



Master Lesson Plan

For

Fun with Give and Take

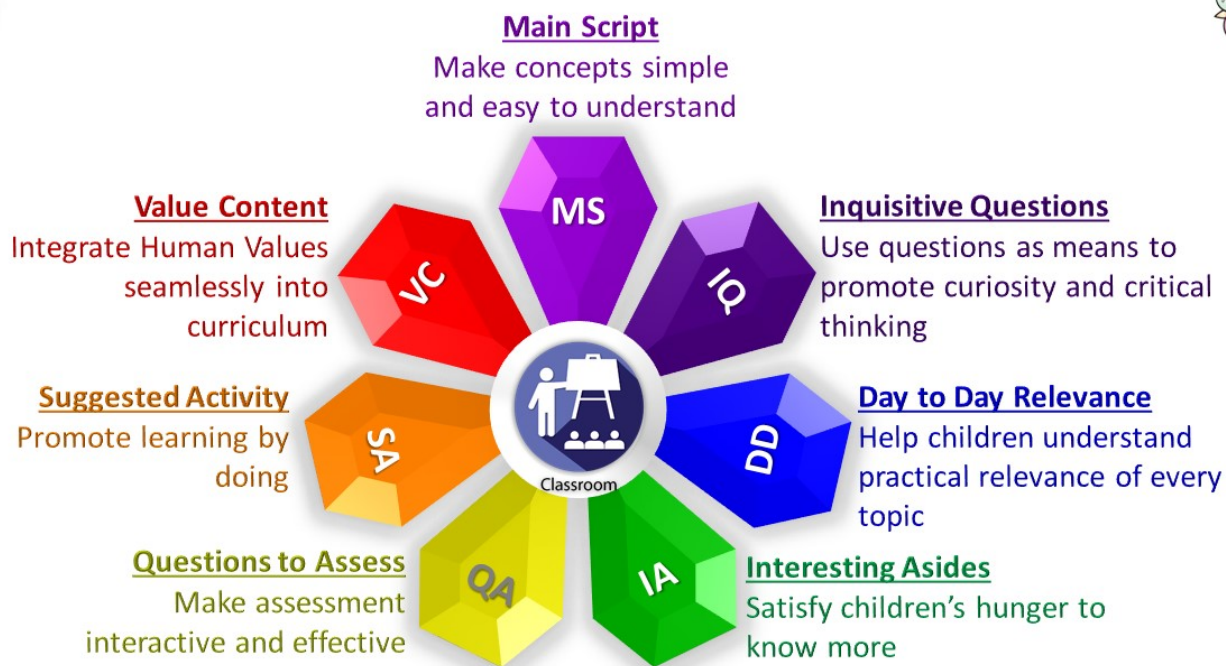
Board	Standard	Subject	Chapter	Language	Reference Link	Creation date
CBSE	STD III	Mathematics	Fun with Give and Take	English	Fun with Give and Take	2021-04-15 18:27:16

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Master Lesson Plan (MLP) - Covers the entire chapter with the help of these 7 asset types



For more information on how to use the lesson plan effectively, please scroll to the guidelines at the end of this document.

Fun with Give and Take

1. MS_Objectives_Fun with Give and Take

OBJECTIVES – FUN WITH GIVE AND TAKE

Teachers will be able to get an overview of the Asset Objectives in the MLP for the chapter “Fun with Give and Take”

Notes to the teacher:

- This asset lays down the proposed plan for transacting this chapter.
- It states the asset objectives of MLP.
- This asset is for the teacher’s reference and need not be taught to the students.

Students will be able to

- think of subtraction as the opposite of addition
- solve subtraction problems by regrouping
- do addition and subtraction using number line
- explain increasing and decreasing pattern of numbers
- recollect the counting methods of 2s, 4s, 5s, 10s
- relate to subtraction in their day to day activities
- gain knowledge on facts about mutual dependence among creations
- apply the related facts in addition and subtraction problems
- apply addition and subtraction strategies using number lines
- identify increasing and decreasing pattern of numbers
- enjoy learning facts about numbers through a card game
- enjoy the art of creating a collage using coloured sheets to represent digits
- appreciate the joy in sharing things with others

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	Addition and Subtraction	

2. IQ_Increasing and Decreasing Patterns of Numbers

How would you count the eyes in this group of children?



Answer: Count by 2s.

How would you count the number of fingers on the raised hands?



Answer: Count by 5s

Examine the Number Table: 1 to 100 given below and explain:

Number Table: 1 to 100									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

How can you use the Number Table 1 to 100 to count by 2s? By 5s?

Answer: To count by 2s, we start from 2 and add 2 to get to the next number. The digit in the one's place is increased by 2.

To count by 5s, we start from 5 and add 5 to get to the next number.

2. Colour to record your work. What patterns do you see?

Answer: When counting by 2s, we find that every alternate column is coloured.

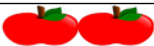
When counting by 5s, the 5th column and 10th column are coloured.

3. Which numbers are shaded twice? Why do you think that happens?

Answer: Numbers ending with 0 are coloured twice. Because the numbers 10, 20, 30... are all even numbers, multiples of 2, and multiples of 5.

Decreasing Pattern of Numbers

Sita has a basket of 32 apples. She gave 2 apples each to 8 children. What number pattern do you observe in the basket of apples?

TOTAL NUMBER OF APPLES IN THE BASKET = 32		
		
CHILD NUMBER	APPLES GIVEN	BALANCE
Child 1		30
Child 2		28
Child 3		26
Child 4		24
Child 5		22
Child 6		20
Child 7		18
Child 8		16

Answer: the number decreases in 2s

32, 30, 28, 26, 24, 22, 20, 18, 16....

Links to the images used in the Asset:

- Group of Kids:** <https://www.maxpixel.net/Ink-Watercolor-Effect-Paint-Blend->

[Watercolour-1768921](#)

2. **Raised Hands:** <https://pixabay.com/en/hands-raised-raised-hands-arms-up-1768845/>
3. **Apple:** <https://pixabay.com/vectors/apple-red-fruit-food-healthy-388761/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Inquisitive Questions	Addition and Subtraction	Pattern of Numbers, Pattern of Numbers

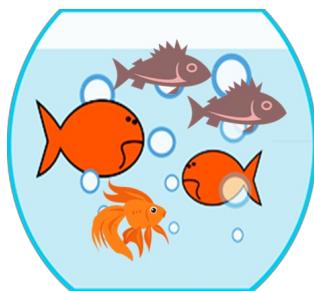
3. MS_Addition and Subtraction Facts

Note: Children must have a prior exposure to and knowledge of various addition strategies, basic addition and subtraction facts.

