**MATHEMATICS ACTIVITIES DIGITAL CONTENT SCRIPT**

|  |  |
| --- | --- |
| **STRAND**  | **Blue** |
| **SUB STRAND**  | **Green** |
| **SUB SUB STRAND**  | **Pink** |
| **ACTIVITY/ QUIZZES**  | **Cyan** |
| TVO WITH TEXT AND SIGNING | **Purple** |
| **INSTRUCTION**  | **Red** |
| **CONTENT**  | **Black** |

General Adaptation:

a. In the navigation allow some flexibility for the learner to pause, replay, enlarge or slow the pace

b. the voice overs instructions to be accompanied with signed videos and Text. c. The object pictures when moved should stay in the box until the “check answer” button is pressed.

d. Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh

e. For the animations the pictures should be accompanied by the signs

**TVO WITH TEXT AND SIGNING:** Hello learner. (pause) Welcome to mathematics activities for Grade one. In this grade you will learn about Numbers(Teacher signs the word numbers), Measurement(Teacher signs the word Measurement)and GeometryTeacher signs the word Geometry.

**Strand: NUMBERS**

**Sub-Strand: Number concept**

**Introductory Illustration**: Picture of market stall with arrangement of items (tomatoes, onions, bananas, oranges, carrots, mangoes, potatoes); supermarket shelf of sufurias or bowls of different sizes or even clothing.

**1. SORTING AND GROUPING OBJECTS**

**Collecting objects**

TVO WITH TEXT AND SIGNING: Hello learner. Look around your classroom. There are many different objects such as; pieces of chalk, pencils, rubbers, sharpeners, crayons, rulers and balls. Collect these objects,

The objects can be put according to colour, size or shape. The act is called sorting and grouping.

Animation: the pictures zoom in as the teacher signs/ fingerspell the item

**TVO WITH TEXT AND SIGNING**: Today we are going to learn about sorting and grouping objects.

**TVO WITH TEXT AND SIGNING**: how do you use sorting and grouping objects at home? (Pause)

**TVO WITH TEXT AND SIGNING**: we sort the objects and put them in groups according to colour size and shapes.

**TVO WITH TEXT AND SIGNING**: let us group together objects of the same color. **Activity 1:**

**TVO WITH TEXT AND SIGNING**: Sort the objects according to color. drag and drop objects of the same color into the correct box.

Illustration: 3 boxes with boundary pink, black and green

Illustration: black (pair of male leather shoes, pencil), Green (covered book, apple) and pink (cone ice cream, rubber)

**Activity 2:**

**TVO WITH TEXT AND SIGNING**: Sort the objects according to color. drag and drop objects of the same colour into the correct box.

1

Illustration: 3 boxes with a bold boundary red, blue and yellow

Illustration: yellow (pencil, sharpener), Blue (bag, rubber) and red (apple, ruler)

**TVO WITH TEXT AND SIGNING**: I hope you are able to group the objects of the same color together. Pause

let us now group together objects of the same size.

**Activity 3:**

**TVO WITH TEXT AND SIGNING**: Sort the objects according to size. drag and drop objects of the same size into the correct box.

Illustration: 2 boxes labelled (large items and small items) at the top, below the boxes are illustrations of 6 objects chair, blackboard, sharpener, pencil, table and rubber

**Activity 4:**

**TVO WITH TEXT AND SIGNING**: Sort the objects according to shape. drag and drop objects of the same shape into the correct box.

Illustration: 3 boxes labelled (round, straight and rectangular) at the top right corner, below the boxes are illustrations of 11 objects rubber, ruler, ball, rubber, blackboard, two chalks, sharpener, pencil, orange and box of chalks.

**Games/exercises:**

|  |
| --- |
| **1. https://youtu.be/uk0yl3fFTGw ( Please create a game same as this one with signs)** **2. https://youtu.be/2ZSWt9fyOSA, https://youtu.be/sX1eHEvYwTo 3. https://youtu.be/4GA2CzqUreM.** **4. https://youtu.be/J3vQZppV4LQ** |

**2. Pairing and matching**

**TVO WITH TEXT AND SIGNING**: Hello learners. pause In the last lesson, we learnt about sorting and grouping objects according to color, size and shape.

2

**TVO WITH TEXT AND SIGNING**: In today’s lesson, we are going to learn about pairing and matching objects.

**Activity 1:**

**TVO WITH TEXT AND SIGNING**: match the animal with what they give us.

Illustration: Pictures of 1. Dairy cow, 2. Hen 3. Sheep against three eggs, a bottle and glass of milk, and a sisal bag of wool.

**Activity 2:**

**TVO WITH TEXT AND SIGNING**: match the given group of objects according to size. Illustration: Words in boxes 1.Three balls, 2. Two rulers, 3.Four oranges; illustration of 2 rulers, 3 balls and 4 oranges.

**Activity 3**: match the objects of equal number.

**TVO WITH TEXT AND SIGNING**: match the objects of equal number. Illustration: 1. four pencils, 2.five bananas, 3.two bicycles;

 illustration five bananas, four and two bicycles.

**Activity 4**: match the objects of equal number.

**TVO WITH TEXT AND SIGNING**: match the objects of equal number.

Illustration: 1.five rubbers, 2. Four sharpeners,3. Three plates; illustration four sharpeners, five rubbers and three sauces.

**Activity 5:** match the objects using

 The cows are …. the goats.(more than, less than, equal to)

Illustration: three cows and two goats.

**TVO WITH TEXT AND SIGNING**: Are the pencils … the rubbers. (more than, less than, same as)

Illustration: two rubber s and two pencils.

3

**TVO WITH TEXT AND SIGNING**: Are the girls are … the boys. (more than, less than, same as)

Illustration: two girls and three boys.

**TVO WITH TEXT AND SIGNING:** Are the cups are … the plates. (more than, less than, same as)

Illustration: two plates and three cups.

**TVO WITH TEXT AND SIGNING**: Collect three rocks of different sizes from your school compound. Arrange them as shown in the picture. (big, bigger, biggest or small, smaller, smallest)

Illustration: Photos of three rocks of different sizes big, bigger, biggest or small, smaller, smallest.

Games/activities

https://youtu.be/sX1eHEvYwTo

**3. Ordering and sequencing:**

**TVO WITH TEXT AND SIGNING**: Arrange these animals from the smallest to the largest.

ILLUSTRATIONS: Illustration of boxes in which to arrange them through drug and drop, Pictures of a hare, rat, lion and elephant appear as one is dragged and dropped

**TVO WITH TEXT AND SIGNING** Arrange these trees from the smallest to the largest.

Illustration: four trees of different sizes (height, width and age-seedling); boxes in which to arrange them through drug and drop.

**TVO WITH TEXT AND SIGNING**: Arrange these cups from the largest to the smallest.

Illustration: 4 clay cups of different sizes(height, width and circumference)boxes in which to arrange them through drug and drop.

**TVO WITH TEXT AND SIGNING**: Arrange these vehicles from the largest to the smallest.

Illustration: of 4 different types of vehicles sizes(car, lorry, van and bus)boxes in which to arrange them through drug and drop

4

**TVO WITH TEXT AND SIGNING**: matching shapes, Drag and drop to match the shapes

Illustration: 2 shapes (oval and square)boxes in which to arrange them through drug and drop with names at the top square and oval.

**Patterns**

**Activity 1:** Drag and drop to match the shapes

**TVO WITH TEXT AND SIGNING**: identify the shapes in the pattern. Which shape comes next in the pattern?.

Illustrations: 6 shapes arranged in order of(red oval, green rectangle, yellow triangle, same order repeated a second time and in the third arrangement oval …?... triangle)box in which to drag and drop missing shape from the options green triangle, red oval, yellow triangle, star and rhombus

Adaptation: the voice overs instructions should be accompanied with signed videos **TVO WITH TEXT AND SIGNING**: Write the missing letters in the pattern. Illustration: Pattern with to be filled A \_ I O \_

Choices I E B U O C T A

 Activity: fill in the pattern with the letters given below.

A \_ I O \_

Choices I E B U O C T A

**Activity:**

**TVO WITH TEXT AND SIGNING**: Write the missing numbers to complete the pattern. Illustration: The pattern is \_ 2 3 4 \_ 6 \_ \_ 9 10

Choices are 10 7 3 8 2 4 5 9 6

**Number names**

In pre primary we already learnt numbers 1 up to 20

5

Let us count

Activity 1:

**TVO WITH TEXT AND SIGNING**: collect sticks from the school compound and arrange them in sets from one to ten. Count the sets of sticks from one to ten. ONE stick, TWO sticks, THREE sticks, FOUR sticks, FIVE sticks, up to TEN sticks.

