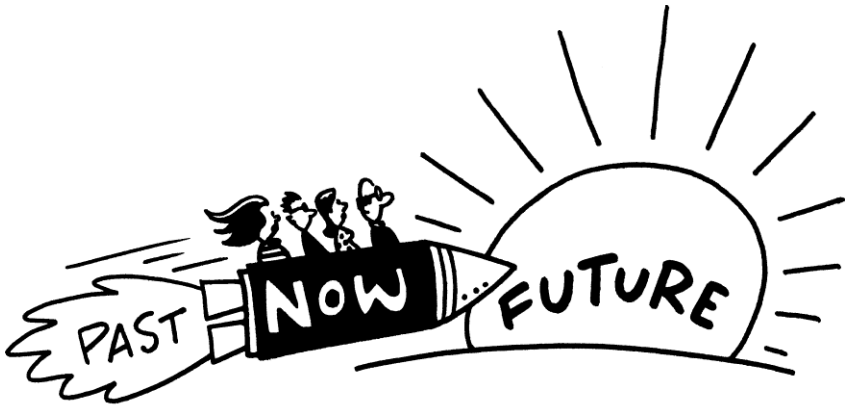
National Farmers Union

"Understanding Your Past, Looking Forward to Your Future"



Section 1: Grades 1-2

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Lesson Plan 1: Making My Own Timeline

Unit Objective: Students will learn how to make their own timeline.

Length: 1 hour

Lesson from: www.education.com

Materials Needed: 6-7 strips of paper for each student /tape / colored pencils/ markers/crayons

Preparation Needed: *Prior to the lesson, please read the Farmers Union History worksheet. Make an example timeline of the Farmers Union history to show the class. The timeline can be in any style that you wish.*

1. Ask students if they've heard of a **timeline**, or a series of events in order of time.
2. Talk about what a timeline is and how it is used. Ask students how they think a timeline may be useful.
3. Pass out the first page of the *What is a Timeline?* Worksheet.
4. Explain that this worksheet represents a daily timeline, but that timelines can represent days, weeks, months, years, or any other denomination of time.
5. Show students the Farmers Union timeline that was made before the lesson, walk through the timeline with the students
6. Review the timeline worksheet with the class, answering any questions students have as you go.
7. As a class, create a timeline of daily events that happen in the classroom.
8. The timeline can be created using a whiteboard, or by having students write down events on paper and putting them in the right order as a class.
9. Ask students to think of events that have happened in their own lives during the past year, such as their birthday, the first day of school, vacations, and holidays, in preparation to create their own timeline.
10. Once students have brainstormed their life events, have them create a timeline and place the events in the right order with labels. Have students model their timelines after the worksheet.
11. Remind students that this is a timeline of events of what has happened in the past year, so the labels will involve the months of the year.

Making the timelines:

Materials:

- 6-7 strips of paper for each student
- Tape
- Colored pencils, markers, crayons

1. Provide each student with a strip of paper for each event they would like to include in their timelines (or construction paper, if you wish), and have students write about the event on the strip. If desired, you can have students illustrate the event, too. Then, have students link each chain event together to create a timeline chain.
2. You can make a timeline chain for Farmers Union OR for each student.

Lesson Plan 2: What on Earth Are Natural Resources?

Unit Objective: Students will learn the identity and value of the Earth's natural resources.

Grades: 1-2

Length: 1 hour: 10 min. for "A Stewardship Story" discussion, 10 min. for introduction of background information and discussion, 10 min. for "The Stewardship Shuffle" and discussion, 30 min. for "Natural Resource Stewardship Bracelets" activity.

Materials Needed: Pencils, copies of "A Stewardship Story" and "The Stewardship Shuffle" for each child, elastic string and a variety of colored craft beads (See "Natural Resource Bracelets" instructions for colors) and prizes (optional).

Preparation Needed: Cut seven-inch sections of elastic string for each child. Separate craft bead colors for "Natural Resource Bracelets." Make copies of "A Stewardship Story" and "The Stewardship Shuffle" for each child.

Background:

Soil, water, air, wildlife, trees, minerals, oil: these and other raw materials supplied naturally in the environment are known as the Earth's **natural resources**. Many people fail to value our natural resources, although without them, life would not exist.

