



National Farmers Union *“Planet Stewardship”*

Section 2: Grades 3-5

Contents:

Lesson 1: Living Sustainably* ~ 1 hour

Lesson 2: From Trash To Treasures ~ 1 hour

Lesson 3: The Groundwater Story* ~ 1 hour

Lesson 4: Watching Out For Wildlife* ~ 1 hour

Optional Activities

** Lesson contains a cooperative education component.*

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Lesson Plan 1: Living Sustainably

- Unit Objective:** Students will learn the importance of sustainable living.
- Grades:** 3-5
- Length:** 1 hour: 5 min. for opening activity, 15 min. for “What Makes a Co-op a Co-op,” 10 min. for introduction of background information and discussion, 30 min. for “Sustainability Checklist” and discussion
- Materials Needed:** Pencils, enough copies of “What Makes a Co-op a Co-op” and “Sustainability Checklist,” for each student, M&M’s
- Preparation Needed:** Make copies of “What Makes a Co-op a Co-op” and “Sustainability Checklist.” (Make double-sided copies to save paper.)

Background:

If everyone in the world lived an “American lifestyle,” it would require four earths to sustain that level of **consumption**! The average American family has 9,918 pounds of belongings. The average American is bombarded by approximately 3,000 advertisements per day urging us to buy more things. Every day U.S. consumers purchase 154,000 pounds of Starbucks coffee, 125,000 Barbie dolls and about 29 million cans of Mountain Dew. This type of lifestyle consumes a lot of **natural resources** and energy and creates a lot of trash.

Being a good steward of the Earth’s natural resources means being environmentally, socially and economically responsible. This is also known as **sustainability**. Sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Living sustainably is about making changes and choices, even small ones, that improve the quality of our lives while maintaining or improving the quality of our planet.

Teaching Strategy:

1. Open the lesson with the “Candy Arm Wrestle.” Have groups form pairs. Explain that in the game, the goal is to win as many M&M’s as possible. Candy is awarded as a result of points won. Demonstrate what each pair is supposed to do: grasp right or left hands with the elbows on the table (the traditional arm-wrestling position, but do not say that; only demonstrate it). Every time your partner’s hand touches the table you get a point and every time your hand touches the table your partner gets a point. When the leader says go, everyone will have 15 seconds to get as many points as possible. For each point won, that person will receive an M&M. Each person is responsible for counting his or her own points. No one is allowed to talk. Make sure that no pairing is such that someone could get hurt. Give the group 15 seconds.
2. The trick to the game is to not resist and have each hand touch as many times as possible, going back and forth, or to have one person’s hand just tap the table and share the treats. Watch to see if any of the pairs figured that out and call on them last. Ask who got the most points and how they did it. If no one got the point of the game, ask the group why everyone assumed it was a competition and brainstorm ways of doing it so everyone could win and not just the strongest people. Either way the game can lead to a nice discussion about cooperation and eventually sustainability.
3. *The principles of cooperatives are all about working for the best of the whole instead of just for yourself.* Hand out “What Makes a Co-op a Co-op” and pencils. *Take a look at these “Seven International Principles of Cooperatives” and circle all of the words or phrases that embody this concept. Let’s see how many we can find.* Ask people to call out any words or phrases in each of the cooperative principles. These may be big words and concepts for this age group. Be prepared with examples and definitions in simpler terms.
4. *Today we are going to expand this conversation about the spirit of cooperation in relation to the environment. Environmental stewardship requires living sustainably for the good of the whole, not necessarily what seems to be the best for you personally at any given time.* Introduce the background information above.

5. Hand out “Sustainability Checklist” and pencils. Have students individually consider things they always do, sometimes do or never do. Remind them that this is not to make them feel guilty about what they do or do not do, but to analyze what the impacts of all of our collective actions may be having.
6. Have them get into groups of two to four, depending on the group’s size, to choose two items from their “never” categories and discuss why they do not do these things and write the reasons on their sheets.
7. Next, ask the group to add to the list two extra things that people could do to help the environment.
8. Now ask each group to choose one of the statements and brainstorm the implications of the course of action for the environment if no one did it and if everyone did it.
9. After about 10 minutes, open a discussion about material possessions. *Think about your room at home. If there was a fire, what would you want to save? What items would be most helpful in an emergency? What items make you happy and truly make your life easier? What about the other items in the room? Why do you have them?*
10. Ask the group to proceed to the “Needs and Wants” section of the paper. Again, remind them that the point isn’t that they should not have things that they want. The message is that real needs are few and don’t cost much to the environment. Too many wants have collectively ended up costing quite a lot of the Earth’s resources. The goal is to have everyone think about the sustainability of their actions and weigh the costs and benefits of each decision they make, including what they consume.
11. Assemble back into the large group and pose the questions: *Why do people often not behave in a way that helps the environment? How can they be persuaded to change?* Have the small groups share some of the things they discussed in their small groups.