Illustration: symbols from 1 and the representation with sticks up to 10, 11 to 20, 21 to 30

**Activity 2**: Collect more sticks from the school compound and arrange them from sets eleven to twenty.

**Activity 3:** Collect more sticks from the school compound and arrange them from sets twenty one to thirty.

 **STRAND: NUMBERS**

**SUB-STRAND: Whole numbers**

**(VO PLUS TEXT):** Hello learners. Welcome to Whole Numbers.

In this lesson we are going to learn about whole numbers

“Whole numbers” written on a slides

Add sign video to VO

Counting numbers forwards and backwards to 100

**Activity 1**

**TVO WITH TEXT AND SIGNING**: Hello learners, in this lesson we are going to learn about counting numbers forward and backwards. Pause

To count numbers forward we start from the left to the right. Pause To count numbers backwards we start from the right to the left

Illustration: Provide a 100 number chart.

6

Animation: Animate by blinking a number at a time. Animation with numbers 1-5 and an arrow at the top moving to the right, another one at the bottom moving to the left.

**Activity 2**

**Counting numbers from 1-50**

**TVO WITH TEXT AND SIGNING :**Let us now count numbers 1-50. One, two, three, four, five……..50

ANIMATIONS: Numbers drop in one by one as one reads aloud from 1-10, 11-20, 21-30, 31-40, 41-50

**Activity 3**

**TVO WITH TEXT AND SIGNING:** Hello learners. In this lesson we will learn how to count numbers using oranges

ILLUSTRATIONS: Illustration of numbers 1 to 5 using oranges

**TVO WITH TEXT AND SIGNING:** On the screen is a basket full of oranges. Let us count them together.

**LVO WITH TEXT AND SIGNING:** One, Two, Three, four, five, six, seven, eight, nine, ten.

Pause

**TVO WITH TEXT AND SIGNING:** Now let us count the the remaining oranges

ANIMATIONS: Number 1-20 appear each with the corresponding number of oranges as the learners read. Eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty.

**Activity 4**

**TVO WITH TEXT AND SIGNING** Counting by 5’s up to 50

How do you count by 5’s? Pause

**TVO WITH TEXT AND SIGNING** To count numbers by 5’s we add 5 to the last number to get the next number. Pause

**TVO WITH TEXT AND SIGNING**: For example what is the next number from the number 1?

Pause

We start with 1 and count in 5's

The next number is 1, 6,11, 16, 21,21, 26, 31……………...

7

ANIMATION: use a number line to illustrate from 1 bounce a ball across 5 steps to 6, followed by 5 steps to 11

**Activity 5**

**Counting in 10’s using concrete objects (Sticks)**

**TVO WITH TEXT AND SIGNING: Let us count (pause)**10, 20, 30, 40, 50, 60, 70, 80, 90, 100

ILLUSTRATIONS: Numbers 10-100 with bottle tops placed in groups of 10.

ANIMATIONS: The illustrations appear in rows from 10-100 with the number on the left and the bottle tops on the right from 10-100

**Activity 6**

**Introduction:** In the last lesson we learnt about counting numbers in 10’s using bottle tops. In this lesson we will count numbers from 1-100 using number chat

**TVO WITH TEXT AND SIGNING:**Counting numbers forward using chart with numbers arranged in rows from 1 to 100

ILLUSTRATIONS: Number chart with numbers 1-100 in boxes of different colours. **Activity 7**

**Counting numbers backwards**

**TVO WITH TEXT AND SIGNING:** In previous lessons we counted numbers forward. In this lesson we are going to count numbers backwards

**TVO WITH TEXT AND SIGNING:** We are going to use a chart of numbers from 100 going back to 1

ILLUSTRATIONS: Number chart with numbers from 100 to 1 in boxes of different colours.

**TVO WITH TEXT AND SIGNING:** Let us count together

**LVO WITH TEXT AND SIGNING** 100, 99, 98, 97,96………...1

**Activity 8**

**Counting numbers forwards in two’s**

8

**Introduction:**

**TVO WITH TEXT AND SIGNING:** In the last lesson we learnt about counting numbers backwards. In this lesson we will learn about counting numbers forward in two’s.

**TVO WITH TEXT AND SIGNING:** CLook at our number chat. Let us count together in 2’s.

**TVO WITH TEXT AND SIGNING:** 2, 4, 6, 8, 10………100

ILLUSTRATIONS: Number chart with numbers from 2,4,6……100 in boxes of different colours.

**Activity 9**

**Counting numbers backwards in two’s**

**TVO WITH TEXT AND SIGNING** We have finished counting numbers forward in 2’s. Now let us count them backwards from 100 to 2

**LVO WITH TEXT AND SIGNING:** 100, 98, 96, 94…….2

ILLUSTRATIONS: Number chart with numbers from 100, 98, 96……2 in boxes of different colours.

**Activity 10**

**Counting numbers by 5’s forward and backwards**

**TVO WITH TEXT AND SIGNING:** In other lessons we learn about counting numbers backwards by 5’s. Today we are going to learn about counting numbers forward and backwards by 5’s.

**TVO WITH TEXT AND SIGNING:** Let us count the numbers in the chart from 5 to 100 **LVO WITH TEXT AND SIGNING:** 5,10,15,20, 25……...100

**TVO WITH TEXT AND SIGNING:** Now let us count numbers backwards from 100 to 5 **LVO WITH TEXT AND SIGNING:** 100, 95, 90, 85, 80…….5

ILLUSTRATIONS: Number chart with numbers from 5,10,15,20……100 and 100.95,90,85……5 in boxes of different colours.

**Activity 11**

9

**Counting numbers by 10’s**

**TVO WITH TEXT AND SIGNING:** We are done with counting numbers in 5’s. Let us now count numbers in 10’s

**LVO:** 10,20,30…100

**FVO:** Now let us count numbers backwards from 100

and 100,90,80….10

ILLUSTRATIONS: Provide a chart of numbers by 10’s from 10, 20, 30….100 and 100,90,80….10 in boxes of different colours.

Animation; Animate from the 100 number chat. Forward appearance on the screen of a number at a time with audio and a signed video. Zoom out and in

**Activity 12: GAME**

**Counting numbers by 10’s up to 100 using number line**

**MVoice Over:** In the last lesson we learnt how to count numbers in 10's. **MVoice Over:** We are going to play a game using a number line by adding 10’s **MVO:** We will start with 10 and add 10 as we jump to the next number

ILLUSTRATIONS: Graduated scale with intervals of 10

**LVO WITH TEXT AND SIGNING:** I0, 1,2,3,4,5,6,7,8,9,10.

**TVO WITH TEXT AND SIGNINGr:** Where are you now?

**Illustration: a number line of 1-100 in 10s**

**TVO WITH TEXT AND SIGNING:** When we add 10 to 10 we get 20. **TVO WITH TEXT AND SIGNINGr:** Lets jump another 10 steps.

*Learners to play this game out of class*

ANIMATIONS: Curved arrows appear moving from left to right 10,20,30….as the numbers are read out

**GAME**

**Drag and drop the number of pictures in the box**

**TVO WITH TEXT AND SIGNING:** Now let us do some activities involving numbers **TVO WITH TEXT AND SIGNING:** Match the pictures with the number of in the box.

ILLUSTRATIONS: A box with number 3 inside and below it are groups of 5 oranges, 7 ladybirds, 4 balls and 3 monkeys

**ANIMATIONS: The box with number 3 is appears in a zooming in manner GAME**

10

**TVO WITH TEXT AND SIGNING:** Match the number of pictures with number in the box **TVO WITH TEXT AND SIGNING:** Check your answer

**ILLUSTRATIONS**: There is a box with number 4 inside and below it are groups of 5 oranges, 3 monkeys, 4 balls and 7 ladybirds.

**ANIMATIONS**: The box with number 4 appears in a zooming in manner **GAME**

**Drag and drop number of pictures in the box**

**TVO WITH TEXT AND SIGNING:** Match the number of pictures with the number in the box

**TVO WITH TEXT AND SIGNING:** When you finish, check your answer

**ILLUSTRATIONS**: There is a box with number 7 inside and below it are groups of 4 balls, 5 oranges, 3 monkeys and 7 ladybirds.

**ANIMATIONS**: The box with number 7 appears in a zooming in manner **Activity 16: GAME**

Drag and drop the number of pictures into the box

**TVO WITH TEXT AND SIGNING:** Match the number of pictures with the number in the box

**TVO WITH TEXT AND SIGNING:** When you finish, check your answer

ILLUSTRATIONS: There is a box with number 5 inside and below it are groups of 3 monkeys, 4 balls, 5 oranges and 7 ladybirds.

ANIMATIONS: The box with number 5 appears zooming in

**COUNTING OBJECTS AND PEOPLE IN WORDS**

**TVO WITH TEXT AND SIGNING:** In this lesson we will count different objects in numbers.

**TVO WITH TEXT AND SIGNING:** For example One girl, Two pencils, Three eggs, Four boys, Five cups

ILLUSTRATIONS: A girl, 2 pencils, 3 eggs, 4 boys and 5 cups appearing on the screen 11

ANIMATIONS: Animations of pictures with corresponding numbers in words of one girl, 2 pencils, 3 eggs, 4 boys and 5 cups appearing and disappearing on the screen in that order.

**GAME 1**

**Click on the correct number**

**TVO WITH TEXT AND SIGNING :** Now we know how to count in numbers. **TVO WITH TEXT AND SIGNING:** Let us count the objects below.

