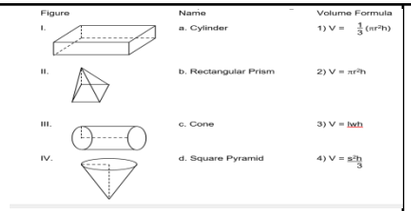
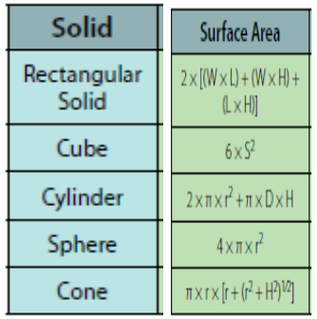
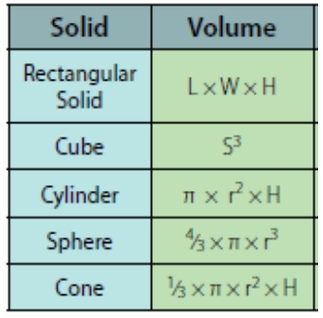
GRADES 1 to 12 DAILY LESSON LOG	School:		Grade Level:	VI
	Teacher:		Learning Area:	MATHEMATICS
	Teaching Dates and Time:	WEEK 3	Quarter:	4TH QUARTER

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I. OBJECTIVES	The learner…….				
A. Content Standard	demonstrates understanding of volume of solid figures and meter reading.				
B. Performance Standard	is able to apply knowledge of volume of solid figures and meter reading in mathematical problems and real-life situations.				
C. Learning Competencies / Objectives	solves routine and non-routine problems involving volumes of cylinder, cone and sphere M6ME-IVc-98	solves routine and non-routine problems involving volumes of pyramid, cubes and prisms. M6ME-IVc-98	creates problems involving surface area of solid/space figures, with reasonable answers. M6ME-IVc-99	creates problems involving volume of solid/space figures, with reasonable answers. M6ME-IVc-99	Get at least 80% mastery from the lessons learned.
Measurement	Measurement	Measurement	Measurement	Measurement	**Weekly Test**
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide pages	21ST Century Mathletes	21ST Century Mathletes	21ST Century Mathletes	21ST Century Mathletes,	
2. Learner's Materials pages	21st Century Mathletes 6	21st Century Mathletes 6,	21st Century Mathletes 6	21st Century Mathletes 6	
3. Textbook pages	21st Century Mathletes 6	21st Century Mathletes 6	21st Century Mathletes 6	21st Century Mathletes 6	
4. Additional Materials from Learning Resource (LR) Portal	Math 6 DLP Mod. 59	Math 6 DLP Mod. 59	Math 6 DLP Mod. 59	Math 6 DLP Mod. 59	
B. Other Learning Resources	Mathletes 6 textbook, power point presentation	Mathletes 6 textbook, power point presentation	Mathletes 6 textbook, power point presentation	Mathletes 6 textbook, power point presentation	
IV. PROCEDURES					
A.Reviewing previous lesson or presenting the new lesson	Mental Computation Drill: Multiplying Fractions and Whole Numbers: ¼ x 8 x 10 ¾ x ½ x 5 75 x 8 50 x 7 1/5 x 6 Review: Match the formula to the name and picture of the solid figure.	Drill: Have a drill on the multiplication of fractions and whole numbers using the activity sheet. Example: $\frac{1}{3} \times 6 \times 8 \quad 40 \times 6$ $\frac{1}{3} \times 7 \times 9 \quad 51 \times 7$ $\frac{1}{3} \times 21 \times 4$ Review: A. Solve the ff. problems: 1.The milk can is in the shape of a cylinder. It has a radius of 3 cm. and a height of 6 cm. Find its volume. 2.The toy hat of Alex is in the shape of a cone. Its base area is 72 cm^2 and its height is 21 cm. What is its volume?	Activity (Group Work) Mechanics: 1)Divide the class into 3 groups. 2)Group 1 will be given name of solid figure. 3)Group 2 will be given the formula on how to get the surface area of the solid figure. 4)Pupils holding the activity cards will stand, raise the activity cards they are holding and go around to look for their partners while singing the song, "Math Song." Mathematics (2x), how it thrills (2x) It is so exciting, and so interesting I love Math (2x) Mathematics (2x), Challenging (2x)	Activity (Group Work) Mechanics: 1)Divide the class into 3 groups. 2)Group 1 will be given name of solid figure. 3)Group 2 will be given the formula on how to get the volume of solid figure. 4)Pupils holding the activity cards will stand, raise the activity cards they are holding and go around to look for their partners while singing the song, "Math Song." Mathematics (2x), how it thrills (2x) It is so exciting, and so interesting I love Math (2x) Mathematics (2x), Challenging (2x)	

