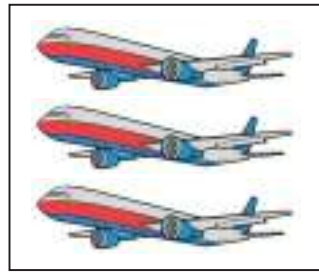
Example:





4

>

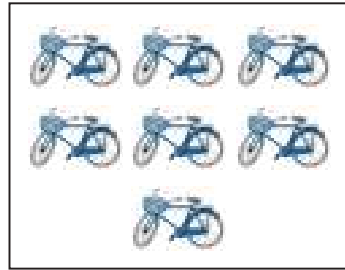


3



1

<

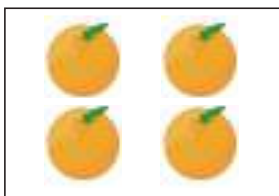
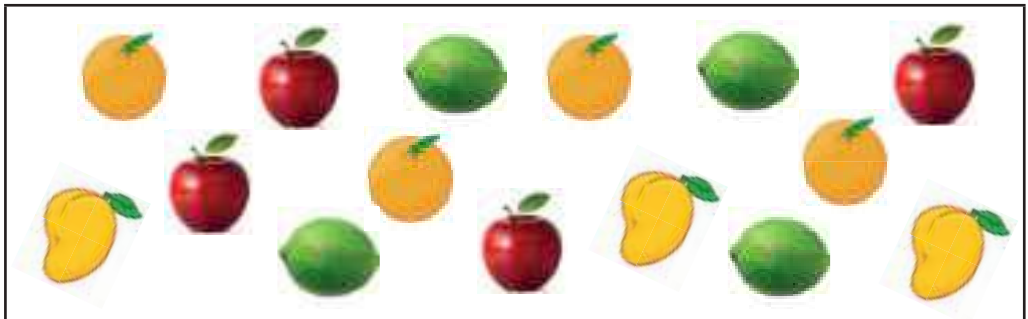


7

6. The groups talk about their work.

Assessment

1. Choose any two fruits from the box below. Sort, Count and compare. Describe the sets as $>$, $<$, or $=$.



4

>



3

WORKBOOK

Activities In Numeracy for Kg1

Activities 101 - K1.6.6.1.6, 108 - K1.7.1.1.1, 109 - K1.7.1.1.3 After Practical Activities and exercise on Assessment.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Relationship Between Numbers

ACTIVITY 102 – K1.6.7.1.3 (Page 102)

SORT AND COMPARE: MORE THAN >, LESS OR FEWER THAN <, OR SAME AS =.

Content Standard: Demonstrate the understanding of the types of soil.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

In the children's daily experiences, they handle playthings, their snacks, and crayons. They are able to tell which types of biscuit packets have more when opened. This becomes their preference when they choose biscuits at the shop. They can tell who has more sweets even without counting.

One important part of teaching young children about math is helping them to learn the concepts of more than, fewer or less than, same as or equal to. The concepts call for comparison- looking at the relationship between quantities, numbers, and measurements (weights, lengths and heights of objects/people).

The child is able to compare and say whether he/she has more biscuits than his/her friend; whether they are more or less in a group

They can compare sizes, colours, and shapes of clothes and other items.

To help children compare items and quantities, they have to be taken through activities in pairing/ one-to – one correspondence (putting one group of objects against another group to see which group is more or less or if the two groups are the same in quantities) .

Indicators/Objectives

Identify objects, count the number in each group and use comparative language to describe the groups. Extend the activity to include addition and subtraction.

Key words

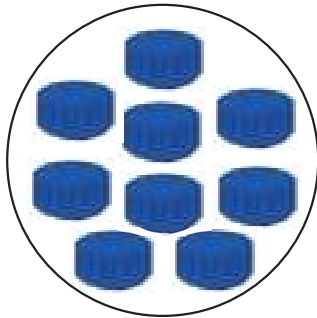
Hoe, rake, cutlass, more than, fewer than, less than, same as, equal to.