**TVO WITH TEXT AND SIGNING:** How many cups are there? Find the correct number ILLUSTRATIONS: 5 cups and numbers (4, 5, 8,7) below them.

ANIMATIONS: The five cups appear zooming in from clockwise position **GAME 2**

**TVO WITH TEXT AND SIGNING :** How many boys are there?

**TVO WITH TEXT AND SIGNING:** Find the correct number

ILLUSTRATIONS: 4 boys and numbers 6, 5, 4,3 below them.

ANIMATIONS: The four boys appear zooming in

**GAME 3**

**TVO WITH TEXT AND SIGNING :** How many girls are there?

**TVO WITH TEXT AND SIGNING:** Find the correct number

ILLUSTRATIONS: 1 girl and numbers 4, 5, 1, 7 below them.

ANIMATIONS: The girl appear moving from right to the left and stops at the middle **GAME 4**

**TVO WITH TEXT AND SIGNING:** How many pencils are there?

**TVO WITH TEXT AND SIGNING:** Find the correct number

ILLUSTRATIONS: Two pencils with numbers 4, 2 and 5 below them.

ANIMATIONS: The pencils appear one by one moving left to right and stops near the left

12

**Game GameG**

**TVO WITH TEXT AND SIGNING:** In this lesson we are going to learn how to Identify place value of ones and tens

**TVO WITH TEXT AND SIGNING:** Place value is the value of each digit in a number

**TVO WITH TEXT AND SIGNING:** For example Look at our place value house. **TVO WITH TEXT AND SIGNING** The left room shows the place value tens. The right room shows place value ones.

ILLUSTRATIONS: A two roomed open house with the rooms having a white box and the right room labeled “ones” while the left room labelled “tens”.

**Place value of a single digit**

**TVO WITH TEXT AND SIGNING:** Look at our place value house again. Pause **TVO WITH TEXT AND SIGNING:**1 as a single digit falls under the place value of ones.

ILLUSTRATIONS: A two roomed open house with the rooms having a white box and the right room labeled “ones” while the left room labelled “tens”.

**Place values of two digit numbers**

**TVO WITH TEXT AND SIGNING:** We have learned the one number only has one place value.

**TVO WITH TEXT AND SIGNINGr:** Let us now look at 23. How many numbers does 23 have?

**TVO WITH TEXT AND SIGNING:** 20 has two numbers.

**TVO WITH TEXT AND SIGNING:** Good. 23 has two numbers, 2 and 3. Two falls under the place value of tens and 0 under the place value of ones.

ILLUSTRATIONS: A two roomed open house with the rooms having a white box and the right room labeled “ones” while the left room labelled “tens”. The left box has the number 2 and the right box the number 3.

ANIMATIONS:

**Place values of two digit numbers**

13

**TVO WITH TEXT AND SIGNING:** Let us now look at the number 25. **TVO WITH TEXT AND SIGNING:** 25 has two numbers, 2 and 5.

**TVO WITH TEXT AND SIGNING:**Two falls under the place value of tens and 5 under the place value of ones.

ILLUSTRATIONS: A two roomed open house with the rooms having a white box and the right room labeled “ones” while the left room labelled “tens”. The right box has the number 5 and the left box the number 2.

**GAME**

**Place value of numbers**

**TVO WITH TEXT AND SIGNING:** What is the place value of 1 in the number 18? Click the correct answer.

Animation: A two roomed open house with the rooms having a white box and the right room has the number “1” while the left room labelled has the number “0”. Below them are two boxes labeled ones and tens that can be clicked for right/wrong response.

**GAME**

**Place value of numbers**

**TVO WITH TEXT AND SIGNING:** What is the place value of 5 in the number 15? Click the correct answer.

Animation: A two roomed open house with the rooms having a white box and the right room has the number “1” while the left room labelled has the number “5”. Below them are two boxes labeled ones and tens that can be clicked for right/wrong response.

**GAME**

**Place value of numbers**

**TVO WITH TEXT AND SIGNING:** What is the place value of 2 in the number 25? Click the correct answer.

Animation: A two roomed open house with the rooms having a white box and the right room has the number “2” while the left room labelled has the number “5”. Below them are two boxes labeled ones and tens that can be clicked for right/wrong response.

14

**Activity 4: GAME**

**Place value of numbers**

**TVO WITH TEXT AND SIGNING:** What is the place value of 7 in the number 37? Click the correct answer.

Animation: A two roomed open house with the rooms having a white box and the right room has the number “3” while the left room labelled has the number “7”. Below them are two boxes labeled ones and tens that can be clicked for right/wrong response.

**COUNTING NUMBERS 1 TO 50 IN SYMBOLS (VO)?**

**TVO WITH TEXT AND SIGNING:** In other lessons we learnt about counting numbers in words.

**TVO WITH TEXT AND SIGNING:** In this lesson we are going to learn how to count numbers 1 to 50 in symbols

 ILLUSTRATIONS: a number chart for numbers 1 to 50

**Activity 1**

**TVO WITH TEXT AND SIGNING:** Let us count numbers 1 to 10 in symbols **TVO WITH TEXT AND SIGNING:** 1, 2, 3, 4……...10,

ANIMATIONS : Numbers of different colours appearing on the screen one by one with voice over from 1-10

**Activity 2**

**TVO WITH TEXT AND SIGNING:** Let us count numbers 11 to 20 in symbols **TVO WITH TEXT AND SIGNING:** 11, 12, 13, 14……...20,

ANIMATIONS : Numbers of different colours appearing on the screen one by one with voice over from 11-20

**Activity 3**

15

**TVO WITH TEXT AND SIGNING:** Let us count numbers 21 to 30 in symbols **TVO WITH TEXT AND SIGNING:** 21, 22, 23, 24……...30,

ANIMATIONS : Numbers of different colours appearing on the screen one by one with voice over from 21-30

**Activity 4**

**TVO WITH TEXT AND SIGNING:** Let us count numbers 31 to 40 in symbols **TVO WITH TEXT AND SIGNING:** 31, 32, 33, 34……...40,

ANIMATIONS : Numbers of different colours appearing on the screen one by one with voice over from 31-40

**Activity 5**

**TVO WITH TEXT AND SIGNING:** Let us count numbers 41 to 50 in symbols **TVO WITH TEXT AND SIGNING:** 41, 42, 43, 34……...50

ANIMATIONS : Numbers of different colours appearing on the screen one by one with voice over from 41-50

**Counting numbers 1 to 10 in words**

**TVO WITH TEXT AND SIGNING :** In this lesson we will learn how to count numbers 1-10 in words

**TVO WITH TEXT AND SIGNING:** Let us start

ILLUSTRATIONS: Illustration of a black board with “numbers 1-10 in words” ANIMATIONS: A text box with numbers in both symbols and words appears on the screen as they are read out aloud

**LVO WITH TEXT AND SIGNING:** “1 One” “2 Two” “3 Three”...........”10 Ten” **GAME**

**TVO WITH TEXT AND SIGNING:** Write the missing letter to form the number names.

ILLUSTRATIONS: A number box on the right containing a number. Letter boxes on the left with each box containing a word and a missing letter and options of answers.

16

1 O\_e (n,m,t)

2 Tw\_ (e,o, a,)

3 Th\_ee (n, m, r)

4 Fo\_r (o,u,a)

5 \_ive (r,t,f)

6 S\_ x (a, i, o)

7 Seve\_ (n, m, r)

8 Ei\_ht (t,s,g)

9 \_ine (n,r,m)

10 T\_n (o,u,e)

**IDENTIFYiNG MISSING NUMBERS IN A PATTERN**

**TVO WITH TEXT AND SIGNING:** We learnt how to count numbers from 1-20 in past lessons. In this lesson we are going to find missing numbers in the pattern

**TVO WITH TEXT AND SIGNING:** Find the missing number in the pattern

ANIMATIONS: The female with the female VO bubble appears and clears and a male with the male VO bubble appears from the left and the numbers appear

**Activity 1:**

**TVO WITH TEXT AND SIGNING:** Find the missing numbers in the pattern

ILLUSTRATIONS: Number patterns 1 \_ 3 \_ 5\_ 7 8 9 10 \_ with the following answer choices in a box 10 9 4 2 7 3 5 6 8 11.

**Activity 2**

**TVO WITH TEXT AND SIGNING:** Identify missing numbers in the pattern

ILLUSTRATIONS: Number patterns \_ 12 \_ 14\_ 16 17 \_ 19 \_ with the following answer choices in a box 12 15 19 16 20 11 18 17 14 13.