Sources: Lesson adapted from resources from PeaceGames.org, Oregon State Extension, <http://extension.oregonstate.edu/catalog/pdf/ec/ec1614.pdf> and Olliesworld.com

What makes a co-op a co-op?

The Seven International Principles of Cooperation

The following are Seven International Principles of Cooperation, which act as a code of practice for all cooperative ventures:

1. **Voluntary and Open Membership:**

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.

2. **Democratic Member Control:**

Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives members have equal voting rights (one member, one vote).



3. **Member Economic Participation:** Members contribute equitably to, and democratically control, the capital of their cooperative. Members allocate surpluses for any of the following purposes: developing their cooperative; benefiting members in proportion to their transactions with the cooperative; and supporting other activities supported by the membership.

4. **Autonomy and Independence:** Cooperatives are autonomous, self-help organizations controlled by their members. Agreements with other organizations must be done in such a way as to preserve autonomous member control.

5. **Education, Training and Information:** Cooperatives provide education and training for members, elected representatives, managers and employees so that they can contribute effectively to the development of the cooperative. They inform young people about the nature and benefits of cooperation.

6. **Cooperation Among Cooperatives:** Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, regional, national, and international structures.

7. **Concern for Community:** Cooperatives work for the sustainable development of their communities through policies approved by their members.

*Adapted from "Co-operative Young Leaders"
Ontario Co-operative Association (formerly CCA, Ontario Region)*

Lesson Plan 2: From Trash to Treasures

- Unit Objective:** Students will learn the importance of recycling, reusing and reducing waste.
- Grades:** 3-5
- Length:** 1 hour: 10 min. for puzzle, 10 min. for introduction of background, 20 min. for “Trash to Treasure” craft, 10 min. for composting video and discussion, 10 min. for “Recycling Relay”
- Materials Needed:** Pencils, one copy of pages 8, 9, 10, 11 and 12 (on cardstock and cut into puzzle pieces), old greeting cards, rulers, scissors, pencils, computer with Internet access, projector and screen or white wall, clean recyclable goods, a large beach ball, a bucket, a trash can and two recycle bins
- Preparation Needed:** Make copies of pages 8, 9, 10, 11 and 12 on cardstock and cut the pages into randomly shaped puzzle pieces. Distribute the puzzle pieces throughout the place where the lesson will be held so that the kids can find the pieces and bring them back to a table to be put back together. Make a sign for the “Recycling Relay.” Print templates and directions for recycled greeting card box (<http://www.allfreecrafts.com/christmas/images/templateboxes.jpg>) or another “Trash to Treasure” craft.

Background:

The average person throws away more than four pounds of trash each day! When you put your garbage in the trash can, you may not see it again, but it doesn't mean it disappears.

Most trash is taken to **landfills**, which are large, controlled dump sites. Once a landfill site is full, new land must be made available to take in our garbage. The landfill site will never go away. The more trash we make, the more land will need to be used for landfills.

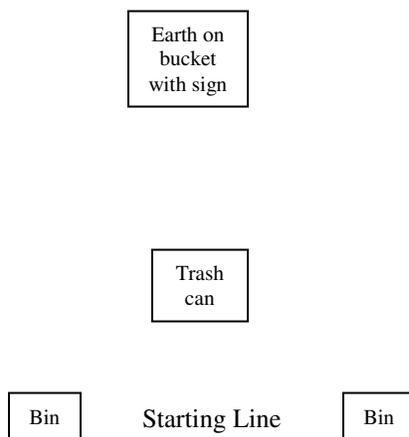
Because our **natural resources** are limited, it is important that we not waste or pollute them. By using the three R's -- **reducing**, **reusing** and **recycling** – we can **conserve** and **preserve** our natural resources. National Farmers Union supports recycling as a responsible activity that protects our environment and natural resources. Any time we can reduce our waste at home, at Farmers Union camp and at school helps protect the environment.

Teaching Strategy:

1. Before the lesson begins, distribute the puzzle pieces around the room. Put some of them around so that they look like they are trash littered about. As the children enter the space, see if they notice the pieces first, then suggest that they look like puzzle pieces and maybe they should work together to put the puzzle back together. Suggest the table they should use for placing the puzzles back together.
2. *How many of you thought those pieces were just trash when you walked into the room? Guess it goes to show that sometimes things we think of as trash can be made into something useful. Those puzzles you put back together are useful because they tell us the processes for how our trash is recycled. We're going to talk a lot about recycling today because it is one important way we can be good stewards of our natural resources.* Introduce the background information above.
3. *In addition to recycling, we can reuse things that we would normally throw away. There are many “Trash to Treasure” craft ideas out there. You could use your creativity to come up with some of your own. Today we're going to reuse old greeting cards by turning them into small gift boxes.* Hand out the box template (<http://www.allfreecrafts.com/christmas/images/templateboxes.jpg>) and boxes of old cards and supplies. Read or hand out printed directions (<http://www.allfreecrafts.com/recycling-crafts/greeting-card-box.shtml>). (Other “Trash to Treasure” craft ideas are available at <http://www.allfreecrafts.com/recycling-crafts/index.shtml>)
4. *We could reduce our household garbage by about 30 percent by handling our food better. More than 2/3 of the food we throw away is still edible, which wastes food and money. Leftovers can be stored in the refrigerator. Food*

