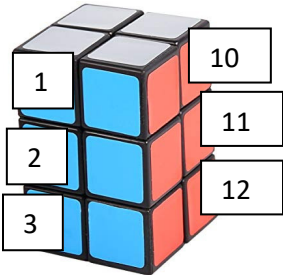


Lesson Plan/ Learning Plan	
Topic- Volume	Grade: V
Concept (If Applicable)	Volume
<u>Mapping of skills/competencies/attitudes :</u> <i>(Skills/competencies/attitudes that a teacher plans to develop through the learning engagements)</i>	Skills: Self Management skills, Thinking skills Attitude: Creativity, Cooperation Competencies: Creativity, Critical thinking
Lesson Plan Duration : <i>(flexible based on the requirements of the topic)</i>	4 days
Learning Engagements for Active Learning: <i>(examples : KWL chart, Brainstorming, Bundling, Pair-share, Role-play, PPTs, Audio-Video ,live objects from the classroom, Reflections)</i>	Something from home, 3 D model
Questioning Technique/s to be Used : <i>(Probing/Comprehension/Simple/Multiple choice, open-close ended)</i>	Pose, Pause, Pounce and Bounce, Probing questions
Learning objectives: By the end of the topic, the learners will be able to: • calculate the volume of the given geometrical figures using four basic mathematical operations. • compare the volume of given figures • innovate and design an aquarium diorama.	
Annexure 1 (Kolb's Model)	
Connecting to Prior knowledge <i>(How do you check what learners already know?)</i>	The learners are aware that length (L) is the measurement or extent of something from end to end and breadth (B) is the distance from side to side. Some figures/objects like pencil box, notebook, table etc. can be shown to mark length and breadth.
Resources Required:	Bottle, jug, cup, glass, A4sheet, cardboard, Colors, Glue stick, plastic aquatic animals etc.
Implementation of lesson plan - Stage 1	
	(Learning engagement 1) LE: Something from home

	Facilitator will bring Bottle, jug, cup, glass etc from her home. She will tell the students to fill water in all of them till the water starts flowing out. Once the water start flowing she will ask students “ Why did the water started flowing out of the containers ” Students will come up with an answer that there is no more space in the container. Container is already full. Facilitator will than tell the students that the space enclosed by a closed surface is called as Volume.  Day 1: (Learning engagement 2) Facilitator will show a 2 x 3 tower cube having length as 2 units breadth as 2 units and height as 3 units to her students. Now she separates the cube and show there are 12 cubes .i.e volume of cuboid is 12 cu units, So, the formula for volume of cuboid=$2 \times 2 \times 3 = L \times B \times H$ 
Proceeding further <i>(What strategies will be used in the class to achieve the lesson objectives?)</i>	Day 1: (Learning engagement 3) After the activity Facilitator give few points to be remembered as: • Volume is an amount of space that is contained within an object or solid shape. • Bigger the size of container more the volume of water it can hold.

	• The unit of Volume is cu .m/cu. Cm • A cuboid is a 3D shape having L, B, and H. • Cuboids are made from 6 rectangles, which are placed at right angles. • Volume of Cuboid =L X B X H • A cube is cube is a three-dimensional solid object bounded by six square faces each having side ,S • Volume of Cube =S X S X S
Learning Logs <i>(How learners keep a track of what they are learning, includes reflections)</i>	Day 2: (Learning engagement 1) Guided practice Students will do the spiral work with help from facilitator (Pg. 74 Q1,2,3,4)
Lesson Plan : Stage 2	
Formatives/Unit test <i>(How will the facilitator check for comprehension?)</i> <u>*Integration of Arts/ICT</u> <i>(leads to creation, generates interest, builds curiosity, emotional connect through performing Arts leading to AHAA moment!)</i>	<u>Day 2: Students-generated Test Questions.</u> Learners will be asked to develop a small test questions / sums (2-3) from the concepts they have understood. Facilitator will collect and randomly distribute all the test papers. Anyone can get anyone's test paper. Learners will solve the test questions and return it to the child whose name is written on it. The child who has set the test questions will check the answers. The facilitator will finally cross check all the test sheets. <u>Creativity- Generates ideas</u> <u>Critical thinking- Make judgments and decisions.</u> • Students use wide range of ideas to create a questionnaire • Effectively interprets information and solve the questions using all 4 basic operations. OR LE: Bingo 1) Facilitator will give each child a Bingo card or a cardboard card having few numbers written on it.

	2) Teacher will speak various combinations of length and breadth and height and will ask the students to find the volume and cut the number if they have in their bingo card. 3) Teacher also poses higher order question where volume is given and one side is missing. 4) Students whose all numbers are cut first says “Bingo” and he/ she wins the game. <table><tr><td>25</td><td></td><td>30</td><td></td><td>76</td></tr><tr><td></td><td>45</td><td></td><td>90</td><td></td></tr><tr><td>28</td><td></td><td>55</td><td></td><td>86</td></tr><tr><td></td><td>12</td><td></td><td>8</td><td></td></tr></table>	25		30		76		45		90		28		55		86		12		8	
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Teacher Interventions (Addressing the concerns and issues faced during the transactions)	Day 2: Students at time mix the concept of Volume, area and perimeter and land up finding perimeter or area at place of volume. So, the facilitator tries to give more examples which help the students to understand the concept of area and perimeter properly																				
Extending the Lesson Further (Creating through Active experimentation)	Day 3: Facilitator will give some objects like Ice-cubes, dice, Rubik cube etc and ask the students to find their volume. Pose, Pause, Pounce and Bounce 1) Pose- Facilitator will pose a higher order questions like the volume of figure is given along with the length, breadth or height. Students will find one of the missing sides. Or Find the volume of the structure when area of the base along with height is given. 2) Pause- Facilitator gives thinking time to all the students 3) Pounce- Facilitator selects who will provide the answer 4) Bounce-Facilitator ‘bounces’ the answer from student to student. Case study: Students will also be given a case study of designing a model of a swimming pool for their school where the total area of land available is 1250 sq mtrs. Students will work on following pointers: The depth of the pool required for ECE students as well as seniors.																				

	• Volume of the water needed to fill the pool. • Need for one pool or separate pool for juniors and seniors • The boundary of the pavement around the swimming pool etc. • The material available for making pool • Cost of the material etc. It will be an extensive project and will check students' knowledge on various topics covered in class V. Activity would be conducted in group and students will be given a time of 1 week to research and submit their report in a period of 1 week
Summative Assessment (<i>How will the facilitator check that learning objectives have been achieved?</i>)	
Day 4: LE:3 D model Create an Aquarium Diorama with the given volume. • Facilitator will divide the class in-group of 7 students. • Each group will receive an envelop with the following instructions: (Volume of the diorama should be 4500 cu cm, The base color of the diorama should be blue, Diorama can include some artificial fishes, plants etc.) Critical Thinking (Use System Thinking, make judgment and decisions) • Effectively use the information provided to them(volume of diorama as 4500 Cu Cm) • Recognizes and manipulates parts of systems to come together to make a beautiful diorama	