

Preschool Through Kindergarten



# Lessons in Lead Curriculum



Provided by

The Los Angeles County  
Department of Public Health  
Childhood Lead Poisoning Prevention Program  
1-800-524-5323 (1-800-LA-4-LEAD)  
[www.lapublichealth.org/lead](http://www.lapublichealth.org/lead)



The cover artwork comes from winners that participated in the 2007 Art Contest. They are Morgan Gonzalez and Nancy Beltran from Broad Avenue Elementary in Wilmington. We would like to thank all the students who participated in the contest and encourage future artists to be public health advocates against childhood lead poisoning.

**Lessons in Lead**  
**Pre-K—Kindergarten**



**Acknowledgements**

This curriculum was developed to offer school educators an updated lead poisoning prevention tool. The Childhood Lead Poisoning Prevention Program (CLPPP) would like to acknowledge the following teachers, county employees and schools who contributed to the development of this curriculum.

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- Pilgrim School, Los Angeles

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Lead Poisoning Prevention Curriculum Project: Crawford, Labette and Montgomery Counties. Fall 2002. Sponsored by the Kansas Childhood Lead Poisoning Prevention Program. Reprinted by permission of the Southeast Kansas Education Service Center - Greenbush.

Developed by the Los Angeles County, Department of Public Health,  
Childhood Lead Poisoning Prevention Program

2008

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**Lessons in Lead**  
**Pre-K—Kindergarten**



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## **Lead Poisoning Overview**

### Introduction

Childhood lead poisoning is a major, preventable, environmental health problem in the United States for children 1-6 years of age. Between 2002 and 2006, 3,842 children were identified with elevated blood lead levels (BLL  $\geq$  10  $\mu\text{g/dL}$ )\* in Los Angeles County.

### Goals and Objectives

#### Goals:

The goals of this curriculum will be to reduce the incidence of lead exposure in children through educational lessons taught in class and to inform teachers of the lead hotline.

#### Objectives:

- The students will be able to identify at least two sources of lead.
- The students will be able to identify at least two ways to prevent lead poisoning.
- Teachers will identify the lead hotline as an important phone number to get lead poison related information.

### What is Lead Poisoning?

- Lead poisoning is a result of exposure to lead in the environment.
- Lead enters the body most commonly through ingestion (swallowing).
- Lead poisoning is especially dangerous for young children because their rapidly growing and developing bodies absorb more lead.

### What are the Effects of Lead Poisoning?

- Lead interferes with the rapidly developing brain and other organs of young children.
- Studies have correlated lead in early childhood with poor academic achievement<sup>1</sup>, juvenile delinquency<sup>2, 4</sup> and elevated school dropout rate<sup>3</sup>.
- Multiple studies have indicated that even children with blood lead levels less than 10 micrograms per deciliter\* show that their IQ drop 4-8 points<sup>1, 5, 6</sup>.
- Very high levels of lead exposure can cause mental retardation, coma, convulsions and even death.

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\* The level identified by the CDC as a level of concern.



## Lead Poisoning Overview

### Symptoms

- Most children with lead poisoning do not look or act sick.
- If there are symptoms, they may include:
  - Irritability
  - Loss of appetite
  - Weight loss
  - Sluggishness
  - Abdominal pain
  - Vomiting
  - Constipation
  - Unusual paleness from anemia
  - Learning difficulties
- Though uncommon, the symptoms of severe lead poisoning include abdominal pains, headaches, vomiting, confusion, muscle weakness, seizures, hair loss and anemia.

A blood lead test is the only way to know if a child has lead poisoning.

### Who is at Risk of Lead Poisoning?

- Children's bodies absorb more lead than adults do.
- Very young children tend to put their hands or other objects into their mouths, which may be contaminated with lead dust.
- Children living at or below the poverty line who live in older housing.
- Adults living in or surrounded by an environment containing lead-based products are at risk of exposure.
- Pregnant women must take extra precautions because lead can damage the developing baby.



## Lead Poisoning Overview

### Sources of Lead Exposure for Los Angeles County

- **Most Common Source**

The most common source of lead exposure in Los Angeles County for children is lead-based paint.

- o Children can become poisoned from lead-based paint when the home or school they live in or spend time in:
  - Was built before 1978
  - The paint is deteriorating
  - The home is being remodeled

- **Second Most Common Source**

Is take home exposure. Lead is exposed at the job to the worker, their clothes and shoes, which is then brought home.