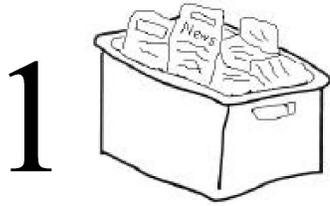
scraps that are not edible can be composted. Composting is great for the environment because not only does it reduce landfill space, it also creates nutrient-rich organic matter that improves our soil.

5. How many of your families or schools compost? There are several methods for composting, but here's a video that will explain how two different families use composting in their homes. Show the following YouTube video: <http://www.enviromom.com/2008/07/one-can-chall-3.html>. (The second to last button on the lower right will maximize the YouTube video to full screen.)
6. What are some benefits of composting household food and yard waste? (Doesn't require the purchase of expensive plastic bags often used for disposing household and yard waste, saves the cost of transporting waste, reduces pollution from landfills, creates nutrient-rich organic matter to improve the soil, saves money you might spend on mulch.) What are some of the possible problems with composting? (Too much work? Not enough space? Messy?) What suggestions do you have for solving these problems?
7. Finally, invite children outside for a "Recycling Relay." The object of the game is to recycle as many objects as possible in the time limit. Two teams are lined up at the start line. One player from each team races to the trash can, grabs an object from the can and runs around the Earth, represented by the ball on a bucket. Next to the Earth is a sign which indicates the number of laps around the Earth they must do for each type of recyclable product. (Paper=1 lap, cardboard=2 laps, aluminum=3 laps, plastic=4 laps). Once they have made their cycle around the Earth, they must run back, place their recyclable in the bin and move to the back of their team's line. After the set time limit is up, the groups count their recycled products and the team with the most recycled products wins.



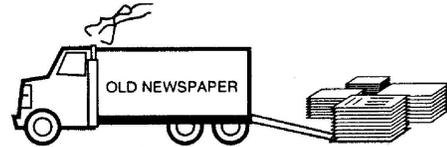
Sources: Lesson activities adapted from resources on AllFreeCrafts.com, FunAttic.com, Education-world.com and Enviromom.com.

Paper Recycling



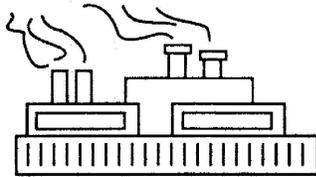
Old newspapers are collected at recycling centers or at curbside.

2



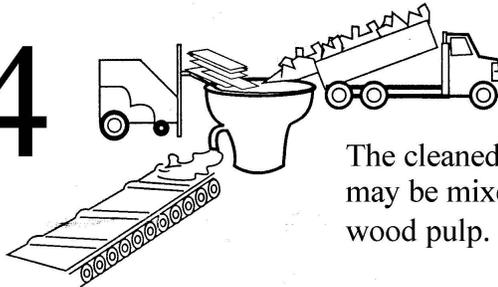
Collected paper is moved to a factory.

3



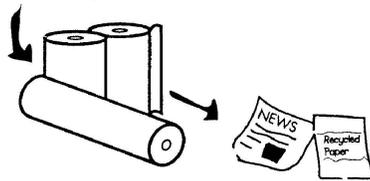
The ink is washed and rinsed away with water.

4



The cleaned newspaper may be mixed with scrap wood pulp.

5



The pulp mix is poured onto rollers and then made into recycled paper.

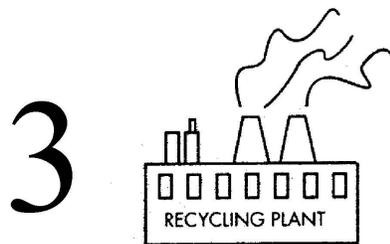
Aluminum Recycling



Aluminum is collected from curbside or recycling centers.



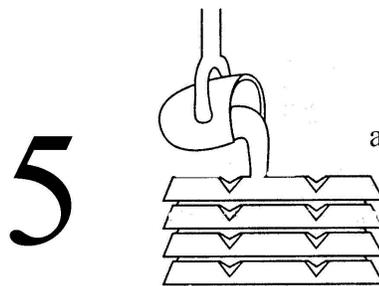
It is moved to a recycling plant.



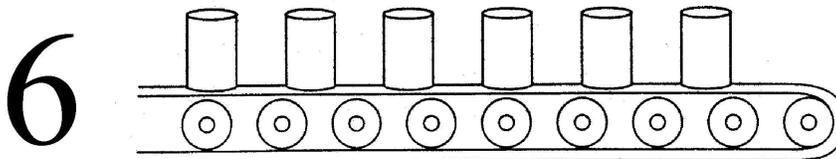
At the recycling plant the aluminum...



is melted...

