ACTIVITY THREE:

HEATED CONVERSATIONS

SUMMARY

Burning household trash and other manmade materials contributes to air, soil, and water pollution, and is illegal in North Carolina. What are the consequences to human health and the environment of burning trash and synthetic materials? What are the possible legal consequences? What are alternatives to burning? Students will answer these questions while engaging in fun and entertaining skits and short performances. Students can follow the provided scripts or create their own.

OBJECTIVES

Students will learn that burning trash produces dangerous air pollution that harms human health, and that burning trash is illegal. Students will perform and/or create their own skits to learn about open burning and educate their classmates.

TIME NEEDED

Classroom Time: 45-60 minutes

A project of the North Carolina Air Awareness Program

"STUDENTS PERFORM AND/OR CREATE SKITS TO IMPROVE COMMUNICATION SKILLS AND EXPLAIN THE DANGERS OF OPEN BURNING / AIR POLLUTION."

KEY TAKE-AWAYS

- Burning trash and other man-made materials is harmful to human health and the environment, and is illegal.
- We can reduce the human and environmental impact of our trash by generating less waste, re-using and recycling items, and choosing other disposal methods.

COMMON CORE & ESSENTIAL STANDARDS

- 7.E.1.6
- 7.E.1.1
- 7.RP.1
- 7.L.2.3
- 7.SI.1
- 7.TT.1
- 7.G.1.1

Teacher Tips

Materials

- ☐ Burn pile materials (collect "clean trash"; see "Smoldering Nasty Stuff" activity for details)
- ☐ Costume props: fun clothes, hats, sunglasses, clipboard, official-looking hat and/or jacket (affix paper label reading "NCDAQ", "Air Quality Inspector", etc.)
- ☐ Several clean "trash" items (suggested list provided)
- ☐ Clean receptacle(s) such as kitchen trash can or metal drum/barrel
- ☐ Student Activity Sheet A: "What's in the Barrel?"
- ☐ Student Activity Sheet B: "What comes out?"

BACKGROUND

Each day, every person in the United States creates an average of 4.4 pounds of trash.[1] In many parts of North Carolina and the United States, burning has been the traditional way to get rid of trash. However, burning trash or any other manmade material is illegal in North Carolina.

Burning trash and all other man-made materials outdoors has been prohibited since 1971 under North Carolina's open burning rule, one of North Carolina's oldest air quality regulations. ***Open burning*** is any type of burning in which the smoke is released directly into the air, without passing through a chimney or smokestack. Examples of open burning include burning trash in a barrel, and burning leaves in a pile. Under the open burning rule, it is always illegal to burn trash and other ***non-vegetative*** materials. Leaves, branches and other plant growth can be burned only under certain conditions.

Why do people burn trash? In North Carolina, most residential trash burning (about 90%) happens in rural counties.[2] In many of these areas, especially outside of city or town limits, trash pick-up is not provided. Households have to hire a private trash hauler, or take their own trash to a landfill, sometimes paying a tipping fee. However, air quality inspectors have noticed that it's not just the cost or inconvenience of proper disposal that causes people to burn their trash. Often, people in rural areas burn their trash because it's the only disposal method they've ever known, and it's the way their families have disposed of trash for generations.

What can and can't be burned legally? A good rule to remember is: **"If it doesn't grow, don't burn it!"** All manmade or non-vegetative materials are illegal to burn in North Carolina. Even lumber is considered a man-made material and cannot be legally burned.

Vegetative material such as leaves, brush, and tree limbs may be legally burned only in areas where public pick-up for these materials is not provided. Even in areas without public pick-up, local laws may restrict or prohibit burning of vegetative material.

In counties with an air quality forecast, all open burning is banned on ***Air Quality Action Days.*** These are days when the forecasted air quality is Code Orange (unhealthy for sensitive groups), Code Red (unhealthy), or Code Purple (very unhealthy).

