LESSON 6: Environment

ACTIVITY OPTION 1

<table>
<thead>
<tr>
<th>OBJECTIVE this activity supports: Introduction to lesson</th>
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<tbody>
<tr>
<td>MATERIALS NEEDED</td>
</tr>
<tr>
<td>• Market Maria, Enviro Myra, and Money Max puppet faces</td>
</tr>
<tr>
<td>• Paper bags for hand puppets</td>
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<tr>
<td>TIME</td>
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<tr>
<td>2 to 3 minutes</td>
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</table>

Scene: Market Maria is watering the lawn. (Use a piece of water hose and Christmas tree icicles to simulate watering.)

Market Maria: (Singing) What makes that little ol’ ant think he can move a rubber tree plant...Anyone knows an ant can’t move a rubber tree plant...But he’s got high hopes...

Enviro Myra: Hey, Maria! What are you doing?

Market Maria: Watering my plants.

Enviro Myra: Didn’t you just water them yesterday?

Market Maria: Yes.

Enviro Myra: Come to think of it, didn’t you water them every day this week and almost every day last week too?

Market Maria: Yes, I did. They have beautiful flowers, but they use an awful lot of water.

Enviro Myra: Well, Maria, have you ever thought about using plants that need less water or plants that grow naturally in this area?

Market Maria: No, why?

Enviro Myra: Because, silly, they use less water. If you use less water on your plants you can save water for us to use later and cut utility bills! Also, the flowers that grow naturally here are some of the most beautiful ones.

Money Max walks through and drops a candy wrapper.

Enviro Myra: Max! Don’t throw your trash on the ground. Here we are talking about making the environment beautiful, and you’re polluting it by throwing a wrapper on the ground. You guys need to come with me. I know a place we can to learn about how to keep our environment beautiful and litter-free.

Money Max: Hey, that sounds good!

Market Maria: Let’s go!

All three start moving off the stage singing:

High hopes, he’s got high hopes, he’s got high, apple pie-in-the-sky hopes...

When we buy things and when we use them, we are making consumer decisions that make our environment healthy or unhealthy. Our lesson today will make us think before we consume so we will make choices that make and keep our environment healthy.
LESSON 6: Environment

<table>
<thead>
<tr>
<th>ACTIVITY 2</th>
<th>Native Plants Tour</th>
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<tbody>
<tr>
<td>OBJECTIVE this activity supports: Recognize importance of native plants to enhance beauty of environment and save consumer dollars in landscaping.</td>
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<tr>
<td>MATERIALS NEEDED</td>
<td>Nursery owner, garden club member, or someone else who is knowledgeable about plants in your area. Have questions listed at the end of the introduction below written on individual cards so each team will have a question to answer at the end of the tour.</td>
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<tr>
<td>TIME</td>
<td>50 minutes</td>
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Leader Preparation

Schedule a tour with a local wholesale or retail nursery or garden center.

Instructions

INTRODUCTION: When we make a consumer choice, we make a decision about using natural resources. Our choices may or may not help keep our environment healthy. Which choice is healthier for our environment—walking, riding a bike, or riding in the car to visit a friend? (Let the students answer: walking or riding a bike is healthier.) Is making lemonade from fresh lemons or using individual pre-mixed drinks more environmentally healthy? Some choices mean making two or three choices at once that affect our environment. An example is choosing plants to use at our home, school, or community park. We will tour a nursery today. Choose a partner, and listen carefully to find the answer to the question on your card. At the end of the tour, you will share your answers, and our tour guide will help us be sure we're right.

To Play:

Schedule a tour at a local wholesale or retail nursery or garden center. Inform the employees of your consumer life studies of native plants and the environment. Explain that you are working with 9- to 11-year-old youth. Ask them to guide the youth through their nursery or garden and share their knowledge about native plants. Topics to cover should be:

- plants native to your area.
- native plants they have for sale.
- the cost of native plants compared to other plants available.
- water usage comparing various types of plants.
- growth patterns of the plants and where they grow (full sun, shade, etc.).
- how to read plant care labels and compare labels of native and non-native plants.
The tour should take about 20 minutes, to be followed by 10 to 15 minutes for questions. Here are your questions.

- What kind of plants are best for our environment here where we live?
- How does the type of plant make a difference in the amount of water and other care that plants need?
- What plant would you choose to plant in (chosen community site)?