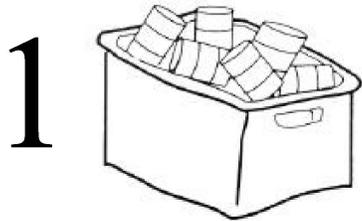


and poured into molds...



and shaped into cans, siding, and other products.

Steel Recycling



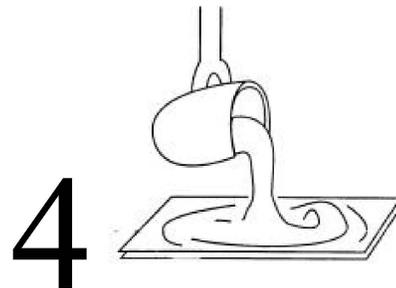
Empty steel cans are collected.



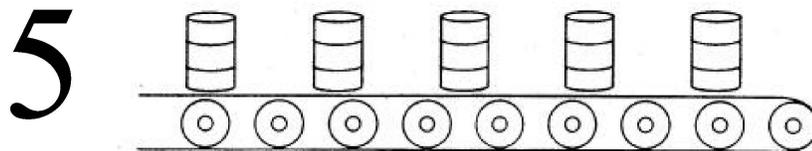
Steel cans and other steel products are moved...



to steel mills.



The steel is heated and poured onto sheets.



The steel is coated with tin and shaped into cans.

Plastic Recycling

1



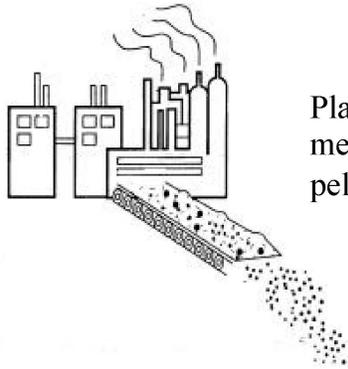
Different kinds of plastic are sorted.

2



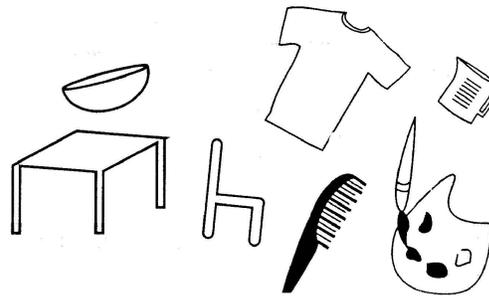
The sorted plastic is sent to a processing plant.

3



Plastics are washed, crushed, melted, and made into plastic pellets.

4



Recycled plastic pellets are used to make new things.

Glass Recycling



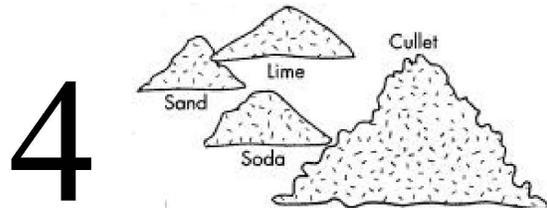
Glass containers are collected curbside at recycling centers.



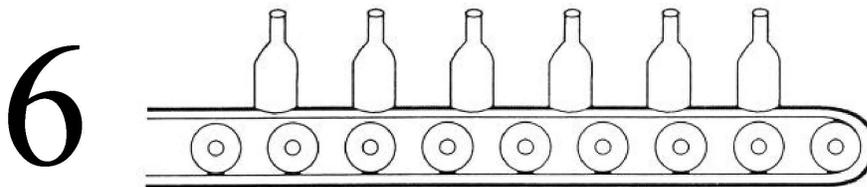
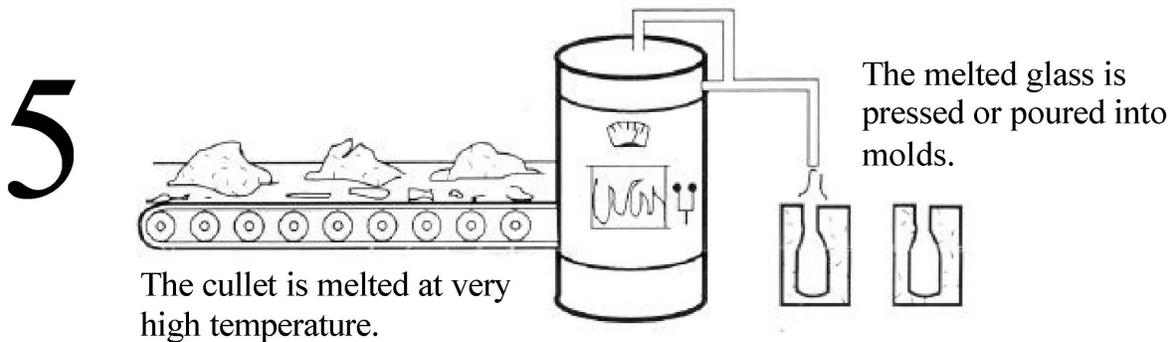
The containers are taken to a recycling plant.