Anita has 5 goldfish; 3 are orange in colour and 2 are purple in colour.

What are the addition facts you can write about Anita's goldfish?

What are the subtraction facts you can write about Anita's goldfish?



Here are 2 **related facts**.

$$3+2 = 5 \text{ and } 2 + 3 = 5$$

Think about subtraction as the opposite of addition.

$$5 - 3 = 2 \text{ and } 5 - 2 = 3$$

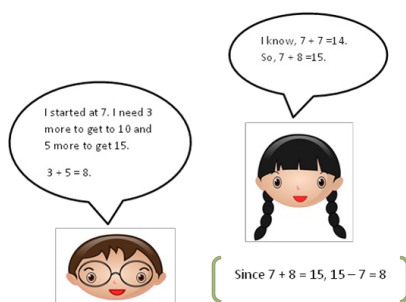
Every subtraction fact has a related addition fact. To subtract, we can think in terms of addition.

On Monday, 15 children signed up for a basketball game. On Tuesday, 7 more children signed up. How many more children signed up on Monday than on Tuesday?

Here, we have to find $15 - 7$.

Think in terms of addition.

$7 + ? = 15$; i.e. What do I add to 7 to get 15?



Links to the images used in the Asset:

- GOLD FISH:** <https://pixabay.com/illustrations/gold-fish-tank-aquarium-gold-5190622/>
- FISH:** <https://pixabay.com/illustrations/clipart-fish-sign-icon-cartoon-3418130/>
- FISH IN TANK:** <https://pixabay.com/vectors/bowl-fish-goldfish-tank-water-sad-161409/>
- KIDS FACES:** <https://openclipart.org/detail/217102/kids-faces/>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	Addition and Subtraction	Addition and Subtraction Facts, Addition and Subtraction Facts

4. SA_ Addition and Subtraction Facts Game

Aim:

To understand 'Addition and Subtraction facts' through a game

Resources Required:

20 blank cards for each group. This game can be played in pairs.

Procedure:

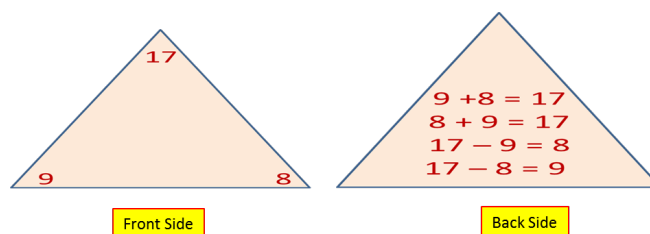
- Choose any 2 numbers between 0 and 9.
- Add them.
- On a card, write the chosen numbers in 2 corners and the total number in one corner.
- Write all the related facts on the other side.
- Continue to build your card collection.

Show and Tell

- Share the cards to play a game. Take turns.
- Player 1 shows the 3 numbers on the front of a card.

- Player 2 tells what facts are on the back of the card.
- Player wins the card when he gives all the correct facts.
- The winner is the one with the maximum cards in the end.

FRONT AND BACK SIDES OF THE CARD



Conclusion: This game helps the students to recollect the 'Addition and Subtraction Facts' learnt in the class.

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Suggested Activity	Addition and Subtraction	Addition and Subtraction Facts, Addition and Subtraction Facts

5. QA_Addition and Subtraction Facts

Content:

1. Write the related facts for each group of numbers.

- a) $5 + 9 = 14$ Answers: $9 + 5 = 14$; $14 - 9 = 5$; $14 - 5 = 9$
- b) $6 + 7 = 13$ Answers: $7 + 6 = 13$; $13 - 6 = 7$; $13 - 7 = 6$
- c) $12 - 4 = 8$ Answers: $12 - 8 = 4$; $4 + 8 = 12$; $8 + 4 = 12$
- d) $14 - 7 = 7$ Answer: $7 + 7 = 14$

2. Write the related addition facts for each subtraction fact.

- a) $15 - 8 = 7$ Answers: $8 + 7 = 15$; $7 + 8 = 15$
- b) $10 - 6 = 4$ Answers: $6 + 4 = 10$; $4 + 6 = 10$
- c) $17 - 8 = 9$ Answers: $8 + 9 = 17$; $9 + 8 = 17$

3. Write all the related facts using each set of numbers.

a) 11, 5, 6 **Answers:** $6 + 5 = 11$; $5 + 6 = 11$; $11 - 6 = 5$; $11 - 5 = 6$

b) 3, 9, 12 **Answers:** $9 + 3 = 12$; $3 + 9 = 12$; $12 - 9 = 3$; $12 - 3 = 9$

c) 11, 4, 7 **Answers:** $7 + 4 = 11$; $4 + 7 = 11$; $11 - 7 = 4$; $11 - 4 = 7$

d) 9, 9, 18 **Answers:** $9 + 9 = 18$; $18 - 9 = 9$

4. Subtract and explain your strategy.

a) $10 - 7 = ?$

Answer: $7 + ? = 10$ I get 10 when I add 3 more to 7, Since $7 + 3 = 10$; then $10 - 7 = 3$

b) $14 - 6 = ?$

Answer: $6 + ? = 14$, I know $6 + 6 = 12$, 12 and 2 more gives 14. Since $6 + 8 = 14$; then $14 - 6 = 8$

c) $15 - 8 = ?$

Answer: $8 + ? = 15$, I need to add 2 more to 8 to get 10. I know 10 and 5 more gives 15. Since $8 + 7 = 15$; then $15 - 8 = 7$

d) $12 - 7 = ?$

Answer $7 + ? = 12$. I get 10 when I add 3 more to 7. 10 and 2 more gives 12.

If $7 + 5 = 12$; then $12 - 7 = 5$.

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Assessments	Addition and Subtraction	Addition and Subtraction Facts, Addition and Subtraction Facts

6. MS_3 Digit Subtraction with Regrouping

Commence the class by writing two 3-digit numbers on the board that will require regrouping when subtracted. Then, review the concept of regrouping and ask students the following questions:

- Why is it necessary to regroup the numbers?
- When do we use regrouping?