- o The work may involve:
  - Painting, radiator repair, battery manufacturer, foundry work, pottery/ceramics manufacturer, scrap metal recycling, firearm shooting, etc.

- **Third Most Common Source**

Is lead dust. It can be from within the home or outside. Lead dust can come from deteriorating lead paint and accumulates in and around the home. It can settle on toys, soil, places where children play, which get on the fingers and then are put in their mouths.

- **Fourth Most Common Source**

Soil contaminated from leaded gasoline, lead dust or lead-based paint .

Folk Remedies. Traditional or folk remedies including Azarcon and Greta, which are used for upset stomach or indigestion; Pay-loo-ah, which is used for rash or fever.

- **Other Sources**

Hobby. Like glass staining

Pottery. Handmade ceramic tableware, especially imported ceramics decorated with lead-based glaze or paint.

Other. Imported candies, spices, mini-blinds, toys, jewelry, or other non-traditional sources of lead.

Water. Lead is found in low-levels in some drinking water because lead-based solder on water pipes may add lead to water.



## **Lead Poisoning Overview**

### **Lead Poisoning Prevention**

#### **Simple Steps Can Be Taken**

- Washing children's hands and face often.
- A blood lead test is the only way to know if a child has lead poisoning.
- Wet mopping and wet wiping, floors and windowsills in order to clean up lead dust or lead-based paint chips in homes built before 1978 with deteriorating paint.
- Covering bare dirt with grass, wood chips or cement.
- Wiping feet before entering home.
- Keep non-food items out of children's mouths.

#### **Nutrition Is Very Important**

- Children who eat foods that are high in iron, calcium, vitamin C and low in fat are less likely to absorb lead.
- Each day kids need:
  - 3 to 4 servings of foods high in iron
  - 3 to 4 servings of foods high in vitamin C
  - 3 to 4 servings of foods high in calcium
- Some of these foods can be:
  - Turkey Sandwich
  - Chicken
  - Peanut Butter
  - Yogurt
  - Strawberries
  - Broccoli
  - Cheese
  - Leafy Greens

For additional information please contact CLPPP at **1-800-LA-4-LEAD (1-800-524-5323)**.



## **Educational Program**

### Lesson Plan Outline

The following summarizes the two lesson plans included in this curriculum:

#### **Lesson 1: Good and Bad**

**Goal:** The lessons will increase the student's awareness of childhood lead poisoning prevention.

**Objectives:** 1) As a result of this activity, the learner will be able to distinguish between items that are good for them and bad for them regarding lead poisoning prevention.  
2) The learner will be able to name at least two activities that can prevent lead poisoning.

**Content:**

Teacher instructions  
Sample pictures

**Evaluation:** Found under Assessment on page 8.

#### **Lesson 2: Handwashing Song**

**Goal:** The lessons will increase the student's awareness of childhood lead poisoning prevention.

**Objectives:** 1) As a result of this activity, the learner will identify handwashing as a form of lead poisoning prevention.  
2) The learner will be able to name at least two behaviors that can prevent lead poisoning.

**Content:**

Teacher instructions  
Student Information Sheet  
Coloring sheet

**Evaluation:** Found under Assessment on page 14.



## **Educational Program**

### **Lesson Plan Availability**

We have lesson plans for grades:

- I. Preschool through Kindergarten
- II. Elementary
- III. High School

If you would like a curriculum for a different grade, please contact the Childhood Lead Poisoning Prevention Program at **1-800-LA-4-LEAD (1-800-524-5323)**.

### **Preparation**

It is recommended that the instructor read through the included lead poisoning overview on pages 1-4. If further information is desired please refer to the Resources Section or call **1-800-LA-4-LEAD (1-800-524-5323)**.



## Safe and Unsafe

### Objectives

- ◆ As a result of this activity, the learner will be able to distinguish between items that are safe for them and unsafe for them regarding lead poisoning prevention.
- ◆ The learner will be able to name at least two activities that can prevent lead poisoning.

### Activity Description

**The students will separate pictures into a safe pile and unsafe pile, based on facts about preventing lead poisoning. Find pictures of safe and unsafe things.**

### Teacher Notes:

After you have gone over safe and unsafe things then have each child separate pictures. This tells you how much they retained or understood.