The glass is sorted by color. It is crushed into small pieces called cullet.



Cullet is cleaned and then mixed with sand, soda ash, and limestone.



The molded glass is cooled and shipped for reuse.

Lesson Plan 3: The Groundwater Story

- Unit Objective:** Students will learn about groundwater and its pollutants.
- Grades:** 3-5
- Length:** 1 hour: 10 min. for “Water Charades,” 10 min. for opening discussion, background and animation, 25 min. for “Edible Earth Parfaits,” 5 min. for “Cooperative Groundwater Story,” 10 min. for “Fact or Fiction”
- Materials Needed:** Three pencils and three copies of the “Fact or Fiction” sheet, computer with Internet connection, projector and screen; red, grape or orange soda, vanilla ice cream (one 5-quart bucket yields 60 aquifers at one generous scoop per individual), clear soft drink (7-Up, Sprite, etc.), chocolate chips, cookie crumbs, variety of colored cake decoration sprinkles, drinking straws, clear cups and spoons for each child, an ice cream scoop, and something to write on at the front of the room such as a whiteboard and pens
- Preparation Needed:** Make three copies of “Fact or Fiction.” Download “The Groundwater Story” online video: www.groundwater.org/kc/groundwater_animation.html (Time to download depends on connection speed and how busy the site server is at the time.) Check with youth before conducting the “Edible Earth Parfaits” activity to see if any are diabetic or lactose intolerant. Make substitutions if needed.

Background:

The water in lakes, rivers or oceans is called **surface water**. Not all water is visible.

Groundwater is water that comes from underneath the ground. It comes from rain, snow, sleet and hail that soaks into the ground. Groundwater passes between particles of soil, sand, gravel or rock until it reaches a depth where the ground is full of water -- like a big sponge.

An area underground that holds a lot of water is called an **aquifer**. Water from aquifers can be pumped up with a **well** and be used in homes, businesses and to irrigate crops.

Groundwater and surface water sometimes trade places. In other words, groundwater can move through the ground and into a lake or a stream. Likewise, water in a lake or stream can soak down into the ground and become groundwater.

While most groundwater is clean, it can become polluted. When **pollutants** leak, spill or are carelessly dumped on the ground they can move through the soil into the groundwater. Because it is deep underground, groundwater pollution often is difficult and expensive to clean up. Some of the primary contaminants are gasoline, oil, battery acid, paint, household chemical cleaners, road salts, fertilizers, pesticides and other contaminants that can be found in landfills, storage tanks, lagoons and septic systems.

The protection of our groundwater resources is critical to our drinking water sources as well as to farming operations that produce our nation’s food supply.

Teaching Strategy:

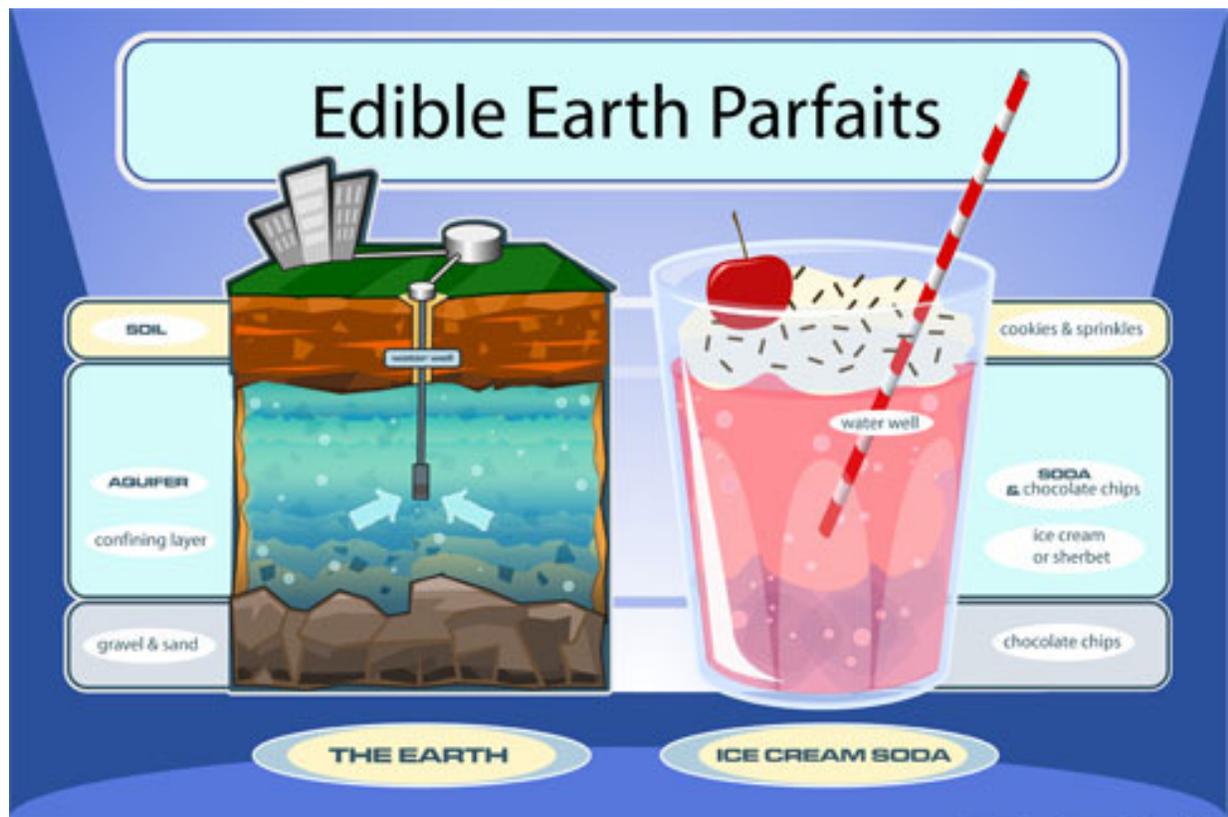
1. Open the lesson with “Water Charades.” Have a volunteer come to the front of the group. The leader whispers that they are supposed to act out one way that they use water. When someone has guessed their action, that person is invited to the front. The leader whispers the same instructions to the next person and so on. Break up the game after 10 min., or until at least one person remains. The remaining person or people must guess what all of the actions had in common.
2. Open a water discussion. *How much water do you drink each day? What’s your favorite thing to do with water?* (swim, water balloon fight, water flowers, drink it, take a bath) *What other ways do we use water that haven’t been mentioned?* (putting out fires, cooking, cleaning) *Where does water come from?*
3. Introduce the background information and play “The Story of Groundwater” online video.

4. Assist students in creating their “Edible Earth Parfaits” by filling each ingredient one at a time and discussing what each layer represents.
5. *What sorts of things could pollute our water? What do you currently do to conserve water? Is there anything else we can do as individuals to protect and conserve our usable groundwater?* (Pick up litter, never dump anything into storm drains, reduce, reuse and recycle, conserve water in the bathroom, kitchen and laundry, clean up after pets, properly dispose of any household hazardous wastes, walk or bike instead of riding in a car, reduce chemical usage on lawns, use environmentally safe cleaners rather than hazardous ones. We can also support family farms, which have historically been our best soil and water conservationists.)
6. Next the group will take turns building a “Cooperative Groundwater Story.” Start with the word “In,” and go around the room having each person take turns adding a word to the story related to groundwater. Explain that the story is over when everyone has said at least one word, they feel the full story has been told and the final two say “The End.”
7. Play “Fact or Fiction.” Divide the group into three smaller groups. Hand each group a copy of the “Fact or Fiction” statements. As a group, they must decide on a name for their group, pick a group reporter and agree whether they will declare each statement “fact” or “fiction.” (Explain they will be using some cooperative concepts in their groups such as democratic member control, “one member, one vote,” voluntary, open membership and autonomy and independence.) Once they have come to a consensus on each question, each group’s reporter comes to the front of the room. Write the group names across the top of the whiteboard with the numbers running down the left side. Go through the statements one at a time. Read the question, have the reporters declare their group’s answer, and write it on the board. Next, read the answer to the question, and circle those answers that are correct. (See key below.) In the end, count the number of circles from each group and declare the winning team.
8. The winning team must share their ideas for conserving and preserving freshwater supplies. Give the other teams the option of sharing additional ideas.

Key for “Fact or Fiction”:

1. FICTION – The average American uses 150 gallons of water per day.
2. FACT
3. FICTION – About 20 percent of the rain that falls in the U.S. becomes groundwater.
4. FICTION – About one-half of all people in the U.S. depend on groundwater for drinking.
5. FACT – 97 percent of the people who live in rural areas depend on groundwater.
6. FACT
7. FICTION – Only 1 percent of the world’s water is usable. The rest is either too polluted, too salty, or tied up in glaciers and ice caps.
8. FACT
9. FACT
10. FICTION – It is projected that by the year 2025, one-fourth of the world’s population will be in need of more water.