Materials/Resources

Countable objects- bottle tops, plastic bottles, cups, broad leaves, sticks and pebbles.

Procedure/Methods

1. Sit learners in a semi-circle. Have them sing:
Count me the mangoes again and again.
1, 2, 3, 4, 5, 6, 7, 8, 9, 10
2. Put various quantities of countable objects in a bowl/box. Example: 9 bottle tops, 5 cups, 7 plastic bottles, 5 sticks, 4 leaves and 8 pebbles.
3. Invite a group of 6 learners to sort and group the objects. In turns, have each learner count the objects he/she has sorted with the whole class.
4. Teacher assists each learner to draw his/her object on the board. The learner writes the number of objects against the drawing.
5. In pairs learners compare and talk about their objects.



9



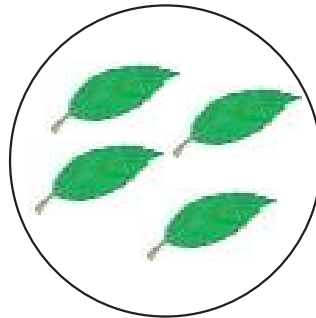
5



7



5



4

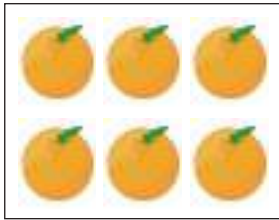


8

6. 5 cups > 4 leaves, 7 plastic bottles < 8 pebbles, 5 sticks = 5 cups.
7. In pairs have learners collect varied quantities of countable objects, count and compare.
8. Have each group talk about their activity using comparative language.

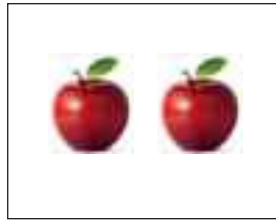
Assessment

1. Draw 2 groups of objects in 2 different quantities = 6 oranges and 2 apples.
Count, write the numbers and use comparative language to describe the groups.



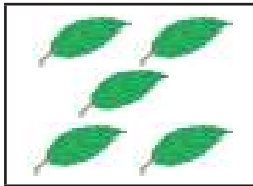
6

>



2

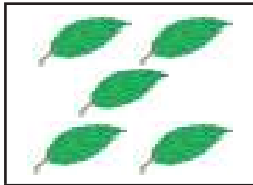
2. Add the following sets of objects.



+



=



+



=

9

WORKBOOK

Activities In Numeracy for Kg1

Activities 102-k1.6.7.1.3, After Practical Activities and exercise on assessment.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Counting And Representation And Cardinality

ACTIVITIES: 103 – K1.6.7.1.3 AND 106 – K1.6.9.1.5 (Page 103 and 106)

MATCHING OBJECTS

NUMBER NAMES

Content Standard:

Activity 103 - K1.6.7.1.3 Demonstrate understanding of the types of soil.

Activity 106 - K1.6.9.1.5 Demonstrate understanding of changing weather conditions and seasons.

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking.

Introduction

The child's learning of number names is preceded by number rhymes/poems; ones in which numbers are said or sang in order teaches the child number names in order.

In counting activities, the child is taught to tag objects with number names. The child's counting starts from the number one and continues.... The child gradually learns to tag quantities with their correct numbers and number names. This consolidates his/her concept of number. Recognition of numbers support the development of other number skills such as counting.

Teaching counting at the kindergarten level improves the child's readiness for other numeracy concepts, such as addition and subtraction.

Indicators /Objectives

Have learners represent people, farm tools and trees with sticks, shells and other objects and count the number in each group.

Activity 106 – K1.6.9.1.5 – Give out numeral cards and let learners compare the numbers by using comparative language.

Key words

One, Two, Three, Four, Five, Six, Seven, Eight, Nine.

