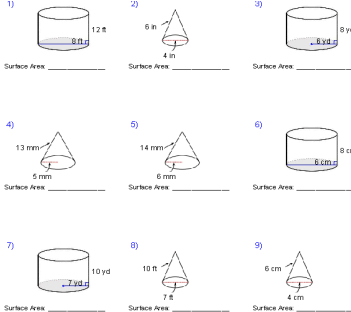
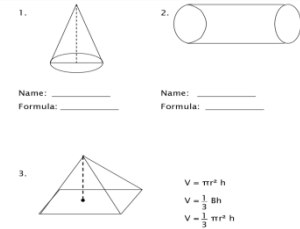
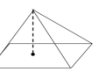
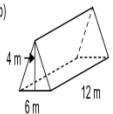
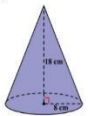
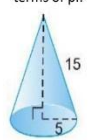
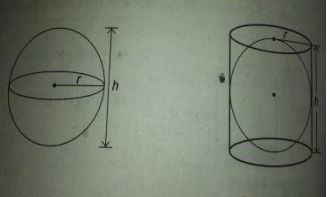
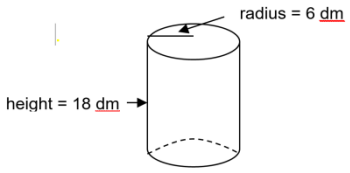
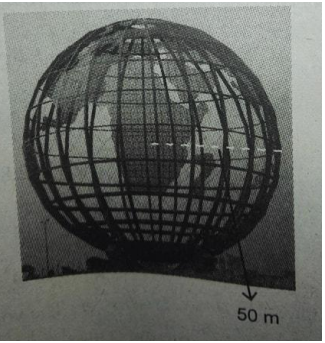


 GRADES 1 to 12 DAILY LESSON LOG	School:		Grade Level:	VI
	Teacher:	<i>Credits to the Writer of this DLL</i>	Learning Area:	MATHEMATICS
	Teaching Dates and Time:	MAY 2-5, 2023 (WEEK 1)	Quarter:	4TH QUARTER

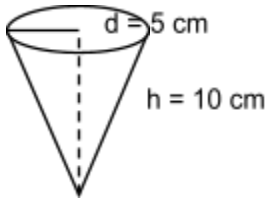
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I. OBJECTIVES	The learner.....				
A. Content Standard	demonstrates understanding of volume of solid figures and meter reading.				
B. Performance Standard	is able to apply knowledge of volume of solid figures and meter reading in mathematical problems and real-life situations.				
C. Learning Competencies / Objectives		determines the relationship of the volume between 70.2 a cylinder and a cone. M6ME-IVa-95	derives the formula for finding the volume of cylinders M6ME-IVa-96	derives the formula for finding the volume of cone M6ME-IVa-96	derives the formula for finding the volume of spheres. M6ME-IVa-96
Measurement		Measurement	Measurement	Measurement	Measurement
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide pages		21 ST Century Mathletes	21 ST Century Mathletes	21 ST Century Mathletes,	21 ST Century Mathletes
2. Learner's Materials pages		21 st Century Mathletes 6,	21 st Century Mathletes 6	21 st Century Mathletes 6, p. 272-285	21 st Century Mathletes 6
3. Textbook pages		21 st Century Mathletes 6	21 st Century Mathletes 6	21 st Century Mathletes 6	21 st Century Mathletes 6
4. Additional Materials from Learning Resource (LR) Portal		Math 6 DLP Mod. 58	Math 6 DLP Mod. 58	Math 6 DLP Mod. 58	Math 6 DLP Mod. 58
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		Drill: Find the surface area of the ff. 	1. Mental Computation Drill: Solving for Volumes of Prisms a) Teacher divides the class into 6 groups (per column). Each group is provided with an illustration board ($\frac{1}{4}$), chalk, and eraser. b) Teacher flashes a card with the dimensions of a prism. For ex.: l = 8 cm w = 5 cm h = 10 cm B = 18 m² h = 3 m	1. Mental Computation Drill: Multiplying Whole Numbers Multiply the following mentally:(use flash cards or use power point presentation) a. 15 x 4 d. 3 x 4 x 4 2. Review: Finding the Volumes of Cylinders	Drill by group: Name each figure. Then write the formula in finding the volume of the given figure. Choose your answer from the box.  1.  Name: _____ Formula: _____ 2.  Name: _____ Formula: _____ 3.  Name: _____ Formula: _____ $V = \pi r^2 h$ $V = \frac{1}{3} Bh$ $V = \frac{1}{3} \pi r^2 h$

