



# Creation Lens

*Exploring the World, Discovering God*

*Grade Level:* **Grade 3**

*Title:*

## **Circuits of Light & Jesus Is the Light of the World**

*Denomination:* **Catholic**

*Lesson ID:* **PS-G3-07-CA**

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

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## PHYSICAL SCIENCE – GRADE 3 - CATHOLIC

### LESSON TITLE: Circuits of Light & Jesus Is the Light of the World

#### SCIENCE LESSON CONCEPT

- Define electricity
- Parts of a complete circuit
- Electrical path
- Source of energy

#### GOAL OF SCIENCE LESSON

- Students will create circuits to light a light bulb.

#### OUTCOME EXPECTED

- Students will observe electricity through a circuit when the light bulb lights up.

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#### RELIGION LESSON CONCEPT

- Jesus – Light of the World
- Jesus - Redeemer

#### GOAL OF RELIGION LESSON

- Students will learn that like electricity lights up a light bulb, Jesus lights up our world.
- Students will learn that Jesus is the Light of the World.

#### OUTCOME EXPECTED

- Students will learn Matthew 5:14-16.

## **MATERIALS NEEDED**

- Science Journal Page: Electricity and Circuits
- Detailed instructions for each student or student group on how to build an electrical circuit (teacher created)
- Pencil or pen
- Cell holder – 1 per student or group
- D battery – 1 per student or group
- Light bulb -1 per student or group
- Light bulb holder -1 per student or group – a screw-in type fixture
- Filament – 1 per student or group - for viewing only – not part of the experiment
- Wires – 1 set per student or group
- Switch
- START sign
- STOP sign

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- Students will be aware of how Jesus is the Light of the World.
- Students will learn how they can be a light to others.

## **MATERIALS NEEDED**

- Bible – Matthew 5:14-16 – 1 copy per student
- Poster board – 1 per student
- Markers, crayons, colored pencils, etc.
- Magazines to cut out pictures
- Drawing paper
- Scissors
- Glue
- SONG: “We Are the Light of the World”
- SONG: “Whatsoever you do...”
- SONG: “This Little Light of Mine”
- Battery operated candle
- Bushel basket or similar item

## SCIENCE METHODOLOGY

**NOTE: See Science Links for detailed instructions to do this experiment.**

- **ASK:** Is there electricity in this room?
- **ASK:** How do you know? (lights are on, plugs are in the wall sockets, etc.)
- **EXPLAIN** that electricity needs a complete path along which to travel.
- **SELECT** several students.
- **ASK** them to go completely around the room. They are to begin at the START sign and end at the STOP sign.
- **HAVE** the students walk the path.
- **SAY:** The students have completed a circuit or path just like electricity needs to travel.
- **IDENTIFY** the parts of a circuit.
- **WRITE** the terms on the chalkboard or chart paper.
- **HAVE** the students write the terms on the Science Journal Page: Electricity and Circuits.
- **SHOW** the students the parts of the circuit.
- **HAVE** them draw the parts by the terms on the Science

## RELIGION METHODOLOGY

- **READ** Matthew 5:14-16.
- **EXPLAIN** that Jesus used this parable to teach people how to follow God.
- **SAY:** Because Jesus told this story, He received the title “Light of the World”.
- **SAY:** When there is darkness and we are afraid, it is harder to see our way. When there is light, we are able to see our path. Jesus and the Holy Spirit guide us and show us the Light.
- **DARKEN** the room as much as possible.
- **LIGHT** the battery operated candle.
- **SAY:** This candle represents Jesus in our world. He said He was the light of the world. We are to allow His light to shine through us.
- **ASK:** This one candle gives some light. How much more light would be given if each of us was allowing the light of Jesus within us to shine to others?
- **ASK:** What did Jesus mean when he said you don’t hide your light under a bushel basket?
- **HOLD** the bushel basket or similar object over the candle.
- **ASK:** What happened to the light?

Journal Page.

- **DISTRIBUTE** the materials for the experiment to each student or group.
- **HAVE** the students create a circuit using the materials.
- **ASK:** Did the light bulb light up?
- **DISCUSS** open and closed circuits.
- **COMPARE** the information about open and closed circuits to those circuits that did light the bulb or those that didn't.
- **HAVE** students repeat the experiment.
- **ASK:** Did the light bulb light?
- **HAVE** the students draw and label the circuits on the Science Journal Page.
- **ASK:** Your circuit had to have an energy source. What was the source of your energy? (D battery)
- **ASK:** When you turn on a radio, TV, or lamp at home, what happens? (circuit is complete)
- **ASK:** If you turn on an electrical lamp and it does not go on, what should you check?
- **LIST** the students' responses. Be sure to have: plugged into energy source, light bulb completely screwed into

