

Know the Facts Before You Burn

Teaching Guide



Introduction

Burning household trash has been a way of life for many years in some parts of Kentucky. Many of us grew up with a backyard burn barrel, and that was our means of getting rid of our waste. However, burning trash today creates more pollution than in past years. Today's household waste contains more plastics and other synthetic materials than ever before. Yesterday's paper packaging and reusable containers have been replaced by today's individual serving-sized plastic packaging.

Burning trash is not good for our environment or our health. It gives off smoke and ashes that can pollute our air, rivers, and streams. Smoke from open burning contains harmful pollutants such as particulate matter and dioxins. Particulate matter is so small it cannot be seen by the naked eye, but we breathe it into our lungs. This can be very dangerous for young children and individuals with asthma or compromised immune systems.

Dioxins are extremely dangerous compounds that form when items containing carbon and chlorine are burned. Dioxins have been linked to cancer, developmental and reproductive disorders, and birth defects. Dioxins can enter the food chain when airborne ashes settle on feed crops and bodies of water. These dioxins are then consumed by domestic meat and dairy animals, and accumulate in the fat of these animals. Dioxins then enter the human body when we consume these meat, fish, and dairy products.

Instead of burning, consider these options:

- Recycle plastics, newspaper, and aluminum cans
- Donate items that are still useful
- Trade useful items with a neighbor or friend
- Help start a community recycling program
- Send trash to an approved sanitary landfill

Purpose

This lesson is designed to educate citizens on the hazards of backyard trash burning, and provide alternative methods for disposing of household trash.

Suggested Resources and Materials

- **Publications** (Available from your University of Kentucky Cooperative Extension Service Office, or online from the University of Kentucky College of Agriculture at <http://www.ca.uky.edu/agc/pubs/pubs.htm>)
 - *Know the Facts Before You Burn* (IP-75)
 - *Open Burning* (IP-74)

Publications available online at www.ca.uky.edu/enri/pubs

- *How to Recycle: Beginning Recycling at Home* (ENRI-315)
- *Managing Household Waste: Preventing, Reusing, Recycling and Composting* (IP-70)
- **Display**
 - *Up In Smoke* (Available as a downloadable display from the Environmental and Natural Resource Issues Task Force website at <http://www.ca.uky.edu/enri/FOCSGRP/S/AQ/OpenBurning.htm>)
- **Activity**
 - *Burn Barrel Investigation* (See instructions below)



Suggested Teaching Techniques and Strategies

1. Open the lesson by asking the audience what they usually do with their household waste. Have audience members share their waste disposal methods, and discuss various methods of household waste disposal.
2. Discuss household trash burning and its associated hazards with the audience. Use the background information in this lesson and suggested publications for more information.
3. Conduct the Burn Barrel Investigation activity.
4. Brainstorm shopping techniques to reduce the amount of waste accumulated in a household.

Burn Barrel Investigation

Materials:


Trash bag filled with a variety of trash items (including plastic bottles, newspaper, white paper, cardboard, aluminum cans, glass bottles, Styrofoam, and food items)

Procedure:

1. Remove one item from the trash bag. Ask the audience whether this item should be burned or not. Ask the audience if this item is recyclable or reusable. Using the chart below as a reference, discuss ways to get rid of the item instead of burning it.
2. Repeat with all items in the trash bag.



Disposal suggestions for trash bag items:

Trash item	Disposal Method
Plastic bottles 	Recycle if facilities exist in your area. Usually bottles with a #1 or #2 (enclosed in a triangle of arrows) on the bottom are recyclable. DO NOT BURN.
Newspaper	Recycle if facilities exist in your area. Newspaper can also be composted, reused as packaging material, or reused as gift wrap. Can be burned if necessary.
White paper, junk mail	Recycle if facilities exist in your area. White paper can be burned if necessary. DO NOT BURN slick paper such as coupons or advertisements.
Cardboard, paperboard (cereal boxes)	Recycle if facilities exist in your area. Cardboard can easily be reused as storage containers. Some mail and postage services will reuse cardboard boxes. Coated paperboard boxes (ones that go in the refrigerator or freezer) are not always recyclable. Uncoated cardboard can be burned if necessary. DO NOT BURN coated paperboard.
Aluminum or steel cans	Recycle if facilities exist in your area. DO NOT BURN.
Styrofoam	Styrofoam packaging material can be reused. DO NOT BURN. Dispose of in an approved sanitary landfill if necessary.
Glass bottles, jars	Recycle if facilities exist in your area. Reuse for storing small items. DO NOT BURN. Dispose of in an approved sanitary landfill if necessary.
Food scraps	Compost fruit and vegetable scraps or dispose of in an approved sanitary landfill. DO NOT BURN.

Suggested Evaluation Techniques

- Ask each participant to name one thing they learned from the lesson.
- Re-do the Burn Barrel Investigation activity with new materials and use as a quiz.
- Ask each participant to identify three ways they can reduce their waste at home.
- Use the Up In Smoke survey (below) as a pre- and post-lesson evaluation. See if the participants' answers changed after the lesson.

Up in Smoke Survey

For each item, check the appropriate column (Burn if necessary **or** NEVER Burn)

Item	Burn if necessary	NEVER Burn
Plastic Pepsi Bottle		
Newspaper		
Cereal Box		
Leftovers from lunch		
Mt. Dew Can		
Styrofoam Cup		
Packing Peanuts		
Spaghetti Sauce Jar		
Notebook Paper		
Pesticide Container		
Milk Carton		

Answer Key

Item	Burn if necessary	NEVER Burn
Plastic Pepsi Bottle		X
Newspaper	X	
Cereal Box	X	
Leftovers from lunch		X
Mt. Dew Can		X
Styrofoam Cup		X
Packing Peanuts		X
Spaghetti Sauce Jar		X
Notebook Paper	X	
Pesticide Container		X
Milk Carton		X

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2007 Kentucky Water Awareness Month Packet

March 2007