		Review: Volume of the pyramid= _____ x volume of rectangular prism. For a rectangular prism, $V=l \times w \times h$ So for pyramid, $V= \frac{1}{3} l \times w \times h$	$l = \frac{1}{2} \text{ m}$ $w = \frac{1}{5} \text{ m}$ $h = \frac{1}{4} \text{ m}$ c)The first student from each group solves mentally for the volume of the prism and writes the answer on the illustration board provided. d)When teacher say “boards up,” they raise their boards up. e)Whoever gives the correct answer, with the proper label, gets 2 points for his/her group. f)Teacher flashes another card and the next student in each group solves mentally for the volume and so on. g)The group with the highest number of points wins. Review: Formula: $V = Bh$ where $B = \text{area of the base}$ $h = \text{height of the prism}$ Ex. a) An aquarium is 60 cm long, 20 cm wide, and 30 cm high. How much water can it hold? $V = Bh$ $= (l \times w) \times h$ $= 60 \times 20 \times 30$ $= 36,000 \text{ cm}^3$ The aquarium can hold 36,000 cm^3 of water. b)  $V = Bh$ $= \left(\frac{bh}{2}\right) l$ $= \left(\frac{4 \times 6}{2}\right) 12$ $V = 144 \text{ m}^3$	Prepare different sizes of cans (as many as the number of groups). Each group will get one can and do the following: measure its height and its radius in cm find its volume share the solution and answer to the class	Review: Volume of a Cone Find the volume of the following Cones:  
B.Establishing a purpose for the lesson		Show the pupils a cylinder and a cone. Let the pupils say something about the figures.	Present a story problem: Water is indispensable because of its many uses. However, some places do not have enough supply of water. People need to store water using jars, plastic containers, drums, and water tanks. Carlo lives in a barangay with a low supply of water. They need to store water to ensure that they	Let pupils give examples of objects that are conical in shape. Have them define or describe a cone.	Let pupils give examples of objects that are round like a ball. Have them define or describe a sphere.

			have enough water to use for their daily needs. To make sure that they have a good supply of water, his father installed a new cylindrical water tank behind their house. The water tank, which is 18 dm high with radius of 6 dm, assures Carlo's family that they have enough water for their daily consumption. How much water can the cylindrical tank hold?		
C.Presenting Examples/Instances of new lesson		Group activity: Materials: a cylinder which is open at one end and a cone that is open at the base (note: the cylinder and the cone must have congruent bases and altitude), sand, worksheet Procedure: Let the children fill the cone with sand then ask them to guess how many "conefuls" of sand it would take to completely fill the cylinder. Let them check their guesses by filling the cylinder with sand from the cone. Questions: 1) How many "conefuls" of sand did you put to fill up the cylinder? 2) Was your guess correct? Why? 3) What mathematical formula can you derive for the volume of a cone? Note: Volume of the cylinder is three times the volume of the cone or the volume of the cone is $\frac{1}{3}$ that of the cylinder.	a. Let each group/pair discuss the following questions and record their answers or ideas. Afterwards, they can share them to the class. 1) Why is water important? What are its uses? 2) Do you only need to conserve if your place do not have enough supply of water? Why or why not? 3) How can we conserve water? 4) What did Carlo's father install in their house? What is its shape? 5) What are the dimensions of the tank? 6) What are we asked to find? 7) Do you know how to find its volume?	Present a Story Problem: Marie attended a birthday party where all children were given party hats and ice cream in cones. One little girl accidentally dropped her ice cream, so she started crying. Marie saw the incident. She went over to the girl and gave her ice cream. The little girl gave her a big smile and said "thank you." Marie was very happy. Discussion: a) What was the story all about? b) Why was the little girl crying? c) What did Marie do? d) Why was Marie very happy? e) If you were Marie, would you have done the same thing? Why or why not? f) What kind of solid figure was the container of the ice cream? g) If the cone has a height of 10 cm and a diameter of 5 cm, what is its volume?	Volume is measured in cubic units. A circle on the sphere with the same center as the sphere has an area of πr^2. Imagine this same circle as the base of a cylinder that exactly contains the sphere.  The volume of this cylinder would be the area of its height, which is $\pi r^2 \times 2r$, or $2\pi r^3$. The sphere does not fill the whole cylinder. In fact, its volume is $\frac{2}{3}$ of the volume of the cylinder. $\frac{2}{3}(2\pi r^3) = \frac{4}{3}\pi r^3$ Therefore , the volume of the sphere is $\frac{4}{3}\pi r^3$