**Activity 3**

**TVO WITH TEXT AND SIGNING** In previous lessons we learnt how to count numbers in groups of 2.

**TVO WITH TEXT AND SIGNING:** In this exercise we are going to find missing numbers in groups of two

17

**TVO WITH TEXT AND SIGNING:** Find the missing numbers in groups of two

ILLUSTRATIONS: A female teacher with a text box on the right “Find missing numbers in groups of two”. Illustrations of number pattern 2 \_ 6 \_ 10 \_ 14 \_ 18 \_ 20 with answer choices in a box 1, 15, 12, 7, 11, 9, 13, 3, 4, 16, 13, 8, 5, 11, 10, 3, 5, 9, 8

**Activity 4**

**TVO WITH TEXT AND SIGNING:** In previous lessons we learnt how to count numbers in groups of 5.

**TVO WITH TEXT AND SIGNING:** In this exercise we are going to find missing numbers in groups of 5

**TVO WITH TEXT AND SIGNING:** Find the missing numbers in groups of five

ILLUSTRATIONS: A male teacher with a text box on the right “Drag and drop missing numbers in steps of 5”. Illustrations of number pattern 5 \_ 15 \_ with answer choices in a box 10, 14, 6, 4, 2, 7, 9, 8

**Strand: NUMBERS**

**Sub-Strand: ADDITION**

Substrand: addition

addition as putting objects together,

**TVO WITH TEXT AND SIGNING**: Hello learner, today we are going to learn how to add objects.

**TVO WITH TEXT AND SIGNING**: This we will do by putting together the two groups of given objects.

Illustration: 3 short pencils with 2 short pencils gives in its own box 5 short pencils

**TVO WITH TEXT AND SIGNING**: When 3 pencils are put together with 2 pencils. **TVO WITH TEXT AND SIGNING:**How many pencils do you get altogether ? **activity 1:** count all the pencils put together.

**TVO WITH TEXT AND SIGNING**: 3 pencils put together with 2 pencils gives 5 pencils. **TVO WITH TEXT AND SIGNING**: therefore 3 + 2 = \_\_\_\_\_

18

Answer: provide space for correct/wrong response and feedback “good” or “wrong, try again

**activity 2:**

**TVO WITH TEXT AND SIGNING**: A father brought home, 4 oranges and 2 bananas for his family. How many fruits are there altogether?.

**TVO WITH TEXT AND SIGNING**: How many fruits are there altogether? Pause **TVO WITH TEXT AND SIGNING**: put together and count all the fruits.

Illustration: 4 oranges with 2 bananas gives in its own box 6 fruits

**TVO WITH TEXT AND SIGNING**: 4 oranges put together with 3 bananas gives 7 fruits. **TVO WITH TEXT AND SIGNING**: therefore 4 + 3 = \_\_\_\_\_

Answer: provide space for correct/wrong response and feedback “good” or “wrong, try again”

**Activity 3:**

**TVO WITH TEXT AND SIGNING**: A family has 2 boys and 4 girls. How many children are there altogether?

**TVO WITH TEXT AND SIGNING**: put together and count all the children. Illustration: 2 boys put together with 4 girls gives in its own box 6 children

**TVO WITH TEXT AND SIGNING**: count all the children put together. **TVO WITH TEXT AND SIGNING**: 2 boys put together with 4 girls gives 6 children. **LVO WITH TEXT AND SIGNING**: therefore, 2 + 4 = \_\_\_\_

Answer: provide space for correct/wrong response and feedback “good” or “wrong, try again”

**Activity 4 :**

**TVO: put together and count all the balls**

illustration: 2 balls with 2 balls gives in its own box 4 balls

TVO: In term one your class bought 2 balls. In term three we bought 2 more balls for playing.

TVO: How many balls is your class having altogether?

19

LVO: count all the balls put together.

LVO: 2 balls put together with 2 balls gives 4 balls altogether.

TVO: therefore, 2 + 2 = \_\_\_\_\_\_

Adaptation: VO should be accompanied by a signed video

the words “with” and “gives” should be read as add and equals

Answer provide space for correct/wrong response and feedback “good” or “wrong, try again”

**Games**

**TVO: drag and drop the answer in the box**

Illustration: a male teacher standing with a text box “drag and drop the answer in the box” and illustration of the objects as (object and object is \_\_\_\_ ).

How many are they?

2 birds and 8 birds is \_\_\_\_\_\_\_

3 cats and 2 cats is \_\_\_\_\_\_\_

A house and a house is \_\_\_\_\_\_

7 trees and 3 trees is \_\_\_\_\_\_

4 bags and 4 bags is \_\_\_\_\_\_\_

**Using ' +' and ' =' signs in writing additional sentences.** FVO: We use the plus (+) sign to show that we are adding two numbers together. FVO: for example, if we add 1 and 1 we will write the addition as it is 1+1 Animation in 1 + 1

Pause

FVO: We use the = sign to show the answer.

FVO: for example if we are adding 1 and1 the answer is equal to 2. followed by animation so we write, 1+1=2”

Adaptation: VO should be accompanied by a signed video

the words “with” and “gives” should be changed to add and equal

**Activity: 1**

**How many?**

Illustration of 5 objects and 4 objects is 9 objects ( mangoes)

Complete the addition sentence.

20

 5 \_\_ 4 \_\_ 9

**Activity: 2**

**How many?**

Illustration of 4 objects and 8 objects is 12 objects ( buttons dark blue) Complete the addition sentence

 4 \_\_ 8 \_\_ 12

4 plus 8 is 12

4 + 8 = 12

**Activity: 3**

**How many?**

Illustration of 6 objects and 9 objects is 15 objects (dogs dark coloured) Complete the addition sentence.

 6 \_\_ 9 \_\_ 15

6 plus 9 is 15

6 + 9 = 15

**Game**

**How many? Write the answers in the spaces given.**

Illustration of 5 objects and 1 objects is 6 objects (pens)

 5 \_\_ 1 \_\_ 6

Answer 5 + 1 = 6

Illustration of 5 objects and 11 objects is 16 objects (ovals)

 3 \_\_ 6 \_\_ 9

Answer 3 + 6 = 9

Illustration of 5 objects and 11 objects is 16 objects (triangles)

 2 \_\_ 5 \_\_ 7

Answer 2 + 5 = 7

**Adding of two single digit number upto a sum of 10**

FVO: In our lesson today you will learn adding numbers up to a sum of 10 TVO: How do you add two numbers together?

TVO: for example What is the answer of 2 + 3

LVO 1: Using objects count the numbers and add.

LVO 2: Take the big number and count on the smaller.

LVO 3: Using a number line.

TVO: Oh very good.

TVO: Let are try and use all three ways to add 2 + 3

**Activity 1**

21

2 + 3

Illustration of 2 small circles plus 3 small circles and put together is 5 small circles. 2 + 3 = 5

**Activity 2**

Animation of counting on starting with 3 add 2 as 3, 4, 5

So 2 + 3 = 5

**Activity 3**

Illustration of a number line of numbers 1 to 10

Animate the skipping start at 2 and skip 3 steps forward stopping at 5

So 2 + 3 = 5

**Game**

1. Write the answers to complete the addition sentence

a) 2 + 1 = b) 2 + 2 = c) 2 + 3 = d) 2 + 4 = e) 2 + 5 = f) 2 + 6 = Answers: 3 4 5 6 7 8

2. State true or false

a) 3 + 3 = 9 b) 4 + 5 = 9 c) 6 + 2 = 9 d) 2 + 6 = 8 e) 7 + 2 = 9 Answers: F T F T T

3. Drag and drop the write answer

a) 9 + 1 = b) 8 + 2 = c) 7 + 3 = d) 6 + 4 = e) 5 + 5 = Answers: 10 11 12 10 13 10 10 14 15 10

TVO: In this lesson you will learn more about addition.

TVO: to add two numbers, draw a number line of numbers 1 to 10and skip on. **Activity 4:**

Illustration: 8+ 2 is the same as 2 + 8 that is 8+ 2 = 10 and 2 + 8 = 10.

Using a number line to put and 2 together, start at 8 and count 2 steps forward. On what number do you stop?

Repeat the same starting on 2 and counting on 8 steps forward. On what number do you stop?

22

What do you observe in the two?

8+ 2 = 10 and 2 + 8 = 10 are the same.

Illustration of a number line of numbers 1 to 10

Animate the movement on the number line as illustrated in the activity.

Adaptation: Use different colours for counting 2 from that of 8. A signed video should accompany the VO.

**Activity 5: What is 7+3 and 3+7**

Illustration: 7 + 3 is the same as 3 + 7 that is 7 + 3 = 10 and 3 + 7 = 10.

Using a number to put 7 and 3 together line, start at 7 and count 3 steps forward. On what number do you stop?

Repeat the same starting on 3 and counting on 7 steps forward. On what number do you stop?

What do you observe in the two?

7 + 3 = 10 and 3 + 7 = 10 are the same.

Illustration of a number line of numbers 1 to 10

Animate the movement on the number line as illustrated in the activity.

Adaptation: Use different colours for counting 3 from that of 7 A signed video should accompany the VO.

**Game**

**TVO: Drag and drop to match equal sums.**

Illustration:

8 + 2 =

9 + 1 =

7 + 3 =

 Choice answers:

23

2 + 8 3 + 7 1 + 9

Game

1+ 9 =

2 + 8 =

3 + 7 =

4 + 6 =

Choice answers: 7+3 6+4 8+2 9+1

**Adding 3-single digit numbers up to a sum of 10**

TVO: Hello learner in this lesson you will learn how to add 3 numbers together. TVO: supposing your family used 2 tomatoes during breakfast, 4 tomatoes for lunch and 4 for supper. How many tomatoes will have been used altogether? Pause

LVO: 10 tomatoes

TVO: how did you get the number of tomatoes?