Sources: Lesson adapted from resources from King County Washington Groundwater Protection Program: <http://www.kingcounty.gov>. “Edible Earth Parfaits” was adapted from “Making A Bigger Splash,” co-published by The Groundwater Foundation and the US EPA, Region VII: <http://www.groundwater.org/kc/activity5.html>



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Materials Needed:

- Red, grape or orange soda
- Vanilla ice cream (one 5-quart bucket yields 60 aquifers)
- Clear soft drink
- Chocolate chips
- Cookie crumbs
- Colored cake decoration sprinkles
- Drinking straws
- Clear cups
- Ice cream scoop
- Spoons

Activity Steps:

1. Fill a clear plastic cup one-third full with chocolate chips to represent gravels and soils.
2. Add enough clear soda to just cover the candy.
3. Add a layer of ice cream to serve as a “confining layer” over the water-filled aquifer. Discuss what a confining layer is and does.
4. Then add more sand and gravel on top of the confining layer.
5. Colored sprinkles represent the porous top soil and should be sprinkled over the top.
6. Now add the colored soda, which represents contamination. Watch what happens when it is poured on the top of the “aquifer.” Point out that the same thing happens when contaminants are spilled on the Earth’s surface.
7. Using a drinking straw, drill a well into the center of your aquifer.
8. Slowly begin to pump the well by sucking on the straw. Watch the decline in the water table.
9. Notice how contaminants can get sucked into the well and end up in the groundwater by leaking through the confining layer.
10. Now “recharge,” or refill, your aquifer by adding more soda which represents a rain shower. It can also be re-polluted with more colored soda.
11. Review what you have learned as you enjoy eating your edible aquifer.

Activity Source: *Edible Earth Parfaits* was adapted from “*Making A Bigger Splash*,” co-published by The Groundwater Foundation and the U.S. EPA, Region VII. <http://www.groundwater.org/kc/activity5.html>

Fact or Fiction?

Circle "fact" or "fiction" and report answers to the group.



1. The average American uses 50 gallons of water per day for household and personal uses. *FACT or FICTION?*
2. The estimated supply of groundwater in the United States is 65 quadrillion gallons. *FACT or FICTION?*
3. About 10 percent of the rain that falls in the U.S. becomes groundwater. *FACT or FICTION?*
4. About one-third of all people in the U.S. depend on groundwater for their drinking water. *FACT or FICTION?*
5. Almost everyone who lives in rural areas depends on groundwater. *FACT or FICTION?*
6. In the U.S., agriculture accounts for about 40 percent of water consumption. *FACT or FICTION?*
7. Only 10 percent of the world's water is usable. *FACT or FICTION?*
8. If all the groundwater in the world was pumped to the surface, it would cover the Earth to a depth of about 10 feet. *FACT or FICTION?*
9. More than 63,000 chemical compounds are used in the United States, and some are potential hazards to our drinking water when they are not used and disposed of properly. *FACT or FICTION?*
10. It is projected that by the year 2050, one-fourth of the world's population will be in need of more water. *FACT or FICTION?*

Bonus Question: Brainstorm ways that people could cooperatively work together to conserve and preserve our freshwater supply.

Lesson Plan 4: Watching Out for Wildlife

- Unit Objective:** Students will analyze the costs and benefits of wildlife protection.
- Grades:** 3-5
- Length:** 1 hour: 10 min. for introductory discussion and background information, 25 min. for “Animal Tag,” 10 min. for “Handmade Habitats,” 15 min. for “Food Web”
- Materials Needed:** Labels, two bags of snacks, a couple balls of yarn, a beach ball, markers, various colors of construction paper, scissors and glue sticks
- Preparation Needed:** Make sure all snacks comply with any food allergies or intolerances in the group. Divide snacks into two sacks or boxes. Make sure there aren’t enough snacks for everyone participating in “Animal Tag.” (Snacks can be given in the end to those who did not get snacks in the game.)

Background:

Wildlife depend on the environment for their survival. If cold spring weather damages plants, wild animals can have too little food. If a wildfire comes through, shelter and food sources can be destroyed. If natural predators disappear, other types of animals may suffer from **overpopulation**. If too much of an animal’s natural **habitat** is taken over by urban development or harvested farming acres, the wildlife will compete for limited shelter and food.

It is very important to protect wildlife and **endangered species**. Farmers Union members believe it is also important to consider the economic and cultural impact these environmental protections would have on agriculture. The critical habitat designated for threatened species by the U.S. Fish and Wildlife Services can sometimes infringe upon the **property rights** of agricultural producers and other landowners. National Farmers Union policy says farmers and ranchers should be compensated through federal policy that provides meaningful incentives for providing habitat to endangered species.

Good stewardship of natural resources strikes a balance so that all members of the Earth’s **food web** -- humans, plants and animals alike -- share in the Earth’s benefits.