### Materials Needed:

- “Safe and Unsafe” pictures (see samples on page 10-11)

### Action Steps for Activity

1. Prior to conducting activity with students, instructor should review ‘Lead Poisoning Overview’ in curriculum on pages 1-4 to become familiar with lead poisoning sources.
2. Find pictures that are either safe or unsafe regarding lead poisoning such as:  
Safe List—Wash Hands, Wipe Feet, Grassy Areas, Door Mats, Soap, Doctor, Spinach, Broccoli, Cereal, Cheese, Milk, Oranges  
  
Unsafe List—Lead-Paint (pre-1978), Dust, Soil, Ceramic Dishes, Children’s Jewelry, Paint Chips
3. Explain the basic understanding of what lead is:  
A metal found all around in our environment. It can be found in the dirt of homes built before 1978, very old paint, some toys, some dishes. That’s why it is very important to wash your hands.  
  
Show the picture of lead on page 9 to the students so they may know what it looks like in its original form.
4. Explain that lead is a poison that can make someone very sick even though they may show no symptoms. The only way to know if they have lead poisoning is to go to the doctor.



## Safe and Unsafe

5. Discuss with the children that they can do some activities that can help to prevent lead poisoning. These include:
- Washing their hands
  - Eating healthy foods high in calcium and iron
  - Wiping their feet before walking into their home or classroom
  - Keeping non-food items out of children's mouths
  - Playing in areas that are covered with grass, asphalt or cement

**Please remind students to take the parent letter home (found in the Appendix on pages 20-21) so their parents may have the 800 number to call if they have questions.**

### Assessment

Upon completing the activity:

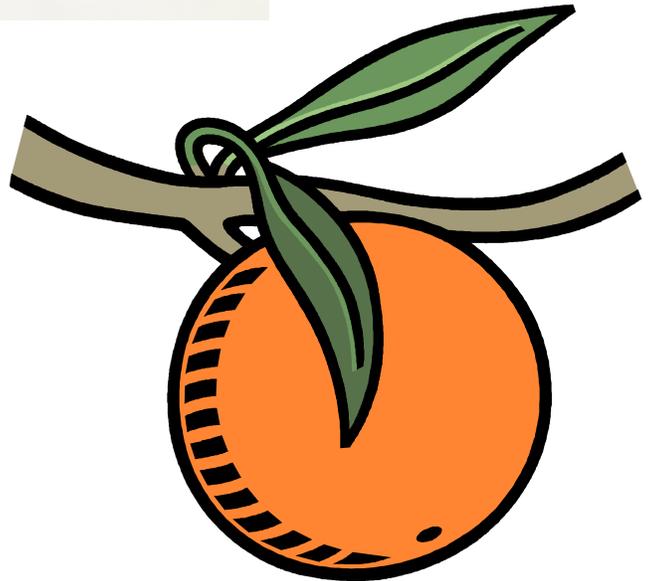
1. Ask students what activities they can do to prevent lead poisoning?
2. Students can also be assessed during the activity when selecting pictures in the appropriate list.

*For additional information please contact Childhood Lead Poisoning Prevention Program for informational handouts, i.e. "Simple Steps to Protect Your Child From Lead". The hotline number is 1-800-LA-4-LEAD (524-5323)*

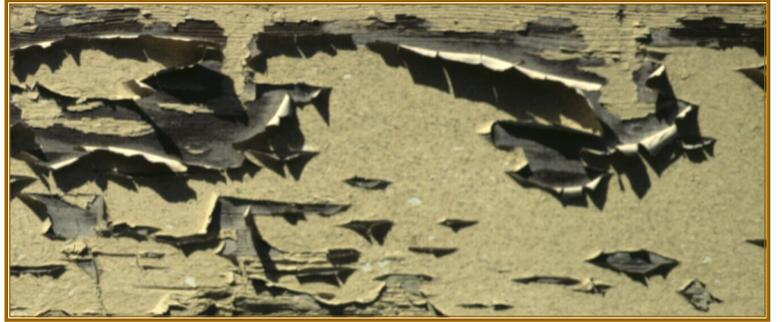
## Picture of Lead



# Samples of "Safe"



# Samples of "Unsafe"



Left Blank Intentionally



# Handwashing Song

## Objectives

- ◆ As a result of this activity, the learner will identify handwashing as a form of lead poisoning prevention.
- ◆ The learner will be able to name at least one behavior that can prevent lead poisoning.