LVO: To get the number of tomatoes used I added 2 + 4 + 4

LVO: 2 + 4 + 4 = 10

TVO: Good.

**Activity 1:**

What is 2 + 4 + 4

Illustration of 2 tomatoes + 4 tomatoes + 4 tomatoes

Animation of being put together and the count 1 2 3 4 5 6 7 8 9 10

**Activity 2:**

1. What is 8 + 3

Illustration 8 pencils + 3 pencils

Animate 8 pencils + 2 pencils ( taken from the 3) + 1 pencil ( 3-2=1)

So 8 + 3 = 8 + 2 + 1= 10 + 1 = 11

2. What is

a. 2 + 6 + 4 = 2 + 10 = 12

b. 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14

c. 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9

e) add a 2-digit number to a 1-digit number without regrouping, horizontally and vertically with sum not exceeding 100,

24

Adding a 2 digit number to a 1 digit number horizontally

What is

a. Illustration 15 cow + 4 cows = box

b. Illustration 23 goats + 4 goats = box

c. Illustration 56 lions + 3 lions = box

d. Illustration 82 trees + 7 trees = box

MVO: to add two numbers vertically we just need to count all the objects together. Example

a. 15 cows + 4 cows = 19 (count 4 numbers forward after the big number of the given two . that is 15, 16, 17, 18, 19)

b.

**Vertical addition of two numbers**

FVO: in this lesson you will learn how to add a 2 digit number to a 1 digit number vertically What is

a 13

+ 3

b 35

 + 2

c 21

 + 8

d

 55

 + 5

MVO: to add two numbers vertically we can use objects like this.

Example

a. 3 bottle tops

+3 bottle tops

 6 bottle tops

Try the rest of the examples and compare your answers with others in your class. f) add multiples of 10 up to 100 vertically,

g) work out missing numbers in patterns involving addition of whole numbers up to 100. **TeacherVO : one plus one.**

25

1+1= empty box.

Activity10: Adding one to one.

Illustration: One fuming car.

Adaptation: remove the car to avoid confusion when counting. Let the numbers remain. Exercise:

Work out the following sums.

1+4=

1+5=

1+6=

1+7=

1+8=

Answers

8 5 9 6 7.

 **TVO: two plus three, four, five, six, seven equals**

Activity11: Adding 2+2 , 2+3 to get an answer and write it in the box provided. Adaptation: remove the wagons.

Exercise:

Add:

2+2= 2+3= 2+4= 2+5= 2+6= 2+7=

 **TVO: Three plus two, three, four, five, six, seven equals**

Adaptation: Add voice and video clip

**Strand: NUMBERS**

26

**Sub-Strand: SUBTRACTION**

PANEL 1.

(VOICE OVER PLUS TEXT):

We use the minus (-) sign to show that we are subtracting one number from another for example if we are subtracting 1 from 2, we write it as 2-1

Adaptation:

· use take away instead of minus and show the sign for take away which is(-)subtract · add KSL Video

ANIMATION

The MVO is animated bubbled the first in. and out followed by the second in.

ILLUSTRATION

Illustration of female teacher

Adaptation:

PANEL 2

VOICE OVER plus text: we use the equal (=) sign to show the answer. For example, if we are subtracting 1 from2 the answer is equal to 1 we write it as 2-1=1

ANIMATION

Provide animation of a teacher and learners in class discussing how health habits help them to stay healthy.

GAME 1

VOICE OVER plus text:

Let us play the flying bird game. Click on them to begin to count.

ILLUSTRATION: At the top is written ”begin counting from your left” Left has a tall leafy tree on a grassy and flowery ground. There are nine birds all the same colour drawn above the ground on a line below which is a box written 0 inside. (on running the cursor over the birds, they blink and attempt to fly)

Adaptation

· Instead of changing the colour of the birds to show taking away of birds,let the birds fly away

27

· Let every panel have a different item for counting illustration e.g pens/rubbers/sticks/cups/bananas /oranges/chairs/spoons/tables/ apples etc · Do it to all other panels that illustrate using the same illustration

· Change the colour of every background to a different colour.

Panel 4: GAME 2

VO: Let us play the flying bird game. How many birds are there? Click on them to begin Illustration little difference

At the top is written ”begin counting from your left”

Left has a tall leafy tree on a grassy and flowery ground. There are nine birds all the same colour except one drawn above the ground on a line below which is a box written 9 - 1 = box written 0 inside. (Note when the cursor runs over the birds the color they blink and the different one changes to the groups colour)

PANEL 5: VOICE OVER plus text

“nine take away two”

Illustration: setting remains the same as above except for two birds that have a different colour from the rest. In a box 9-2=

PANEL 6 : VOICE OVER plus text

“nine take away three”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-2=

PANEL 6 : VOICE OVER plus text

“NINE take away Four”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-2=

PANEL 7: VOICE OVER plus text

“NINE take away FIVE”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-5=

28

PANEL 8: VOICE OVER plus text

“NINE take away SIX”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-6=

PANEL 9: VOICE OVER plus text

“NINE take away SEVEN”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-7=

PANEL 10: VOICE OVER plus text

“NINE take away EIGHT”

Illustration: setting remains the same as above except for three birds that have a different colour from the rest. In a box 9-8=

PANEL 11: VOICE OVER plus text

suppose one bird flies away. Click on one bird to make it fly away

Illustration:

PANEL 12: VOICE OVER plus text

“eight take away two”

Illustration:

PANEL 11: VOICE OVER plus text

suppose one bird flies away. Click on one bird to make it fly away

8-1=

8-2=

8-3=

8-4=

8-5=

29

8-6=

8-7=

PANEL 14: VOICE OVER WITH TEXT

Suppose one bird flies away. Click on one bird to make it fly away

Illustration: 7-1=; 7-2=;7-3=;7-4=; 7-5=; 7-6=; 6-1=; 6-2=; 6-3=; 6-4=; 6-5=;5-1=; 5-2=:5-3=; 5-4=

PANEL 15: VOICE OVER WITH TEXT

SUBTRACTING USING A NUMBER LINE.

“For example, subtracting five from ten. Using the number line, start from ten and jump five steps backwards. Where do you land.”

ILLUSTRATION: for example, illustration 5 is written on top of an arrow number line below 0 5 10 15 20 10 – 5 = ; 15-5= Box.

PANEL 15: VOICE OVER WITH TEXT

“fifteen minus five using the number line, start at fifteen and jump five steps backwards. Where did you land”.

ILLUSTRATION: for example, illustration 5 is written on top of an arrow number line below 0 5 10 15 20 10 – 5 = ; 15-5= Box.

PANEL 16: VOICE OVER WITH TEXT

“using the number line subtract eight from fifteen”.

Adaptation: During subtraction avoid using addition to explain the subtraction concept in this panel. Let it remain takeaway only

Illustration: Using the number line subtract 8 from 15 in a box.

PANEL 17: VOICE OVER WITH TEXT

“using a number line fifteen take away eight is equal to seven”

Illustration: Below 15 – 8= 7 arrow number line 0 5 10 15 20 as above arrow 8+7=15 PANEL 18: VOICE OVER WITH TEXT

30

“Suppose we have five loaves of bread, if two are eaten, how many will be remaining?

Illustration: Three whole oval loaves and 2 halves. Red rectangular box for writing answer. Choices in a box 3 2 1 4

Adaptation: Let the loaves of bread that have been eaten be removed /disappear to show that they have been eaten

PANEL 18: VOICE OVER WITH TEXT

“Suppose we have five bananas, if four are eaten, how many will be remaining?” Illustration: Five bananas; Red rectangular box for writing answer. Choices in a box 3 2 1 4

PANEL 18: VOICE OVER WITH TEXT

“Suppose we have five birds, if two flies away, how many are left?”

Illustration: Five birds; Red rectangular box for writing answer

Choices in a box 3 2 1 4

PANEL 19: VOICE OVER WITH TEXT

“subtracting multiple of t.en up to ninety”

Change to: Take away numbers in groups of tens up to ninety

PANEL 20: VOICE OVER WITH TEXT

“Let us take away using the counting board. All sum should be read like this example: ninety take away ten. Place your counter on the number ninety”

· From ninety to twenty, the takeaway activities should be reduced to 5 questions

· The counting board box colours should be changed from brown and white to black and white

Animation: The placing of the counter on ninety on the counting board and movement one step behind is animated by change of colour.

