



Lesson Plan: Unit 1 – Reduce, Reuse, Recycle

Standards of Learning

- 1.1. Identify items and materials that can be reduced, reused or recycled.
- 1.2. Explain why it is important to dispose of trash properly, recycle materials, conserve water, and prevent water pollution.
- 1.3. Create strategies to keep the environment healthy, to include proper disposal of trash, recycling or reusing, and water conservation.

Objectives/Goals

- Students will engage in reducing, reusing, and recycling to help the environment.

Materials

- A bowl of water and sponges
- Videos and materials referenced in the PBS lessons (i.e., One large bag of popcorn • 6 small individual serving-size bags of popcorn • One-gallon jug of juice in a glass jar • A six pack of juice boxes • Assorted items that can be reused and recycled (detergent bottles, soda bottles, blankets, glass jars, magazines, newspapers, paper plates, plastic yogurt cups, paper, plastic water bottles, cereal boxes, etc.))
- Computer with Internet access

Procedure

1. Activities: Reduce, Reuse, Recycle

- Tell students about pollution (land (e.g., garbage), air (e.g., smog from cars, smoke from cigarettes), and water (e.g., oil spills from boats). And then implement the following lesson:

Heroes Unite: When you know
<https://www.youtube.com/watch?v=7qkaz8Chell>

Activity One: Reducing Waste*Step 1*

Tell the students that you are going to show them what it means to reduce waste. Explain the idea of reducing waste by telling your class that when you avoid making garbage in the first place, you don't have to worry about disposing of waste or recycling it later. Show the students the large bag of popcorn and the individual bags of popcorn and ask them which they think makes more waste. Show the students how more wrapping is used in the individual bags and tell them that if more paper and packaging is used to make something, it makes more waste, or garbage. Explain how packing popcorn in reusable containers will reduce waste because it makes less garbage. Show the students the gallon jug of juice in a glass jar, and a six-pack of juice boxes. Ask the students to predict which of these items makes more waste. Tell the students that it takes more paper and plastic to make the juice boxes.

Step 2

Ask questions to ensure students' understanding of the differences between the items you have presented to them. Encourage students to think of other examples of how to reduce waste. Use the following prompts as guides to stimulate discussion:

- If you write on both sides of paper, how does this reduce waste?
- If you buy one big bottle of detergent instead of three small ones, how does this reduce waste?
- If you use a reusable lunch box or bag instead of paper, how does this reduce waste?
- If you use dishes instead of paper plates, how does this reduce waste?
- If you use a reusable mug instead of a paper or plastic cup, how does this reduce waste?
- If you say, "No thanks, I don't need a bag,"

When you buy something that doesn't require a bag, how does this reduce waste?

Step 1

Ask the students to tell you what they know about reusing things. You may use the following questions as prompts:

- _Did you ever go to a yard sale? What is a yard sale?
- _Did you ever donate your old toys or clothes to a charity?
- _Did you ever give clothes that no longer fit you to a brother, sister or a cousin?
- _Did you ever use an old glass jar to hold your pencils, pens or paintbrushes?

Tell the students that these are all examples of reusing things.

Step 2

Show the following items to your class and ask how they might be reused:

- Gift wrapping paper

- Paper lunch bags
- A toy
- An empty peanut butter jar
- A cardboard box
- A plastic milk jug
- A detergent bottle
- An empty plastic soda bottle

Step 3

Ask the students to generate more examples of how one can reuse varied items. Encourage your students to bring examples into class. Explain to the class how reusing things instead of throwing them out can help take care of the earth.

Activity Four: The Play*Step 1*

Invite students to bring in items that are examples of how to reduce waste, items that are recycled, and items that are reused. As a class, sort the items into three groups: • Things that reduce waste • Things that can be recycled. • Things that can be reused. Tell the students that you will be using these items in a class play.

Step 2

Divide the class into three groups. Assign each group to one of the following categories:

•Reduce • Recycle • Reuse. Have each student in the group present one item. Each student says the name of the item they have, and how it reduces waste. Place three bins on the stage. Label each bin with one of the following signs: Reduce, Recycle, Reuse. Select a narrator to read the one sentence introduction to each category.

Step 3

Present the play using the guidelines below.

Part 1: REDUCE

Narrator: There are three important ways to help take care of the earth. Entire

Class: REDUCE, REUSE, RECYCLE

Narrator: When you reuse things, you can help the earth.

Each student in the "reduce" group presents an item. The following are examples of what students might say: • This is paper. When you use less paper, you reduce waste. • This is a large bag of dog food. When you buy a big size, you reduce waste.

After the item is presented, each student puts the item in the bin labeled "Reduce."