## Activity Description

**Introduce handwashing song. Have students sing the song while they wash their hands with soap under running water.**

### Teacher Notes:

Students should wash their hands before eating, after going to the bathroom and after playing.

### Materials Needed:

- Sink
- Soap
- Paper Towels
- Water

## Action Steps for Activity

1. Prior to conducting activity with students, instructor should review ‘Lead Poisoning Overview’ in curriculum on pages 1-4 to become familiar with lead poisoning sources.
2. Since children’s hands can carry germs and lead dust to their mouths, children should wash their hands:
  - Before eating and touching food
  - After using the bathroom and sneezing or coughing
  - After playing
  - Before going to bed
3. Explain to the students that they will be learning the handwashing song and singing it to the tune of “Row, Row, Row Your Boat”. Teach the kids the following words:

**Wash, wash, wash your hands  
Play our handy game.  
Rub and scrub, and scrub and rub.  
Germs go down the drain, HEY!**

**Wash, wash, wash your hands  
Play our handy game.  
Rub and scrub, and scrub and rub  
Dirt goes down the drain, HEY!**

4. Once the students have learned the words, teach them to make the physical motion of washing their hands at their desk. This will allow them to practice how to properly wash their hands. Remind students to scrub in between fingers as well as behind their hands to thoroughly wash their hands.



## Handwashing Song

5. If children wash their hands with soap under running water during the time it takes to sing this song twice, they will have thoroughly cleaned their hands.
6. Page 15 has been included to use as an additional teaching tool to help children understand when they should wash their hands.
7. Teachers may make copies of the coloring sheet on page 16 for each student to color after the activity.

**Please remind students to take the parent letter home (found in the Appendix on pages 20-21) so their parents may have the 800 number to call if they have questions.**

### Assessment

Upon completing the activity:

1. Ask students what they can do to prevent lead poisoning?
2. Have students sing the handwashing song while practicing the act of hand washing from their desks.

### Additional Resources

Teachers may visit the following websites or call the phone numbers listed, to order or print free material on handwashing.

Acute Communicable Disease Control Program (ACDC) Health Education Materials

- <http://www.lapublichealth.org/acd/HealthEd.htm>
- (213) 240-7941

Child Health & Disability Prevention Program (CHDP) Internal Forms and Publications

- <http://lapublichealth.org/cms/chdp/Internalpub.asp>
- (800) 993-CHDP (800-993-2437)

California Department of Public Health Immunization Branch

- <http://www.dhs.ca.gov/ps/dcdc/izgroup/shared/education/wyh.htm>
- (510) 620-3737

*For additional information please contact Childhood Lead Poisoning Prevention Program for informational handouts, i.e. "Simple Steps to Protect Your Child From Lead". The hotline number is 1-800-LA-4-LEAD (524-5323)*

