

# Math 8 LG 6

## VOLUME



### INTRODUCTION:

We live in a 3-dimensional world... Check out Chapter 7 Opener on pages 242 & 243.



### LEARNING GUIDE EXPECTATIONS:

On the completion of this learning guide you will be able to:

- 1) understand the concept of volume
- 2) calculate the volume of a prism
- 3) calculate the volume of a right cylinder
- 4) solve problems involving prisms and cylinders



### EVALUATION:

You are ready to progress to the next learning guide when you can demonstrate your understanding of the above expectations. Please refer to your Mathematics 8 Marks Record Sheet to determine the assessment.



### RESOURCES NEEDED:



Math Links 8 Text



THSS Math 8 Learning Guides and Math 8 Journal Entries Package



Centimetre cubes

### LEARNING ACTIVITIES:



#### Expectation #1: Understand the concept of volume.



1. [Watch and take notes on instructional video on Volume.](#)



2. In the Math Links 8 text, read the introduction on Chapter 7 Section 7.1 page 246 and complete the Explore the Math activity on Chapter 7 Section 7.1 pages 246-247.
3. In the Math Links 8 text, work through Example 1 on Chapter 7 Section 7.1 pages 247-248. Now complete Chapter 7 Section 7.1 #3, 4 on page 250.
4. In the Math Links 8 text, work through Example 2 on Chapter 7 Section 7.1 page 248. Now complete Chapter 7 Section 7.1 #5, 6 on page 251.



5. Read Key Ideas on Chapter 7 Section 7.1 page 249. In your math journal, complete the journal entry for LG6 Expectation 1.



**Expectation #2: Calculate the volume of a prism.**



1. [Watch and take notes on instructional video on Volume of a Prism.](#)



2. In the Math Links 8 text, read the introduction on Chapter 7 Section 7.2 page 254 and complete the Explore the Math activity on Chapter 7 Section 7.2 pages 254-55.
3. In the Math Links 8 text, work through Example 1 on Chapter 7 Section 7.2 page 255. Now complete Chapter 7 Section 7.2 #4, 5, 6 on pages 258-259.
4. In the Math Links 8 text, work through Example 2 on Chapter 7 Section 7.2 page 256. Now complete Chapter 7 Section 7.2 #7, 8 on pages 259.
5. In the Math Links 8 text, work through Example 3 on Chapter 7 Section 7.2 pages 256-57. Now complete Chapter 7 Section 7.2 #9, 10 on page 259.



6. Read Key Ideas on Chapter 7 Section 7.2 page 257. In your math journal, complete the journal entry for LG6 Expectation 2.



7. In the Math Links 8 text, complete Chapter 7 Section 7.2 #11, 12, 14, 16, 19, 22 on pages 260-61.



**Expectation #3: Calculate the volume of a right cylinder.**



1. [Watch and take notes on instructional video on Volume of a Cylinder.](#)



2. In the Math Links 8 text, read the introduction on Chapter 7 Section 7.3 page 262 and complete the Explore the Math activity on Chapter 7 Section 7.3 pages 262-63.
3. In the Math Links 8 text, work through Example 1 on Chapter 7 Section 7.3 page 263. Now complete Chapter 7 Section 7.3 #4, 5 on pages 265.
4. In the Math Links 8 text, work through Example 2 on Chapter 7 Section 7.3 page 264. Now complete Chapter 7 Section 7.3 #6, 7 on pages 265-66.



5. Read Key Ideas on Chapter 7 Section 7.3 page 264. In your math journal, complete the journal entry for LG6 Expectation 3.



6. In the Math Links 8 text, complete Chapter 7 Section 7.3 #9, 12, 14, 16, 18 on pages 266-67.



#### **Expectation #4: Solving Problems Involving Prisms and Cylinders.**



1. [Watch and take notes on instructional video on Solving Problems with Prisms and Cylinders.](#)



2. In the Math Links 8 text, read the introduction on Chapter 7 Section 7.4 page 268 and complete the Explore the Math activity on Chapter 7 Section 7.4 pages 268-69.

3. In the Math Links 8 text, work through Example 1 on Chapter 7 Section 7.4 page 269-70.

4. In the Math Links 8 text, work through Example 2 on Chapter 7 Section 7.4 page 270. Now complete Chapter 7 Section 7.4 #4, 5, 6 on pages 273.

5. In the Math Links 8 text, work through Example 3 on Chapter 7 Section 7.4 pages 271-72. Now complete Chapter 7 Section 7.4 #7 on page 273.



6. Read Key Ideas on Chapter 7 Section 7.4 page 272.

7. In the Math Links 8 text, complete Chapter 7 Section 7.4 #8, 11, 13, 15, 18, 20, 21 on pages 273-75.

#### **REVIEW AND CHALLENGE**



1. In the Math Links 8 text, complete Chapter 7 Review pages 276-77 #1-4, 5, 9, 10, 11, 13, 14, 17, 19, 20.