Give each student two “number flashcards.” Remind them that **ones** are represented by **dots**, **tens** are represented by **lines**, and **hundreds** are represented by **squares**.

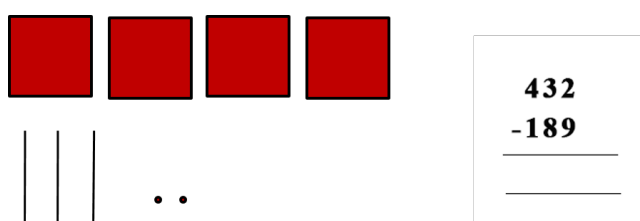
Then show students how to regroup the bigger number by changing a square into 10 lines or a line into 10 dots

Finally, students can compose their graphic design number however they like.

Example:

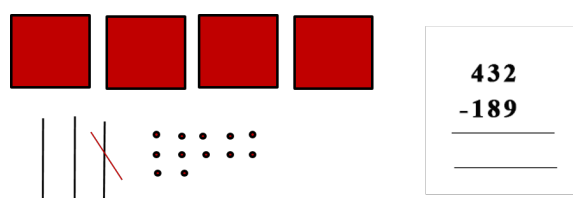
The two number flash cards are 432 and 189

432 can be represented as

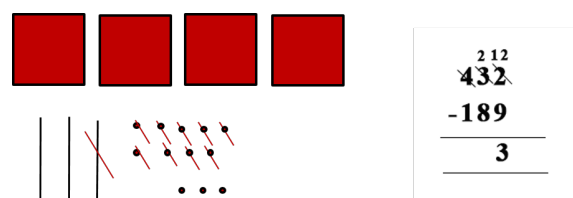


In the one's place, 9 cannot be subtracted from 2

Subtraction in the one's place can be done by changing one line into ten dots.

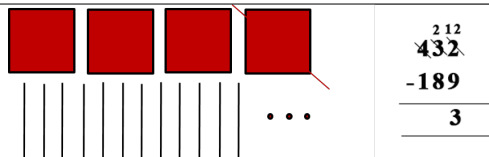


There are 12 dots (ones) now, so 9 can be subtracted from 12.



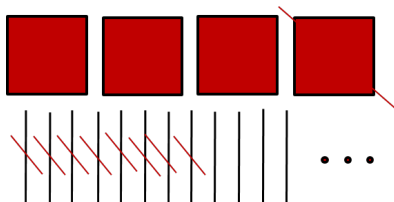
We find that in the tens place, 8 cannot be subtracted from 2.

Subtraction in the ten's place can be done by changing one square into ten lines



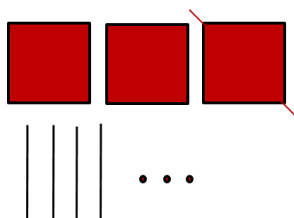
$$\begin{array}{r} 2 \ 12 \\ 432 \\ -189 \\ \hline 3 \end{array}$$

Now there are 12 lines (tens) and 8 can be subtracted from 12.



$$\begin{array}{r} 3 \ 12 \ 12 \\ 432 \\ -189 \\ \hline 43 \end{array}$$

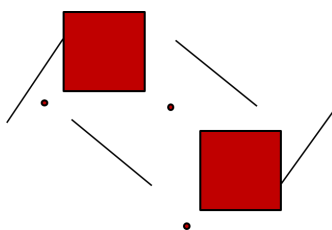
By subtracting 1 square from 3, in the hundred's place we get



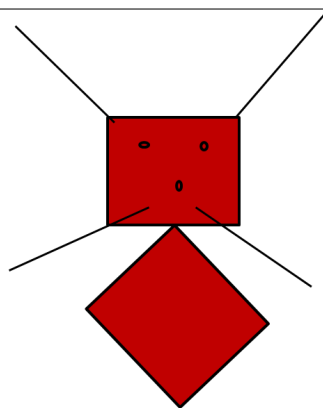
$$\begin{array}{r} 3 \ 12 \ 12 \\ 432 \\ -189 \\ \hline 243 \end{array}$$

The answer is 243

Students can then be asked to make a design of the graphic number (the answer: 243) however they like. The collage can be:



Another collage can be:



Let the students draw the squares, lines, and dots on the worksheet for each step.

Students can write the two numbers and the difference on the back of the worksheet in the standard form.

Give the students three more sums on subtraction regrouping and tell them to repeat the above steps. Encourage the students to design different collage patterns and kindle their creativity.

Details of the images used in the Asset:

Images: OC- Original (using shapes/MS PPT features)

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Main Script	Subtraction	Subtraction with Regrouping, Subtraction with Regrouping

7. SA_ Subtraction with Regrouping Game

Aim:

To learn and understand about 3 digit subtraction with regrouping through an art activity

Resources Required:

- Construction papers cut into thirds – 2 sheets of Orange colour, 1 sheet each of black, purple, and green colour per student.
- It's an individual activity.

Procedure:

- Students choose one of their answers of subtraction by regrouping, to turn into a collage.
- Assign a color to each place value.
- Hundred - Orange
- Tens – Purple
- Ones - Green
- Students are given construction paper cut into thirds.
- Cut the orange piece into half to represent hundred
- Cut the purple piece into ten strips to represent tens
- Cut the ten green strips into ten small squares to represent ones.
- Students paste their items onto black construction paper.

Students create a new collage showing the answer of subtraction regrouping

Hundred Tens Ones

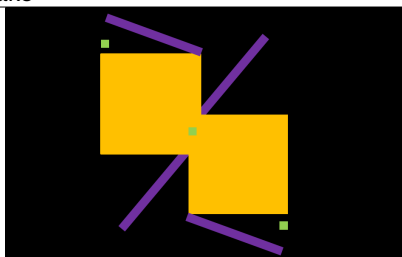


For example: $432 - 189 = 243$

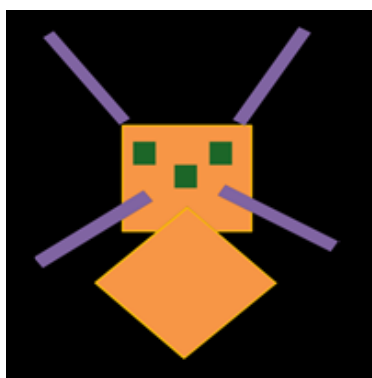
The answer from subtraction regrouping is “243”

It can be represented as

**A COLLAGE**



ANOTHER COLLAGE



Note to the teacher:

The Teacher can give various numbers to different students and encourage them to form different collage patterns and display them in classroom.