		3. a sphere has a radius of 45cm. what is its volume? B. What is the formula in getting the volume of cube? Rectangular prism? Pyramid?	Numbers are ideas, numerals are symbols Math, Math, Math (2x) 5)As soon as they find their partners, they read together what is written on their activity cards. 6)The first to find their partners will be the winner.  Review: Analyze then solve the problems. 1.A box is 10 cm long, 12 cm wide and 20 cm high. Find its volume? 2. A pyramid has a square base of side 20 cm and a height of 15 cm. Find the volumeof the pyramid. 3. The height of a cube is 7 decimeter. Find the volume of the cube.	Numbers are ideas, numerals are symbols Math, Math, Math (2x) 5)As soon as they find their partners, they read together what is written on their activity cards. 6)The first to find their partners will be the winner.  Review: Create problems involving surface area based on the given situation below. 1. the length of a box is 3 dm, the width is 6 dm, and the height is 5.2 dm 2. The side of a cube measures 12 dm. 3. The radius of a spherical tank is 2.5 m. 4. a cylindrical tank of radius 8 dm and a height of 15 dm	
B.Establishing a purpose for the lesson	Give each group a set of steps in solving problems. Let them arrange the steps in correct order. (This can be done in the form of a game.) Ex.: What operation is needed to solve the problem? What are the given facts? What is the correct number sentence? Write the solution with correct label. What is being asked?	Group the pupils into four. Let them write the 4-step plan in solving problems. Original File Submitted and Formatted by DepEd Club Member - visit depedclub.com for more	Let the pupils read the problem below: A cylinder shaped water pitcher has a radius of 6 inches and a height of 11.4 inches. Find the surface area of the pitcher. **Ask:** Can you create a problem on surface area similar to the one given? Call 1 pupil to give example problem.	Let the pupils read the problem below: 1. A milk can has a height of 12 cm and a radius of 3.5 cm. What is its volume? **Ask:** Can you create a problem on volume similar to the one given? Call 1 pupil to give example problem. **Say:** This time you will create problems involving the volume of a solid figures.	

