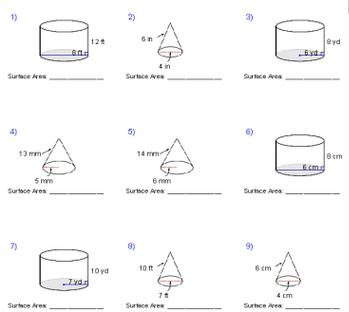
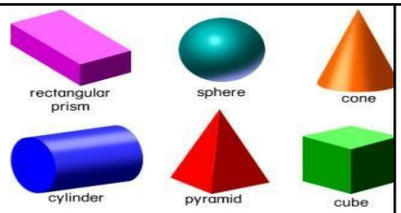
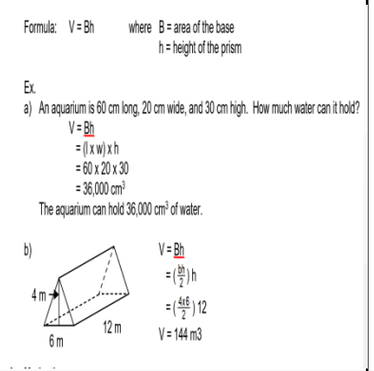
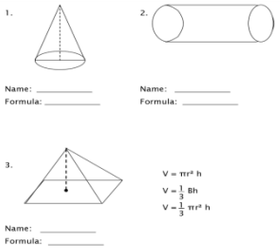
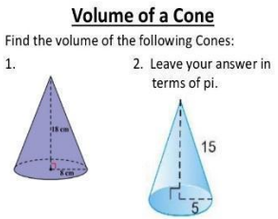
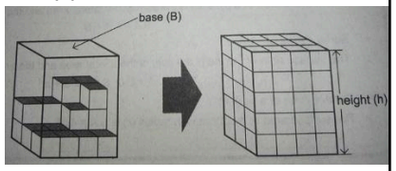
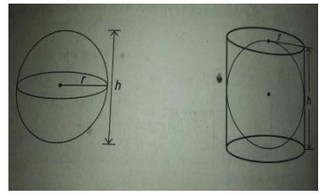
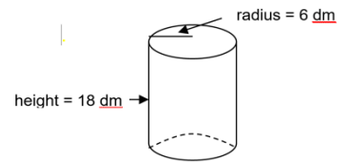
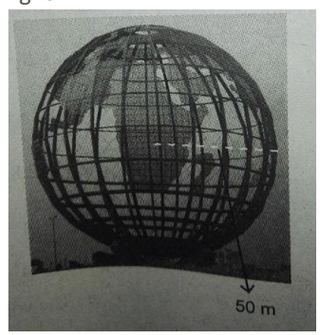
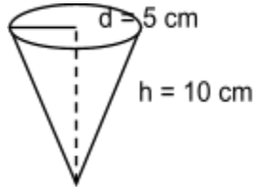
GRADES 1 to 12 DAILY LESSON LOG	School:		Grade Level:	VI
	Teacher:		Learning Area:	MATHEMATICS
	Teaching Dates and Time:	MAY 1 – 5, 2023 (WEEK 1)	Quarter:	4TH QUARTER

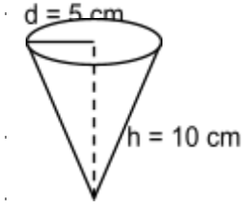
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
I. OBJECTIVES	The learner…….				
A. Content Standard	demonstrates understanding of volume of solid figures and meter reading.				
B. Performance Standard	is able to apply knowledge of volume of solid figures and meter reading in mathematical problems and real-life situations.				
C. Learning Competencies / Objectives	determines the relationship of the volume between 70.1 a rectangular prism and a pyramid. M6ME-IVa-95	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	Measurement
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide pages	21ST Century Mathletes	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, p. 272-285	21st Century Mathletes 6
3. Textbook pages	21st Century Mathletes 6	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. 58	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	Mathletes 6 textbook, power point presentation
IV. PROCEDURES					
A.Reviewing previous lesson or presenting the new lesson	Drill: A. Perform the indicated operation: 35 x 25 125 x 2.5 30 ½ x 25 450 ÷ 20 50 ½ x 15 B. Find the surface area of the ff. 1. e=25cm 2. l=16cm, w= 9cm, h=8cm 3. d=14cm, h=23cm Review: A.Identify the figure below:	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 m^2 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.

