



# Creation Lens

*Exploring the World, Discovering God*

*Grade Level: Grade 4*

*Title:*

## **Mass and Volume & Living Our Faith**

*Denomination: Catholic*

*Lesson ID: PS-G4-06-CA*

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***Note: Web sites referenced in this lesson were valid at time of publication.***

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## PHYSICAL SCIENCE MODULE – GRADE FOUR - CATHOLIC LESSON 6: Mass and Volume and Living Our Faith

### **GENERAL CONCEPT: Mass and Volume are Different and How We Return the Love of Jesus**

#### **SCIENCE LESSON CONCEPT**

Mass and Volume are different.

#### **GOAL OF SCIENCE LESSON**

Student will be able to describe matter by its physical properties of mass and volume.

#### **OUTCOME EXPECTED**

Student will be able to define mass and volume as physical properties.

#### **MATERIALS NEEDED**

- Science Journal Page: MASS AND VOLUME
- Pen/pencil
- Graduated cylinder
- Water

#### **RELIGION LESSON CONCEPT**

Having faith and living the faith are two different things.

#### **GOAL OF RELIGION LESSON**

Student will better understand the difference between belief and practice.

#### **OUTCOME EXPECTED**

Student will understand that Jesus requires us to practice our beliefs.

#### **MATERIALS NEEDED**

- A selection of Fruits and Vegetables
- Potato chips, soda, candy
- Tray
- SIGN: I believe I should eat healthy foods.

- 3-4 small objects such as a marble, rock, pencil
- Tongs for removing objects

- SIGN: I eat healthy foods.
- SIGN: I believe I should pray to God
- SIGN: I pray to God three times a day.
- SIGN: I believe I should participate in Mass every Sunday.
- I participate in Mass every Sunday.
- I believe Jesus wants me to share what I have with others.

## SCIENCE METHODOLOGY

- **DEFINE:** Mass. Have the student write it on the Science Journal Page.
- **GIVE** examples of the mass of objects. Have the students record on the Science Journal Page.
- **DEFINE:** Volume. Have the student write it on the Science Journal Page.
- **GIVE** examples of the volume of objects. Have the students record on the Science Journal Page.
- **DISCUSS** how mass and volume are different.
- **DO** the experiment. Place the graduated cylinder on the desk and fill it \_ full of water.

## RELIGION METHODOLOGY

- **ASK:** How many of you believe that you should eat healthy good rather than unhealthy food?
- **TELL** the students you will let them eat one thing from the tray of food. All of it has some nutritional value.
- **LET** a few students select and eat.
- **ASK:** Did the students select healthy or unhealthy foods? Didn't most of you or all of you say that you believe you should eat healthy foods?
- **PLACE** the two food signs by the food tray.
- **ASK:** Which sign is belief and which is practice?
- **SHOW** the two signs about praying to God.

- **SHOW** the students the small objects.
- **ASK** the students to predict which objects will cause the water level to rise the most in the cylinder.
- **HAVE** the student write the predictions on the Science Journal Page and draw the cylinder of water.
- **PLACE** one object in the cylinder.
- **ASK:** What happened? Observe and measure if the water rose in the cylinder. Why did it rise? How much did it rise? What does this tell us about the mass and volume of the object, if anything?
- **DISCUSS** answers.
- **REPEAT** with the other objects – use the tongs to carefully remove the objects after use.
- **LET** the student suggest two other objects and predict which has the greater mass and volume.
- **EXPERIMENT, OBSERVE, AND RECORD** on the Science Journal Page.
- **POSIT** your conclusions about Mass and Volume.
- **ASK:** Which is belief and which is practice?
- **ASK:** What do you believe about going to Mass on Sunday? What is your practice about going to Mass on Sunday?
- **SHOW** the two going to Mass signs.
- **ASK:** Which is belief and which is practice?
- **DISCUSS** if you can really be a good Catholic if you do not practice what you believe.
- **ASK** the student to reflect silently about what they believe about sharing what they have with others.
- **SHOW** the last sign: I believe Jesus wants me to share what I have with others.
- **DISCUSS** how to do this and share student reflections.
- **HAVE** the class or each student decide on something which they can do for one week which puts a belief into practice.
- **RECORD** project in the Religion Notebook.
- **AFTER ONE WEEK**, have them check and grade themselves on how well they put the belief into practice.
- **POSIT:** To follow Jesus we must practice what we believe.

## RESOURCES, LINKS AND COMPUTER LESSONS

### Science Links

(Teacher) Science Textbook Publisher  
<http://www.sfscience.com>

(Teacher or student) Teacher can have a 14 days free trial of Brain Pop. Good activities and information on Mass and Volume.  
<http://www.brainpop.com/science/matterandchemistry/measuringmatter/preview.weml>

(Teacher) Cool experiment with Coke and Diet Coke floating in a tank.  
<http://www.middleschoolscience.com/dietcoke.htm>

### Religious Links

(Student) St. Frances Cabrini talks about her life.  
QUESTION: How did St. Frances Cabrini put her beliefs into practice?  
<http://www.stjames-cathedral.org/kids/saints/cabrini.htm>

(Student) St. John talks about his life. QUESTION: How did St. John put his beliefs into practice?  
<http://www.stjames-cathedral.org/kids/saints/john.htm>

(Student) Mary talks about her life. QUESTION: How did Mary put her beliefs into practice?  
<http://www.stjames-cathedral.org/kids./saints/mary.htm>

Repeat for St. James, St. John Mary Vianney, St. Peter, St. Therese, St. Anthony by substituting the name in lower case letters where the name "mary" is in the above site address.

**KEY WORDS**  
**PHYSICAL SCIENCE – GRADE FOUR - LESSON 6 - CA**



**MASS**  
**VOLUME**  
**MATTER**  
**PROPERTIES**  
**GRADUATED**  
**CYLINDER**



**HAVING FAITH**  
**LIVING FAITH**  
**PRACTICE**  
**BELIEF**  
**GOOD CATHOLIC**

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**MASS**

**HAVING FAITH**

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