What kind of pollution is caused by burning trash, and how is it harmful? Smoke is a mixture of gases and tiny particles. The gases in smoke, from both vegetative and non-vegetative materials, include carbon monoxide, carbon dioxide, nitrogen oxides (NOx), and volatile organic compounds (VOCs). Household trash typically contains plastics, chemically treated paper, and other ***synthetic*** materials that, when burned, emit toxic chemicals into the air. These chemicals can include dioxins, furans, hexachlorobenzene, lead, mercury, and many others. The chemicals released by burning trash can harm people when they breathe the smoke, or when they are exposed through contamination of plants, land and water.

Health effects from breathing smoke: The health effects of breathing smoke can include lung and eye irritation, coughing, headaches, dizziness, asthma attacks, heart attacks, and even death. Exposure to smoke from burning trash could have long-term consequences, as some of the toxic chemicals are probable or known human carcinogens and have other health effects.

The tiny particles in smoke are called ***particulate matter or particle pollution.*** These particles, whether from burning natural or synthetic materials, travel deep into the lungs and can cause serious respiratory and heart problems. While breathing particle pollution is harmful to everyone, it is especially dangerous for people with existing respiratory disease like asthma or emphysema, or existing heart problems. Breathing particle pollution can cause asthma attacks and acute bronchitis, and may increase the risk of respiratory infections. For people with heart disease, the particle pollution in smoke can cause heart attacks and cardiac arrhythmias (irregular heart rhythm). Numerous studies have linked elevated particle levels to increased hospital admissions, emergency room visits, and even death from heart and lung disease.[3]

Burning trash contributes to regional air pollution. But the greatest impact of burning trash – and even leaves and brush – is to people living nearby, who may be exposed to concentrated smoke and high levels of pollutants. Smoke from burning trash can be a serious health threat for you, your family, and your neighbors, especially for anyone with a respiratory or heart condition.

Health effects from plant, soil and water contamination: Burning household trash is the largest known source of dioxins in the nation.[4] Dioxins are highly toxic, long-lasting chlorinated organic compounds. They are dangerous even at extremely low levels and have been linked to cancer and developmental and reproductive disorders. Dioxins produced by burning trash settle on plants and into water. Meat and dairy animals eat the plants, and store the dioxins in their fatty tissue. People are exposed to dioxins primarily by eating meat, fish, and dairy products, especially those high in fat.

Smoke from burning synthetic trash deposits other hazardous chemicals like furans, mercury, and hexachlorobenzene onto land and water. Like dioxins, these chemicals enter the food chain and are ultimately consumed by people. These pollutants can have long-term health effects such as nervous system or organ damage, or reproductive or developmental disorders.[5]

The ash from burning, which is often dumped onto the ground, can contain lead, cadmium, mercury, chromium, arsenic and other toxic substances. These leach into the soil to be taken up by plants (including food plants) and seep into groundwater, or run off into streams, rivers and lakes. Children can accidentally swallow toxic chemicals from dirt on their hands while playing near discarded ash.[5]

What happens to trash when it's burned? Does it all go up in smoke? The Law of Conservation of Mass states that matter cannot be created or destroyed. When an item is burned, it doesn't just go away. Rather, the item is changed into other substances through the process of ***combustion.*** Combustion is a chemical reaction between a fuel and oxygen that gives off heat. When the fuel is ignited, oxygen combines with the chemical components of the fuel, converting them into different combustion products. In general, when the reaction uses more oxygen, it reaches a higher temperature and the fuel undergoes more complete combustion, meaning greater oxidation of the fuel's components.

When trash is burned in a pile or burn barrel, the fire doesn't get much oxygen and burns at a relatively low temperature, resulting in ***incomplete combustion,*** which produces more smoke and toxic emissions. For example, dioxins are produced by burning items that contain even tiny amounts of chlorine, and nearly all household waste contains chlorine. The relatively low combustion temperatures of burn barrels produce significant amounts of dioxins, whereas very high temperatures such as those reached by waste incinerators (typically over 2,000 degrees F) destroy dioxins by converting them into other compounds which can then be captured by pollution control equipment.

What are alternatives to burning?