- **ASK:** What would cause the light of Jesus to stop shining through us? (being selfish, sin, being mean to others, etc.)
- **SAY:** When we share God's love with others, we are building the Kingdom of Jesus here on earth. We are doing good work for the church and our community. Just like a circuit needs to be connected and needs all the parts to work, we need to work as a community to keep faith alive.
- **GIVE** the students the poster board and other supplies.
- **SAY:** You are to create a poster to show how you can act as light to the world. You should include the Matthew 5: 14-16 Scripture passage on the poster board. You may draw pictures or cut out pictures from the magazines to show how to be light for others.
- **ALLOW** time to create poster.
- **GATHER** the students and their posters into a prayer space.
- **LEAD** a prayer service using "We Are the Light of the World", "This Little Light of Mine", or "Whatsoever you do..." song.
- **IN THE PRAYER SERVICE**, read the Matthew 5:14-16 passage.
- **HAVE** the students, say one way they can be light to

the light bulb holder, check filament, etc.

- **SHOW** the students the filament in a light bulb.
- **EXPLAIN** how the filament needs to be intact for the circuit to close.
- **HAVE** the students write a paragraph about circuits and how they got the light bulb to light.
- **DISPLAY** the Science Journal Page on a table with an open circuit and a closed circuit.
- **POSIT:** Electricity needs a complete path to complete the circuit. The light bulb will only go on when the circuit is complete and open.

others and then place their poster in the prayer area.

- **POSIT:** We need every person to show light and love to others. We need to be completed circuits of God's love to others.

## SCIENCE LINKS

[www.myschoolhouse.com/courses/O/1/68.asp](http://www.myschoolhouse.com/courses/O/1/68.asp)  
[Simple Electric Circuit - Elementary Science Lessons & Tests - My ...](#) **Electricity** Lesson, Simple **Circuit**, **Electricity**, **Electricity** for Kids in **Elementary** School.  
Good diagrams and explanations of an electrical circuit.

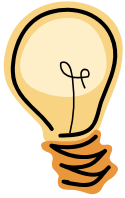
[www.umd.umich.edu/sep/students/mgmamm/mgmamm\\_giless.html](http://www.umd.umich.edu/sep/students/mgmamm/mgmamm_giless.html)  
[Guided Lessons: Circuits](#) This unit on **circuits** was designed for **elementary** students in grades three through ... **Science** Resources on **Electrical Circuits**. This site contains several simple lessons on electrical circuits.

[www.mps.uchicago.edu/docs/reports06/PlayingWithElectricity.pdf](http://www.mps.uchicago.edu/docs/reports06/PlayingWithElectricity.pdf)  
[Playing with Electricity: Exploring electric circuits through ...](#)  
The exhibit is based around building simple **electric circuits** using wires, a battery, and **elementary** ... Because **circuits** and **electric** devices are an area of **science** ... Good explanation of how to do the experiment.

## RELIGIOUS LINKS

[www.mssscrafts.com/newtestament/lightoftheworld.htm](http://www.mssscrafts.com/newtestament/lightoftheworld.htm)  
[Jesus, Light of the World - MSSS Bible Lesson](#) Links to story ideas, coloring pages, **activity** ... **Jesus** proclamation that He is **the light of the world** in ... **Jesus** is the **Light** of the ...

[www.dltk-bible.com/crafts-nt.htm](http://www.dltk-bible.com/crafts-nt.htm)  
[Bible Crafts](#) Printable templates for **children's** Bible **crafts**. ... Simply take the craft for the season you are in and "**Jesus** is the **Light of the World** ...



### KEY WORDS

- ELECTRICITY
- LIGHT ENERGY
- CIRCUIT
- CURRENT
- SWITCH
- FILAMENT
- LIGHT BULB
- HOLDER
- OPEN CIRCUIT
- CLOSED CIRCUIT

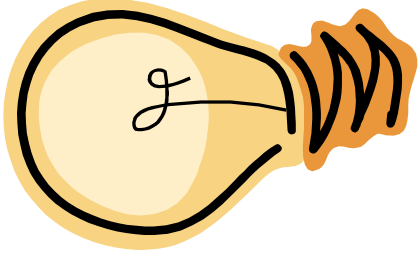


### KEY WORDS

- MATTHEW
- SCRIPTURE
- COMMUNITY
- FAITH
- GOD
- MISSION
- LIGHT
- BUSHEL BASKET



## KEY WORDS



ELECTRICITY

LIGHT ENERGY

CIRCUIT

SWITCH

FILAMENT

LIGHT BULB

HOLDER

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