JUMPING MATH (LEVEL 1)

Description	Learner will design their own number line game to get a better grasp of number sense and conduct simple addition and subtraction functions
Leading Question	Can you make your own number line?
Total Time Required	5 hours total over 4 days.
Supplies Required	Paint, paper, scissors, cardboard.
Learning Outcomes	1. Understanding odd-even numbers 2. Describe a simple relationship between two numbers using appropriate mathematical terms. 3. Understand place value in and order whole numbers 4. Represent the place value of two-digit numbers (tens and ones) using real objects, models and expanded notation 5. Add and subtract whole numbers
Previous Learning	Awareness of numbers from 0-20 and being able to write the numbers.

DAY 1

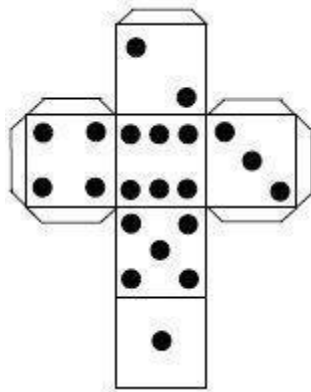Today you will learn what a number line is and how to create one.

Suggested Duration	Activity and Description
10 minutes	● Learners will revise counting the numbers from 0-20
50 minutes	● Learners will design their own number line: They will paint, write and cut out each of the numbers from 0 – 20 and stick them in order on the ground ● The even numbers will be in one colour and the odd numbers will be in another colour ● Input: 2 – 4 – 6 – 8 – 10 – 12 – 14 – 16 – 18 – 20 are even numbers and the odd numbers of 1 – 3 – 5 – 7- 9 – 11 – 13 – 15 – 17 – 19

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TIP: If you have tiles at home – please ask them to place a number in each tile or measure equal distances between the numbers being stuck.

DAY 2

Today you will learn how to create your own dice or spinning wheel.

Suggested Duration	Activity and Description
30 minutes	● Learners will make their own dice based on their understanding of a cube. ● *Input: A cube is a three-dimensional solid object bounded by six square faces, with three meeting at each vertex.* Learners can identify other cubes in their home (e.g. ice cubes, sugar cubes, square tissue boxes etc.) and write the description of a cube and draw the same Learners will identify the different squares in the cube and count and draw these with equal length of 4 sides Learners will also identify rectangles at home and draw these to see the difference between the square and the rectangle Learners can design and draw the below to make their own dice, the lines will be folded and stuck together in the shape of a cube. ● Alternatively, learners will design the spinning wheel for the game. Input: A spinning wheel is a circle or round and looks a little like a clock. Like the hands of a clock, we have to design a hand or arrow that we can spin and will land on one choice Learners can use any

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round object to trace out a large circle. They will then make 6 sections to the circle

- TIP: Please see below as a reference and learners can understand it by imagining the circle is one big pizza or cake and you had to cut 6 pieces of the pizza)

- Learners will now create the spinning arrow – which could be a paper clip that is inserted in a paper pin that is inserted into the center of the circle as below

- Alternatively, the learners can cut out an arrow on cardboard or thick paper and then insert this into the center of the circle using an opened paper clip or paper pin.
- Learners will now write all the numbers down and cut them into small cards.
- Learners will also write the main mathematical functions on separate small cards (+ addition / - subtraction / greater than / less than)

DAY 3

Today you will learn addition.

Suggested Duration	Activity and Description
45 minutes	- All the preparations are now ready to play the addition game! - Rules: learner will throw the dice or spin the spinner and based on the number that comes, they have to jump that number up. Learner will start from 0 (e.g. if the dice is 3, they will jump up to number 3, then throw the dice and if it is 5 – they will jump up to 8 (3+5)

- Learners can also come up with rules. Examples:
  If you land on an even number – you have to jump forward 2 steps
  If you land on an odd number – you have to jump forward 3 steps.

  Learner will also complete a numerical representation by writing down the sums that they are practicing e.g. 3+5=8

15 minutes	• Family members will pick up a number card. If the number the learner is standing on is greater than the number the family picked up they can ask their family member to perform an exercise of their choice e.g. jumping jacks etc. • Example: Family member picks up a number 4, if the learner happens to be standing on 6, since 6 is greater than 4 - the learner gives the family members an exercise to do • Learners will represent this in a numerical function as 6 **greater than** 4

DAY 4

Today you will learn subtraction.

Suggested Duration	Activity and Description

45 minutes	• All the preparations are now ready to play the subtraction game
	 • Rules: Learner will throw the dice or spin the spinner and based on the number that comes, they have to jump down that number. Learner will start from 20 (e.g. if the dice is 3, they will jump down to 17 (20–3), then throw the dice and if it is 5 they will jump down to 12 (17-5)
	 • Learners can also come up with other rules. Examples:
	     ○ If you land on an even number – you have to jump forward 2 steps
	     ○ If you land on an odd number – you have to jump forward 3 steps
	 • Learner will also complete a numerical representation by writing down the sums that they are practicing e.g. 20 – 3 = 17

15 minutes	• Family members will pick up a number card. If the number the learner is standing on is less than the number the family picked up they can ask their family member to perform an exercise of their choice e.g. jumping jacks etc.

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- Example: Family member picks up a number 13, if the learner happens to be standing on 8, since 8 is less than 13 - the learner gives the family members an exercise to do
- Learners will represent this numerically as 8 i**s less than** 13

DAY 5

Today you will learn subtraction.

Suggested Duration	Activity and Description
45 minutes	- Play the game with all the four numerical functions - Family members can pick up a function card and a number card. Learners will then perform the operation e.g. + 6, - 3, is the number greater than 2 etc. - Learners will write down all the mathematical functions numerically - If you land on an even number – you have to jump that many times - If you land on an odd number – you have to hop that many times

ASSESSMENT CRITERIA

- Understanding of shapes and ability to identify them
- Design of the dice
- Clarity of the painting and formation of the numbers and numerical representation of the sums
- Deeper number sense.

ADDITIONAL ENRICHMENT ACTIVITIES

- Design the number line for up to – 10 / - 20
- Add more rules to the game for multiplication / division by 2 etc.
- Design the number line for 30 - 50

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