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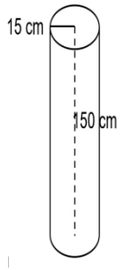
C.Presenting Examples/Instances of new lesson	Activity 1 – News Report (Class → Group Activity) 1)Let one pupil read the news report. (This can be written on manila paper.) Quezon City – an electric post, 150 cm long with radius 15 cm, was hit by a truck yesterday at 4:30 a.m. This caused a two-hour brownout in the area. The driver, Mr. Luis Mercado, and his friend, Mr. Mark Fernando, were rushed to the nearby hospital. Luckily, they just had mild contusions and minor bruises. The two were being questioned as to the cause of the accident – Ruby Hilario. 2)Discussion: a)What was the news all about? b)Why do you think the truck hit the post? c)How can you avoid accidents (of any form)? d)What kind of solid figure is given in the news? Can you read that part. I am going to use the electric post to solve a problem. Let's see if you can find the answer.	Present this problem to the class: Emilio and Jose pitched a tent that has a shape of a pyramid. The base of the tent is a rectangle that is 2.5 meters wide and 2.8 meters long. The tent is 2 meters high. What is the volume of the tent? Round your answer to the nearest hundreds. A.Understand. What is asked? What are the given facts? B.Plan. Which formula(s) shall we use to solve the problem? C.Solve. Show your computation. D.Check. Go back to your computation. Check if the given dimensions are properly substituted to the formula. Check the flow of your computation. (See answer on page 294, Mathletes txbk)	Group activity: 1.Group the pupils into four. 2.The teacher will distribute problems on surface area of solid figures 3.Let them create their own problem similar to the one given to them. 4.Let them choose a reporter to explain the work of the group. **Group 1:** 1.Jason is wrapping a present. The box he is using is a rectangular prism with a length of 15 inches, a width 8 inches and a height of 6 inches. Find how many square inches of paper he needs to wrap the entire box. **Group 2** 2. A certain music box has the shape of a cube. Each side of the music box is 20 cm long. What is the surface area of the box? **Group 3** 3. A cosmetics company that makes small cylindrical bars of soap wraps the bars in plastic prior to shipping. Find the surface area of a bar of soap if the diameter is 4 cm and the height is 2.5 cm. (Use π =3.14) **Group 4** Find the surface area of a right circular cone-shaped building with a height of 10 cm and a radius of 8 cm.	Group activity: 1.Group the pupils into four. 2.The teacher will distribute problems on volume of solid figures 3.Let them create their own problem similar to the one given to them. 4.Let them choose a reporter to explain the work of the group. **Group 1:** a.A juice box is $\mathbf{4\ in}$. tall, $\mathbf{1\ in}$. wide, and $\mathbf{2\ in}$. long. How much juice fits inside the juice box? **Group 2;** Cinema theaters created a new popcorn box in the shape of a rectangular prism. The new popcorn box has a length of $\mathbf{6}$ inches, a width of $\mathbf{3.5}$ inches, and a height of $\mathbf{3.5}$ inches. How much popcorn does the box hold? **Group 3:** 1. Dante built a wooden, cubic toy box for his son. Each side of the box measures $\mathbf{2}$ feet. How many cubic feet of toys will the box hold? **Group 4:** Find the volume of a right circular cone-shaped building with a height of 10 cm and a radius of 8 cm.	
D.Discussing new concepts and practicing new skills #1	Group the pupils into 5. Let them answer the activity below: Find the volume of the electric post, 150 cm long with radius15 cm,that was hit by a truck. e)Analysis of the problem:	Group Activity: Present a story problem: Victor and Carlos are brothers. They share their toys with each other. One day, they were playing with dominoes. They were making different shapes	After the activities are done, let the groups post their created problems from the given situations and let them follow the task below. Read the problem and ask the class to solve the problem.	After the activities are done, let the groups post their created problems from the given situations and let them follow the task below. Read the problem and ask the class to solve the problem.	

What are the given facts? ____
Let them draw or illustrate the electric post using the given facts.
What are we looking for in the problem? _____
Identify the figure. _____
What is the operation to be used? ____
Write the formula to find the volume of the given solid figure. _____
What is the number sentence? _____
Write the solution with correct label. _

Answer: Volume of Cylinder



V = Bh (multiplication)
V = $\pi r^2 h$
V = 3.14 x 15 cm x 15 cm x 150 c
V = 3.14 x 225 cm^2 x 150 cm
V = 3.14 x 33 750 cm^3
V = 105 975 cm^3

and figures out of these dominoes.
Victor made a rectangular solid using 7 dominoes.
If each domino has a length of 3.5 cm, width of 2 cm, and a height of 1 cm, find the volume of the rectangular figure that Victor made.
Analysis and solution of the problem through a table:
Possible Answer:

a) What is being asked? Identify the solid figure	Volume of rectangular solid
b) What are the given facts?	1 domino has l = 3.5 cm, w = 2 cm and height = 1 cm Victor used 7 dominoes
c) What is the hidden fact?	The height of the 7 dominoes
d) What operation should be used to find the hidden fact?	Multiplication
e) What formula is needed to find the volume of a rectangular prism?	V = l x w x h
f) What is the mathematical sentence? Illustrate the figure (see diagram above)	V = 7 x (3.5 cm x 2 cm x 1 cm)
g) Solve the equation. Label the answer correctly .	V = 7 x (3.5 cm x 2 cm x 1 cm) = 7 x (7 cm^3) = 49 cm^3

