

Lead Poisoning Prevention

Teaching Outline

Introduction:

You cannot see, taste, or smell lead, yet it is almost impossible to avoid some exposure to it. It has been used for many purposes – ceramics, ammunition, solder, paint, coins, water pipes, and as a gasoline additive. Lead lasts forever in the environment because it never breaks down into a harmless substance.

Lead poisoning is a serious, preventable health problem. It is especially dangerous to children, with an estimated 310,000 American children having elevated blood-lead levels. Most children do not show symptoms, and a blood test is the only way to detect the problem. Lead poisoning in children can cause learning and behavioral problems, slow mental development, and damage the nervous system. Adults can suffer high blood pressure and reproductive system damage.



The most common source of lead in the home is lead-based paint. Lead has been banned from house paint since 1978, but many homes were built before then. The highest lead levels are found in pre-1950 paint. The lead in the paint can contaminate household dust. Exterior paint can also contain lead, especially paint on windows, doors and exterior walls. This paint can flake and cause contamination to the soils around the edge of your home. The only way to detect this problem is to do a soil sample.

Lead can enter your water through lead pipes and lead soldered joints in copper plumbing. Brass faucets and pump components may also contain lead. You can find out whether your water contains lead by having it tested. Lead concentrations in your water can be reduced. Whenever your water has not been used for more than four hours, let the cold water run for a minute or two before using it. Water that is soft or acidic will dissolve lead from pipes and fittings more easily than water that is not. Hot water also is more likely to dissolve lead, so cold tap water should always be used for cooking and drinking.

Focus on Children:

Children are more susceptible to lead poisoning because they are more likely to swallow or breathe lead contaminated dust. Their bodies are also less capable of eliminating lead. The long-term effects of lead in a child can be severe. They include learning disabilities, decreased growth, hyperactivity, impaired hearing, and even brain damage. These effects can be decreased if caught early. Lead poisoning can only be diagnosed with a blood test.

Lesson Purpose and Objectives:

Purpose: This lesson is designed to educate families about the dangers of lead poisoning.

Objectives:

- Develop knowledge about potential sources of lead exposure.
- Understand why lead poisoning is a serious health threat, especially for children, and the potential health effects.
- Learn about the primary routes of exposure to lead.
- Identify a few potential signs of lead poisoning.
- Know the recommendations for blood lead testing for children.
- Be able to implement strategies and actions to reduce or eliminate exposure to lead.
- Other (Please list in the space below):

Suggested Resources & Materials:

The following items are available through Extension for your use in teaching this lesson. Select and use resources according to your program focus and needs. County agents should request these items in advance.

University of Kentucky Cooperative Extension Publications & Fact Sheets

- *Lead Poisoning Prevention* - ENRI-504 (www.ca.uky.edu/enri/lead)
- *Lead and Drinking Water* - ENRI-207 (www.ca.uky.edu/enri/lead)
- *Lead in and around the Home* – IP-60 (www.ca.uky.edu/agc/pubs/ip/ip60/ip60.pdf)

Videos (Available through the Ag. Communications video library.)

- *Environmental Safety: What Every Parent Should Know* (VEI-1337)
- *The Dangers of Lead Based Paint* (VHD-0918)
- *Sesame Street Lead Away* (VGN-1280) (targeted to young children)

Resources are also available through the following agencies.

Kentucky Department for Public Health Resources

Publications, presentations, press releases and event schedules for the Kentucky Child Lead Poisoning Prevention Program are available online at www.putthelidonlead.org.

Environmental Protection Agency Publications

Electronic versions of the following publication are available at www.epa.gov/lead/leadpbed.htm. Print copies may be requested by calling the National Lead Information Center at (800) 424-LEAD (5323).

- *Fight Lead Poisoning with a Healthy Diet*
- *Lead in Your Home: A Parent's Reference Guide* (English & Spanish.)
- *Protect Your Family From Lead in Your Home* (English & Spanish.)
- *Reducing Lead Hazards When Remodeling Your Home* (English & Spanish.)
- *Testing Your Home for Lead Paint, Dust and Soil*
- *Lead Poisoning and Your Children* (English & Spanish.)

Suggested Teaching Techniques and Activities:

Select only those activities that will help you teach the lesson. Limit selection according to your program focus, audience, and length of lesson.

- Use the easel book or presentation slides to give an overview of lead poisoning concerns, potential health effects, sources of exposure and strategies for reducing or eliminating exposure. Encourage discussion as you present the information.
- Invite someone from the local Health Department to come and talk about the dangers of lead. Ask the speaker to talk about ways to identify lead sources in the home and procedures for blood lead testing. Ask the audience how many have had their water tested, or their children's blood tested. Discuss lead programs through the Department for Public Health.
- Show the lead poisoning segment of the *Environmental Safety: What Every Parent Should Know* video. Discuss the major points from this short clip.
- Show the video *The Dangers of Lead Based Paint*. Ask the audience how many live in homes built before 1980. Discuss with the audience the need to have soil around the edges of the house tested if they have small children and live in older homes.
- If presenting to small children or parents of small children, show the video *Sesame Street Lead Away*. Talk to the audience about ways to prevent lead poisoning. With young children, review the information in the song.
- Other: (Please specify below.)

Suggested Evaluation Techniques:

Select the technique(s) best suited to the information you would like to obtain from your audience. Immediate evaluation will provide reaction to the presenter and program materials. Delayed evaluation will give a better indication of changed behavior and attitudes.