# Wash Your Hands



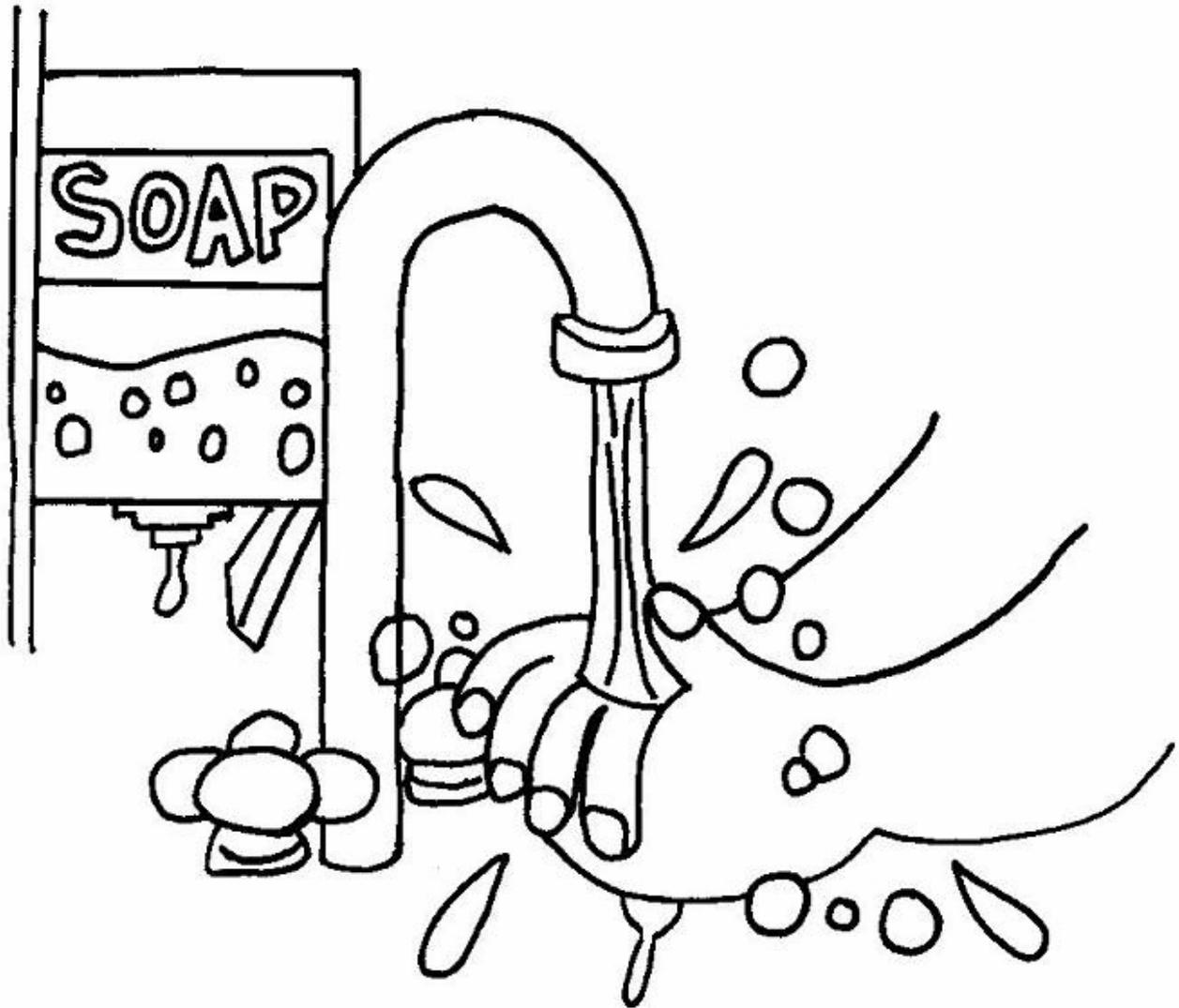
**BEFORE YOU EAT OR SLEEP**



**AFTER YOU PLAY**



**AFTER THE BATHROOM OR SNEEZING**



Be Healthy,  
Wash Germs  
Away!



## Resources

### Resources Relevant to the Curriculum

- Los Angeles County Website  
<http://lapublichealth.org/lead/>
- Government Website  
<http://cdc.gov/nceh/lead/>

### Resources for Students and Teachers

- If you would like to order materials, please complete the order form found in the Appendix.





**Appendix**

- Letter to Parents (English and Spanish)
- Art Contest Participation Information
- Order Form



JONATHAN E. FIELDING, M.D., M.P.H.  
Director and Health Officer

JONATHAN FREEDMAN, Ph.D.  
Acting Chief Deputy

**Childhood Lead Poisoning Prevention Program**

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[www.lapublichealth.org/lead](http://www.lapublichealth.org/lead)



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**Dear Parent/Guardian:**

The Los Angeles County, Department of Public Health, Childhood Lead Poisoning Prevention Program aims to prevent lead poisoning in children. Childhood lead poisoning is a major, preventable, environmental health problem in the United States for children 1-6 years of age.

The most common sources of lead exposure for Los Angeles County are:

- Chipping or peeling lead-based paint used in homes built before 1978.
- Take home exposure where people bring lead from their jobs into their home.
- Lead dust from deteriorating lead-based paint found inside or outside the home.