Materials/Resources

Number cards -

1 to 10 in the small boxes

Number names on cards - One, Two....Nine.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

One	Two	Three	Four	Five
-----	-----	-------	------	------










Six	Seven	Eight	Nine	Ten
-----	-------	-------	------	-----

Countable objects- balls, cups, sticks, bottle tops

Procedure/Methods

Practical Activities A

1. Have learners stand in a circle and say with actions: ‘One, Two, Three, Four, Five, Once I caught a fish alive...’
2. Have learners sit in a semi-circle.
3. Revise counting. 1-5. Call out a numbers and have learners pick out that number of countable objects (any kind of objects)
4. Put groups of countable objects on tables.
5. In turns, have learners count the groups and place the correct number cards underneath them.
6. Arrange groups of countable objects, and tag each with number and number name in words.

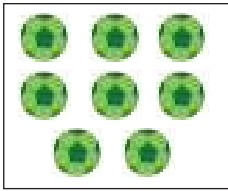
								
1	2	3	4	5	6	7	8	9
one	two	three	four	five	six	seven	eight	nine

7. Have learners read the words underneath the objects and figures. First drill them on one to five, then six to nine in subsequent lessons.

Assessment

Mention a number. Example: 8

1. An individual is invited to pick and count that number of countable objects. He/she calls another learner to pick the matching number card. Another learner picks the word card.



8

Eight

2. Draw five cups, write the number under it, copy the correct number name beside it.

	<p>5</p>	<p>Five</p>
--	----------	-------------

WORKBOOK

Activities In Numeracy for Kg1

Activity 103 – K1.6.7.1.3 and 106 –K1.6.9.1.5

- Do the exercise after the Practical Activities .
- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.

Sub Strand: Whole Numbers: Operations

ACTIVITIES 104 - K1.6.8.1.5, 107 - K1.6.9.1.5, 110 - K1.71.1.5 (Page 104, 107 and 110)

ADDITION AND SUBTRACTION**Content Standard:**

- Activity 104 - K1.6.8.1.5 Demonstrate understanding of the source of light for day and night.
- Activity 107 - K1.6.9.1.5 Demonstrate understanding of changing weather conditions and seasons
- Activity 110 - K1.71.1.5 Demonstrate understanding of different ways we connect and communicate with the global world

Core Competencies: Communication and Collaboration; Personal Development and Leadership; Critical Thinking and Relating well with the people with different beliefs.

Introduction

When children learn to count they are able to tell how many things there are or they have. Learners daily experience the concept of addition when they pick one more play-things to add on to what they already have. Another example is when a friend joins in a play activity.

Addition means to add on something /persons to a group of other things or persons; also to put together different groups of things/persons. The two groups are made one and counted together.

Addition and Subtraction are opposites. While addition adds on to a group, subtraction takes away from a group.

Subtraction/take away/separate all mean the same thing.

In subtraction, a smaller number of objects are taken away or separated from a larger group.

Indicators/Objectives

Count the number of items in different sets and add them.

Key words

Add, Addition, Put together, Plus, Count

Subtraction, subtract, take away, separate.

Materials/Resources

Countable objects- toys, empty containers and packets, balls, bowls-3 for each group of three. Addition and subtraction story cards

Tara bought 5 red cups and 4 green cups. How many cups did she buy in all?

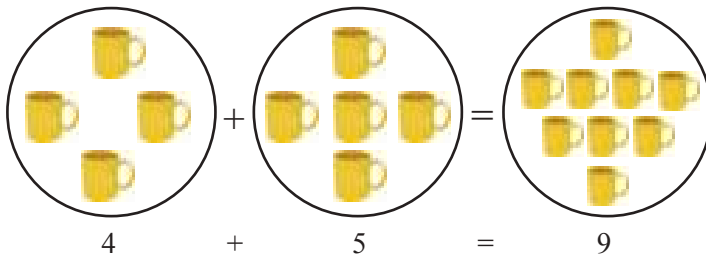
Afi had 7 eggs in a basket. She fell down. 2 of the eggs got broken. How many of the eggs will be left?