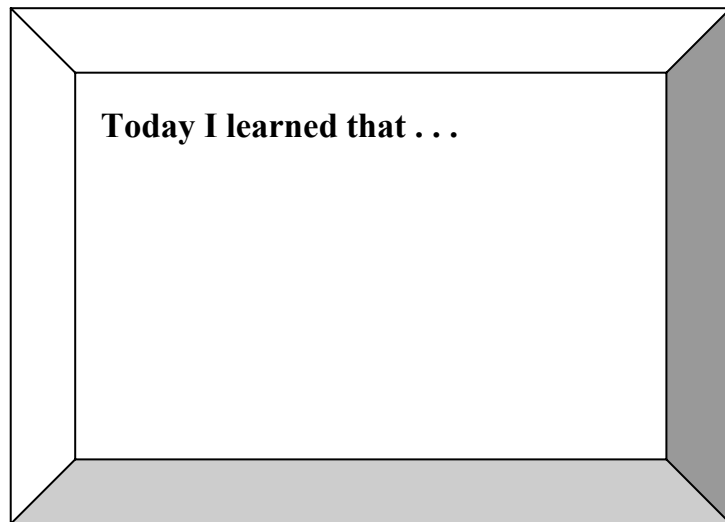
- Provide each participant with an index card. Ask them to write their name, phone number and/or e-mail address on the card along with *one* thing they will do as a result of this lesson. Follow up with participant 4-6 weeks following the lesson to see if they have taken action.
- Provide each participant with an index card or small piece of paper. Ask them to list at least 3 things they learned by experiencing this activity.
- Use the *It's Your Turn* sheet provided with this guide as an end-of-session evaluation form. Tally the results to compile information about knowledge gain and planned behavior change. Follow-up 3-6 months later to see what changes have been made.

Prepared by Kim Henken, Extension Associate for Environmental Issues.

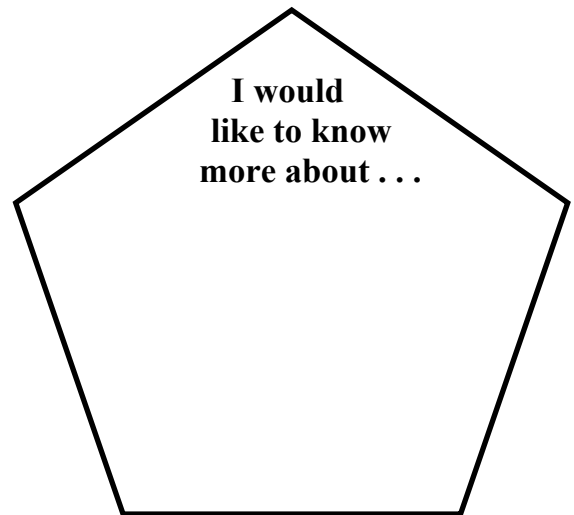
Lead Poisoning Prevention

It's Your Turn!

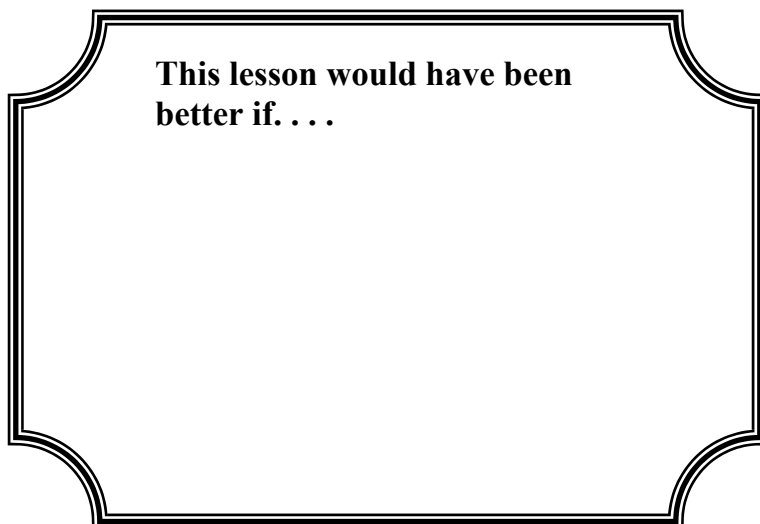
We'd like to have your feedback about this activity. Please take a few minutes to respond to the questions below.



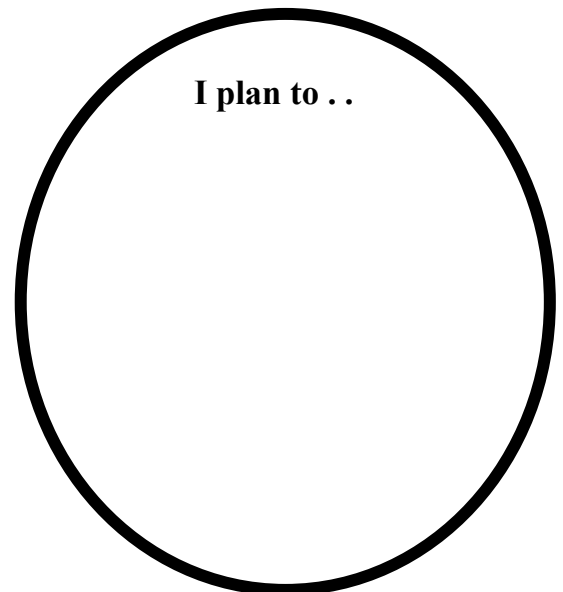
Today I learned that . . .



**I would
like to know
more about . . .**



**This lesson would have been
better if. . .**



I plan to . . .

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