We, as humans, cannot create natural resources, but we can and do impact them. Because many of our natural resources, such as water, soil, fossil fuels and minerals are **non-renewable**, or in limited supply, it is important that we do not waste or pollute them. It is the responsibility of all human beings to be good **stewards** of the Earth's natural resources. Stewardship is the wise use and **conservation** of natural resources.

Family farmers, ranchers and fishermen display good stewardship as they work hard to protect our soil, water and air. They need these resources to produce our food and fiber. They know that if they're good to the Earth, it will be good to them. That's what planet stewardship is all about.

Teaching Strategy:

1. Open the lesson with "A Stewardship Story." Have children take turns reading each paragraph and the questions that follow.
2. Introduce the background information above. *What would happen if someone upstream from your town dumped harmful chemicals into the river? If our water became polluted, how would we create more water? If your neighbors decided to cut down all of the trees around where you live, how would that impact you? Those natural resources are ours to share and we must be careful to conserve and protect them.*

3. Hand out "The Stewardship Shuffle" with pencils. Allow time for students to fill out the sheets on their own. Take time afterward to go over the answers and lead them in a discussion. *Which of these activities do you do already? Which of these activities would be easy to do now that you know it can help protect our natural resources and our Earth? What other stewardship activities can we think of?*
4. *Next, we're going to create natural resource stewardship bracelets to remind us how important natural resources are in our daily lives.* Follow the directions on the "Natural Resource Stewardship Bracelets" sheet for leading this group craft.
5. Once the craft is completed, ask volunteers to recite what each of the beads on their bracelets represent for a chance to receive a special prize. Encourage them to wear their bracelets throughout the event and after they get home as a reminder to be good stewards of our planet's natural resources.

Key: Page 4: air, trees, fossil fuels, water

A Stewardship Story

Once upon a time, a little girl received a special bottle of perfume from her grandmother for her birthday. Her grandmother told her that the perfume was quite valuable. She had received the large bottle of perfume from her mother, and this particular brand was no longer being produced.

She encouraged her granddaughter to take good care of it, so it could last her lifetime and one day be passed on to her daughter.

The little girl valued the perfume very much. For years, she would use a single drop of the beautiful perfume on the most special occasions. As she grew up, she carefully protected the special perfume to make sure none was carelessly spilled.

When she had a daughter of her own, she told the girl the story behind the perfume. She told her daughter that her grandmother had entrusted her with this valuable perfume, and it was her turn to enjoy it.

The daughter loved the perfume and found many uses for it. She put it on her dolls, she poured it in her bath water and she left it out on the dresser without the lid where it would easily spill over. In a short amount of time, the rare and beautiful perfume that had been passed down for generations was completely gone.

Discussion Questions:

1. Who was the better steward of the perfume, the mother or the daughter?
2. How did the daughter's actions differ from her mother's?
3. How do you think the daughter felt before and after the perfume was gone?
4. How do you think her mother felt when she discovered the perfume was gone?
5. Have you ever been asked to take care of something that wasn't yours? What happened? How did that make you feel?
6. What precious gifts does "Mother Earth" entrust to us?
7. In what ways do we act like the mother in the story when it comes to these gifts? In what ways do we act like the daughter in the story?
8. How can we be good stewards of our natural resources to make sure they last a lifetime?
9. How can we make sure these natural resources can be passed down to our sons, daughters and grandchildren?

The Stewardship Shuffle

First, fill in the blank with the correct name of the natural resource pictured. Next, draw a line connecting each natural resource with acts of good stewardship that could help conserve and protect them for future generations. Each natural resource may have more than one action associated with it. Each action may impact more than one resource.

___ ___ ___

___ ___ ___ ___ ___

Plant one.

Ride a bike.

Recycle paper.

Walk to school.

Take a shorter shower.

Pick up litter.

Use fuels from the farm.

Do not flush trash.

Do not over-fertilize lawns and fields.

Do not pour chemicals down the drain or on the ground.

Properly seal containers that contain chemicals that could evaporate.

___ ___ ___ ___ ___ ___

___ ___ ___ ___ ___

___ ___ ___ ___ ___

Turn off the faucet while brushing your teeth.

Prevent soil erosion.

Recycle plastics.

