

SUBJECT : MATHEMATICS

CLASS : VI

TOPIC : ALGEBRA

Pre-Content/Content/Post-Content	Learning Outcomes/Objectives	
	General	Specific
<u>PRE-CONTENT</u> • Introduction to Algebra and its importance	Students will be able to ✓ co-relate and find the use of variables	Students will be able to ✓ use letters and symbols in algebra
<u>CONTENT</u> • Patterns • Variables and Constants • Algebraic Expressions • Simple equations	✓ identify patterns ✓ understand variables and constants ✓ generalize algebraic expressions ✓ understand simple equations and their solution	✓ identify the patterns and write the rule that follows the pattern ✓ differentiate between variables and constants ✓ create algebraic expressions for different situations using different Mathematical operations ✓ create and calculate value of an equation using hit and trial method ✓ find a unique solution using transpose method and also check the solution
<u>POST-CONTENT</u> • Application of simple equations	✓ apply algebra in real life situations and solve the equation	✓ simplify, solve the problems and develop problem solving ability and solve real life problems

Home Work /Assignments:

1. NCERT exercise/solved examples given as home task.
2. Extra practice questions.

MONTH : NOVEMBER'20
TIME : POST-MID TERM

Teacher's Activity	Student's Activity	Teacher's Observation and Remedial
Teacher will demonstrate the use of variables. show how to write algebraic expressions following the patterns. explain and differentiate between variables and constants. takes up examples to form various algebraic expressions. discuss different methods with examples to find solution of a simple equation and conduct the activity on it. (Annexure-11) give problems on simplification and application based problems.	Students will learn the use and importance of variables. follow the rules and write algebraic expressions. compare and understand the difference. make algebraic expressions on their own. apply the methods to find solution of a given simple equation and perform the activity as per the instructions given, to find solution of an algebraic expression and write their observations. (Annexure-11) simplify and solve application based problems.	Teacher will write his/her observations after the completion of the topic.

Teaching Aids: Smart board, ICR, Paper tiles.

Methodology/Innovative Methods: Discussion, Brain storming, Activity oriented.

Interdisciplinary Links: Linked with Art, Real life.

H.O.D.

Coordinator

Vice-Principal

Principal

Annexure-11

Subject	MATHEMATICS
Class	VI
Chapter/Unit	Algebra
Topic	Solution of an Algebraic Expression
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning outcome)?

To evaluate algebraic expression.

Skills:- Psychomotor Coordination, Critical Thinking, Problem Solving, Representing, Evaluating

What I have to do?

To evaluate algebraic expression by activity method.

What do I require?

Thick coloured papers, cardboard and adhesive.

What do I need to know?

Concept of Variables, Constants and Basic mathematical operations.

➤ **Teacher's Activity**

Teacher will enable the students to recall the concept of variables, constants, basic mathematical operations and will explain the steps of the activity.

How will I proceed?➤ **Student's Activity**

- Let us solve an algebraic expression as $2x + 3$ when $x = 3$, where x is a variable and 2, 3 are constants.
- Take a cardboard and paste any thick coloured paper on it, say green.
- Now, make green rectangular tiles of any convenient size and denote it by a variable (x) as shown in Fig.1.



Fig.1

- Similarly, make same sized square tiles of other two different colours, say red and blue.
- Denote red square tile with (-1) and blue square tile with $(+1)$ as shown in Fig.2.

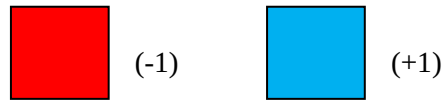


Fig.2

- Now, to represent $2x + 3$, arrange the tiles as shown in Fig.3.



Fig.3

- Then, to solve $2x + 3$ when $x = 3$, replace each x with the value of 3 i.e., replace each green rectangular tile by three blue square tiles as shown in Fig.4.

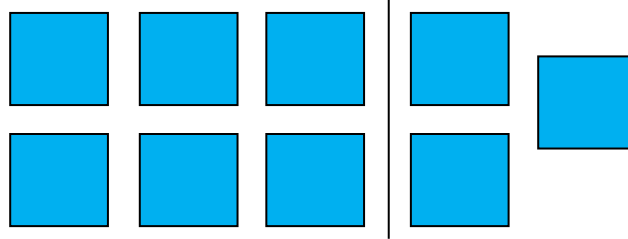


Fig.4

- Now, combine the remaining blue square tiles as shown in Fig.5.

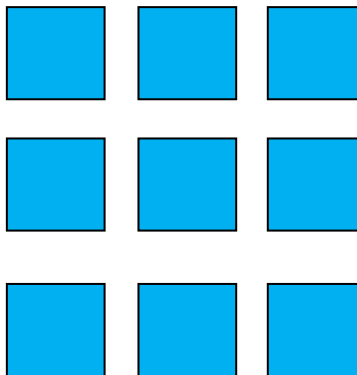


Fig.5

What have I observed?

The value of an algebraic expression $2x + 3$ when $x = 3$ is _____.

What have I learnt?

To evaluate _____.

What am I curious to know?

Solve an algebraic expression $3x + 4$ when $x = -2$ using tiles.

Let me evaluate myself

1. Complete the entries in the third column of the table:

S. No.	Expression	Value of variable	Solution of an expression	Expression satisfied: Yes/No
1.	$x + 1$	$x = 9$	10	
2.	$10y$	$y = 6$	60	
3.	$2z + 4$	$z = 7$	19	
4.	$p - 8$	$p = 8$	-8	
5.	$m + 11$	$m = 3$	15	
6.	$5x - 7$	$x = 0$	-7	
7.	$r + 9$	$r = 2$	11	
8.	$3z - 1$	$z = 1$	2	
9.	$4q$	$q = -2$	8	
10.	$10y + 10$	$y = 3$	40	

2. Complete the table:

(a)

p	6	7	8	9	10
$4p + 7$					

(b)

m	1	2	3	4	5
$7m - 1$					