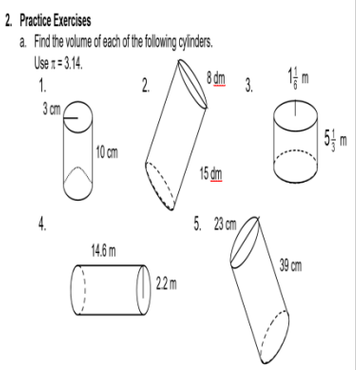
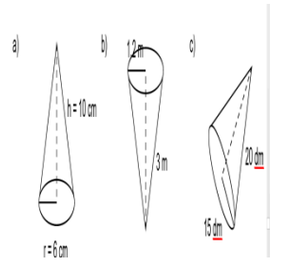
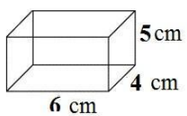
	 B.Solve each situation. 1. a rectangular box has a length of 24 inches, a width of 18inches, a width of 18 inches and a height of 30 inches. What is the surface area? 2. A sphere has a radius of 23cm. What is the surface area?	Review: Volume of the pyramid= _____x volume of rectangular prism. For a rectangular prism, V=lxwxh So for pyramid, V= _____ lxwxh= lxwxh/?	$l = \frac{1}{2}$ m $w = \frac{1}{5}$ m $h = \frac{1}{4}$ 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: 	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: 
B.Establishing a purpose for the lesson	Have you ever gone to a family outing to a resort? There are many different kinds of swimming pool, isn’t it? There are swimming pools for kids and for adults. There is also Jacuzzi. If you will be asked how much water is placed in the swimming pool, how will you do it?	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	Let pupils give examples of objects that are conical in shape. Have them define or describe a cone. Original File Submitted and Formatted by DepEd Club Member - visit depedclub.com for more	Let pupils give examples of objects that are round like a ball. Have them define or describe a sphere.

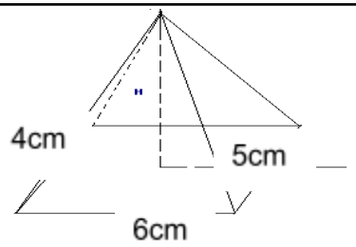
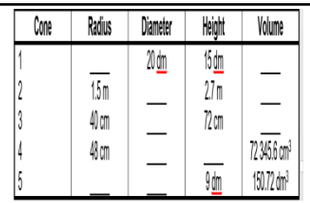
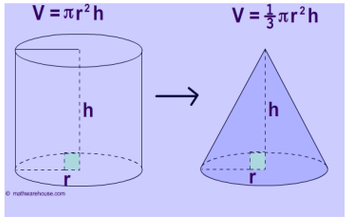
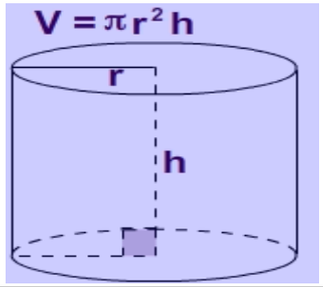
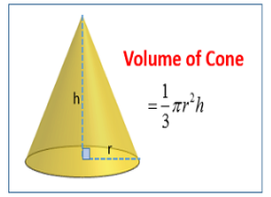
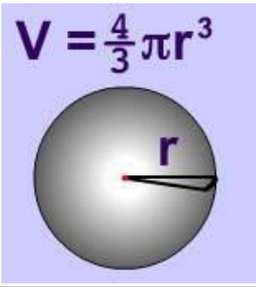
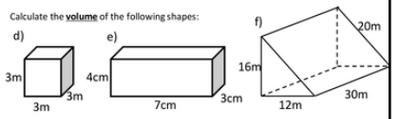
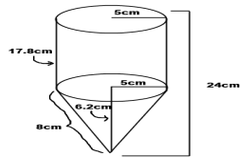
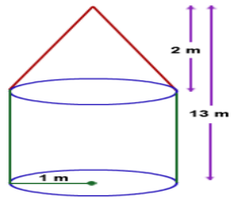
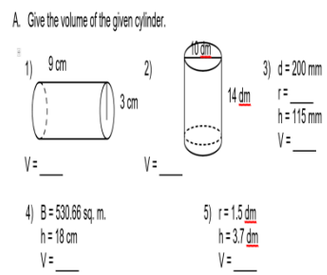
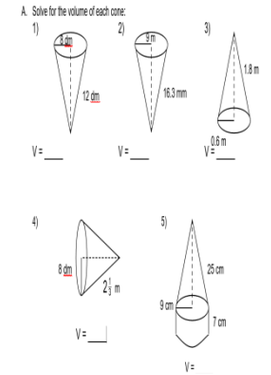
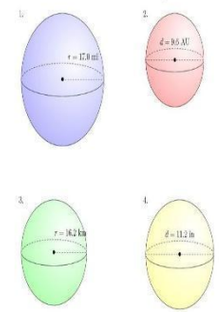
			they have enough water to use for their daily needs. To make sure that they have a good supply of water, his father installed a new cylindrical water tank behind their house. The water tank, which is 18 dm high with radius of 6 dm, assures Carlo's family that they have enough water for their daily consumption. How much water can the cylindrical tank hold?		
C.Presenting Examples/Instances of new lesson	The volume of prism is the amount of space inside the prism. Volume is measured in cubic units, which means it tells you how many cubes of a given size it takes to fill the prism. We can use the diagram on page 288 to show why the formula of any prism works.  To find the volume (V) of a prism, multiply the number of cubic units needed to cover the base (B) by the number of layers. Volume of prism= is the product of the base area (B) and the height (h). V=Bxh Since B=lxw, then V=lxwxh	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 $\pi r^2 x 2r$, or $2\pi r^3$. The sphere does not fill the whole cylinder. In fact, its volume is 2/3 of the volume of the cylinder. $2/3(2\pi r^3)=4/3\ \pi r^3$ Therefore , the volume of the sphere is $4/3\ \pi r^3$