Conclusion: Creative learning can be encouraged through activities like this.

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Subtraction	Subtraction with Regrouping, Subtraction with Regrouping

8. MS_Number Lines in Addition and Subtraction

USING NUMBER LINE TO ADD AND SUBTRACT

Notes to teacher:

- Students should have prior knowledge in methods of decomposing numbers.
- Students should be searching for efficient ways of decomposing numbers. For example it is more efficient to decompose 156 into $100 + 50 + 6$, than $10 + 10 + 10 + 10$ etc.
- Students should be able to add within 20 using mental strategies.

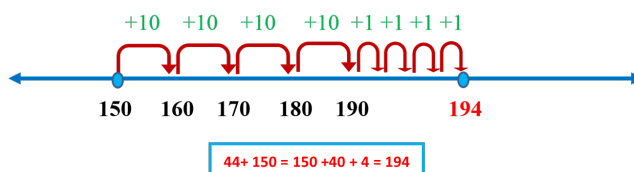
ADDITION STRATEGIES

- Begin by telling the students that you are going to teach them three strategies to solve three-digit addition problems using an **open number line**, and then they are going to play a game to practice it.
- An open number line is a blank number line so that you can add your own numbers, as needed.
- Draw an open number line on the board as a model, and then use it to solve $44 + 150$.

STRATEGY I – LARGER, THEN SMALLER STRATEGY

The first strategy is called **larger, then smaller** strategy because you start with the large addend (***addend is a number which is added to another number***) and then add the smaller number digit by digit. It is easier when you start with the larger addend. Now, explain how to add $44+150$ using the 'larger, then smaller' strategy.

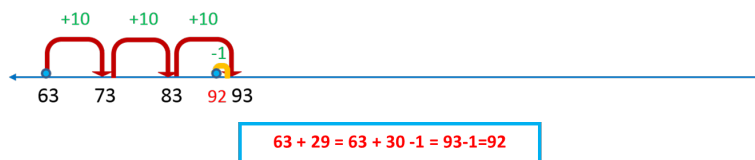
- Put a point on the number line on the left and label it as '150.'
- From the point marked as 150, jump four times to the right on the number line. Mark each jump '+10' above the arc and then label the new total below the number line (190).
- Now add the ones, making four small jumps to the right, labeling each one as '+1' above the arc. Add the sum and write as 194 (the sum) below the number line.



STRATEGY II – COMPENSATION STRATEGY

The second strategy is called **compensation strategy**. Now explain how to add $63+29$ using 'compensation' strategy.

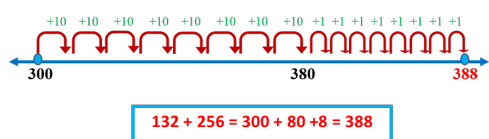
- Write ' $63 + 29$ ' on the board.
- Demonstrate how you temporarily add 1 to 29 and change it to 30 [You can temporarily add any number to a number to make it a round number to remember easily].
- Now add $63+30$. Decompose 30 as $10+10+10$
- Put a point on the number line and label it as '63.'
- Add three tens to 63 ($63 + 10 + 10 + 10 = 93$). It makes the total 93. Then take away the number added temporarily. In this case it is number 1. To take that 1 away, go backwards on the number line by one jump. This makes the sum 92.



STRATEGY III – COMBINATION STRATEGY

The last strategy is called the **combination strategy** because you first decompose the numbers in 100s, then 10s and then 1s. Then you combine the hundreds in both numbers the tens in both numbers and then the ones in both numbers, one at a time. Now explain how to add $132 + 256$ using the 'combination' strategy.

- Decompose 132 as $100+30+2$ and decompose 256 as $200+50+6$
- $132 + 256 = 100+30+2 + 200+50+6$
- Now add 100s first, 10s next and 1s in the end
 - $100 + 200 = 300$
 - $30 + 50 = 80$
 - $2 + 6 = 8$
- In the number line start at 300, then jump forward in 10s till 80 (mark the sum 380 under the number line). Then jump forward 8 times in ones on the line. You should be at 388 now on the number line.



SUBTRACTION STRATEGIES

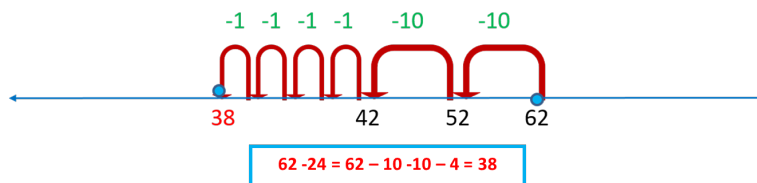
Now, tell the students that you will explain subtraction strategies using an open number line. There are three subtraction strategies.

STRATEGY I - MAKE JUMPS OF 10 AND THEN JUMPS OF 1

Example: $62 - 24 = ?$

- Decompose the number to be subtracted. i.e. $24 = 10+10+4$

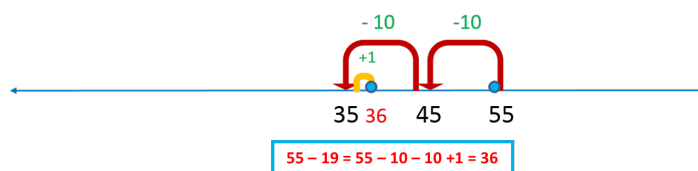
- Start at 62 on the number line, then jump back 2 tens and then 4 ones
- Mark 2 times '-10' and 4 times '-1' and write the 10s and 1s above the arc
- You are at 38 on the number line and write the number 38 below the number line
- $62 - 24 = 62 - 10 - 10 - 4 = 38$



STRATEGY II - SUBTRACT A “FRIENDLY NUMBER” AND THEN COMPENSATE

Example: $55 - 19 = ?$

- Number 19 is close to 20. Therefore 19 is written as $10 + 10 - 1$.
- Now, take away 2 tens and then add 1 back in.
- Start at 55 on the number line, then jump back 2 tens and write the 10s above the arc
- You are at 35 on the number line. Mark 35 below the line
- Give back the 1 added to 19 by jumping once inward from 35.
- You are at number 36 on the number line
- So, $55 - 19 = 55 - 10 - 10 + 1 = 36$

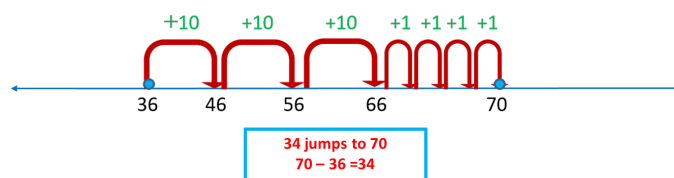


STRATEGY III – ADD TO SUBTRACT

Example: $70 - 36 = ?$

- Start with the number to be subtracted. In this case, it is 36.