Natural Resource Stewardship Bracelets

Materials Needed:

- Stretch Magic clear, elastic string or other type of elastic string
- Medium-sized red, brown, black, white, blue, gold, green, orange, turquoise and yellow beads (1 of each color bead per student)
- Smaller silver beads (more beads needed for filler)

Activity Steps:

1. Give each student approximately seven inches of elastic string. Have beads divided on paper plates with labels of what each color represents. For large groups, the beads could be divided into bags for teams to sort through when each color is introduced by the leader.
2. Have the students string the beads on their bracelets while the colors are being introduced. Explain what each item represents and its importance to agriculture and their daily lives:

   a. **Red beads represent soil**, the basis of life. Healthy soil is necessary for growing plants and animals. It must be protected from erosion, nutrient depletion and pollution.

   b. **Brown beads represent organic matter.** Organic matter is necessary for healthy soil. Old plant and animal material that is broken down in the soil becomes organic matter, which helps the soil absorb water and provides habitat for soil organisms.

   c. **Black beads represent fossil fuels.** Fossil fuels, such as oil and coal, are created from organic matter. However, fossil fuels are considered to be non-renewable because they take millions of years to form and reserves are being depleted faster than new ones are being formed.

   d. **White beads represent minerals.** Minerals are considered non-renewable natural resources because their production by Earth's forces cannot keep up with their consumption by humans. Minerals are used for agricultural fertilizers, building materials, dietary supplements and many other purposes.

   e. **Blue beads represent water.** All living things require water to live, but only one percent of the world's water is usable. So, it is crucial to conserve and protect the Earth's water supply.

   f. **Gold beads represent sunlight.** Humans and animals need the sun for warmth and for healthy plants, which require sunlight for photosynthesis to produce food for themselves and oxygen for animals and people.

   g. **Green beads represent trees.** Trees help cleanse the environment, prevent erosion and are natural buffers to harsh weather conditions and noise pollution.

   h. **Orange beads represent animals.** Animals provide nutritious food and many other products we use every day.

i. **Turquoise beads represent plants.** Plants provide food and oxygen for people and animals. They also help keep soil in place to prevent erosion. Plants are renewable resources.

j. **Yellow beads represent renewable fuels from the farm.** Yellow is the color of corn, which is an important renewable resource that feeds people and animals and is also one of several agricultural products that can be used to create renewable fuels that we put into our cars.

k. **Silver beads represent air.** Air is a precious natural resource that is all around us. The air we breathe can become polluted from many sources and must be protected.

3. Have students space out their bracelets with enough silver beads and leftover string to fit their wrists. The leftover string should be used to tie in a double knot. The excess string should be cut and tucked into one of the beads on the bracelet.
4. Throughout the day, ask for students to volunteerto recite what each of the beads on their bracelets represent for a chance to receive a special prize.
5. Encourage students to wear their bracelets as a reminder to be good stewards of our planet's natural resources.

Lesson Plan 3: Sold On Soil

Unit Objective: Students will learn the importance of soil and the farmer's role in caring for it.

Grades: 1-2

Length: 1 hour: 15 min. for background information and opening discussions about soil, 5 min. for "Dirt Made My Lunch" song, 15 min. for "Soil Circle," 15 min. for discussion about soil types and "Particle Parade," 10 min. for composting video and discussion.

Materials Needed: Pencils, a basketball, a baseball, a marble, a computer with Internet connection, a projector and a screen or white wall.

Preparation Needed: Make copies of "Dirt Made My Lunch" lyrics for each student. Set up computer and projector if utilizing the online composting video.

Background:

Everything we need for life starts with soil. Plant roots need oxygen from the air, water, and nutrients to survive. About one-half of soil is made up of pores full of air and water. The other one-half is made up of **minerals** and **organic matter**. Some of the nutrients in the organic matter and minerals dissolve in the water so plants can absorb them.

Farmers take special care of the soil because they know that whatever they want to grow on their land is only as good as the soil that it's grown in. They make sure the soil has the right nutrient levels and the correct consistency for the type of plant they want to grow. They work to protect the fertile **topsoil** from **erosion** from water or wind by planting trees for windbreaks, grasses in waterways and high-density crops. Many farmers also rotate their crops so their soils can renew their organic matter. Many also employ soil-friendly minimal tillage or **no-till** practices to prepare their fields. These and similar activities collectively are referred to as **soil conservation** techniques.