At the end of the tour, ask all teams that have the same question to give their answers and see if they agree. Then ask the tour guide to decide if they are correct, and, if not, to tell the group the correct answer.

**ADD TO IT**

In addition, you may have older youth draw diagrams of their yards, if they have one, or a yard (real or imagined) they think is ideal. Then have them find native plants at the nursery that would fit in their landscapes, considering factors like the amount of shade and sunlight available; the type of soil; the position of buildings, sidewalks, and driveways; and drainage of rain water.

This project can also be turned into a community service project. This approach can be particularly helpful if the young people in your group don’t live in houses with yards. Choose a part of the school grounds, a vacant lot, or a part of the grounds around a community housing unit where the youth can choose, plant, and care for a native plant flower bed. A community organization or the nursery you visited might fund the project, or the youth could raise the money with a recycling project (a garage sale or a can or paper collection drive).

**SUMMARY:** Native plants help beautify our environment while conserving water. Native plants may often be bought from local nurseries at a lower cost than plants unconditioned to the climate. By adding up the total care cost, you can make an informed choice of cost-efficient plants.

**DISCUSSION QUESTIONS:**

✓ What makes native plants a wise choice for environmentally smart shoppers?
✓ What kind of native plants could be used in a park or school campus in our community?
✓ What are other consumer choices that make a difference in our environment? (composting trash, recycling paper saves trees, walking and biking saves oil and gas)
✓ What can you do differently as a consumer to make our environment better?

**SUMMARY POINTS:**

✓ Using native plants can save water and make our home or community environment better.
✓ Consumers can make choices that save natural resources when they buy things they need and want.
LESSON 6: Environment

**ACTIVITY 3**

**Utopia**

**OBJECTIVE this activity supports:** Youth will recognize the importance of native plants to enhance the beauty of environment and save consumer dollars in landscaping.

**MATERIALS NEEDED**

- Game board (attached)
- One die or numbers 1, 2, 3, 4, 5, 6 to draw
- Pennies
- Scratch paper
- Tape
- Pen or Pencil

**TIME**

20 to 30 minutes

**Leader Preparation**

Gather the necessary supplies. This game might be played at the end of the nursery tour in Activity 2 or while towels dry in Activity 4.

**Instructions**

**INTRODUCTION:** The game we will be playing takes you down the path that plants take during their lifetime. As you play, think about decisions you can make that could help make a difference in the environment where plants—and you—live and grow.

**To Play:**

Any number of people can play Utopia—one person or as many people as you can get around the game board. As more people play, more time is needed to complete the game. If you do not have a die, cut 18 pieces of paper and write the numbers 1 through 6 on them. You will end up with three sets of numbered pieces. Each piece should have only one number written on it. Fold the pieces and put them in a container the youth can draw from easily.

Each player chooses a plant he or she learned about on the tour or one he or she just likes, such as a daisy, an oak tree, or a trumpet vine. They need to know a little about the plant in order to answer the questions that arise along the way. To start them thinking about their plants’ characteristics, you could ask them to go to the right side of the room if their plant likes to grow in the sun, to the left side of the room if it likes the shade, and to the front of the room if they aren’t sure. Then let them tell what type of plant they are. If you cannot help those who don’t know, ask them to choose another plant. Repeat the process with other characteristics so the youth know if their plants are native and if they resist bugs and diseases common in your area.

In the game, each person is represented by a token made of a penny with the name of his or her plant attached to it. Because the tokens are so similar, the players must remember which plant they are. Choose who will go first and begin. Simply roll the die or draw a number and move the number of spaces shown. If the marker lands on a space with instructions, do as instructed. Once you reach the star, you must roll the exact number needed to enter Utopia. You may move ahead if you roll less than needed, but you can enter Utopia only by rolling the exact number.
ADD TO IT:
To make this game more adventurous, make a life-size board, using your backyard, or a vacant lot. Use survey tape to make the course. Each young person will walk around on the game board to represent his or her plant in the game.

SUMMARY: Enviro Myra lives in the native plant world called Utopia. In your quick trip to Utopia, you had some quick moves forward and some setbacks. Enviro Myra hopes your trip will help you become environmentally friendly and choose native plants that are beautiful and use less water, fertilizer, and products to control diseases and insects.