- Mark 36 on the number line.
- Make jumps in 10s and 1s till you reach the number 70.
- Count how many jumps you took
- $36 + 10 + 10 + 10 + 4 = 70$
- i.e. 34 jumps to 70
- So $70 - 36 = 34$



Details of the images used in the Asset:

Images: OC- Original (using shapes/MS PPT features)

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Main Script	Strategies of Addition and Subtraction	Number Line, Number Line

9. QA_ Number lines in Addition and Subtraction

1) Look at the number sets given below and decide which addition or subtraction strategy is appropriate to use.

- $22 + 39$
- $134 + 422$
- $654 - 351$
- $368 - 110$
- $945 + 242$

Answer Key:

a) **Compensation Strategy of addition.** Add 1 temporarily to 39 and make it 40. Start with

22 and make four jumps of 10 forward. Jump back once to give back the borrowed 1. The position on the number line gives the total.

b) **Larger then Smaller Strategy of addition.** Start with 422. Make one jump of 100; three jumps of 10; and four jumps of 1. The position on number line gives the total.

c) **Add to subtract Strategy.** Start with 351; Make three jumps of 100 and four jumps of 1. Count how many jumps you took

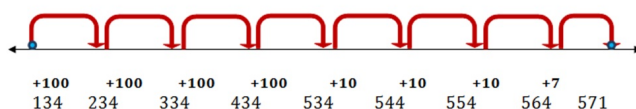
d) Decompose the number to be subtracted; Make one jump of 100 and one jump of 10

e) **Combination Strategy of addition.** Decompose 945 as $900+40+5$ and 242 as $200+40+2$; Add $900+200=1100$; $40+40=80$; $5+2=7$. Start with 1100 and make eight jumps of 10 and seven jumps of 1.

2) Read the following word problem. Then, look at how the 3rd grade student solved the problem. Decide if the student used the number line efficiently. If there is a more efficient way of

using the number line to add, explain how the student could have changed their work on the lines provided.

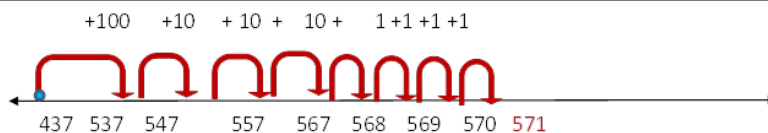
Rani went to the zoo last weekend. She counted 134 different types of birds and 437 types of flowers. How many total types of birds and flowers did Rani count?



Answer Key:

When Rani created the open number line she began by decomposing 437. She solved the problem correctly. However, she did not solve it efficiently.

- If we start with 134, it is not an efficient way of solving, for, we have to decompose a bigger number and will have to do many jumps.
- Instead, start with the bigger number and decompose the smaller number. We will have lesser jumps. The efficient number line will appear as:
- $437+100+10+10+10+4$



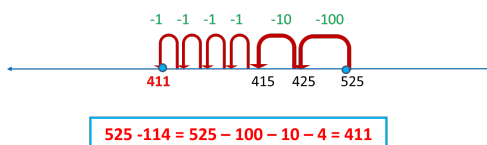
Number lines in Subtraction

Read the following word problem and solve it using a number line.

Ritu had ₹ 525 in her piggy bank. She took ₹ 114 from it to buy notebooks. What would be the balance in her piggy bank after spending ₹ 114?

Answer:

- Decompose the number to be subtracted. i.e. $114 = 100 + 10 + 4$
- Start at 525 on the number line, then jump back one 100, 1 ten and then 4 ones
- You are at 411 on the number line
- $525 - 114 = 411$



Note to the teacher: The teacher can give the following word problems and tell the students to practice the addition and subtraction strategies using number lines.

Exercise:

1. Sabareesh had saved ₹ 320 in his piggy bank. On his Birthday he got a total cash gif of ₹ 197 which he put in his piggy bank box. How much is his savings now?

[Hint: Use compensation Addition Strategy. Start at 320 on the open number line. Add ₹ temporarily to 197. You have 200 now. Make two jumps of 100. You are in $320 + 100 + 100 = 520$. Now return the temporary addition of 3 by making 3 reverse jumps of 1. You are or $520 - 3 = 517$. So, $320 + 197 = 517$]

2. Santu is on a holiday trip with his parents, traveling to his Uncle's home. He travelled 623 kms by flight and then 126 kms by car to reach his Uncle's home. How many kms did Santu travel in total?

[Hint 1: Use Combination Addition Strategy. Decompose 623 and 126 as 600+20+3 and 100+20+6 respectively. Add 100s first: 600+100=700; then 10s: 20+20=40; then 1s: 3+6=9. In the open number line start at 700 and make 4 jumps of 10 and 9 jumps of 1. You are at 749 on the number line. So $623 + 126 = 749$]

[Hint 2: Students can also make 9 ones as 10 by a temporary addition of 1 and make 5 jumps of 10 instead of 4 jumps and a return jump of 1. So, $623 + 126 = 700 + 50 - 1 = 749$]

3. Kamala went shopping. She had ₹ 678 in her purse. She purchased fruits and vegetables for ₹ 497. What would be the balance amount in her purse?

[Hint: Use ‘Subtract a “Friendly Number” and then compensate’ Strategy. Add 3 to 497 and make 497 as 500. Start at 678 and jump in 100s 5 times inwards. You will be at 178. Make 3 reverse jumps. $178 + 3 = 181$. So, the balance in the bag is 181.]