Illustration: The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 10 = box

31

PANEL 21: VOICE OVER WITH TEXT

“ninety take away twenty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 20 = box

PANEL 22: VOICE OVER WITH TEXT

“ninety take away fifty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 50 = box

PANEL 23: VOICE OVER WITH TEXT

“ninety take away sixty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 60 = box

PANEL 24: VOICE OVER WITH TEXT

“ninety take away fifty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

32

In a box 90 – 50 = box

PANEL 25: VOICE OVER WITH TEXT

“ninety take away fifty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 50 = box

PANEL 26: VOICE OVER WITH TEXT

“ninety take away seventy”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 70 = box

PANEL 27: VOICE OVER WITH TEXT

“ninety take away eighty”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

The counting board 10 20 30 40 50 60 70 80 90

In a box 90 – 50 = box

PANEL 28: VOICE OVER WITH TEXT

“seventy take away ten”

Animated on to the screen 10 20 30 40 50 60 70 80 90

Illustration

33

The counting board 10 20 30 40 50 60 70 80 90

In a box 70 – 10 = box

PANEL 29: VOICE OVER WITH TEXT

“drag and drop your answers in the correct box”

Adaptation

Pick the correct answers for each activity. The activities should not be more than 5 from panel 32-35”.

PANEL 30: VOICE OVER WITH TEXT

“Subtraction of numbers vertically”

Animated on to the screen 10 20 30 40 50 60 70 80 90 and 70 – 30 in a vertical arrangement ready for subtraction

Illustration: Illustration of teacher with Mvo in a bubble.

PANEL 30: VOICE OVER WITH TEXT

“Patterns involving subtraction of whole numbers upto a hundred”

PANEL 30-34: VOICE OVER WITH TEXT

Activity 1: Work out the missing numbers in the pattern

Remove the last box from the pattern

Strand: Measurement

Sub-Strand: Length

**Introduction:Comparing length of different objects in the Classroom** VO WITH TEXT AND SIGNING::

Hello Learner, in this lesson we are going to learn about length. Take two pencils and put them together. Are they the same ?pause, Why?

VO WITH TEXT AND SIGNING: Length is the size of something from end to end 34

Animation: A pencil showing end to end using a line e. g 

VO WITH TEXT AND SIGNING: To get the item that is shorter or longer we put the items together take away (then show the animation below)

ANIMATION: showing two pencils one short and another long. With lines showing the starting point and the end point. Bounce them one after another for learners to see the one that is longer. To get the one that is longer or shorter put the pencils together on one end.

ILLUSTRATION: Two pencils of different lengths with a line indicating starting point.

Activity 

VO WITH TEXT AND SIGNING: : Drag and drop long objects into the box. ANIMATION

Animated on the screen are empty boxes and on the LHS are a short pencil, a long ruler, a pen, a short ruler, a sharpener, a rubber and a long

**Activity 2: Short objects**

VOICE OVER with signing : Drag and drop short objects into the box. ANIMATION

Animated on the screen are empty boxes and on the LHS are a short pencil, a long ruler, a pen, a short ruler, a sharpener, a rubber and a long ruler.

**Activity 3: Objects of the same length**

VOICE OVER with signing: Drag and drop objects of the same length into the box 35

Drag and drop objects of the same length into the box.

ANIMATION

Animated on to the screen are boxes and on the LHS are a short pencil length of a sharpener, 2 pens of the same length, a short ruler and a long ruler. The objects appear as the leaner drops the previous item in the appropriate boxes.

Activity: 4

VO WITH TEXT AND SIGNING: Hello learner in this lesson we are going to learn about longer than, same or shorter than.

Learner, Pick your mathematics text book and exercise book. Pause. Which one is longer?

In two empty boxes put a textbook and Exercise book for the learner to click the correct answer according to their observation

VO WITH TEXT AND SIGNING**: Now learner we are going to use, longer than, shorter than or same as to compare objects.**

VO WITH TEXT AND SIGNING: look at these two animals. Which one is longer? An illustration showing a snake and a tortoise. The snake is longer than the tortoise

Animation: Animation showing a snake and a tortoise with lines showing the starting point and end point. Animate to show the learners how they are measured.

36



VO WITH TEXT AND SIGNING: Now learner we say the Snake is longer than the tortoise. Then the Tortoise is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the snake.

Illustration: 3 Boxes with longer than, shorter than or same for the learner to identify the correct answer. Have an animation of a green tick if the learner is correct or red “x” if wrong or try again.

Activity 6

VO WITH TEXT AND SIGNING:Is ruler A longer than, shorter than or same length like ruler B?

ILLUSTRATION

Two rulers of the same size labelled A and B .

Activity 7

VO WITH TEXT AND SIGNING:Is this rubber(red) longer than or shorter than that(blue) rubber.

Illustration: A red and blue rubber

37

VO WITH TEXT AND SIGNING:Hello learner in this lesson we are going to measure the length of the classroom and desk.

VO WITH TEXT AND SIGNING: use your hand spans to measure the length of your desk.

Content : measuring the length of your desk.

Activity : use your hand spans to measure the length of your desk

ILLUSTRATION

Illustration of desk and teachers table inside the classroom

Content:Measure the length of the window.

Activity :Measuring the length of the window with your hands

ILLUSTRATION

Illustration of open outward classroom window

ADAPTATION

VO WITH TEXT AND SIGNING:We are now going to use footsteps to measure distance ANIMATION

Animated act of a student measurement of the distance in front of the class from the door

ILLUSTRATION

Animated act of a student measurement of the distance in front of the class from the door

Strand: Measurement

Sub-Strand: Mass

Comparing mass of objects

**VOICE OVER:** Hello learners. Welcome to today's lesson. We are going to learn about Mass”

38

**VO :** What is mass? We know mass when we compare the weight of different objects.

**VO:** Some objects are heavier than others. Other objects are lighter. Some objects are of the same mass.

Provide illustration of a small and a big cup.

Add Sign Language Video to VO

**Activity 1**

**VO:** Let us compare mass.

**FVO with Text:** Collect the following objects in the classroom: a piece of chalk, a duster, a pencil, and an exercise book

**FVO:** “Which object is heavy? Which object is light?”

Illustration of balance made of wooden planks with the left side having a bag and the left side an exercise book. The left side is heavier than the right side.

**FVO:** What do you see?

**LVO:** The bag is heavier than the exercise book.

**LVO:** The exercise book is lighter than the bag

Add Sign Language Video to VO

**Activity 2**

**FVO:** Let us compare a duster and a pencil

Illustration of balance made of wooden planks with the right side having a duster and the left side a pencil. The right side is heavier than the left side.

**FVO:** What do you see?

**LVO:** The pencil is lighter than the duster

**LVO:** The duster is heavier than the pencil.

Add Sign Language Video to VO

**Activity 3**

**FVO:** Let us compare a five chalks and two pencils

39

Illustration of balance made of wooden planks with the right side having two pencils and the left side five chalks. The plank balances

**FVO:** What do you see?

**LVO:** The five chalks are same as the two pencils

Add Sign Language Video to VO

**Activity 3: GAME**

**FVO with Text:** Which object is heavier? Find the correct answer

Illustration of balance made of wooden planks with the right side having an exercise book and the left side a pencil. The book is heavier than the pencil.

**LVO:** The exercise book is than the pencil.

Add Sign Language Video to VO.

Provide answer choices - Same as, heavier, lighter.

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

Repeat the same for Bag-duster, pencil-bag,chalk-bag (3 more games)

**Activity 4: GAME**

**FVO:** Now, let us compare weights of different objects in class. We will need a beam balance”.

We will compare;

● Mathematics textbook and english textbook.

● a pencil and a ruler

● left shoe and the right shoe.

● Pair of socks and pair of shoes

Illustration of a beam balance.

Animation of the act of weighing different objects/items using a beam balance. 40

**FVO:** Are the following sentences true or false?

1. The Mathematics textbook is the same as the English textbook (True/False) 2. The pencil is heavier than the ruler ( True/False)

3. The left shoe is lighter than the right shoe ( True/False)

4. The pair of socks is the same as the pair of shoes (True/false)

Add Sign Language Video to VO

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Conserving mass through manipulation**

**VOICE OVER WITH TEXT:** In this lesson we will use the same amount of material to make different shapes.

Illustration: Play doll/plasticine or clay of the same amount

**Animation: different objects made from the same amount of material examples: ball, a cube, a boy, a cow , a car a box, etc**

**TVO with Text:** Lets us compare the weight of different objects from the same amount of material.

**TVO:** What do you notice?

**LVO:** They all have the same weight.

**ACTIVITY 5**

**FVO:** The objects below have been made of the same amount of material 1. Ball and Plate

2. Cup and chair

3. Car and Phone

Illustration: Provide illustrations of ball, cube, cup, chair, car, phone **Animation: The illustrations zoom in as the names are read out aloud. FVO:** Are the following sentences true or false?

1. The ball is the same as the plate (True/False)

2. The cup is heavier than the plate ( True/False)

3. The car is lighter than the phone ( True/False)

41

Add Sign Language Video to VO

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

Strand: Measurement

Sub-Strand: Capacity

**VOICE OVER WITH TEXT:(Female)**

Drag and drop in the box containers that hold:

**Activity**

1. Which container holds more water than others?

Tank and bucket ; sufuria and basin,

2. Which container holds Less water than others?

small bottle and basin; jug and cup

ILLUSTRATIONS:Illustration of different types of containers. , ,.