REDUCE: the amount of trash you make. Try to buy products that use less packaging. Containers and packaging make up the largest portion (30%) of trash generated by Americans.[1] Carry re-usable bags when shopping. Store food in re-usable containers (for example, pack sandwiches in re-usable containers instead of foil or plastic bags).

RE-USE: Use plastic yogurt tubs (and other containers) to store food or other items. Use old newspapers as mulch (but not the glossy inserts, because those inks can contain heavy metals).

RECYCLE: Even if your community doesn't have curbside pickup, recycling stations may exist at your local landfill and other locations. Some recyclable items, such as plastic bottles, are banned from North Carolina landfills. Many North Carolina businesses process recycled items or manufacture new items from them, so when you recycle, you support these businesses by providing them with "raw material." Visit **http://p2pays.org/localgov/ncwaste.html** to find recycling contact information for your community.

COMPOST: Let nature turn your leaves, grass clippings, and small branches into wonderful mulch. Not sure how? Visit **www.p2pays.org/compost/** for a "Composting 101."

PROPERLY **DISPOSE** of the rest. Some stuff has to be thrown away. Materials such as solvents, pesticides, oil-based paints, and many other chemicals should be taken to a hazardous waste facility. You can find information on disposal facilities in your area at **http://p2pays.org/localgov/ncwaste.html.** Some materials, such as computer equipment and mercury-containing thermostats, are banned from North Carolina landfills. For more information on banned materials and how to dispose of or recycle them, visit **http://ncdenr.org/web/deao/recycling/banned-materials.**

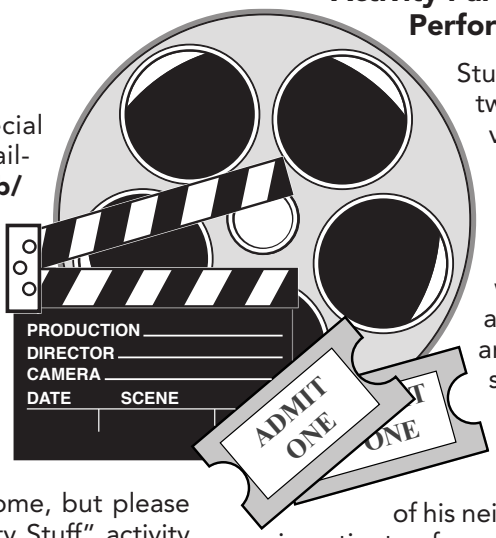
Is open burning ever good? Forestry and wildlife agencies sometimes set prescribed burns to keep forests healthy. This is open burning on a large scale and while it does produce pollution, it is essential to the health of ***fire-dependent ecosystems*** such as the longleaf pine forest of the North Carolina Sandhills region. In fact, species such as the red-cockaded woodpecker, the St. Francis' satyr butterfly, and the longleaf pine itself depend on regular burning for the species to survive. Prescribed burns should only be set by forestry and wildlife professionals, who are trained in fire safety and management.

PREPARING FOR THE ACTIVITY

Show students the video "Special Report: Open Burning", available at **http://ncdenr.org/web/aq/openburning/video,** or on DVD *(free of charge)* from the NC Division of Air Quality (see contact information at end of activity).

- Gather props as suggested on page one and in the included scripts. Students can bring props, clothes and "clean trash" from home, but please see the "Smoldering Nasty Stuff" activity for important safety precautions for collecting clean trash.

- Copy script pages for students.



Activity Part 1: Research and Review

First, learn the basics about air quality. Students can do a preliminary review of NC Division of Air Quality's brochures *(ordering information at end of activity)* or complete online research if computers are available at **www.ncair.org.** As a class, reflect on and answer some of the following:

- What is open burning?
- How might it be harmful to humans?
- How might air pollution or open burning affect the people of North Carolina locally and across the state?
- Who might be in favor of open burning and why?
- What laws or regulations have been enacted to restrict open burning?
- When is it legal to open burn?
- What materials are illegal to burn?