Details of the images used in the Asset:

Images: OC- Original (using shapes/MS PPT features)

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Assessments	Addition and Subtraction	Number Lines, Number Lines

10. MS_Increasing and Decreasing Patterns of Numbers

INCREASING PATTERN OF NUMBERS

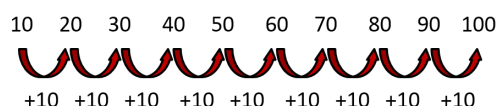
The numbers in the coloured squares form an increasing pattern

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

The numbers in the YELLOW column end in “0.” The numbers in BLUE column end in “5”

THE PATTERN RULE FOR THE YELLOW SQUARES IS:

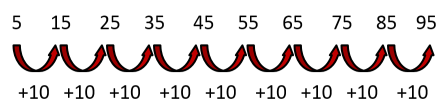
Start at number 10. Add 10 each time.



The pattern makes 1 vertical line. The tens digit increases by 1. The one's digit is always 0.

THE PATTERN RULE FOR THE BLUE SQUARES IS:

Start at number 5. Add 10 each time.



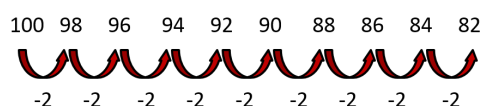
The pattern makes 1 vertical line. The tens digit increases by 1. The one's digit is always 5.

DECREASING PATTERN OF NUMBERS

100	99	98	97	96	95	94	93	92	91
90	89	88	87	86	85	84	83	82	81
80	79	78	77	76	75	74	73	72	71
70	69	68	67	66	65	64	63	62	61
60	59	58	57	56	55	54	53	52	51
50	49	48	47	46	45	44	43	42	41
40	39	38	37	36	35	34	33	32	31
30	29	28	27	26	25	24	23	22	21
20	19	18	17	16	15	14	13	12	11
10	9	8	7	6	5	4	3	2	1

THE PATTERN RULE FOR THE GREEN SQUARES IS:

Start at number 100. Count back by 2s each time.



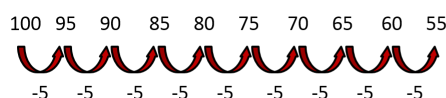
The ones digit follows the pattern: 8,6,4,2,0,8,6,4,2,0.

The tens digit follows the pattern: 9,9,9,9,8,8,8,8,7,7,7,7,...

100	99	98	97	96	95	94	93	92	91
90	89	88	87	86	85	84	83	82	81
80	79	78	77	76	75	74	73	72	71
70	69	68	67	66	65	64	63	62	61
60	59	58	57	56	55	54	53	52	51
50	49	48	47	46	45	44	43	42	41
40	39	38	37	36	35	34	33	32	31
30	29	28	27	26	25	24	23	22	21
20	19	18	17	16	15	14	13	12	11
10	9	8	7	6	5	4	3	2	1

THE PATTERN RULE FOR THE **ORANGE SQUARES** IS:

Start at number 100. Count back by 5s each time.



The ones digit follows the pattern: 0, 5, 0, 5, 0, 5 . . .

The tens digit follows the pattern: 9, 9, 8, 8, 7, 7 ...

Note to the teacher: Encourage the students to identify such patterns in the numbers.

Details of the images used in the Asset:

Images: OC- Original (using shapes/MS PPT features)

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Addition and Subtraction	Pattern of Numbers, Pattern of Numbers

11. QA_ Increasing and Decreasing Pattern of Numbers

- The following 1-100 Number Table reveals some patterns. Rohan has identified a pattern and coloured it. Which numbers would you shade to extend the pattern?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Answer: 45, 56, 67, 78, 89, 100

2. Sita is counting her coins. She says, “25, 30, 35, 40, 45, and 50. I have 50 rupees!”

(a) Describe the pattern using the numbers. (b) What denomination of coins do you think she has? Explain.

Answer: (a) 25, 30, 35, 40, 45, 50, 55, 60----

(b) Sita has 5 rupee coins.

3. Sarita made a chart that shows the total number of blocks in each level of her tower.

Level	Total number of blocks
1	18
2	22
3	26

(a) What could be the total number of blocks in Level 6? (b) How do you know?

Answer: (a) Total number of blocks in Level 6 is 38.

(b) The number pattern is increasing by 4 s. 18, 22, 26, 30, 34, 38----

4. Complete the pattern:

125, 150, 175, 200, -----, 250, -----, -----

Answer: 125, 150, 175, 200, 225, 250, 275, 300.

5. Elise wrote this number pattern: 98, 96, 94, 92, 88, 86. Is she missing any numbers? How do you know?

Answer: The missing number is 90. The pattern starts at 98 and counts back by 2s each time. The pattern is 98, 96, 94, 92, 90, 88, 86-----

6. You write this pattern: 74, 72, 70, 68, . . . Will you write 47 as the next number? How do you know? What is the pattern?

Answer: No, we will not write 47. The pattern starts at 74 and counts back by 2s each time. The pattern decreases by 2s each time and all the numbers in the pattern are even numbers. 47 is an odd number. So we cannot write 47. The pattern will be 74, 72, 70, 68, 66, 64, 62, 60, 58, 56, 54, 52, 50, 48, 46---

7. The coloured squares in the following 1-100 Number Table reveals a decreasing pattern.

100	99	98	97	96	95	94	93	92	91
90	89	88	87	86	85	84	83	82	81
80	79	78	77	76	75	74	73	72	71
70	69	68	67	66	65	64	63	62	61
60	59	58	57	56	55	54	53	52	51
50	49	48	47	46	45	44	43	42	41
40	39	38	37	36	35	34	33	32	31
30	29	28	27	26	25	24	23	22	21
20	19	18	17	16	15	14	13	12	11
10	9	8	7	6	5	4	3	2	1

a) What is the pattern rule?

Answer: The pattern starts at 45 and decreases by 4s.

b) Will the number 18 be in this pattern? How do you know?

Answer: 18 will not be a part of the pattern. The pattern has only odd numbers while 18 is an even number.

c) Extend the pattern and identify the numbers.