Part 2: REUSE

Narrator: There are three important ways to help take care of the earth. Entire Class: REDUCE, RECYCLE, REUSE

Narrator: When you reuse things instead of throwing them out you can help the earth.

Each student presents one item that can be reused and places it in the bin labeled "Reuse." Use the following examples as a guide: • This is a reusable lunch box. • This is a reusable cup.

After the item is presented, each student puts the item in the bin labeled "Reuse."

Part 3: RECYCLE

Narrator: There are three important ways to help take care of the earth. Entire Class: REDUCE, RECYCLE, REUSE- THE MOST IMPORTANT IS REDUCE!

Narrator: Recycling is using something again. When you recycle things you can help the earth. Each student in the "recycle" group presents one item that can be recycled and places it in recycling bin. Use the following examples as a guide: • This is a detergent bottle. You can recycle this. • This is a plastic water bottle. You can recycle this.

After the item is presented, each student puts the item in the bin labeled "Recycle."

Part 4: THE END

Entire Class: REDUCE, REUSE, RECYCLE. REDUCE, REUSE, RECYCLE. BUT MOST IMPORTANT IS REDUCE

(You may choose to have class clap and stomp a beat as they say these words.)

EXTENSION ACTIVITIES

Activity One: Banner Making Ask the class to create a banner with the words REDUCE, REUSE, RECYCLE and illustrations. Post the banner where others in the school and community can view it.

2. Natural Resources and Conservation

- Engage in the following guided discussion.

PBS Kids Lesson: Reduce, Reuse, Recycle

- Tell students that natural resources are raw materials that we obtain from the environment and use in many different ways and that they can help protect Earth's natural resources by reducing the amount of materials they use, reusing materials when possible, and recycling.
- Have students identify natural resources in their immediate surroundings, such as cotton in their clothing, wood in the furniture, paper in books, etc.
- Discuss how by weighing their own personal wants and needs, students can help protect Earth's natural resources. For example, you may ask: What's wrong with throwing paper away instead of reusing or recycling it?
- Explain that some natural resources, like petroleum (from which most plastic toys are made), are limited in supply. Other natural resources, like trees, can be grown and harvested in a responsible way so that the supply does not run out.
- Tell students that they are going to watch an animated video about a boy named Oliver and a big pile of garbage. Tell them to look for something in Oliver's garbage that somebody else might want.
- Show the Garbage Video:

<https://houstonpbs.pbslearningmedia.org/resource/lpsc10.sci.life.garbage/garbage/>

- Ask students to identify ways that they could share or recycle what they no longer need or want. Write these ideas on the board.
- *(Older students could then become involved in a project, such as an ice skate/soccer cleat swap, or a toy clinic to clean and donate used toys. Discuss swap meets that are held at local schools or parks.)*
- Tell students that they are going to watch another animated video, this time about a girl named Clementine. Before viewing, ask students if they have a lot of magazines or catalogues in their house and what they do with them after they've been read. Tell them that after they watch this video, they may think of things to do with them.
- Show the Magazines Video:
<https://www.pbslearningmedia.org/resource/lpsc10.sci.life.mag/magazines>
- After showing the video, draw three columns on the board (or have students draw them on a sheet of paper). Label the columns "Reduce," "Reuse," and "Recycle."
- Brainstorm ways to reduce consumption, encourage recycling, and create art or other fun things from reused materials. For example, they can make cubbyhole decorations, self-portraits, and gift wrap. Food containers that are clean can be used for storing art materials.
- The following questions can be used as writing or discussion prompts to check

for understanding: How could using both sides of a sheet of paper before recycling it help protect natural resources? How could using old magazines or catalogues to wrap presents help protect natural resources? What about donating a teddy bear or some old clothes to a thrift store? How could that help preserve natural resources? Did watching these videos change how you think about the things you have? If so, how?

3. Activity: Water Savers Conserve Natural Resources (Water)

- To demonstrate the value of water conservation, set up a bowl of water and several pieces of sponge, and do the following:
 - Ask student volunteers to come up and identify an activity that they engage in each day that uses water (e.g., brushing teeth); at the same time they should dip the sponge in the water and hold it. As each student dips the sponge, the water level will lower.
 - Tell the class that the challenge with using the world's water is that eventually it can dry up or become so polluted that it is difficult to use. We all can stop that by being "Water Savers."
 - Ask each student with a sponge to identify one way that they think they can save water (e.g., turning off running water while brushing teeth) ; as each student names this activity, have them squeeze the sponge back into the water. As each student identifies a water saving measure and squeezes the water back into the bowl, the water level will increase.
- Conclude by saying that this reflects that even little contributions can improve the natural environment and encourage the students to be water savers every day.