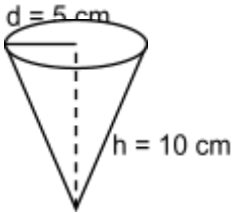
		4) What is the formula used to find the volume of a cylinder? $V = B \times h$ where $B = \text{area of the base}$ $B = \pi r^2$, $\pi = 3.14$ or $\frac{22}{7}$ 5) How do we write the formula for the volume of a cone? $V_{\text{cone}} = \frac{1}{3} Bh$ where $B = \text{area of the base}$ $B = \pi r^2$, $\pi = 3.14$ or $\frac{22}{7}$ $h = \text{height of cone}$ $V_{\text{cone}} = \frac{Bh}{3}$ or $\frac{\pi r^2 h}{3}$ or $\frac{1}{3} \pi r^2 h$		Do you know how to solve the problem? How?	
D.Discussing new concepts and practicing new skills #1		6) From the given word problem, can you now find the volume of the ice cream cone? a) Let them draw the cone with its dimensions. b) Find the radius of the cone. c) Write the formula for volume. d) Solve for the answer. e) Label the answer correctly. $r = 2.5 \text{ cm}$ $V = \frac{1}{3} Bh$ or $\frac{1}{3} \pi r^2 h$ $V = \frac{1}{3} (3.14 \times 2.5 \text{ cm} \times 2.5 \text{ cm} \times 10 \text{ cm})$ $V = \frac{1}{3} (3.14 \times 6.25 \text{ cm}^2 \times 10 \text{ cm})$ $V = \frac{1}{3} (3.14 \times 62.5 \text{ cm}^3)$ $V = \frac{1}{3} (196.25 \text{ cm}^3)$	Discussion: Let the pupils illustrate the tank. Let them write/put the given data correctly.  2) Review then write the formula for finding the volume of rectangular prisms: $V = B \times h$ $V = l \times w \times h$ where $B = \text{area of base}$ $h = \text{height of prism}$ 3) Do you think that solving for the volume of a cylinder is somewhat similar to that of a	Comparing the Volume of a Cone and Volume of a Cylinder Materials: worksheet, 10 oz can, $\frac{1}{4}$ cartolina, pair of scissors, mongo beans, tape Procedure: a) Give each group a 10 oz (milk) can and $\frac{1}{4}$ cartolina. (Or pupils can bring out the materials if these are pre-assigned.) b) Have the pupils construct a cone from the cartolina by cutting out a semicircle, and taping the sides. Have the pupils form a cone whose base has the same circumference as that of the base of the can.	1. Let the pupils find the volume of the sphere at the right.  Discuss the answer on page 293.

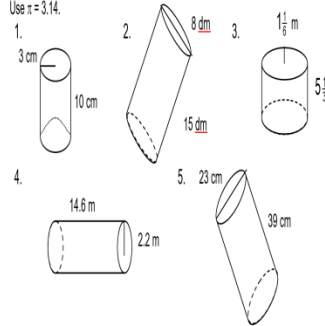
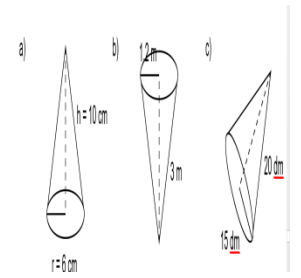
$V = 65.42 \text{ cm}^3$ (the answer is rounded off to the nearest hundredths)