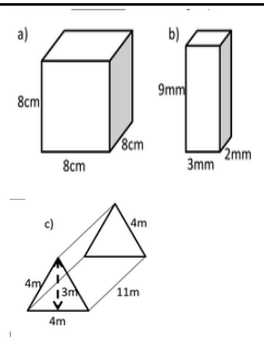
		4) What is the formula used to find the volume of a cylinder? $V = B \times h$ where B = area of the base $B = \pi r^2$, $\pi = 3.14$ or $\frac{22}{7}$ 5) How do we write the formula for the volume of a cone? $V_{cone} = \frac{1}{3} Bh$ where B = are of the base $B = \pi r^2$, $\pi = 3.14$ or $\frac{22}{7}$ h = height of cone $V_{cone} = \frac{Bh}{3}$ 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	Volume of pyramid is the amount of space inside the pyramid. Volume is measured in cubic units, which means it tells us how many cubes of a given size it takes to fill the pyramid. It takes three pyramids of popcorn to fill the rectangular box. The pyramid and the rectangular prism have the same base and height. Explain example no. 2 on page 289. Complete the statement; Volume of the pyramid= _____x volume of rectangular prism. For a rectangular prism, V=lxwxh So for pyramid, V= _____ lxwxh= lxwxh/? The volume of a pyramid is 1/3 the volume of a prism w/ same base area (B) and height (h).	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 cm $V = \frac{1}{3} Bh$ or $\frac{1}{3} \pi r^2 h$ $V = \frac{1}{3}$ (3.14 x 2.5 cm x 2.5 cm x 10 cm) $V = \frac{1}{3}$ (3.14 x 6.25 cm^2 x 10 cm)	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 x h V = l x w x h where B = area of base h = height of prism 3) Do you think that solving for the volume 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	1.Let the pupils find the volume of the sphere at the right.  Discuss the answer on page 293.

		$V = \frac{1}{3}$ (3.14 x 62.5 cm^3) $V = \frac{1}{3}$ (196.25 cm^3) V = 65.42 cm^3 (the answer is rounded off to the nearest hundredths)  	cylinder is somewhat similar to that of a prism? Do we use the same formula V = Bh? 4) What specific formula do we use in finding volumes of cylinders? Elicit formula: $V = \pi r^2$ x 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.	same circumference as that of the base of the can. 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? $V_{cylinder}$ = Bh where B = area of the base = πr^2; π = 3.14 or $\frac{22}{7}$ h = height of the cylinder $V_{cone} = \frac{1}{3}$ 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 cm $V = \frac{1}{3}$ Bh or $\frac{1}{3}$ $\pi r^2 h$ $V = \frac{1}{3}$ (3.14 x 2.5 cm x 2.5 cm x 10 cm) $V = \frac{1}{3}$ (3.14 x 6.25 cm^2 x 10 cm) $V = \frac{1}{3}$ (3.14 x 62.5 cm^3) $V = \frac{1}{3}$ (196.25 cm^3) V = 65.42 cm^3 (Answer was rounded off to the nearest hundredths) 	

E.Discussing new concepts and practicing new skills #2	Let the pupils watch the video of relationship between pyramid and prism.	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 construct a prism and a pyramid with the same base and height. 2) Let them solve for the volume of the two figures using the formula. 3) Group sharing follows afterwards.	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 π = 3.14  	Let the pupils work by pairs, and answer the following: Find the volume of each cone, use π = 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 π=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 ff.  		Find the volume of the cylinder. Use π = 3.14. 1. r = 2 cm h = 9 cm V = 2. d = 10 mm h = 16 mm	Solve for the missing value to complete the table. Use π = 3.14.	

			V = 3. d = 20 dm r = h = V = 4710 dm^3 4. r = h = 1.6 m V = 1.256 m^3 5. B = h = 24 cm V = 10 851.84 cm^3		
H.Making generalizations and abstractions about the lesson	The volume of a prism is given by the formula *V = Bh* where *B* is the area of the base and *h* is the height. The volume of a pyramid is given by the formula V = 1/3 Bh where *B* is the area of the base and *h* is the height	**The Volume of a Cylinder is given by the formula V = πr² h while the Volume of a Cone is V = 1/3 πr² h** 	How can you find the volume of a cylinder? Volume of a Cylinder V = πr² 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	Find the volume of the ff. figures. Write the formula used.  Compare the formula used in solving the volume of the ff. figures	Evaluate item number 5, 8 and 9 on page 297. Find the volume of the ff.:  	Give the volume of the given cylinder: 	A. Solve for the volume of each cone: 	A. Solve for the volume of each sphere. 

					
J.Additional activities for application and remediation	Answer Math Challenge on page 298-299				
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?					