

US EPA ARCHIVE DOCUMENT

Avoiding Dangers in the Dirt

1 The City Garden

Directions: Read the following passage.

Mei and her husband have four small children. They own a house outside the city. They have a small yard.



Mei wanted a garden. In the spring, she decided to plant some vegetables. She went to the hardware store. She bought seeds, a rake, and a shovel. When she got home, she prepared the soil. She planted the seeds and watered them.

Soon the plants began to grow. She watered her garden. She protected the plants from animals and bugs. In the summer, the garden was full of carrots, lettuce, tomatoes, turnips, and beans. They were ready to eat!

Mei's husband didn't want to eat the vegetables. He was worried that there were chemicals in the soil. Many houses in their neighborhood contained lead paint. He was worried about the children.

Mei was disappointed. She did not know what to do. She was so worried that she called the local health department. The health department officials answered her questions. Mei learned that vegetables do not absorb much lead from the

soil. She learned that there were certain things she could do in her garden to prevent lead contamination. The health department officials said to add compost to the soil and to avoid root vegetables such as potatoes, carrots, and turnips. Next year she will plant lettuce and tomatoes, which grow above ground. And finally, the health department officials told her to wash her vegetables with vinegar and water, peel the root crops, and throw away the outer leaves of lettuce because dust with lead falls on garden plants.

Mei was very careful. She enjoyed eating her vegetables! She was still worried about her children. The health department officials told her it was dangerous for children to play in soil with lead and to test the soil.

2 Vocabulary

Directions: Review the vocabulary words below and define each using simple English terms.

city(ies) (n.)	yard(s) (n.)
vegetable(s) (n.)	garden(s) (n.)
hardware store(s) (n.)	tool(s) (n.)
rake(s) (n.)	hoe(s) (n.)
shovel(s) (n.)	grass (n.)
dirt (n.)	soil (n.)
seed(s) (n.)	bother (v.)
grow (v.)	root(s) (n.)
turnip(s) (n.)	lettuce (n.)
carrot(s) (n.)	tomato(es) (n.)
bug(s) (n.)	harvest (v.)
lead (n.)	environmental (adj.)
leaf(ves) (n.)	absorb (v.)
health department(s) (n.)	crop(s) (n.)
compost (n.)	danger (n.)
plant (v.); plant(s) (n.)	water (v.)

3 Review and Discuss

Directions: Review “The City Garden” and answer the following questions.

1. Where does Mei live? _____

2. Who lives with Mei? _____

3. What did Mei plant in her garden? _____

4. Why was Mei's husband worried? _____

5. What did the health department officials tell Mei to do? _____

6. Did Mei eat the vegetables from her garden? _____

7. How can Mei protect her children from lead poisoning? _____

8. How does lead get from the soil into children's bodies? _____

4 Topics for Discussion

Directions: Describe some of your experiences with gardening, food, and the environment. Answer the following questions.

1. Do you plant a garden? _____

2. What do you grow in your garden? _____

3. Have you tested the soil from your garden for lead? _____

4. Does anyone in your neighborhood have lead in their soil? _____

5. Do you live in the city? _____

5 Testing Your Soil for Lead

Directions: Read the directions below for testing lead in the soil. Then follow the directions and collect soil samples from home. Bring your samples to the next class. Your teacher will locate the nearest testing laboratory and mail class samples to be tested.

The danger of lead in soil depends on (1) the amount of lead in the soil around your house and (2) the amount of soil that gets into your child.

To find out the lead content of your soil, you need to test it. The test results will tell you what to do about low, medium, high, or very high levels of soil lead.

If you have children, select areas in your yard where children normally play. Soil in other areas, such as near the outside of your house or garage, or near the street, may also contain lead.

- Select area(s) of your yard to sample.
- Take soil from the top one-half inch of each area you have selected with a clean spoon.
- Collect about one cup of soil and place it in a clean, ordinary plastic bag.