DISCUSSION QUESTIONS:
✓ Which plant made it to Utopia first? What helped you move faster to Utopia?
✓ What stops on the way to Utopia caused your plant to be stressed and take a few moves back?
✓ What stops on the way to Utopia helped your plant move faster?
✓ From the moves you experienced on the way to Utopia, what shopping pointers will you remember when you or your family buys a plant?

SUMMARY POINTS:
scratch Native plants help beautify our environment while conserving water.
scratch Native plants bought from local stores usually cost less than plants not conditioned to the local climate.
scratch When you add up total care costs, native plants are efficient, environmentally-friendly consumer choices.
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<table>
<thead>
<tr>
<th>ACTIVITY 4</th>
<th>How Much Water Does It Take?</th>
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<tbody>
<tr>
<td><strong>OBJECTIVE this activity supports:</strong></td>
<td>Recognize and practice efficient water-use skills.</td>
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<table>
<thead>
<tr>
<th>MATERIALS NEEDED</th>
<th></th>
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<tbody>
<tr>
<td>• roll of paper towels</td>
<td></td>
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<tr>
<td>• 3 cups of water</td>
<td></td>
</tr>
<tr>
<td>• yard with the following elements: full-sun area, partial-sun area, and complete shade area</td>
<td></td>
</tr>
<tr>
<td>• sunny day</td>
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</tbody>
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| TIME | 20 minutes |

**Leader Preparation**

Gather the necessary supplies. Find a yard with the proper conditions.

**Instructions**

**INTRODUCTION:** As a smart consumer, Enviro Myra does her part to protect our environment. She checks out her choices to see which choice uses less of our natural resources. When she shops for plants, she remembers that plants in the shade will have more time to absorb the water; so they may need watering less. Plants growing in full sun may need more water. Native plants need less water in sun or shade.

**To Play:**

Tear off three paper towels. Put one in each cup of water and allow the towels to become completely saturated. Have the youth take the towels and place one in the yard where it will get full sun. The second towel should be placed in partial shade. The third should be placed in full shade. Have the youth check the towels every 5 minutes to see if the towels are wet or dry. This activity allows the youth to see the differences in the evaporation process. Help them to understand that the plants in the shade will have more time to absorb the water and, therefore, may need watering less. Those in full sun have less time to absorb the water before it evaporates and may require more water. Remind them that native plants will require less water in the sun or shade. (You could play the Utopia game in the previous activity while you wait for the towels to dry.)

**ADD TO IT:**

If you use this activity at a camp or school setting, complete it three times in one day—once in the morning around 8:00 or 9:00, once around mid-day, and once in the afternoon. Have the children chart how fast the water evaporated. Then figure out at which time it took the longest to evaporate. It should be in the morning. Discuss with them how, when plants are watered in the morning, the water evaporates more slowly, giving the plants more time to absorb it and reducing total water usage and cutting family utility costs.
SUMMARY: Before we buy or use something, Enviro Myra asks us to think how our choices can affect our environment. Making wise consumer choices when buying plants can help us use less of our water resources and have a better environment.

DISCUSSION QUESTIONS:
✓ Where plants grow makes a difference in the amount of water they use. Where is the most water-saving place to grow plants?
✓ The time of day we choose to water plants affects the amount of water they use. What is the most water-saving time of day to water plants?
✓ The type of plants we use affects the amount of water we use. What kind of plants use less water?
✓ What other consumer choices do you make that can make our natural resources last longer?

SUMMARY POINTS:
♫ Water is a natural resource we can save by using it wisely.
♫ Plants, like people, need water to live. They use less water when they are watered in the morning.
♫ Consumer decisions about plants and other things we eat, wear, and use—and how we care for them—make a difference in our environment.
# LESSON 6: Environment

<table>
<thead>
<tr>
<th>ACTIVITY 5</th>
<th>Raindrops Falling on Our Heads: When Plants and Consumers Use Water</th>
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<tbody>
<tr>
<td><strong>OBJECTIVE this activity supports:</strong> Youth will recognize and practice efficient watering skills.</td>
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</tbody>
</table>
| **MATERIALS NEEDED** | • waterhose  
• sprinkler  
• swimsuits  
• umbrellas  
• working water faucet  
• drink refreshment  
• radio |
| **TIME** | 30 minutes |

## Leader Preparation

## Instructions

**INTRODUCTION:** Enviro Myra is a smart consumer. She checks out her choices to see which choice uses less of our natural resources so she can do her part to protect our environment. When she shops for plants, she remembers that plants growing in the shade have more time to absorb water before it evaporates, so they may need watering less. Those in full sun may need more water. Native plants require less water in the sun or shade.