Please contact the Los Angeles County, Childhood Lead Poisoning Prevention Program at **1-800-LA-4-LEAD (1-800-524-5323)** if you have questions on:

- How to repair chipping, peeling or deteriorating paint
- What steps to take to prevent bringing lead home from your job
- Lead in toys, traditional remedies, imported pottery or imported children's jewelry
- Any other questions on childhood lead poisoning
- Or please see our website at [www.lapublichealth.org/lead](http://www.lapublichealth.org/lead)

Sincerely,

Childhood Lead Poisoning Prevention Program  
Health Education Unit  
5555 Ferguson Drive, Suite 210-02  
Commerce, CA 90022



JONATHAN E. FIELDING, M.D., M.P.H.  
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**Estimados Padres / Tutor Legal:**

El Departamento de Salud Pública del Condado de Los Angeles con el Programa de Prevención del Envenenamiento por Plomo en la Niñez tienen como propósito prevenir el envenenamiento por plomo. El envenenamiento por plomo en la niñez es un gran problema para la salud y es evitable. En los Estados Unidos es muy serio sobre todo en los niños entre 1 y 6 años.

Las fuentes más comunes que exponen a los niños al envenenamiento por plomo en el Condado de Los Angeles son:

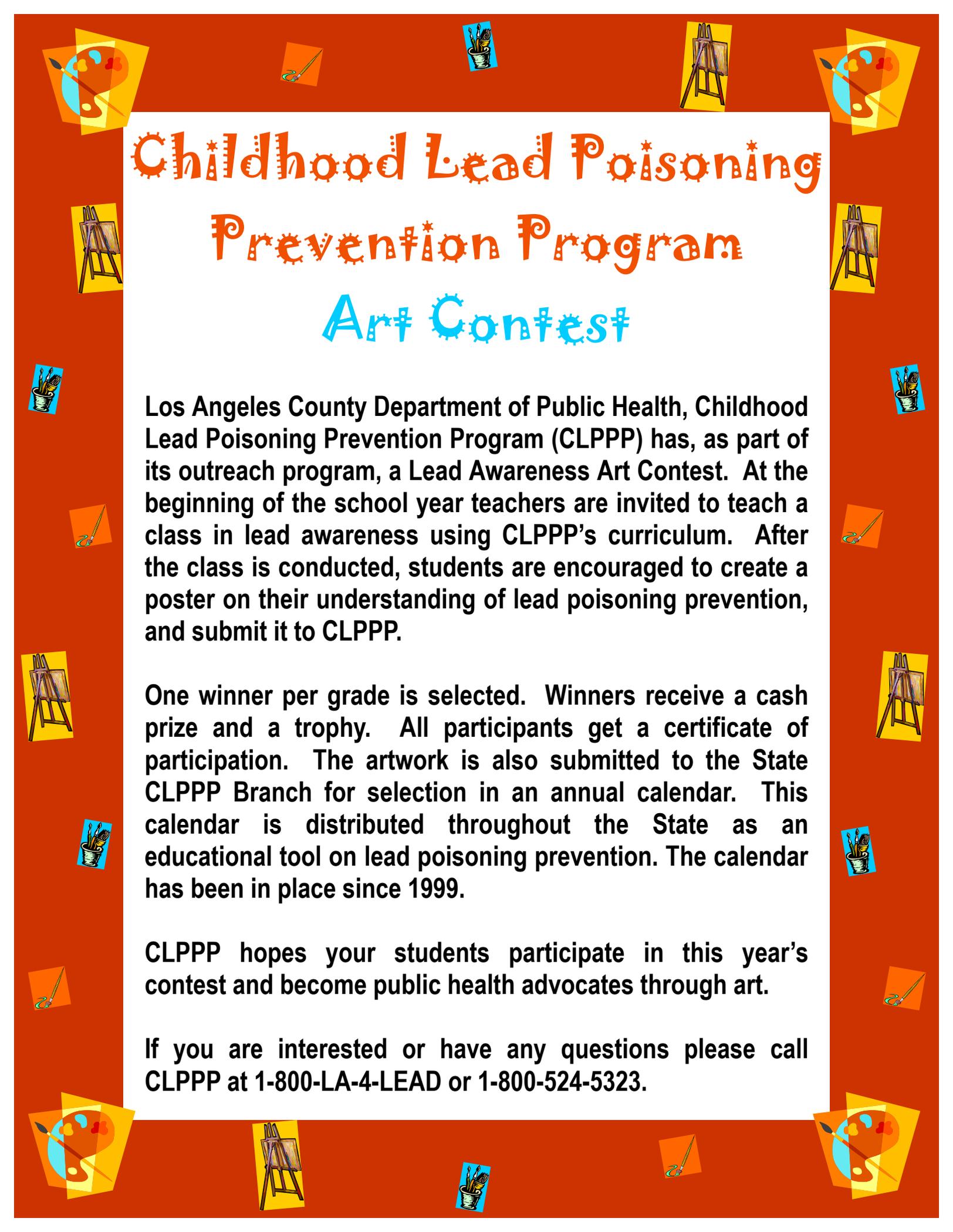
- La pintura a base de plomo en casas construidas antes de 1978 que se estén descascarando / deteriorando, al igual que la pintura haciéndose polvo dentro y fuera de estas casas.
- Al llevar el plomo a casa de su trabajo.