Activity Part 2: Dramatic Performance

Students act out the following two scenarios (scripts provided) for their classmates. A different group of actors should perform each scenario. In Activity Part 3 *(optional),* students can write their own scripts, creating their own characters and scenarios, or using the suggestions provided.

In each scenario, a citizen has been reported by one of his neighbors for burning trash. An investigator from the North Carolina Division of Air Quality, the state's air quality enforcement agency, visits him just as he's about to set the trash on fire. Curious neighbors overhear the conversation between the investigator and the citizen.

In the first scenario, the investigator isn't in a good mood. The investigator isn't rude, but just quotes the law and talks about the fines violators can be assessed for breaking the open burning law.

In the second scenario, we try again, but with a different investigator, different citizen, and different curious neighbors. This time, without threatening the would-be violator with a civil penalty *(a fine for violating the law),* how can the investigator persuade the citizen not to burn these synthetic materials?

After acting out both of the following scenarios, discuss with the class how they felt about the different scenarios. In each scenario, do students think the "burner" will really stop burning trash? In which scenario was the investigator's message more effective to stop open burning, both in the near and long term? How did the citizen feel? How did the neighbors feel? Would you be sympathetic for the citizen or angry with him/her? Did the investigator do a good job of addressing the situation?

HEATED CONVERSATIONS: SCENARIO 1

Characters:

NARRATOR 1

NARRATOR 2

RUSTY GATES: A retired homeowner

BILL PATIO:
An inspector for the North Carolina Division of Air Quality (DAQ), the state government agency that enforces open burning regulations.

CURIOUS NEIGHBORS (TWO OR MORE):
These neighbors have seen the state car in Rusty's driveway and have come over to see what's going on.

Suggested props: Open burning brochure (or folded sheet of paper); clipboard (can be used to conceal script); official-looking hat and/or jacket emblazoned with "NCDAQ" or "Air Quality Inspector"; barrel or trash can; newspapers, magazines, and "clean trash" in barrel; empty match box; and fun clothes. Set the scene with available props as described by NARRATOR 1.

START SCRIPT

NARRATOR 1: In the scene before us, an old rusty 55-gallon drum sits on concrete blocks at the end of Rusty Gates' driveway. Mr. Gates has piled a week's worth of household trash, some newspapers, and magazines into the drum.

Enter RUSTY holding a box of matches. BILL enters from the other stage direction, holding a clipboard and wearing official hat and/or jacket.

NARRATOR 2: Division of Air Quality inspector Bill Patio drives into the driveway of homeowner Rusty Gates. Mr. Gates' name, address, and phone number were given to Mr. Patio by a neighbor, who wishes to remain anonymous. The neighbor, knowing about the open burning rule, called the regional office of the North Carolina Division of Air Quality. Mr. Patio took the call and tried to contact Mr. Gates by phone, but the answering machine picked up each time. No violation of the open burning rule has happened today - so far!

BILL: (Polite but not friendly; matter-of-fact and official-sounding) Good morning. I'm Bill Patio with the North Carolina Division of Air Quality. How are you doing today?

RUSTY: I was doing fine. What can I do for you?

BILL: Are you Rusty Gates? And do you live here at 2603 Campbell Post Office Road?

RUSTY: I suppose so... I hope you're here about the factory down the road and that awful noise they make every morning about one. Wakes me up every time.

BILL: No sir, the Division of Air Quality is responsible for protecting ambient air quality, not dealing with noise. We've received a report that you might be burning trash here in your yard.

RUSTY: Well, I haven't burned anything just yet. What in the world is ambient air?

BILL: Ambient air is the air outside that moves around with the wind and that everybody breathes. I see you've got a box of matches in your hand, and there's a barrel full of what looks like trash sitting there at the end of your driveway. Are you getting ready to burn that trash?

NEIGHBORS start gossiping: "Rusty's been doing that for years" … "I'm amazed he hasn't gotten caught until now" … "What's the problem with burning trash?"

RUSTY: It's over eight miles to the county dump and they charge you for every load you bring in there. My family has been here for three generations. My grand-daddy used to take the garbage and kitchen scraps out to the back side of the garden and once a week he'd burn what the hogs didn't get. The ashes made the tomatoes and squash grow real good.