**To Play:**

This is a good activity to use on a hot afternoon or to combine with a picnic. Have the children wear their swimsuits. Hook the waterhose, sprinkler, and faucet together for regular operation. Allow some of the participants to use umbrellas, but not all. Place the children in various spots around the sprinkler, some 5 feet away, others 10 feet away, and so on. The children do not have to stand in any particular pattern. Make sure some have umbrellas. The children with umbrellas must open them and use them as they would normally. Turn on the water and allow the kids to play for 5 minutes. The only restriction is that they cannot move their feet (they must stand in one spot but can move arms about). At the end of the five minutes check to see if most everyone is wet to some extent. Turn the water off and have the children remain in their location. Provide them with a liquid refreshment. Notice that some will drink it fast while others will drink it slowly. Ask the children to consider themselves a plant and the sprinkler to be rain.

**SUMMARY:** It's not the amount of water plants get on their leaves that matters, but how much reaches the ground around them and gets to the plant's root system. When you water plants, Enviro Myra reminds you that the soil, not the foliage, needs the water.
DISCUSSION QUESTIONS:

✓ What did the umbrellas signify? (shade)
✓ Did the shade make you get more or less wet than other people? (less)
✓ Do plants that get wetter on the leaves take up more water or need more water? (need more water)
✓ As a person you got wet from the rain, but how do you take in most liquids? (by drinking them)
✓ How do plants drink water? (through their roots)
✓ So most of a plant’s nutrients are obtained by its _________? (root system)
✓ What other ways do we use things as consumers that can save or waste natural resources.

SUMMARY POINTS:

✓ Plants use less water when the water gets into the soil around the plants.
✓ Like plants, we need to think about how we can use less water. (Examples: wash clothes at night; hang up clothes and find ways to keep them clean so you change less often each day; turn off water while soaping your hands or brushing your teeth.)
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ACTIVITY 6

Making Choices for Yourself and the Environment

OBJECTIVE this activity supports: Youth will make buying choices that are economically and environmentally smart, and see how recycling affects the environment.

MATERIALS NEEDED

- Kool-Aid® (or similar drink mix) in the single packet
- Kool-Aid (or similar drink) in the individual 6-pack bottles
- Cereal in a large box
- Cereal in individual shrink-wrapped servings
- Chips in a large bag
- Chips in individual serving bags
- Environmental Choices Activity Sheet
- Pictures of the county landfill
- Pens or pencils
- Activity Worksheet

TIME

approximately 1 hour

Leader Preparation

Gather the necessary supplies. Make copies of the Activity Worksheet, one for each person. The leader should be familiar with the cost per serving for the example products, recycling opportunities in the area, and the function of a landfill.

Instructions

INTRODUCTION: How do decisions that you make when buying a product affect the environment?

Where does a piece of notebook paper go when you throw it away, or a juice box, or a single chip bag? (Show examples.) Usually it goes to the local landfill.

Have you ever been to or seen a landfill? Do you know how one is built?

There are two landfill by-products that have a big effect on the environment: methane and leachate. Methane is a gas produced when garbage decomposes in the landfill. It causes air pollution. Leachate is a liquid that runs out of the landfill. Leachate water can contaminate ground water we drink.

How can your buying decisions affect our environment? The more we buy, the more we throw away. Did you know that, when you buy a product, you pay not only for the product, but also for the package you will throw away? Most of the time, the packaging for products cannot be recycled and will end up in the landfill.
To Play:

As an example, let’s look at the Kool-Aid. (Show the two examples and give the cost per serving of each product.) Now there are two products on the table. (Cereal and chips. Other comparable products can be used. Have two choices of each product.) Compare and find the difference in:

1. Cost per serving.
2. Packaging.
3. Recyclability—is this symbol on the package?
4. Convenience.

Explain which products you would choose and why. Complete the activity sheet.

SUMMARY: Our consumer choices affect our environment. Enviro Myra reminds us to think about how much of what we’re buying will end up in the trash — which ends up in our landfills. When trash breaks down naturally, the gas and liquid it creates pollute our air and water.