Por favor llame al Programa de Prevención del Envenenamiento por Plomo en la Niñez del Condado de Los Angeles al **1-800-LA-4-LEAD (1-800-524-5323)** si tiene preguntas sobre:

- Cómo arreglar la pintura que se este deteriorando
- Cuáles son los pasos para evitar llevar el plomo a casa del trabajo
- Cuáles juguetes, remedios caseros, cerámica importada o dulces importados pueden estar contaminado con plomo
- Si tienen otras preguntas sobre el envenenamiento por plomo en la niñez
- O si gustan pueden visitar nuestra pagina web a **[www.lapublichealth.org/lead](http://www.lapublichealth.org/lead)**

Atentamente,

Programa de Prevención del Envenenamiento por Plomo en la Niñez  
Health Education Unit  
5555 Ferguson Drive, Suite 210-02  
Commerce, CA 90022



# Childhood Lead Poisoning Prevention Program Art Contest

Los Angeles County Department of Public Health, Childhood Lead Poisoning Prevention Program (CLPPP) has, as part of its outreach program, a Lead Awareness Art Contest. At the beginning of the school year teachers are invited to teach a class in lead awareness using CLPPP's curriculum. After the class is conducted, students are encouraged to create a poster on their understanding of lead poisoning prevention, and submit it to CLPPP.

One winner per grade is selected. Winners receive a cash prize and a trophy. All participants get a certificate of participation. The artwork is also submitted to the State CLPPP Branch for selection in an annual calendar. This calendar is distributed throughout the State as an educational tool on lead poisoning prevention. The calendar has been in place since 1999.

CLPPP hopes your students participate in this year's contest and become public health advocates through art.

If you are interested or have any questions please call CLPPP at 1-800-LA-4-LEAD or 1-800-524-5323.



# Los Angeles County Department of Public Health Childhood Lead Poisoning Prevention Program

## Art Contest & Order Form (Pre-K—K School)

✓ Please call me to talk more about the Lead Awareness Art Contest. Yes      No

	Date: _____
School Name: _____	District: _____
Contact Person: _____	Position: _____
Mailing Address: _____	
City, Zip Code: _____	
Phone: _____	Fax: _____
E-mail: _____	

Materials (while supplies last)	Language	Quantity
Brochure: <i>"Learn about Lead Poisoning"</i>	Bilingual-Eng/Span	
Brochure: <i>"Make Your Home Lead-Safe and Healthy For Children"</i>	English	
	Spanish	
	Russian	
	Vietnamese	
	Korean	
	Chinese	
	Armenian	
Nutrition: <i>"Well fed = Less lead"</i>	English	
	Spanish	
Curriculum (one per teacher): <i>"Lessons in Lead"</i>	Preschool-Kindergarten	
	Elem. School (1-6)	
Art contest rules (one per teacher for grades K-6)	English	
Flyer: <i>"These Candies May Contain Lead"</i>	Bilingual-Eng/Span	
Poster: <i>"Prevent Childhood Lead Poisoning"</i>	Bilingual-Eng/Span	
Coloring Book: <i>"Let's Make Lead Poisoning A Thing Of The Past"</i>	Bilingual-Eng/Span	
Bookmarkers	Bilingual-Eng/Span	
Calendars (one per teacher)	Bilingual-Eng/Span	

**Mail or Fax to:** Childhood Lead Poisoning Prevention Program  
Health Education Unit  
5555 Ferguson Dr., Suite 210-02  
City of Commerce, CA 90022

**Phone:** 800-524-5323  
**Fax:** 323-890-8736

## Lessons in Lead Pre-K—Kindergarten



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