Illustrate and solve the problem with its solution.
Ask: How did you create problems?
Expected answer:
We familiarized ourselves with the mathematical concepts and their application to real-life situations.
We thought of the type of problems we want to create.
We read and studied some problems that we have solved and their solutions.

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E.Discussing new concepts and practicing new skills #2	Present another problem to the class. A spherical tank for natural gas has a radius of 7 meters. About how many cubic meters of natural gas can it hold? Use π = 22/7. Round your answer to the nearest hundredth. Analysis of the problem: (Let the group of pupils answer the ff. questions, then choose 1 leader to explain their work) A.Understand. What is asked? What are the given facts? B.Plan. Which formula(s) shall we use to solve the problem? C.Solve. Show your computation. D.Check. Go back to your computation. Check if the given dimensions are properly substituted to the formula. Check the flow of your computation.	Group Activity: Use the 4-step plan in solving the problem. A water container measures 5 dm on each edge. How much water can it hold? **Understand** Know what is asked. Know the given facts. **Plan** Determine the operation or formula to use **Solve** Show how the solution is done. **Check and Look Back** Verify if the answer is correct.	Group activity: Make a problem involving surface area based on the given situation. Let the other group find the answer to the problems. 1. the length is 2 m, the width is 3 m, and the height is 1.2 m of a rectangular box. 2. The side of a cube measures 25 cm. 3. The radius of a spherical tank is 1.5 m. 4.A pyramid has a square base of side 15 cm and a height of 14 cm. 5. a cylindrical tank of radius 5 dm and a height of 10 dm	Group activity: Make a problem involving the volume based on the given situation. Let the other group find the answer to the problems. 1. the length is 2 m, the width is 3 m, and the height is 1.2 m of a rectangular box. 2. The side of a cube measures 25 cm. 3. The radius of a spherical tank is 1.5 m. 4.A pyramid has a square base of side 15 cm and a height of 14 cm. 5. a cylindrical tank of radius 5 dm and a height of 10 dm.	
F.Developing mastery (Leads to Formative Assessment)	Group Activity: Solve the following problems. (The pupils may follow the analysis format as given or they can make their own as long as they can explain their answers.) Answer the ff. questions. 1. What is asked? 2. What are given? 3. What operation will be used? 4. What is the number sentence? 5. What is the solution? 6. What is the answer? 1.Peter has a cylinder shaped can. If the can measures 30 cm. high and has a radius of 10 cm. how much water can it hold? 2.An ice cream cone has a diameter of 32 mm. and a height of 45 mm. What is its volume?	A pyramid has a height of 16 dm. Its base is 84 sq. dm. What is its volume? 1. What is asked? The volume of the pyramid. 2. What are given? Height = 16 dm, base = 84 sq. dm. 3. What operation will be used? Multiplication and Division. 4. What is the number sentence? $V = 1/3 \quad Bh$ 5. What is the solution? $V = 1/3\ Bh$ $V = 1/31/3x\ 84\ dm^2 \times 16\ dm$ $V = 1/3x\ 1,344\ dm^3$ $V = 1,344\ /3$ $V = 448\ dm^3$ 6. What is the answer? The volume of the pyramid is 448 dm^3.	Pair-share: Create problem surface area using the given data below. 1)A piece of soap is 9 cm by 4 cm by 3cm. Problem: _____ Answer:_____ 2)An aquarium is 0.8 m long, 0.4 m wide, and 0.45 dm deep. 3)An iron bar 2 m long and 0.05 m in diameter. Problem: _____ Answer:_____ 4)An ice cream cone 2 cm in radius and 6 cm in height. Problem: _____ Answer:_____	Pair-share: Create problem surface area using the given data below. 1)A piece of soap is 9 cm by 4 cm by 3cm. Problem: _____ Answer:_____ 2)An aquarium is 0.8 m long, 0.4 m wide, and 0.45 dm deep. 3)An iron bar 2 m long and 0.05 m in diameter. Problem: _____ Answer:_____ 4)An ice cream cone 2 cm in radius and 6 cm in height. Problem: _____ Answer:_____	

