



Creation Lens

Exploring the World, Discovering God

Grade Level: Grade 3

Title:

Seasons and Revolution & The Liturgical Year

Denomination: Catholic

Lesson ID: ES-G3-04-CA

Contact Info:

Exploring the World, Discovering God (EWDG)
Institute for Theological Encounter with Science & Technology (ITEST)
20 Archbishop May Drive, Suite 3400A
St. Louis, MO 63119

EWDG email: EWDG-Info@creationlens.org

EWDG web site: www.creationlens.org

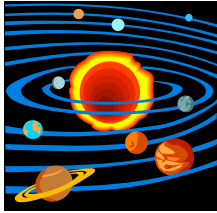
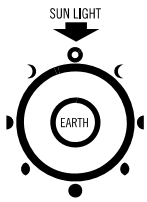
ITEST web site: www.faithscience.org

Ph: 314.792.7220

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

Copyright by Exploring the World, Discovering God (EWDG), a pilot program of Institute for Theological Encounter with Science & Technology (ITEST). All rights reserved. The contents, or parts thereof, i.e., lessons/modules, may be reproduced for classroom educational use only. Any reprinting or reproducing for the purpose of sale is prohibited, and if done, party is subject to all legal sanctions.

© ITEST © EWDG



EARTH SCIENCE MODULE – GRADE THREE - CATHOLIC LESSON 4: Revolution Around the Sun and The Liturgical Year

GENERAL CONCEPT: The earth's revolution around the sun and seasons and we have seasons in the Church.

SCIENCE LESSON CONCEPT

- Seasons on the earth are caused by the earth's revolution around the sun
- Seasons on the earth are caused by the tilt of the earth on its axis.

GOAL OF SCIENCE LESSON

The seasons are caused by revolution of the earth around the sun and by the tilt of the earth's axis.

OUTCOME EXPECTED

- Student will be able to name and describe the four seasons.
- Student will be able to explain how each season affects our life.

RELIGION LESSON CONCEPT

- The Church's year of worship and prayer is called the Liturgical Year.
- The Liturgical Year is composed of seasons and feasts that remember and celebrate God's love for us.

GOAL OF RELIGION LESSON

Student will be able to name the liturgical seasons and the color associated with each season or feast.

OUTCOME EXPECTED

Student will be able to relate the liturgical seasons to the Sacred Story.

MATERIALS NEEDED

- Globe
- Model of the sun
- Seasonal pictures
- Art paper
- Crayons or markers
- Science Journal Page: REVOLUTION AND THE SEASONS
- Pen or pencil
- Small flashlight, laser pointer, or string

SCIENCE METHODOLOGY

- **ASK:** What changes do you make in your family life for the four seasons? For winter? For Fall? For Spring? For Summer?
- **ASK:** What causes the seasons?
- **HAVE** the student write that question on the Science

MATERIALS NEEDED

- Liturgical Year Calendar (classroom size) and/or individual desk sized Liturgical Year Calendars
- Piece of felt the color of current liturgical season to make a banner
- Rod to hang the banner
- Pattern for symbols on banner (See Links)
- Your church and/or pictures of the Church in the current season
- Construction paper: Violet, Purple, Green, White, Red
- Glue for felt
- Scissors
- Pencil
- Cord to hang the banner

RELIGION METHODOLOGY

VISIT your church or a church and describe the current liturgical season. If you can't visit the church use pictures of the church in the current season.

- **EXPLAIN** what the colors mean.
VIOLET: Advent – we wait for Jesus
WHITE: Christmas – we celebrate His coming.

Journal Page.

- **HAVE** the student write an answer on the Science Journal Page.
- **USE** and display the seasonal pictures to spark the discussion.
- **USE** the globe to show the tilt of the earth's axis (poles).
- **ASK:** What effect would the tilt have on our seasons.
- **SHOW** where you are located on the globe.
- **MOVE** the globe around the model of the sun – demonstrating revolution.
- **USE** the flashlight, laser pointer, or string to show that the sun's rays hit the earth at different angles as the earth moves around the sun.
- **USE** your city or state at the point of contact.
- **MOVE** the globe in an elliptical orbit around the sun.
- **STOP** four times: summer, fall, winter, and spring.
- **ASK:** When do we have summer? (Rays are most direct.)
- **ASK:** When do we have winter? (Rays are most indirect.)

WHITE: Epiphany – we look for His surprises

PURPLE: Lent – we suffer with Jesus

WHITE: Easter – we rise with Jesus to new life

RED: Pentecost - we receive the Holy Spirit

GREEN: Ordinary time – we grow in Faith.