We can help improve the soil by turning things we often put into the trash into **compost**. About 30 percent of our solid waste is valuable **biodegradable** material that can be used to improve soil. Food scraps, leaves, grass clippings and other biodegradable organic wastes can be recycled through composting. Through **decomposition**, microscopic organisms break organic wastes into nutrients that can be used by plants and animals.

Teaching Strategy:

1. Introduce the background information above.
2. *Can anyone think of anything that we eat that doesn't originate from the soil? What about cheese? Well, cheese is made from milk, which comes from a cow, which eats grass, which grows in dirt. What about eggs? Eggs come from chickens, which eat grain, which is grown in the dirt. The fact is, everything we eat comes from dirt!*
3. *I have a song about this. Let's learn it together!* Teach the song "Dirt Made My Lunch."

4. Have students create a “Soil Circle.” Have students stand in a circle and the leader starts the game off with naming an object such as “book.” The next person in the circle must say something the book is made of, “paper.” The next person in line must say something paper is made from “pulp,” the next person should say “tree,” the person after that can say “SOIL!” The next person in the circle then comes up with another item and the circle continues. If someone in the circle becomes stumped, the game starts over with the leader again. The game is over when the circle is complete and the last person says “SOIL!”
5. *Try to remember a time when you played in the soil. Did it feel soft sometimes and gritty at other times? It can feel different from one time to another depending on what is in it.* ***Sandy soil*** *is made up of mostly sand particles. It feels gritty and allows water and air to move through it.* ***Silt*** *feels like flour when dry and very smooth and soft when moist. Silt particles keep the soil softer and easier to plow than soils with too much clay.* ***Clay soil*** *has mostly clay particles, some organic matter, silt particles and a little sand. Clay particles are very fine and are the smallest of the three soil particles. Clay is sticky when wet and hard like bricks when dry*.
6. *Sand, silt and clay particles are different sizes. Imagine a piece of sand is the size of a basketball. (Of course it’s not that big in real life, but in relation to the other types of soil it is quite large.) If the sand is the size of a basketball in this illustration, a silt particle would be the size of a baseball and a clay particle would be smaller than a marble*.
7. Ask for seven volunteers to join you at the front of the room for a “Particle Parade.” The first six will represent soil particles; the seventh will represent water.
8. Have the six students hold their arms out straight and touch fingertips with each other. They are now sand particles. Have them put their arms down and have the water flow between them. Since sand particles are large, it is easy for the water to move freely between the particles.
9. Next, have the students stand with their hands on their hips with elbows sticking out and touching each other. They are now silt particles. Have them put their arms down and ask the water to flow between them. Silt particles are smaller than the sand so it is more difficult for water to flow between them.
10. Last, have the students hold their arms at their sides and move in to touch shoulders with each other. They are now clay particles. Have the water try to move between them. Since clay particles are so close together it is difficult for water to move through them.
11. *Why is soil so important to the farmers and ranchers who grow our food and fiber? How might the various types of soil impact crop production*?
12. *How many of you have tried composting before?*
13. *What are some benefits of composting household food and yard wastes?* (Doesn’t require the purchase of expensive plastic bags often used for disposing household and yard wastes, saves the cost of transporting wastes, 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?*

Sources: Lesson activities adapted from South Dakota Ag in the Classroom, www.sdagclassroom.org

Dirt Made My Lunch

CHORUS:
Dirt made my lunch,
Dirt made my lunch.
Thank you Dirt, thanks a bunch,
For my salad, my sandwich
My milk and my munch 'cause
Dirt, you made my lunch.

VERSE 1:
Dirt is a word that we often use,
When we're talkin' about the earth beneath our shoes.
It's a place where plants can sink their toes;
And in a little while a garden grows.

CHORUS

VERSE 2:
A farmer's plow will tickle the ground,
You know the earth has laughed, when wheat is found.
The grain is taken and flour is ground,
For making a sandwich to munch on down.

CHORUS

VERSE 3:
A stubby green beard grows upon the land,
Out of the soil the grass will stand.
But under hoof it must bow,
For making milk by way of a cow.

CHORUS

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