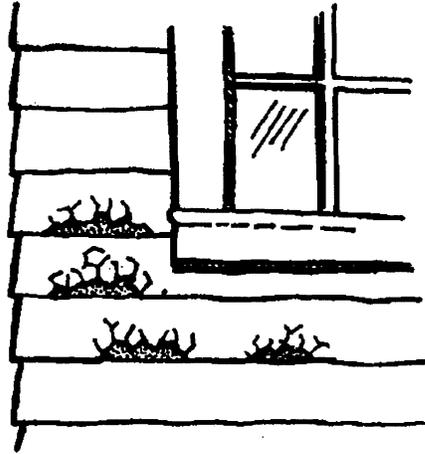
Cut out any plants or grass that are growing in your sample. Do not pull the grass out. Plant roots may stay in the sample.

6 Protecting Your Child from Lead in the Soil

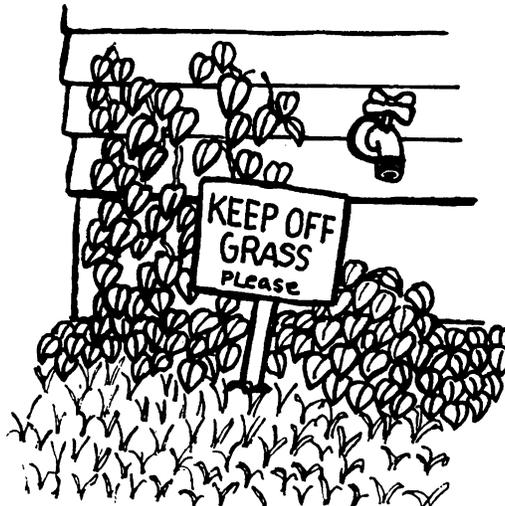
Directions: Read the safety tips below. Do you practice any of them?

If the amount of lead in your soil is high, and if the soil is not covered with many plants or thick grass, *then* you should consider one or more of the following suggestions to make your soil safer.

Control peeling house paint. Call your local health department for appropriate methods.



Plant and maintain grass or ivy.



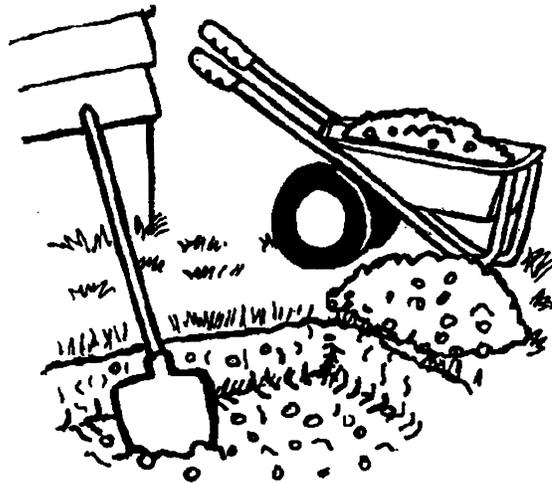
Cover the soil with a thick layer of gravel, wood chips, or other materials.



Pave the area.



As a last alternative, remove the top six inches of soil and replace it with uncontaminated soil.

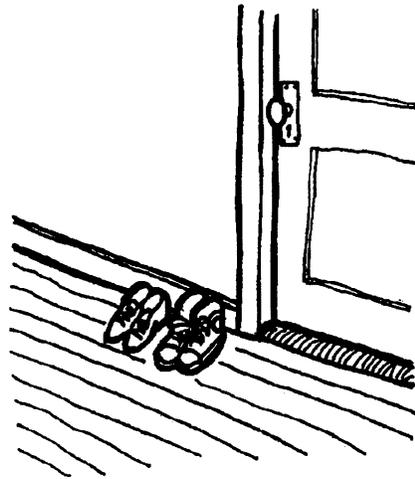


Here are some other ways to stay healthy:

Wash children's hands before eating.



Have all family members and guests take off their shoes before entering the house so that lead dust from the soil will not get inside.



Prepare and eat nutritious meals that include fruits and vegetables; foods high in calcium, such as milk; and foods high in iron, such as meat and iron-fortified cereals.