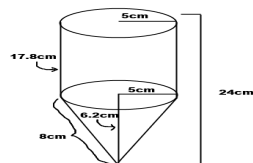
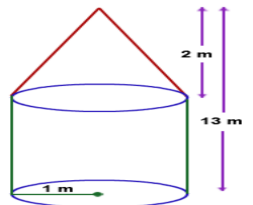
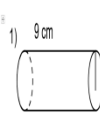
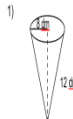
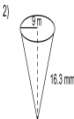
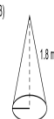
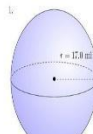
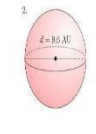
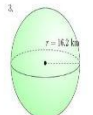
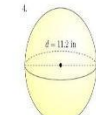


prism? Do we use the same formula $V = Bh$?
4) What specific formula do we use in finding volumes of cylinders? Elicit formula: $V = \pi r^2 \times h$
5) What is the base area of the cylinder? How can we find the area of the base or the circle? (Let them write the formula.)
area of circle = πr^2 .
6) Let the pupils solve for the area of the circle in the given cylinder. Let them understand that the area of the circle represents the base of the cylinder.
7) Afterwards, let the pupils solve for the volume of the given cylinder.

c) Have the pupils completely fill the cone with beans and pour them into the can. Repeat until the can is full.
d) Have the pupils describe the volume of the can in relation to that of the cone.
e) Questions:
1) How many “conefuls” of beans did you pour in the can?
2) What can you say about the volume of the can compared to the volume of the cone?
Volume of the can = 3 times the volume of the cone
Volume of the cone = $\frac{1}{3}$ volume of the can
3) What solid figure is represented by the can?
Therefore, we can say, that,
Volume of the cone = $\frac{1}{3}$ volume of the cylinder
4) What mathematical formula can you derive for the volume of a cone?
 $V_{\text{cylinder}} = Bh$ where B = area of the base = πr^2 ;
 $\pi = 3.14$ or $\frac{22}{7}$
 h = height of the cylinder
 $V_{\text{cone}} = \frac{1}{3} Bh$
where B = area of the base = πr^2 ;
 $\pi = 3.14$ or $\frac{22}{7}$
 h = height of the cone
5) Going back to our word problem, can you now

				solve for the volume of the ice cream cone? a) Draw/illustrate the cone. Write the dimensions. b) Find the radius of the cone. c) Write the formula for the volume. d) Solve for the volume. Label the answer correctly. $r = 2.5 \text{ cm}$ $V = \frac{1}{3} Bh \text{ or } \frac{1}{3} \pi r^2 h$ $V = \frac{1}{3} (3.14 \times 2.5 \text{ cm} \times 2.5 \text{ cm} \times 10 \text{ cm})$ $V = \frac{1}{3} (3.14 \times 6.25 \text{ cm}^2 \times 10 \text{ cm})$ $V = \frac{1}{3} (3.14 \times 62.5 \text{ cm}^3)$ $V = \frac{1}{3} (196.25 \text{ cm}^3)$ $V = 65.42 \text{ cm}^3$ (Answer was rounded off to the nearest hundredths) 	
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E.Discussing new concepts and practicing new skills #2		Let the pupils watch the video of relationship between cylinder and cone.	Group Activity: 1) Let each group construct cylinders of various sizes using cardboard and glue. 2) Let them measure the height and the radius of each cylinder in cm. 3) Let them solve for the volume of their cylinders using the formula. 4)Group sharing follows afterwards.	Group activity: Answer the ff. 1.A cone has a height of 20 cm and a radius of 12 cm. Compute its volume. 2. Find the volume of cone with height 7cm and radius of base 3 cm. 3. What is the volume of cone with radius 4.5 and height 13cm?	Let the pupils watch the video of Volume of Sphere, How to get the Formula.
F.Developing mastery (Leads to Formative Assessment)		Group Activity: 1.Let each group of pupils construct a cone and a cylinder with the same diameter and height. 2. provide rice or mongo seeds 3. Let the pupils fill the cylinder with rice or mongo seeds using the cone. 4. how many cones of rice or mongo seeds can fit inside the cylinder? 5. how do we find the volume of a cone?	Find the volume of each of the following cylinders. Use $\pi = 3.14$ 2. Practice Exercises a. Find the volume of each of the following cylinders. Use $\pi = 3.14$. 	Let the pupils work by pairs, and answer the following: Find the volume of each cone, use $\pi = 3.14$:  Find the missing dimension. Fill in the blanks: d) radius = 8 m, height = ____; Volume = 602.88 m ³ e) diameter = 14 cm, radius = ____, height = 5.1 cm, Volume = ____ f) r = ____, h = 2.1 m, V = 19.782 m ³	Pair-share: 1.A spherical tank for natural gas has a radius of 7meters. About how many cubic meters of natural gas can it hold? Use $\pi=22/7$. Round your answer to the nearest hundredth. Discuss the answer on page 295-296.
G.Finding practical applications of concepts and skills in daily living			Find the volume of the cylinder. Use $\pi = 3.14$. 1. r = 2 cm h = 9 cm V = 2. d = 10 mm h = 16 mm V =	Solve for the missing value to complete the table. Use $\pi = 3.14$.	