	3.Find the volume of a volleyball that has a radius of 4 ½ decimeters. Use 22/7 for π.				
G.Finding practical applications of concepts and skills in daily living	Solving word problems involving measurement of volume following the steps in solving problems Analyze the problem and study the answers to the questions. 1.)Find the volume of a ball with a diameter of 112 cm. 1. What is asked? 2. What are given? 3. What operation is to be used? 4. What is the number sentence? 5. What is the solution? 6. What is the answer? 2.)A cylinder has a radius of 8 cm. and a height of 20 cm. What is its volume? 1. The problem asked for is ___ 2.The given are ____ 3.The number sentence is ___ 4.The answer is ____ 3.)A cone has a radius of 10 m and a height of 18 meters. Find its volume. 1. What is asked? 2. What are given? 3. What operation is to be used? 4. What is the number sentence? 5. What is the solution? 6. What is the answer?	A. Read and analyze each problem. Then answer the questions that follow. 1.The base of a pyramid is 15 cm by 21 cm. Its height is 28 cm. Compute the volume. 2. How many cubic meters of palay can be placed in a box that is 45 m long, 8 m wide and 7 m high? 3. A chalk box measures 18 cm on each edge. What is the volume of the box?? 1. What is asked? 2. What are given? 3. What operation will be used? 4. What is the number sentence? 5. What is the solution? 6. What is the answer?	Group Activity: Let the pupils create problems involving surface area for the following situations then solve for the answer: a)a box 44 cm by 9 cm by 6 cm Problem: _____ Answer:_____ b)a cone with height 9 dm and radius 4 dm Problem: _____ Answer:_____ c)a cabinet 1.2 m by 0.9 m by 0.5 m Problem: _____ Answer:_____ d)a ball with radius 10 cm Problem: _____ Answer:_____ e)a cylindrical tank 25 dm long and radius 8 dm Problem: _____ Answer:_____	Group Activity: Let the pupils create problems involving volume for the following situations, then solve for the answer. a)a box 44 cm by 9 cm by 6 cm Problem: _____ Answer:_____ b)a cone with height 9 dm and radius 4 dm Problem: _____ Answer:_____ c)a cabinet 1.2 m by 0.9 m by 0.5 m Problem: _____ Answer:_____ d)a ball with radius 10 cm Problem: _____ Answer:_____ e)a cylindrical tank 25 dm long and radius 8 dm Problem: _____ Answer:_____	
H.Making generalizations and abstractions about the lesson	How do you solve word problems involving measurement of volume? The following are the steps in solving word problems involving measurement of volume following the steps in solving problems: A. Know and understand the problem, 1. What is asked? 2. What are given? 3. What is the word clue and operation to be used? B. Plan for the solution. 1. What is the number sentence? C. Carry out the plan. 1. Solve the number sentence. 2. What is the answer? D. Look back and check.		Ask the following questions: What did you do to be able to create problems involving the surface area of solid figures? What are the steps in creating problems? Steps in creating problems. Familiarize yourself in the concepts. Think of an explanation to everyday life real situations. Think of the type of problem you want to create and the formula to	Ask the following questions: What did you do to be able to create problems involving the volume of solid figures? What are the steps in creating problems? Steps in creating problems. Familiarize yourself in the concepts. Think of an explanation to everyday life real situations. Think of the type of problem you want to create and the formula to	