Procedure/Methods

1. Have learners stand in a circle. They clap a rhythm and count- one, two. One, two, three, four, five. Repeatedly. They sing “ Five little ducks went swimming one day”
2. Have learners sit in a semi-circle with a low table in front of them.
3. Put out 3 bowls. Two containing two different sets of objects (4 and 5), and the third one empty.



4. Invite 3 learners to the table. The first 2 learners count the content of the first two bowls. They all pour them into the third bowl.
5. The third learner leads the whole class to count the objects in the bowl onto the table. The class vocalize as they count. 4 cups and 5 other cups =9 cups.
6. Have each learner draw his/her bowl with objects on the board.
7. Ask: which sign will indicate that we are adding the two groups of objects? The plus/addition sign (+) to show addition of the 2 sets of objects, and the equal to sign (=) to show total of the sets added.



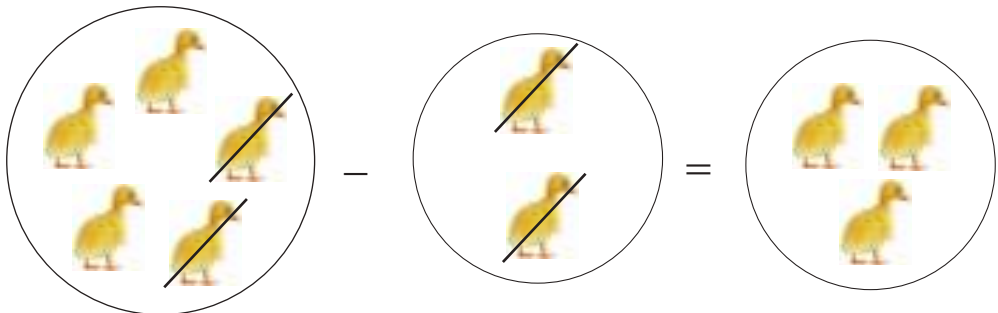
8. Have class count 2 sets of learners (5 and 3) and add.

9. Have learners draw step 8 in sheets of paper.
Explain to learners that by pouring the objects of the 2 bowls into the third bowl, we say we have added the object or put them together.

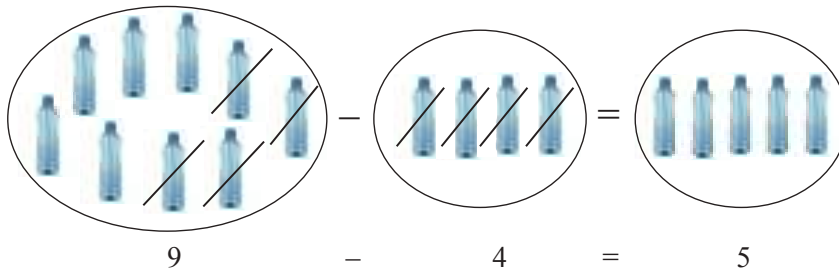
Practical Activity B

Subtraction

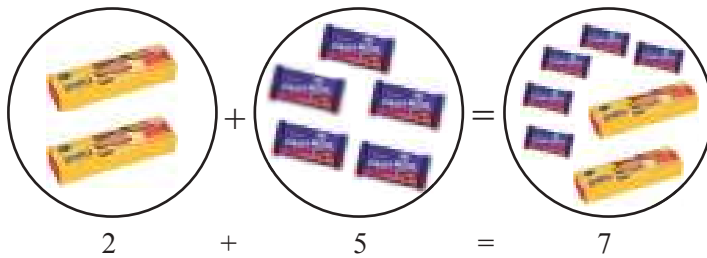
1. Have 5 learners form a queue in front of the class.
2. The 5 learners hold each other's waist while the rest of the class sing:
5 little ducks went swimming one day
Over the hills and far away
Mother duck said quack, quack, quack
And only 4 little ducks came back.
(one learner leaves the queue, the others are counted - 1, 2, 3, 4. The song continues till no little duck came back).
3. Let the class sing again. This time, draw the 5 little ducks on the board. At the singing of quack, quack, quack, the duck which goes out is represented by crossing it out on the board. Let the song end with the crossing out of the 2nd duck going out.
4. Explain to learners that the crossing out of the little ducks on the board means that the two have been taken away from the group of 5. The 2 has been separated from the group of 5.