Teaching Strategy:

1. *Imagine for a minute that everyone in this room and your families had to live in one house? What might happen? Or suppose the trucks that brought food to the stores stopped running? What could happen?*
2. *Situations like these can happen in the wild.* Introduce background information above.
3. Distribute labels to students with the names of the animals on them: healthy buck, healthy doe with fawn, healthy fawn, weak fawn, old sick buck, young male coyote, young female coyote with pup, large wolf, bull moose, old sick moose, quick young fox, old wise fox, bobcat, snake, hawk, wild boar, and many smaller animals such as a young rabbit, lame rabbit, female rabbit with babies, squirrel, field mice, sparrow, wild turkey, quail, etc. In addition, make labels for the human hunter, hungry human and the harvesting human.
4. Have two bags of snacks (which represent plant life) with fewer snacks than students. Announce that there is food for the animals in the bags. The **herbivores** can only eat the snacks. (A deer is an herbivore because it only eats plants.) **Carnivores** can only eat the animals that they can feasibly catch in the wild. (A wolf, bobcat and snake are carnivores because they only eat other animals.) The larger the carnivores, the more or larger prey they’ll have to eat. **Omnivores** can eat the snacks or other animals that they can catch. (Humans are omnivores because they can eat both plants and animals.) The strong prey could escape, but when a carnivore or omnivore tags a lesser animal, they must run the rest of the game holding that animal’s hand. The tagged animal’s food does not re-enter the food supply. It becomes the carnivore or omnivore’s. Ask all not to eat the snacks until you give permission.

5. The animals have five minutes to fend for themselves and decide upon any other “laws of the jungle.” Play the game first with only animals. After five minutes, ask them to freeze where they are. *After the food is distributed, who remains unfed? What would likely happen to them? Who has been tagged and by whom?*
6. Reenact the scene again by taking some of the tagged animals out and giving them the human labels. The harvesting human and hungry human get the first five seconds of play to go through the snacks and take what they want, knowing that the rest has to be dispersed to the rest of the animals. The hunting human and hungry human can also “kill” any animal by tagging it, or they could decide to take food to any animal. After five more minutes of play, stop and ask what changed in the game that time. *What would happen if the human couldn't have hunted or didn't harvest the crops? What might have happened to the animals? The human?*
7. The game could be played a third time with a “forest fire” scenario. Only one bag of snacks will be available. It's every human and animal for themselves. The humans do not get first dibs on the snacks. In this desperate situation, everyone scrambles for as much food as they can get.
8. *What observations can they draw from all of the games? How can human behavior affect animals' food sources? What are positive ways? Negative ways? What do people gain and give up when they set aside land for animal habitat? How does hunting by humans play a role? Positive ways? Negative ways? How would the deer population be affected if hunting was not allowed, or if all their natural predators disappeared? How do disasters such as wildfires impact the situation?*
9. Have the group share any extra snacks they have with those who don't have any and add the extra snacks into the “food web.” Give permission to eat their snacks.
10. While the children are snacking, hand out pieces of construction paper with crayons, markers, scissors and glue sticks. Introduce the following scenario. *You have just inherited 20 acres of land from a distant relative! It is your responsibility now to decide how you will utilize the land so that all animals in the food web have ample places to roam, make homes and eat. Draw your plan of what you think the perfect balance would be on your land. Habitats you might consider are ponds, streams, trees, crops, native prairie grasses, wildflowers, and even homes (for humans).* Afterward, have a few kids share their “Handmade Habitats” with the rest of the group.
11. Create a “Food Web.” The children get to be their animals from the opening activity again. They will stand in a circle, one of the “humans” holds the ball of yarn and tosses it to another animal in the group. Each animal holds on to the yarn when it comes to them and tosses the ball at the end to someone else. If the ball runs out before all animals have participated, tie another ball of yarn to the end and keep going until all animals are holding part of the web. Explain that the result represents a food web that makes the world go ‘round. Toss a beach ball onto the web and have the group work together to make the ball go around the circle. After the ball has been tossed around for a while, ask the carnivores to let go of their parts of the web and continue playing. Then ask the herbivores to drop their parts of the web and continue playing. The result is a collapsed food web. Explain that when one part of the food web breaks down, the other organisms can't survive. *“Planet Stewardship” is about the good of the whole, just like with cooperative business principles.*

Sources: Activities adapted from resources from the North Carolina Forest Stewardship Activity Guide, <http://www.ces.ncsu.edu>.

Optional Activities

The following activities could be incorporated at the end of any lesson to fill extra time.

1. Have the kids draw pictures of some of their ideas about Planet Stewardship.
2. Invite representatives of your local conservation districts to make a presentation on what is being done locally to conserve natural resources.
3. Lead them in the “Natural Resource Stewardship Bracelet” craft from Lesson 1, Farmers Union Planet Stewardship Curriculum, Grades 1-2.
4. Play hangman, charades or a word scramble with some of the bolded words in the background of each of the lessons.
5. Organize young people for a community conservation or beautification project. Have the group plant trees in the community.
6. Have students create posters, jingles, slogans, advertisements or other forms of promotion to convince others to be good stewards of natural resources.
7. Teach some Farmers Union songs. Provide an opportunity for the kids to sing the new songs they have learned to another group.