- **TELL** the students that they are going to celebrate this season in a special way. They are going to make a banner.
- **GIVE** each student a job to do:
 - Trace the symbol patterns on felt pieces
 - Cut on the felt pieces
 - Trace the letters
 - Cut out the letters
 - Put the rod through the banner
 - Glue the letters
 - Glue the symbols
 - Tie the cord to the ends of the banner.
- **HAVE** a short prayer service to bless the banner and sing an appropriate seasonal hymn.
- **HANG** the banner in the classroom
- **POSIT:** Each season of the Church's year brings us closer to Jesus.
- **REMEMBER** to have the class take down the banner when that season is over.

- **HAVE** the students draw the positions of the earth at your summer and winter seasons.
- **DISCUSS** how we have invented items to adapt life to seasons: furnaces, air conditioning, man-made snow, indoor swimming pools.
- **POSIT:** Our lives are affected by the seasons on the earth. The seasons are caused by the tilt of the earth's axis and its revolution around the sun.

- **STEP 3:** Draw a picture in the rectangle and color a picture of your parent or guardian doing something for you.
- **STEP 4:** With your black crayon, divide the picture into smaller pieces like the pieces of stained glass in church.
- **STEP 5:** Under the stained glass window, write a thank you note to your parent(s) or guardians.
- **WHEN FINISHED,** review how God's light is reflected and how we receive the reflected light from our parents and guardians and we reflect God's light back to them.

RESOURCES, LINKS AND COMPUTER LESSONS.

Science Links

(Teacher) Activity based lesson. In this traditional investigation of the causes of the earth's seasons, children model Earth's movement around our Sun using Styrofoam balls and flashlights.

www.lpi.usra.edu/education/skytellers/seasons/activities/sequences.shtml

(Teacher and Student) video on seasons and tilt of earth on axis.

www.bbc.co.uk/science/space/solarsystem/earth/solsticescience.shtml

Religious Links

(Teacher) The seasons of the Church Year

<http://www.sundayschoollessons.com/churchyr.htm>

(Teacher) Liturgical colors and seasons of the church year in the United church of Christ

<http://www.ucc.org/search.jsp?x=15&y=6&query=liturgical+colors>

(Teacher) Some symbols and banner ideas; click on link then click on fridge art

www.domestic-church.com

(Teacher) Sample banners –simplify your design

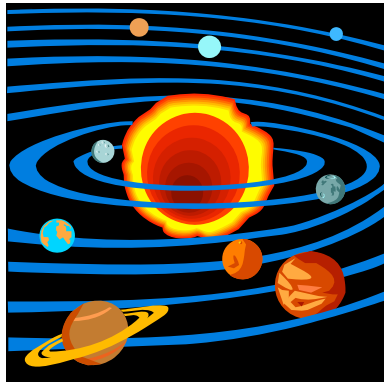
www.catholicsupply.com/churchs/tapestry.html

Computer Links

(Teacher and Student or Parent and Student) On-line planetarium show

<http://library.thinkquest.org/3461/>

KEY WORDS
EARTH SCIENCE – GRADE THREE- LESSON 4 - CA

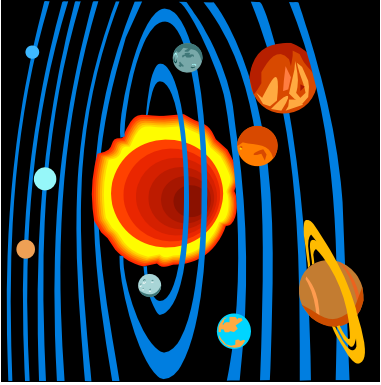


EARTH
REVOLUTION
SEASONS
SPRING
SUMMER
FALL
WINTER
AXIS
TILT
YEAR
ELLIPTICAL



LITURGICAL YEAR
SEASONS AND FEASTS
ADVENT
CHRISTMAS
LENT
EASTER
PENTECOST
ORDINARY TIME
CALENDAR

KEY WORDS
EARTH SCIENCE – GRADE THREE- LESSON 4 - CA



EARTH

LITURGICAL YEAR

REVOLUTION

SEASONS AND FEASTS

SEASONS

ADVENT

SPRING

CHRISTMAS

SUMMER

LENT

FALL

EASTER

WINTER

PENTECOST

AXIS

ORDINARY TIME

TILT

CALENDAR

YEAR

ELLIPTICAL