BILL: Mr. Gates, since the early 1970's there has been a state law that prohibits burning trash. I'm seeing newspaper, magazines, plastic bottles, drink cans, hot dog packages, Styrofoam meat trays and no telling what else in that barrel over there. If you burn that you will be in violation of the North Carolina Open Burning rule. Do you understand that you could be fined up to $25,000 dollars for burning your trash?" Didn't you know it's illegal to burn anything man-made?

RUSTY: Twenty-five thousand dollars! I can't believe you're telling me I can't burn my old newspapers and magazines here on my own land! It isn't hurting anything and you would fine me twenty-five thousand dollars! I don't have twenty-five thousand dollars!"

NEIGHBORS react: "$25,000 for burning?"… "Rusty can't even afford to fix his truck".. "Who has that kind of money?" etc.

NEIGHBOR: *(Under his/her breath)* I won't be doing that in my backyard anymore.

BILL: I'm not saying that you would get an automatic fine. I'm just letting you know that if enforcement were recommended, you could be fined up to that amount.

RUSTY: Well what am I supposed to do with this stuff if I can't burn it? I ain't gonna drive sixteen miles to the dump and back and then have to pay to get rid of it! The Government's out to get what little retirement savings I've got, one way or another!

BILL: *(Hands RUSTY a brochure.)* Here's a brochure that explains what can and what can't be burned and when. Read it. It tells about recycling and tells you to contact your county government about solid waste disposal. Do you understand the rule and that you cannot burn this trash?

NEIGHBORS murmur (ad lib) about the awful noises: "Yeah those noises" … "Oh yeah that's terrible."

RUSTY: Well I suppose. . . I promise I'm not gonna burn this trash now. I'll figure out something to do with it later.

BILL: I'm glad to hear it. There hasn't been a violation this time, because you haven't actually burned anything that I've seen. I'll be going, but you will be getting an information letter to remind you about my visit today and to find another way to dispose of your trash and synthetic materials. Here is my business card. Call me if you have any questions.

BILL turns, gets into his car and drives away.

HEATED CONVERSATIONS: SCENARIO 2

Characters:

NARRATOR 1

NARRATOR 2

BERNARD MIDDEN: A homeowner

JEFFREY CLINE:

An inspector for the North Carolina Division of Air Quality (DAQ), the state government agency that enforces open burning regulations.

CURIOUS NEIGHBORS (TWO OR MORE):

These neighbors have seen the state car in Bernard's driveway and have come over to see what's going on.

Suggested props: Folded paper for "Forestry permit"; business card or small piece of paper; clipboard (can be used to conceal script); official-looking hat and/or jacket emblazoned with "NCDAQ" or "Air Quality Inspector"; fun clothes for other characters, tree branches and "junk" as described by NARRATOR 1.

Suggestion: students can create a *"pile of stuff" and label items with paper with "couch cushion", "broken bicycle", etc. written in marker in large letters.*

Set the scene with available props as described by NARRATOR 1.

START SCRIPT

NARRATOR 1: In this back yard, we see a pile of pine branches. On top of the pile are some old sofa cushions, fertilizer bags, corrugated boxes, old shoes, scrap lumber, broken lawn chairs, and a bent-up bicycle.

Enter BERNARD holding a box of matches. He starts organizing the pile and piling everything up a little higher.

NARRATOR 2: Division of Air Quality inspector Jeffrey Cline drives into the driveway at the home of Bernard Midden. *(JEFFREY starts slowly entering from other stage direction, holding a clipboard. BERNARD, with his back turned to JEFFREY, continues organizing the pile.)* Mr. Midden's name, address, and phone number were given to Mr. Cline by a neighbor, who wants to remain anonymous. The neighbor got worried when he saw Mr. Midden piling junk up in his backyard. Jeffrey took the call and tried to contact Mr. Midden by phone, but the Midden's answering machine picked up each time. No violation of the open burning rule has happened today, yet.