Answer: The pattern is 45, 41, 37, 33, 29, 25, 21, 17-----

8. Complete the pattern:

a) 280, 260, 240, -----, -----, -----, -----, -----

b) 300, 250, 200, -----, -----, -----, -----, -----

Answer: a) 280, 260, 240, **220, 200, 180, 160, 140**

b) 300, 250, 200, **150, 100, 50, 0**

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Assessments	Addition and Subtraction	Pattern of Numbers, Pattern of Numbers

12. DD_Subtraction in Day to Day Activities

Why is Subtraction important in our lives?

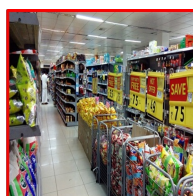
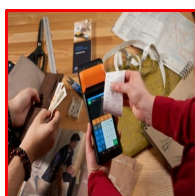
Subtraction is to take a number or an amount away from another number or another amount respectively. Look at a table with four legs. When one leg breaks, that table will be of no use. This is what subtraction is to mathematics, a strong leg that we cannot do without.



We can relate to Subtraction in many of our day to day activities. For example,

Shopping

When we go shopping, we apply subtraction principles to calculate how much money we must pay and how much we should receive while making payment for goods purchased.



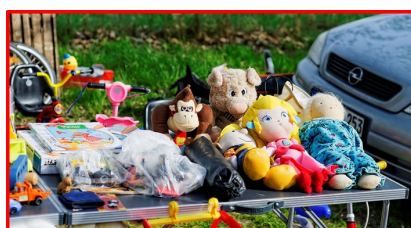
Teamwork

In a game, sometimes you add players; sometimes you take players off the field. The composition of the team changes when players are taken off, that is subtraction.



Clutter

Do you know what clutter is? It's all those tiny little things you collect and store. If you leave it over a period of time you will have a lot of junk that needs to be thrown out. Instead of collecting you need to subtract (throw away) from your closets all the clutter that you have collected over time. That is subtraction.



Brainstorming

Have you ever done brainstorming? In brainstorming, two or more people get together and put all their ideas on a paper. Then they pick out the one idea that is the best. The other ideas can be kept aside for later use. But at that moment you are subtracting the ideas that are not relevant for the moment and use the appropriate idea.



Cleaning the garden

If you have a garden you need to maintain it and keep it neat and tidy. So you have to regularly take out the weeds that have grown in the garden. When you take out the weeds you are subtracting.



Thus we apply subtraction principles in many of our day to day activities.

Links to the images used in the Asset:

1. **BROKEN TABLE:** <https://pxhere.com/en/photo/498859>
2. **SHOPPING:** <https://pixabay.com/illustrations/grocery-shopping-grocery-cart-4035413/>
3. **SUPER MARKET:** <https://pixabay.com/en/supermarket-shopping-sales-store-435452/>
4. **CHECKOUT COUNTER:** <https://pixabay.com/photos/checkout-eet-electronic-records-4762566/>
5. **CHILDREN IN FOOTBALL GROUND:** <https://pixabay.com/sv/photos/barn-fotboll-attacken-f%C3%B6rsvar-2440234/>

6. **BOYS & FOOTBALL GAME:** <https://pixabay.com/nl/photos/voetbal-jongen-speler-spelers-2853609/>
7. **BALL GAME:** <https://pixabay.com/photos/competition-ball-game-squad-3314734/>
8. **JUNK:** <https://www.maxpixel.net/Browse-Junk-Clutter-Flea-Market-Box-Antiquariat-2552658>
9. **BRAINSTORMING:** <https://pixabay.com/illustrations/meeting-business-brainstorming-1453895/>
10. **BRAINSTORM IDEAS:** <https://pixabay.com/en/brainstorm-ideas-notes-pen-1076587/>
11. **GARDEN SWEEP:** <https://pixabay.com/en/sweep-clean-garden-gardening-221399/>
12. **AUTUMN LEAF:** <https://pixabay.com/en/raking-fall-autumn-rake-leaf-2756006/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Day-to-day Relevance	Subtraction	Subtraction with Regrouping, Subtraction with Regrouping

13. VC_Share good things with others

Share good things with others

Children! Give & Take teaches us to share things with others. In fact, sharing is joyful. It gives us happiness and satisfaction.

One day, a coach asked a boy. “Mike, I saw you eating chocolates secretly, why did you do that?”

Mike said, because, everyone would want a piece and I would have less.

Before we talk about the chocolates that Mike did not want to share - Listen to this story.

In Tamil Nadu, there lived a poet saint. He wrote beautiful hymns in praise of God. Every day, he sang on the terrace of his house in front of God’s image.

One day, when he was walking through a village, he was caught in a storm. But he managed to find a place where he could take shelter. That place was enough for him to lie down. After a while another man came running.

The saint said, “Come in, there is enough place such that 1 can lie down and 2 can sit. If you

come, we can sit.”

A bit later, a third man came asking for shelter.

The saint said, “There is enough place such that 2 of us can sit and 3 can stand. But don’t worry. If you join us, all of us can stand.”

So, the three of them stood till the storm stopped and all were safe.

You should develop an attitude of sharing good things that are given to you. This should be out of love and without minding personal inconveniences.

Note to teacher: The teacher can ask the students- Children, after listening to this story, do you agree that Mike should have shared his chocolate? (there will be a smart one who will say: but chocolates do not multiply, so how do we share?, when this Question arises, please speak about the joy of sharing) more smiles on more faces!

Video link:

Share good things with others. Uncle Lion’s tales—Radio Sai

<https://www.youtube.com/watch?v=CfxWOvP1xks>

Time to teach	Value Type	Value Sub Type	Value Attribute
5 Minutes	Love	Sharing	Stories

14. IA_Do you know the benefits of Give and Take?

The teacher can share the following interesting facts with the students:

Give and Take –Mutual Benefits

- Nature demonstrates the mutual benefit of the “Give and Take” relationship in many ways.

Plant roots give carbohydrates to the fungi.

The fungi give phosphate and nitrogen compounds to the plant.

This give and take sustains both the plant and the fungi.

This can be called “Biological Barter.”



- Birds eat the insects stuck to animal skins thus helping the animals clean their skins

Birds get food from animals.

Animals get a free cleaning in return.

This give and take benefits both the birds and the animals.



- When a fruit bat eats the fruit from a fig tree/guava tree or other plants and trees, it eats the seeds also. The seeds are dispersed through its droppings.

Trees and plants provide food to bats.

Bats help in dispersal of seeds.