5. Question: how many little ducks went swimming? 5
6. How many have gone out of the group (looking at the illustration on the board) = 2
7. How many little ducks are left in the group? = 3
Do other story problems with learners.
8. Tell : Sam travelled to Nigeria. He bought 9 water bottles for his friends. When he got back to Ghana, he saw 4 bottles were cracked , so they could not be used.
How many of the water bottles had no cracks and so were good.?
9. Lead learners to illustrate the water bottles on the board. (all the bottles, then the cracked bottles, crossed out to show that they were not good to be used).

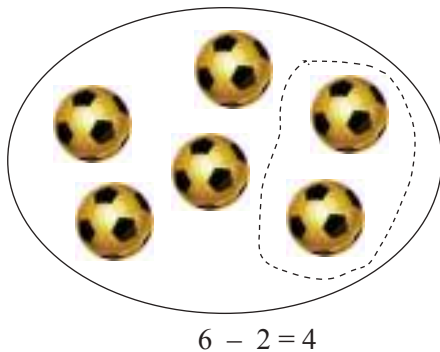


10. Ama was travelling from England to Ghana. She bought 2 packets of biscuits at the airport. The aeroplane first took her to Holland. There, she bought 5 packets of chocolate.
11. How many things did Ama buy altogether ?



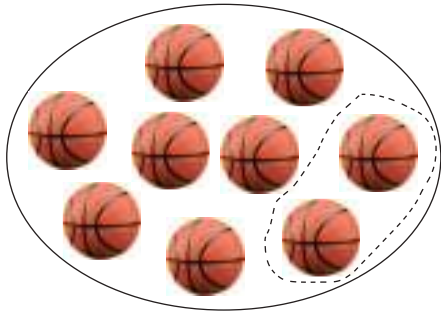
Practical Activities C

1. Put 6 balls into a bowl. Ask a learner to take 2 away.
2. Let the class count what is left in the bowl. Illustrate on the board.



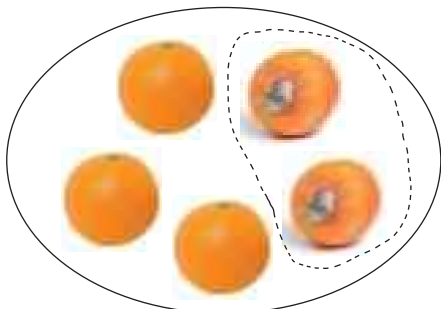
Assessment

1. Draw and put together
6 tomatoes and 3 oranges = 6 tomatoes and 3 oranges. With the numbers written under $6 + 3 = 9$
2. Draw 9 balls take away 2 balls = 7 balls



$$9 - 2 = 7$$

3. Kofi's aunt gave him 5 oranges. When he was ready to eat them, he saw that 2 of the oranges were bad. He threw them away.
How many of the oranges were left for Kofi to eat?



$$5 - 2 = 3$$

WORKBOOK

Activities In Numeracy for Kg1

ACTIVITIES 104 - K1.6.8.1.5, 107-K1.6.9.1.5, 110 K1.71.1.5

ACTIVITIES 104 - K1.6.8.1.5 After practical Activities 'A' and exercises on Assessment.

Activities :107-K1.6.9.1.5,and 110 K1.71.1.5 Do the exercise after Practical Activities B and C and exercises on Assessment.

- Read and explain the instructions to the learner.
- Learner works independently.
- Support learners who need individual attention.