ADAPTATION:

1. Add SL video to VO

2. Add simple definition of capacity

3. Separate the two tasks into task 1 and 2

4. Replace Drag and drop in the box containers that hold:

○ more water than others

○ less water than others with

-Move the containers that hold more water in the correct box

-Move the containers that hold less water in the correct box

5. Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

Exercise

Fill in

Illustrations jug, sufuria, kettle, tin, basin ,bucket

42

Which holds more than; less than?

a. The kettle holds \_\_\_\_\_\_\_\_the sufuria.

b. The jug holds \_\_\_\_\_\_\_\_\_the cup.

c. The basin holds\_\_\_\_\_\_\_\_the bucket.

d. The tin holds \_\_\_\_\_\_\_\_the basin.

e. The sufuria holds \_\_\_\_\_\_the jug.

**VOICE OVER WITH TEXT: (Female)**

“did you know that containers of different shapes hold the same amount of water”

ILLUSTRATIONS: A female teacher and a text bubble with the words “Did you know that containers of different shapes may hold the same amount of water?” A 500ml cup and a 500ml bottle. Two empty boxes labelled more water less water.

ANIMATIONS: The female teacher, text box, the cup and the bottle appear zooming in then disappear.

ADAPTATION:

Add SL video to VO

Replace “may” with “can”

Animations and text to stay on the screen a little longer for learners to conceptualize

Game 1

**VOICE OVER WITH TEXT:** Take an empty bottle and a cup and fill both with water. Which contains more water?

Illustration: A cup and a bottle both being filled with water

ADAPTATION:

Add SL Video to VO

Take an empty water bottle and a cap. Fill them with water.

Which one has more water?

Game 2

**VOICE OVER WITH TEXT:**

Does the container hold more, same as or less water than the bucket when water is poured in?

43

Illustration: A big bucket of water filling a small container.

ADAPTATION:

Does the container hold more, same as or less water than the bucket?

Game 3

**VOICE OVER WITH TEXT:**

Using the cup below pour water to fill this cup

Illustration: A blue cup at the bottom of a white jug.

ADAPTATION:

Replace “using the cup below, pour water to fill this cup” with “using the cup below, pour water to fill this jug”

Game 4

**VOICE OVER WITH TEXT:**

Drag and drop the cups below into the jug

Illustration: One blue cup below a big jug

ADAPTATION: Replace “drag and drop” with “move”

Game 3

use the cup to fill the sufuria (click start)

Animation: An animation of the process on clicking.

Strand: Measurement

Sub-Strand: Time

VOICE OVER WITH TEXT AND SIGNED VIDEO: ACTIVITIES AT HOME

VOICE OVER WITH TEXT AND SIGNED VIDEO: Hello Learner, in this lesson we are going to learn about activities done at home. This is how we sign activities. (Teacher signs activities)

What activities are done at home?

**Illustration** of activities done at home (washing, digging, cooking, sweeping, playing, fetching firewood, grazing etc)

VOICE OVER WITH TEXT AND SIGNED VIDEO: Match the pictures with activities 44

|  |  |
| --- | --- |
| Activity  | Picture |
| 1. Feeding animals |  |
| 2. Planting |  |
| 3. cooking |  |
| 4. Washing clothes |  |
| 5. Fetching firewood |  |

Illustration: pictures of the activities in the above table labelled A, B, C, D and E in a different order.

**ACTIVITIES AT SCHOOL**

**VOICE OVER WITH TEXT AND SIGNED VIDEO:** Learner, what activities are done in your school?

Illustration of activities such as Raising flag, washing classroom, collecting litter, games and sports, drama and singing, reading and writing etc

**Activity**

**VOICE OVER WITH TEXT AND SIGNED VIDEO:** Match the activity with the picture

|  |  |
| --- | --- |
| Activity  | Picture |
| 1. Raising Flag |  |
| 2. washing classroom |  |
| 3. collecting litter |  |
| 4. collecting litter |  |
| 5. reading and writing |  |

45

**Illustration of pictures of the activities above with labels A,B,C,D and E Signing and Telling Time**

**VOICE OVER WITH TEXT AND SIGNED VIDEO: Hello learner, in this lesson we are going to learn to sign when telling about time**. When do you wake up? When do you eat your lunch? When do you sleep?

Illustration: Pictures of child waking up, eating lunch and sleeping at night **VOICE OVER WITH TEXT AND SIGN**

Yes Learner, we wake up in the morning, this is how we sign morning. Learner sign mourning. Pause

We eat our lunch in the afternoon, good, this is how we sign in the afternoon. Learners sign the word afternoon. Pause

We sleep at night, this is how we sign night. Now sign the word night. Include illustrations of Morning, afternoon and night. For example

Animation: Zoom in the illustrations of morning, afternoon and night as the teacher explains to the learner

|  |  |  |
| --- | --- | --- |
| Morning  | Afternoon  | Night |
|  |  |  |

VOICE OVER WITH TEXT AND SIGNING

Move the activities done in the morning, afternoon and evening to the correct box

Illustration: three boxes labelled morning, afternoon and evening ( children playing, a child sleeping, brushing teeth, washing face, learners going to school)

VOICE OVER WITH TEXT AND SIGNING: Sign and tell the time

46

Illustration: Children standing at the school assembly raising flag

VOICE OVER WITH TEXT AND SIGNING: Today we are going to learn about days of the week. There are 7 days in a week

Teacher: The day one of the week is Sunday (Teacher finger spells and signs the word ‘SUNDAY’). Learner, Fingerspell the word “SUNDAY”

Learner: Finger Spells the word S-U-N-D-A-Y

Teacher: Good job! Now sign the word Sunday

Learner: Signs the word Sunday

Teacher: The day 2 of the week is Monday (Teacher finger spells the word Monday). Now learner fingerspell the word Monday

Learner: Finger Spells the word MONDAY(M-O-N- D-A-Y)

Teacher: This is how we sign MONDAY- teacher signs the word MONDAY. Now learner sign the word MONDAY.

Learner: Signs the word MONDAY.

Teacher: Good job! The day 3 of the week is TUESDAY (Teacher finger spells the word TUESDAY(T-U-E-S-D-A-Y). Now learner fingerspell the word Monday

Learner: Finger Spells the word TUESDAY(T-U-E-S-D-A-Y)

Teacher: This is how we sign TUESDAY- teacher signs the word TUESDAY. Now learner sign the word TUESDAY.

Learner: Signs the word TUESDAY

Teacher: Good job! The day 4 of the week is Wednesday (Teacher finger spells the word Wednesday). Now learner fingerspell the word Monday

Learner: Finger Spells the word WEDNESDAY(W-E-D-N-E-S-D-A-Y)

Teacher: This is how we sign WEDNESDAY- teacher signs the word WEDNESDAY. Now learners sign the word WEDNESDAY.

Learner: Signs the word WEDNESDAY

47

Teacher: Good job! The day 5 of the week is THURSDAY (Teacher finger spells the word THURSDAY). Now learner finger spells the word THURSDAY

Learner: Finger Spells the word THURSDAY(T-H--U-R-S-D-A-Y)

Teacher: This is how we sign THURSDAY- teacher signs the word THURSDAY. Now learners sign the word THURSDAY.

Learner: Signs the word THURSDAY

Teacher: Good job! The SIXTH day of the week is FRIDAY (Teacher finger spells the word FRIDAY(F-R-I-D-A-Y). Now learner fingerspell the word FRIDAY

Learner: Finger

Spells the word FRIDAY(F-R-I-D-A-Y)

Teacher: This is how we sign FRIDAY- teacher signs the word FRIDAY. Now learner sign the word FRIDAY.

Learner: Signs the word FRIDAYTeacher: Good job! The SEVENTH day of the week is SATURDAY (Teacher finger spells the word SATURDAY(S-A-T-U-R-D-A-Y). Now learner fingerspell the word FRIDAY

Learner: Finger Spells the word FRIDAY(F-R-I-D-A-Y)

Teacher: This is how we sign SATURDAY- teacher signs the word SATURDAY. Now learner sign the word SATURDAY.

Learner: Signs the word SATURDAY

**Animation: Days animated on the screen as the teacher signs** ACTIVITY: Drag and drop days of the week in the correct boxes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| DAY 1  | DAY 2  | DAY 3  | DAY 4  | DAY 5  | DAY 6  | DAY 7 |
|  | MONDAY  |  | WEDNES DAY |  |  | SATURD AY |

Options: SUNDAY TUESDAY THURSDAY FRIDAY

Exercise: Now learner fingerspell and sign the days of the week 48

Strand: Measurement

Sub-Strand: Money

Kenyan Currency coins and notes

**Voiceover;** “Hello learners. In this lesson we are going to learn about money. Pause

**Voiceover;** We will learn about Kenyan currency in coins and notes upto 100”

Picture illustration of kenyan money 1 shilling coin, 5 shilling coin, 10 shilling coin, 20 shilling coin, 50 shilling note, 100 shilling note.