	1. Find out if you answered the problem correctly		be used. Relate the problem to real life situations. Study the solution in solving the problems. Make your own styles/strategies to justify the solutions.	be used. Relate the problem to real life situations. Study the solution in solving the problems. Make your own styles/strategies to justify the solutions	
I.Evaluating Learning	Solve the ff. problems: 1)A cone hat has a radius of 1.2 dm and a height of 3.4 dm. What is its volume? 2)Harold is molding a cylindrical candle with a diameter of 12 cm and a height of 18 cm. About how much wax does Harold need to mold the candle? 3.) A volleyball has a radius of 5.2 decimeters. What is its volume? Use 22/7 for π. 4.) A cone-shaped paper cup has a radius of 4.2 cm and a height of 9 cm. How many cm^3 of water can it contain? 5.) A water tank has an interior height of 10 metres and a diameter of 6 m. What is the volume in cubic metres. How many litres of water can it hold half-full?	Solve the ff. problems: 1.A rectangular water tank is $\frac{1}{2}$ metre wide, 1 metre long and $1\frac{1}{2}$ metres high. If it is half-filled, how much water does it contain? 2.A box of milk is 9 cm long, 8 cm wide, and 18 cm high. Find its volume. 3.The base of a pyramidal tent is a square. If the tent is 2 metres long and $1\frac{1}{2}$ metres high, how many cubic metres of space can it hold inside? 4. Alice has a paperweight in the shape of a pyramid. Its height is 6 cm, length is 5.2 cm and width is 4.9 cm. What is its volume? 5. Each side of the chalk box is 15 cm long. What is the volume?	Let the pupils create problems involving surface area for the following situations: Solve for the answer. 1.A small gift box measures 8 cm long, 7 cm wide and 2 cm high. 2.A rectangular water tank is 5 meter high, 2 m wide and 3 m long. 3. rectangular prism with length of 5 m, width 7 m, and the height is 14.5 m. 4. a cube measures 30 cm. 5. a spherical tank with a radius of 1.5 m	Let the pupils create problems involving surface area for the following situations. Solve for the answer. 1.A small gift box measures 8 cm long, 7 cm wide and 2 cm high. 2.A rectangular water tank is 5 meter high, 2 m wide and 3 m long. 3. rectangular prism with length of 5 m, width 7 m, and the height is 14.5 m. 4. a cube measures 30 cm. 5. a spherical tank with a radius of 1.5 m	
J.Additional activities for application and remediation	Analyze then solve the problems. 1)A conical tent has a base of 45.7dm in diameter and a height of 24.8dm. What is the volume of the air that it holds? 2.A milk can has a height of 12 cm and a radius of 3.5 cm. What is its volume? Find the volume of a pipe with a height of 1.5 m and a diameter of 0.18 m.	Analyze then solve the problems. 1.A box of corn flakes is 7 cm long, 9 cm wide and 14 cm high. Find its volume? 2.Each book of a set of encyclopedia measures 2.85 dm by 2.15 dm by 0.4 dm. The encyclopedia has 19 books. What is the total volume of all 19 books?	Make a three (3) problem involving surface area. Write the answer to each problem on your answer sheet. You may use an aquarium, shoebox, swimming pool, and other rectangular prisms for the problem.	Make a three (3) problem involving volume. Write the answer to each problem on your answer sheet. You may use an aquarium, shoebox, swimming pool, and other rectangular prisms for the problem.	
V. Remarks					
VI. REFLECTIONS					
A. No. of learners who earned 80% on the formative assessment					

B. No. of learners who require additional activities for remediation who scored below 80%					
C. Did the remedial lessons work? No. of learners who have caught up with the lesson					
D. No. of learners who continue to require remediation					
E. Which of my teaching strategies worked well? Why did this work?					
F. What difficulties did I encountered which my principal or supervisor can help me solve?					
G. What innovation or localized materials did I use/discover which I wish to share with other teachers?					