			3. $d = 20\text{ dm}$ $r =$ $h =$ $V = 4710\text{ dm}^3$ 4. $r =$ $h = 1.6\text{ m}$ $V = 1.256\text{ m}^3$ 5. $B =$ $h = 24\text{ cm}$ $V = 10\,851.84\text{ cm}^3$	<table><thead><tr><th>Cone</th><th>Radius</th><th>Diameter</th><th>Height</th><th>Volume</th></tr></thead><tbody><tr><td>1</td><td></td><td>20 dm</td><td>15 dm</td><td></td></tr><tr><td>2</td><td>1.5 m</td><td></td><td>2.7 m</td><td></td></tr><tr><td>3</td><td>40 cm</td><td></td><td>72 cm</td><td></td></tr><tr><td>4</td><td>48 cm</td><td></td><td></td><td>72 345.6 cm³</td></tr><tr><td>5</td><td></td><td></td><td>9 dm</td><td>150.72 dm³</td></tr></tbody></table>	Cone	Radius	Diameter	Height	Volume	1		20 dm	15 dm		2	1.5 m		2.7 m		3	40 cm		72 cm		4	48 cm			72 345.6 cm ³	5			9 dm	150.72 dm ³	
Cone	Radius	Diameter	Height	Volume																															
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3	40 cm		72 cm																																
4	48 cm			72 345.6 cm ³																															
5			9 dm	150.72 dm ³																															
H.Making generalizations and abstractions about the lesson		The Volume of a Cylinder is given by the formula $V = \pi r^2 h$ while the Volume of a Cone is $V = \frac{1}{3} \pi r^2 h$ $V = \pi r^2 h$ $V = \frac{1}{3} \pi r^2 h$ $V = \pi r^2 h$ Volume of Cone $= \frac{1}{3} \pi r^2 h$ $V = \frac{4}{3} \pi r^3$	How can you find the volume of a cylinder? Volume of a Cylinder $V = \pi r^2 h$ How do you find the volume of a cone? What is the formula used? How do you find the volume of a sphere? What is the formula used?																																
I.Evaluating Learning		Evaluate item number 5, 8 and 9 on page 297. Find the volume of the ff.:  	Give the volume of the given cylinder: A. Give the volume of the given cylinder. 1)  $V =$ 2)  $V =$ 3) $d = 200\text{ mm}$ $r =$ $h = 115\text{ mm}$ $V =$ 4) $B = 530.66\text{ sq. m.}$ $h = 18\text{ cm}$ $V =$ 5) $r = 1.5\text{ dm}$ $h = 3.7\text{ dm}$ $V =$	A. Solve for the volume of each cone: A. Solve for the volume of each cone: 1)  $V =$ 2)  $V =$ 3)  $V =$ 4)  $V =$ 5)  $V =$	A. Solve for the volume of each sphere. 1)  $r = 15.8\text{ m}$ 2)  $d = 8.5\text{ m}$ 3)  $r = 14.2\text{ km}$ 4)  $d = 11.2\text{ in}$																														
J.Additional activities for application and remediation																																			
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 encounter 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?					