This give and take sustains both the fruit bats and the trees and plants.



- Humans and many living organisms are interdependent on each other for healthy co-existence. This is called Symbiosis.

Humans feed and give a protective shelter to their pets.

The pets in turn give love and joy to humans.

This give and take benefits both the pets and the humans.



- Symbiosis is the interaction between two different organisms, like bird and animal, bird and human, human and animal, animal and animal etc. in helping each other for mutual benefit.

Note to the teacher:

The teacher should encourage the students to read and learn about different types of symbiosis to understand how symbioses brings balance in the ecosystems around us.

Links to the images used in the Asset:

1. **WILD MUSHROOM FUNGI:** <https://pixabay.com/photos/wild-mushroom-fungi-mushrooms-4564934/>
2. **FUNGI-PLANT:** <https://pixabay.com/photos/fungi-plant-nature-flora-fungus-1385920>
3. **OXPECKER:** <https://pixabay.com/photos/oxpecker-bird-watching-giraffe-4476988/>
4. **COW AND BIRDS:** <https://pixabay.com/photos/cow-beach-visitor-birds-india-go-827200>
5. **FRUIT BATS:** <https://pixabay.com/photos/fruit-bats-bats-megabats-chiroptera-5586143/>
6. **BABY AND DOG:** <https://pixabay.com/photos/baby-dog-animal-cute-pet-puppies-3858285/>
7. **SQUIRREL, BIRD AND CHILD:** <https://pixabay.com/illustrations/squirrel-bird-child-curiosity-cute-5842032/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Interesting Asides	Exchange	Benefits of Exchange, Benefits of Exchange

15. MS_Summary_Fun with Give and Take

In this lesson the following were discussed:

- Facts about Addition and Subtraction
- 3 Digit Subtraction with Regrouping
- Number lines in Addition and Subtraction
- How to identify increasing pattern of numbers?
- How to identify decreasing pattern of numbers?
- How to create a collage with numbers?

- Addition and Subtraction strategies
- Joy in sharing good things with others
- Mutual Benefits of Give and Take
- Application of addition and subtraction principles

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	Addition and Subtraction	

Master Lesson Plan

Seven Asset Methodology for MLP

What is the purpose of this Master lesson Plan?	This Master Lesson Plan (MLP) prepared by Sri Sathya Sai Vidya Vahini (SSSVV), covers the entire chapter for the given board. The MLP for the chapter given in the textbook is broken down into smaller modules known as assets. Any chapter can be taught using the 7 asset types in SSSVV methodology. Several different assets together complete the entire chapter. Depending on the requirement, each asset is supported by teaching aids such as animated presentation, audio, video, and learning aids such as worksheets. The MLP is for the teacher's preparation and the teaching aids are for use in the classroom.
How to use it?	You can prepare for your class with this MLP by following 3 simple steps: 1. Read your textbook; 2. Go through the information given in the assets (document & multimedia); 3. Prepare your teaching notes. Great! Now you are ready to transact the chapter.
Duration	Kindly note the duration given for each asset. Due care has been taken in planning the assets, to ensure the chapter is completed within the time specified by the Board. Note: Preparation time is not included in the asset duration. The teaching time depends on the duration of the teaching aids and is not impacted by the length of the MLP.
What is a 'Main Script' (MS) Asset?	The Main Script asset is there for explaining the main concepts of the chapter clearly. The information given in the textbook is simplified, organised and structured to give more clarity. Additionally, you may find a video or mnemonics or a graphic organiser to deepen the understanding of the concept.
How to teach using the MS asset?	Please use the blackboard, slides and interaction to develop the concept.
What is an 'Inquisitive Questions' (IQ) asset?	The Inquisitive Questions asset uses questions to promote higher order thinking like the n^{th} why, what-if, new perspectives, cause-effect, and others, creating curiosity.
How to teach using the IQ asset?	You may use the questions to connect with the students, encourage exploration to engage them in the learning process. You may allow multiple responses and instead of rejecting any of the responses, ask why, before revealing the suggested answer or hints.
What is a 'Day to day Relevance' (DD) Asset?	The Day to Day Relevance asset helps students understand the practical relevance of every topic, making them eager participants in the classroom. If students connect the concepts to their environment, they would learn meaningfully without dislike or simply memorizing for exams.

How to teach using the DD asset?	You may use the asset by asking questions about their experience and use it to establish why they are learning the topic. If necessary you may substitute with a recent or local example.
What is an 'Interesting Aside' (IA) asset?	The Interesting Aside asset uses attention grabbing titbits or anecdotes to bring joy and satisfy the child's hunger to know more. This is a quick/short asset intended to bring attention back to the main concept being taught.
How to teach using the IA asset?	You may use this asset to give a piece of interesting information relevant to the topic, without prolonged explanation/discussion. You may suggest appropriate books for further reading.
What is a 'Suggested Activity' (SA) Asset?	The Suggested Activity asset provides a detailed step by step procedure for the teacher to conduct a hands-on activity. This promotes Activity Based Learning.
How to teach using the SA asset?	You may use this asset to energise your students to learn by doing simple, fun-filled activities based on the topic. The asset includes - preparation, activity, and follow-up. You may engage the students in the preparation and follow-up stages to develop collaboration and responsibility. You could try it once, yourself, before the actual delivery to be more comfortable with it. Note: The duration mentioned in the asset is usually for the activity part only.
What is a 'Value Content' (VC) Asset?	The Value Content asset integrates Universal Human Values (such as empathy, inclusivity, respect for nature that translates into responsible behaviour) seamlessly into the curriculum, as the "End of education is character".
How to teach using the VC asset?	You may use this asset to engage with the students to bring out their innate values and connect with the intrinsic values in the topic/concept. The asset includes pointers on the specific pedagogical technique followed.
What is a 'Questions to Assess' (QA) asset?	The Questions to Assess asset uses an interactive approach to check learning of different types of learners, and provides feedback to the teacher for appropriate action. The questions cater to all the levels of Bloom's Taxonomy. Questions from 'Apply' level and above enable students to reflect on their learning.
How to teach using the QA asset?	You may go through the slides to understand its flow and know when to click for the answer (slides include suggested answers). While presenting in the class, you may display the question and encourage multiple responses, before revealing the answer. In some cases, this asset may include extra questions/worksheet that can be given as homework.