JEFFREY: *(Pleasant)* Good morning. *(BERNARD, surprised and startled, turns to face JEFFREY.)* I'm Jeffrey Cline with the North Carolina Division of Air Quality. How are you doing today?

BERNARD: Fine, I guess. What can I do for you?

JEFFREY: This is 123 Mockingbird Lane. Are you Bernard Midden?

BERNARD: That's me.

JEFFREY: Mr. Midden, I'm out here following up on a report that you may be burning household trash here in your backyard. Have you been?

BERNARD: Well, I haven't burned anything just yet, but there's some stuff I got out of my shed and there's some downed limbs from that storm back in January. You can see where I've piled them up close to where I can get to 'em with the garden hose in case it tries to get away. I figured I'd get rid of it all by burning it at the same time. I went down to the store on the corner and got a burn permit. That's okay, isn't it?

BERNARD takes the a Forestry Permit from his shirt pocket and hands it to JEFFREY.

NEIGHBORS whisper (ad lib): "What's a burn permit?"…"I've heard of that before but never got one", etc.

JEFFREY: You know what? I'm glad I got to you when I did. You were about to make a serious mistake. You have a Forestry Permit there, but that's only good for burning the brush in that pile.

BERNARD: What? I thought this was good for burning anything.

JEFFREY: Mr. Midden *(hands the permit back to BERNARD),* if you look closely at that permit, you'll see where you signed it, it says your signature means that you've read the Air Quality Open Burning rules and that you understand them. Those rules are printed on the back of the permit. Did you read them?

BERNARD: *(Squinting at the permit)* Well, I guess I didn't. Honestly, I need my glasses to read anything this small. What do the rules say?

JEFFREY: *(In an understanding tone)* A lot of people don't read them. Basically, they say that you can't burn anything manmade, like all that stuff on top of your brush pile.

BERNARD: No kidding! But so, if I can't burn this stuff from my shed, what else can't I burn?

JEFFREY: Well it's pretty straight forward. What we say is: If it didn't grow there, you can't burn it. If it's logs or branches from yard clean-up, it can't be over six inches in diameter. In addition to when the Forest Service puts out an advisory against burning, you can't burn on Air Quality Action days that are Code Orange, Red, or - heaven forbid - Purple.

BERNARD: *(Squinting closer at the burn permit)* This synthetic material I keep seeing mentioned in the rule - what is it?

JEFFREY: That refers to any man-made or human-processed material. If you think about what's in plastic, the foam in furniture cushions, and things like that, those materials can give off some very toxic chemicals when you burn them – chemicals that can cause cancer and other problems. Some very dangerous pollution can come just from burning your kitchen trash. You don't want to breathe those chemicals, and I'm sure you don't want your family or your neighbors breathing those chemicals either!

NEIGHBOR: *(To other neighbors)* Oh my gosh, I've been burning my kitchen trash, and I've got a little girl at home!

BERNARD: I appreciate what you're telling me! That's scary! But, there's so little of this stuff compared to the tons and tons of garbage that gets burned in those big incinerators and places they burn garbage to make electricity that I've heard about.

JEFFREY: But the thing is, those large facilities burn waste at very high temperatures that break down most of the pollution, and they have millions of dollars worth of emission control devices that capture most of what's left before it can be released. A smoldering burn pile from a single family's trash can put more pollution into the air than one of these giant systems you're talking about.

BERNARD: Okay, so I won't burn this synthetic stuff. But what should I do with it?

NEIGHBOR: *(To other neighbors)* Hey, maybe we could sell our stuff to that strange guy down the road.

Another NEIGHBOR: *(Responding to first neighbor)* Yeah, he's got all sorts of junk in his yard!

JEFFREY: Well, you might consider recycling some of it. Scrap aluminum and other metals are valuable. A lot of things we treat as trash can be made into other things, so they're really re-useable resources. Even that ice storm brush could be piled up on the back of your property for wildlife shelters.

BERNARD: *(Sticks out his hand and shakes JEFFREY'S hand)* I'm glad I met you today. I've stayed out of trouble and have smarter places to send my trash that won't pollute the air. Where can I find out more?

