



Grade Level: Grade 4

Title:

Interaction among Things & Using Things Wisely

Denomination: Catholic

Lesson ID: LS-G4-01-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



LIFE SCIENCE - GRADE 4 - CATHOLIC LESSON 1: Interaction Among Things

GENERAL CONCEPT: Interaction among living things

SCIENCE LESSON CONCEPT

The interaction among living things can affect living and non-living things.

GOAL OF SCIENCE LESSON

Student will become aware of how many resources they use.

OUTCOME EXPECTED

Student will voluntarily limit the use of non-renewable resources.

MATERIALS NEEDED

BOTH OPTIONS:

RELIGION LESSON CONCEPT

We are charged by God to preserve and use things wisely.

GOAL OF RELIGION LESSON

God endows everyone with the responsibility of caring for the environment.

OUTCOME EXPECTED

Students will become active recycling agents.

MATERIALS NEEDED

OPTION ONE:

- Pictures of renewable and non-renewable things
- Science Journal Page: INTERACTIONS
- Pictures of unwise use of land (heavy timber cutting, erosion of fields, dumping old cars and appliances)
- Pencil or pen

OPTION 1:

- Bottle of water per student
- Hand Germicide

OPTION 2:

- A cold water faucet
- A bucket to catch the dripping water
- SIGN: PLEASE DO NOT SHUT OFF THE FAUCET. SCIENCE EXPERIMENT IN PROGRESS.
- Measuring device to measure water

SCIENCE METHODOLOGY

- **SHOW** the student the pictures of renewable and non-renewable resources.

- Pictures of places in which stewardship of land is wise
- Recycle bin
- Chart for recording family recycling that week

OPTION 2:

- Trash containers in the lunch room for 4th grade use only.
- Signs for trash containers: PAPER/CARDBOARD ONLY, CANS ONLY, PLASTIC ONLY, FOOD ONLY
- Plastic gloves for students

RELIGION METHODOLOGY

- **STUDY** the pictures of wise land use.
- **SORT AND CLASSIFY** the pictures.

- **ASK:** What determined the groups? (Item could be replaced; item could not be replaced.)
- **RECORD** the two groupings on the Science Journal Page.
- **ASK:** What can we do to prevent this from happening? (Recycle paper, glass, plastic)
- **ASK:** What is your prediction if there are no rules for the use of non-renewable resources?
- **RECORD** prediction on Science Journal Page.

OPTION ONE: DO THIS EXPERIMENT DURING A COOLER WEATHER TIME.

- **EXPERIMENT:** Tell the students that they are going to really limit their use of water during the day. Give each student a small bottle of water.
- **SAY:** This is ALL the water that you may use all day. Whatever you have to drink for lunch is OK. We aren't counting that liquid in our experiment. No hand-washing with water. You have to use the germicide.
- **PREDICT** on the Science Journal Page how thirsty you will be by the end of the school day. Rate it from # 1-

- **ASK:** What made this wise land use?
- **ASK:** The land user had another choice: What was it? (Unwise use)
- **ASK:** What would have happened to the land if the land user chose unwise practices?
- **ASK:** What makes good or bad land use?
- **ASK:** What will happen to the areas of bad use?
- **ASK:** Is there anything wrong with using the land unwisely?
- **ASK:** Why is this not God's plan for the earth?
- **MAKE** a recycle plan for the classroom. Post it.

OPTION ONE:

- **GIVE** each student the HOME RECYCLE RECORD SHEET.
- **HAVE** them make a recycle plan with their family.
- **AFTER** a week, check with the students about how well their families are recycling.

OPTION TWO:

NOT THIRSTY TO #10 – very thirsty. At the end of the day record you actual thirst level.

OPTION TWO:

- **SAY:** Water is a renewable resource. We can use it over and over. However, this doesn't mean that we should waste water. We use a lot of water each day. We take a bath or shower and fill the tub or let the shower run and run. We use dishwashers which use much more water than you would use washing the dishes at the sink. We let the faucet run when we want a drink of water. We hold the drinking faucet on so others can drink or we stop our drink and talk to someone and let the drinking faucet run and run.
- **SAY:** Let's predict how much water would be wasted if a faucet was dripping just a little bit for 2 hours.
- **TAKE** the class to the faucet you are going to use in the experiment. Be sure they have their Science Journal and a pencil with them.
- **TAKE** the sign about the experiment in progress with you.
- **TAKE** along the bucket.
- **SAY:** We are going to allow this faucet to drip just a little bit for 2 hours.
- **TELL** the students that the 4th graders will have special trash containers at lunch today. Only 4th graders will use these special containers. We will be doing a science experiment right after lunch today. There will be one container for paper and cardboard. There will be one container for plastic items only. There will be one container for cans only. There will be a trash container for food only. Be sure you use the correct containers.
- **DURING LUNCH** be sure the correct containers are used.
- **AFTER LUNCH**, close the plastic can liners and remove them from the trash containers.
- **HAVE** the 4th graders record how much trash they used.
- **TELL** the students to record the amounts of each kind of trash (1 bag, 1.2 bag, _ bag) of each kind of trash in their science journals.
- **ASK:** Is the paper/cardboard bag(s) renewal or non-renewal?
- **ASK:** How can we make it renewable? (Recycle)
- **ASK:** How about the plastics?
- **ASK:** How can we make it renewable?

- **HAVE** a student turn on the cold water faucet and then reduce the amount of water to a steady but small drip.
- **HAVE** the students record the time and have the student place a bucket under the drips.
- **HAVE** another student place the Experiment in Progress Sign by the dripping faucet.
- **RETURN** to the classroom.
- **ASK:** How much water do you predict will be in the bucket at the end of two hours? (1 cup, a gallon, half a bucket?)
- **HAVE** the students record the prediction amount in the Science Journal on the RENEWABLE & NON-RENEWABLE page.
- **SET** a timer for the two hours.
- **AT THE END OF THE TWO HOURS, COLLECT THE BUCKET AND SHUT OFF THE FAUCET.**
- **HAVE** the students measure the amount of water in the bucket and record in the Science Journal.
- **ASK:** How close were you in your prediction?
- **ASK:** How about the cans?
- **ASK:** How can we make some of the cans renewable? (Separate into aluminum and non-aluminum)
- **ASK:** How about the Food bag?
- **ASK:** Is there a way to make the food into a renewable resource? (Compost)
- **ASK:** How can you reduce the amount of trash you use in your lunch? (Take home container)
- **POSIT:** We are charged by God to be wise stewards of our resources.

- **ASK:** What did we learn about dripping water and water use in this experiment?

BOTH OPTIONS:

- **ASK:** What is one simple thing we can each do to cut down on our use of water?
- **SAY:** What can we do to wisely use this water from the bucket? (Water plants or lawn for example)
- **POSIT:** Each person can limit the amount of consumable resources we use with just a little thought and effort.

RESOURCES, LINKS, AND COMPUTER LESSONS

Science Links

(Teacher then student) Many Water Conservation games and activities. Scroll down. On the left hand side is the Kids Section.

http://www.mywinterhaven.com/us/water_conservation.htm

(Parent and student) Water Quiz

http://amwaterhydroschool.org/02_iq.asp?menu=2

(Teacher to print or have students go on-line and read)
Renewable and non-renewable resources

<http://www.woodmagic.vt.edu/Kids/RNR/RNR01.htm>

(Teacher) Information about resources and other links

<http://www.montanagreenpower.com/solar/schools.teacher.html>
1

Religious Links

(Student and teacher, student and parent) Stories and explanation of Catholic Social Justice Issues

http://www.stories4justkids.com/socjustice/sj_def4.html

(Teacher) Making a Catholic Social Justice Big Book Project

http://www.stories4justkids.com/socjustice/sj_cst47.htm

(Teacher) Ascension of Jesus picture – May be used as Jesus going to the Father and giving us his work to do here on earth. Copy and print the coloring page of the Ascension of Jesus.

<http://www.first-school.ws/t/cpascension.htm>

KEY WORDS – LIFE SCIENCE – GRADE 4
LESSON 1 – CATHOLIC



INTERACTION
LIVING THINGS
RESOURCES
RENEWABLE
NON-RENEWABLE
CLASSIFY
PREDICT

CREATION
STEWARDS
PRESERVE
RECYCLE
WISE
UNWISE
PLAN

KEY WORDS – LIFE SCIENCE – GRADE 4
LESSON 1 – CATHOLIC



INTERACTION

CREATION

LIVING THINGS

STEWARDS

RESOURCES

PRESERVE

RENEWABLE

RECYCLE

NON-RENEWABLE

WISE

CLASSIFY

UNWISE

PREDICT

PLAN