



# Lead Poisoning Prevention Program

## Lead Lessons

Childhood lead poisoning is the number one preventable environmental health problem in Maryland and nationwide. Every year thousands of children and adults are accidentally poisoned by lead, and the tragedy is that nearly all lead poisoning is preventable.

The Maryland Department of the Environment, with the assistance of EnviroHealth Connections, a cooperative project of the Institute for Urban Environmental Health at the Johns Hopkins Bloomberg School of Public Health, Maryland Public Television, and the Maryland State Department of Education, has made available four new lead poisoning prevention lessons for use to address the high school core learning goals. Lesson plans in health, chemistry, environmental health, and government are available on line at [www.thinkport.org](http://www.thinkport.org) for use by all teachers.

### Overview: Chemistry

In this introductory chemistry lesson, students will develop a basic understanding of the physical and chemical properties of the element lead, as well as its historical and modern day uses, and how and why it is toxic to the human body. Through lecture and discussion, students will learn about basic reactions of the element and how it interacts with absorption of other important metals into human body systems.

This lesson was designed to be completed during National Childhood Lead Poisoning Prevention Week in October of each year, to raise awareness about lead poisoning, but can be done at anytime throughout the school year. The later in the school year the lesson is done, the more in depth a chemistry teacher can go with some of the more complex chemistry concepts.

### Overview: Environmental Health

In this lesson, students will first be provided with a general overview of the issues around lead poisoning in order to become more aware of the dangers and effects it has on the human body. They will learn why lead was banned from use in gasoline and paint. They will then investigate how and why various government agencies and laws were established to prevent and protect the general public from lead poisoning, as well as raise awareness about lead poisoning issues. Further, they will learn about both the national EPA Elimination Plan, as well as Maryland's response with its own State Elimination Plan. In learning about these laws and issues, students will develop a deeper understanding and appreciation for the importance of lead poisoning prevention.

### Overview: Government

In this lesson, students will be provided with a general overview of the issues around lead poisoning in order to become more aware of the dangers and effects it has on the human body. They will investigate how and why various government agencies and laws were established to prevent and protect the general public from lead poisoning, as well as raise awareness about lead poisoning issues. Further, they will learn about both the national EPA Elimination Plan, as well as Maryland's response with its own State Elimination Plan. In learning about these laws and issues, students will develop a deeper understanding and appreciation for the importance of lead poisoning prevention.

### Overview: Health

In this introductory lesson, students will be provided with a general overview of the issues around lead poisoning in order to become more aware of the dangers and effects it has on the human body, as well as how to treat and prevent the disease. They will also learn about basic laws and regulations established to protect tenants living in properties built prior to 1978. Finally, students will learn what they specifically can do to help prevent lead poisoning in their own families, as well as where to go for more information.