DISCUSSION QUESTIONS:

✓ What is something you use every day that has more packaging than is really needed?
✓ What can you do with things you usually throw away so they won’t be added to our landfill?
✓ How could our group show consumers how their consumer choices affect our environment?

SUMMARY POINTS:

Enviro Myra says smart consumers:

- Buy things with as little packaging as possible.
- Find ways to recycle things you no longer use.
- Keep our air and water clean by reducing waste when you buy and use things you need and want.
ACTIVITY 6 WORKSHEET

Environmental Choices

<table>
<thead>
<tr>
<th>Product:</th>
<th>Product:</th>
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<tbody>
<tr>
<td>Cost Per Serving</td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td></td>
</tr>
<tr>
<td>Recyclability</td>
<td></td>
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<tr>
<td>Convenience</td>
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Explain which choice you would make and why. ____________________________________________

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<tr>
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<tbody>
<tr>
<td>Cost Per Serving</td>
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Explain which choice you would make and why. ____________________________________________

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Explain which choice you would make and why. ____________________________________________
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<table>
<thead>
<tr>
<th>ACTIVITY OPTION 9</th>
<th>Concluding Skit</th>
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<tbody>
<tr>
<td>OBJECTIVE this activity supports: Conclusion to lesson</td>
<td></td>
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<tr>
<td>MATERIALS NEEDED</td>
<td>• Enviro Myra and Market Maria puppet faces</td>
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<tr>
<td>TIME</td>
<td>5 minutes</td>
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Scene: Have a lot of beautiful flowers in the background (could be painted on cardboard box). Again this is in Market Maria’s backyard, but this time she is enjoying the sun with her sun glasses on.

Enviro Myra: (Approaching Market Maria) Hey, Maria! What are you up to?

Market Maria: I’m enjoying the sun and my beautiful environment.

Enviro Myra: You sure are! It looks great around here.

Market Maria: Well, I took the things we learned about the native plants and used those ideas to make my yard beautiful. I don’t have to water it as much. Our utility bill has gone way down, and I can spend time doing other things, like enjoying the sun.

Enviro Myra: That’s great, Maria. Have you seen Money Max?

Market Maria: I saw him earlier today. He was on his way to help with the recycling and cleanup day down at the park.

Enviro Myra: Hey, we should go down and help!

Market Maria: Okay, let’s go!

Both go off stage humming a happy song.

• Ask the youth to complete the evaluation form. Help them with words or instructions they don’t understand.

• Give each young person a copy of the family page to take home and share with his or her family.

Consumer Critters live in an exciting world. The places they shop and the environment where they live have many beautiful, fun things to offer. Happy Consumer Critters are those who think carefully before they buy. They think about their wants and needs for themselves, for their family, and for the plants, animals, and other things that make up our environment. Each decision to buy and use something is a vote that the consumer casts. What will be your vote as a consumer? Will you vote for a better environment? Will you vote to save energy and money resources whenever you can? Will you help other consumers learn what you know about making choices that keep our environment healthy?
Family Page

The Consumer Critter Crew has been teaching your child skills he or she needs to use resources wisely as he or she spends, shares, and saves. This lesson has shown your Consumer Critter how consumer skills affect the environment.

If your family has an interest in planting flowers, trees, or shrubs around your home, church, or community area, help your Consumer Critter find native plants to plant and nurture. Native plants have been discussed in this lesson. Being able to see how they live and grow (using less water, fertilizer, and insect- and disease-controlling products) will make a lasting impression on your Consumer Critter.

This lesson also helps your Consumer Critter think about how products he or she uses are packaged. Your Critter may encourage you to change some of the things your family buys—to choose a brand that uses less packaging or one that is made from recycled material or is recyclable. You may be surprised to see your child show a growing interest in reusing clothes, toys, bicycles, and other items youth typically use a short time and want to replace before they are worn out. When you see these changes, praise your Consumer Critter for being environmentally friendly.

The Consumer Critter Crew has enjoyed becoming a part of your family's experience in building life skills. We hope you will be in contact with us to learn about other skills and interests your Consumer Critter can develop through 4-H. We are always only a phone call away. Let us know how we can work with you in the continued development of your Consumer Critter.