JEFFREY: *(Hands BERNARD a business card.)* At the bottom of my business card, you'll find a web address for the North Carolina Division of Air Quality. Go on the internet and check it out. I'm glad I met you too, and I hope you have a good day.

JEFFREY turns and walks away. He gets into his car and waves as he drives away.

Script

ACTIVITY PART 3

(OPTIONAL OR EXTENSION): CREATE YOUR OWN SCRIPTS

Now that students have acted out some of the concepts and issues, they can try their hand at writing their own scripts. The following suggestions can be used to inspire students to create their own characters and scenarios. One idea is to create characters, print the names and attributes of each character on a card or sheet of paper, and have students select a character (selecting the character of their choice, or "drawing from a hat" at random). Students can then "ad-lib" scenarios involving these characters.

Name: **Ima Burner**
Gender: Female
Age range: 50-64
Character attributes: Ima is suspected of conducting illegal open burning at her residence. She is married and lives in rural NC on a fixed income and is nearing retirement age. She is pleasant, friendly and has a solid work ethic. She burns household trash in a burn barrel because she has no public trash pick-up. She has been disposing of her trash this way all of her life and sees nothing wrong with it. For her, burning her family's trash is simply an economical way of disposal, and avoids a trip to the landfill. She is a straightforward type of person and is simply unaware of the government's open burning rules, and unaware of the harmful health effects of burning synthetic materials. She is the type of person who will probably stop burning if she is made aware of the rules, because she's respectful of the rules and doesn't want to harm anyone.

Name: **Debbie Smith**
Gender: Female
Age range: 25-45
Character attributes: Debbie has two young children and one of them has asthma. She lives next to Ima on their rural road, and has a really good relationship with her neighbor. In fact, Ima helped Debbie a lot when Debbie was a new mother. Debbie likes and respects Ima and doesn't want to get her in trouble, or harm their relationship. But Debbie is getting more and more worried about the effects of Ima's trash burning on her children. There are days when Debbie feels she can't let her children play outside, and sometimes she smells the smoke (which smells really bad) inside her house. Debbie is pretty sure that her child's asthma gets worse on days when Ima is burning and the wind direction brings the smoke to their house.

Other possible characters: Another neighbor, Debbie's husband, air quality inspector.

POSSIBLE SCENARIO:

Debbie talks with her husband or another neighbor for advice on whether to confront Ima, call the Division of Air Quality, or do nothing. Her husband/neighbor doesn't really like the burning either, but isn't sure it could really be that bad, since so many people do it, and people have been doing it so long. Besides, shouldn't Ima have a right to do what she wants on her own property? What might Debbie say to her husband or other neighbor to convince them of the seriousness of the problem? What's more important: that the burning is illegal, or that it could be harming their and their children's health? What will Debbie end up doing? If she confronts Ima, what might she say to convince Ima not to burn? If Debbie calls the NC Division of Air Quality, what will happen when an air quality inspector visits Ima?

IDEAS FOR SCRIPTS OR CLASS DISCUSSION:

Air quality inspectors often hear something like: "My grand-daddy and his grand-daddy before him burned their household trash, so I should be allowed to burn my trash." What's wrong with that today? Have the materials in household trash changed, and how? When packaging was even used at all before about 1930, how was it different from the packaging for products we buy today?

Might trash burning have been harmful to human health 100 years ago? Would it have been more or less harmful than burning today's trash? What options did people 100 years ago have for getting rid of their trash? How has our knowledge of burn barrel emissions and health impacts changed?

In 1900, North Carolina's population was about 2 million people. By 1950 that population was about 4 million, and by the year 2000 our state's population had doubled again to about 8 million. How does population relate to solid waste production, resource consumption, and air pollution?

BACKGROUND SECTION REFERENCES:

For printed brochures and resources on open burning:

Contact the North Carolina Division of Air Quality at (919) 707-8400, or email **air.awareness@ncdenr.gov.** Some brochures may be downloaded from the links under "More Resources and References".