Add Sign language video to VO

**Activity 1**

**VO WITH TEXT:** Look at these coins, they are kenyan money. Click each to see the value.

Picture illustrations: 50 cents, 1 shilling, 5 shilling, 10 shillings, 20 shillings, 40 shillings, notes 50 and 100

Animation: When the coins are clicked, the value should pop up 1.e 1 shilling coin, 5 shilling coin, 10 shilling coin, 20 shilling coin, 50 shilling note, 100 shilling note, 200 shilling note.

**VO:** Now we know which money is in notes and which is in coins.

Add Sign Language video to VO

**Activity 2**

**VO WITH TEXT:** Move the coins and put them in the right boxes.

49

Illustration of the following coins 5 shillings, 10 shillings, 20 shillings, 40 shillings above them are boxes labelled in words 5 shillings, 10 shillings, 40 shillings

Animation: animate the notes to be able to be dragged and dropped

Add Sign Language video to V0

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 3**

**VO WITH TEXT:** Move the notes and put them in the right boxes.

Illustration of the following notes 50 shillings, 100 shillings, above them are boxes labelled in words 50 shillings, 100 shillings

Animation: animate the notes to be able to be dragged and dropped

Add Sign Language video to V0

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 4**

 **VO:** The following items have different costs. Click the item to see how much it costs.

Illustration: table with pictures of a small bar of soap; a packet of milk; 1kg of sugar , an exercise book; loaf of bread, a ruler, and a pencil. A button of List is provided

Animation: animate the illustration so that when clicked the value pops up as follows: A bar of soap sh. 20, a packet of milk Sh. 50, 1 kg of sugar Sh. 100, an exercise book Sh. 40, a loaf of bread sh. 50, a ruler sh 20. A rubber sh. 10, a pencil sh. 5.

**VO:** How much does each item cost?

**LVO:** A bar of soap costs sh. 20, a packet of milk costs Sh. 50, 1 kg of sugar costs Sh. 100, an exercise book costs Sh. 40, a loaf of bread costs sh. 50, a ruler costs sh 20, a rubber costs sh. 10, and a pencil sh. 5.

Add Sign Language video to V0

50

**Activity 5: GAME**

 **VO:** Match each item with the correct cost

Illustration: table with pictures on the left with 1. A packet of milk 2. 1kg of sugar 3. An exercise book 4. A rubber 5. a pencil on the right are costs in the order of sh. 100, Sh. 20, Sh. 50 , Sh, 40, Sh. 5, Sh. 10

Animation: animate the illustration so that the items on the left can be matched by the costs on the right.

Add Sign Language video to V0

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Goods and services**

**TVO:** In previous lessons we learn about the cost of different things. In these lessons we will learn about goods.

**TVO:** Goods are things we buy with money. For example pencil, rubber, bread, ruler are goods.

**TVO:** Services are activities we pay for. For example teaching, going to the salon, riding a bike, riding a bus are services

Illustration: a two column table with the left column labeled goods and the right column labelled services. The left column has the following in each row- pencil;, rubber, bread, ruler. The right column has the following in each row- teaching, a girl getting her hair done, a bus and a boy riding a motorcycle.

Add Sign Language video to V0

**Activity 1: GAME**

**TVO:** Write “good” or “service” in the table below.

Illustration: a two column table with the left column having the following items 1. Bread 2. Book 3. Show shining 4. Car washing 5. Pencil and the left table empty for learners to write “good/service”

51

Add Sign Language video to V0

Provide option for typing “good/service”

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 2: GAME**

**TVO:** How much do the following goods and services cost?.

Illustration: Provide illustrations of the following and each has a description below 1. Loaf of bread Sh. 50 2. A kg of sugar Sh. 100, 3. A boy riding a motorbike Sh.40, 4. A girl getting her hair blow dried sh. 20 5. and a pencil Sh. 5.

Below is a two column table with the names of illustrations on the left and the right column empty for learners to type answers.

Add Sign Language video to V0

Provide an option for typing the cost of each item on the right column. Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**WANTS AND NEEDS**

**VO WITH TEXT:** Wants and Needs. Do you know the difference between wants and needs?

Illustration: pole showing two opposite directions one labelled needs and the other wants.

VO WITH TEXT: A need is something you cannot do without. A want is something you wish to have but can do without it

Animation: animated examples of needs with audio; a plate of maize and beans, water, clothes (shirt, dress, shorts)

Animation: animated examples of wants with audio; biscuits, toy(doll), ball, Add Sign Language video to V0

52

**Activity 1**

**VO WITH TEXT:** Move the pictures into the correct box

Illustration: two boxes, labelled need and other wants. With the following illustrations plate of food and biscuits, sweets and a bottle of water, dress and a ball, a home and a doll.

Animations appear of the following illustrations to be dragged in the box.

1. Plate of food and biscuits

1. Sweets and a bottle of water

2. Dress and a ball

3. A home and a doll

Add Sign Language video to V0

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

Strand: GEOMETRY

Sub-Strand: LINES

TVO:in this lesson you are going to learn about lines

TVO: look around you and see if there are any lines in your surroundings. Name the line?

Pause

LVO 1: Straight lines.

LVO 2: curved lines.

TVO: Draw straight lines as used in real life in your surroundings.

TVO: Draw curved lines as used in real life situations.

53

 Pause

Show your drawings to your teacher and classmate.

Illustration: various geometrical shapes as background (stars, rectangle, oval and square)

**straight and curved lines**

VO WITH TEXT: look at these lines, some of them are straight and others are curved Illustrations: two straight lines and two curved lines.

VO WITH TEXT: a triangle is made up of three straight lines

Animation: animation of triangle as being made up of three lines.

VO WITH TEXT: a rectangle is made up of four straight lines

Animation: Animation of rectangle as being made up of four lines.

 Game:

Drag and drop to match line and name

Illustration: two boxes labelled straight line and curved line; and a curved line in the shape of a skipping rope and a straight one.

**Substrand: shapes**

**TVO + Signed Video**: Hello learners, in this lesson we are going to learn about different shapes.

**VO+Txt+ Signed Video**: There are four main shapes; square, rectangle, triangle and circle

54

Illustration: A square, rectangle, triangle and circle are animated on the screen zooming in manner as they shapes are read out aloud.

**VO +TEXT +Signed Video**: Can we name some objects with square shape? **LVO +Text+ Signed Video:** A slice of bread, a biscuit, a socket, a cube , a wall clock

Provide illustrations of a slice of bread, a biscuit, a window, a cube, a wall clock that are square in shape

Illustration: The objects above appear and disappear on the screen as they are read out aloud.

**VO +TEXT +Signed Video**: Can we name some objects with rectangle shape?

**LVO +Text+ Signed Video:** A loaf of bread, an exercise book, cell phone, a blackboard , a ruler

Provide illustrations of a loaf of bread, an exercise book, cell phone, a blackboard , a ruler that are rectangular in shape

Illustration: The objects above appear and disappear on the screen as they are read out aloud.

**VO +TEXT +Signed Video**: Can we name some objects with triangle shape?

**LVO +Text+ Signed Video:** A triangular ruler, a packet of milk, a triangular mandazi, a cloth hanger, side of a roof

Provide illustrations of a triangular ruler, a packet of milk, a triangular mandazi, a cloth hanger, side of a roof that have triangular shapes.

Illustration: The objects above appear and disappear on the screen as they are read out aloud.

**VO +TEXT +Signed Video**: Can we name some objects with circle shape? **LVO +Text+ Signed Video:** A ball, a 5 shilling coin, the sun, a wall clock, a button, Provide illustrations of a circular ball, a 5 shilling coin, the sun, a wall clock, a button

Illustration: The objects above appear and disappear on the screen as they are read out aloud.

**Activity 1:**

55

**VO + TEXT + Signed Video:** Move the shapes to the correct box.

1. Illustration: two boxes labelled triangle and rectangle. Picture of a rectangle and a triangle.

2. Illustration: two boxes labelled square and circle. Drawing of a square and a circle

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 2:**

**VO + TEXT + Sign Language Video**: Arrange the following shapes from the largest to the smallest

Illustration: a group of 5 rectangles in small different shapes that can be arranged from small to big.

Animation: The triangles should be able to be moved and arranged in descending order.

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 3:**

**VO + TEXT + Sign Language Video**: Arrange the following shapes from the largest to the smallest

Illustration: a group of 5 circles in small different shapes that can be arranged from small to big.

Animation: The circles should be able to be moved and arranged in descending order.

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 4:**

**VO +TEXT + Signed Video:** Match the pictures with the correct shape. 56

Illustration: Boxes with the following shapes; a rectangle, triangle, square, circle. Below them are the following objects 1. An orange cut in the middle to make a circle, 2. A square slice of bread 3. A rectangular winder and 5. A watermelon cut into a triangle

Use “” or a “tick” for wrong/correct responses and when the “try again” button is clicked it should take you to start afresh.

**Activity 5:**

**VO + Text + Sign Video**: Make patterns using triangles, rectangles, squares and circles

Illustration: rectangle and shapes labelled triangle (A), (F); rectangle (D), (E); square (B) and circle (F).

57