# LEAD POISONING PREVENTION CURRICULUM FOR PRESCHOOL CHILDREN AND THEIR FAMILIES



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Contact the NYS Department of Health for additional copies of this document.

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Note: The original Erie County curriculum for 4 and 5-year olds was revised by the New York State Department of Health in 1998 prior to distributing it to Head Start programs serving 3 and 4-year olds. This document reflects the State DOH changes.

## **Curriculum Credits**

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## AN ADDED NOTE FROM THE STATE HEALTH DEPARTMENT:

This curriculum can be enhanced by using a "kick-off" program prior to using the songs, recipes and activities. One such program was piloted in the Capital District that started with a short Sesame Street lead awareness video and was followed by a 5 to 7 minute skit featuring Lena the Lead-Smart Lion. We have two other suggestions for programs you may want to consider - one is to do a briefer version of the Lena skit for the children themselves to act out. This has the advantage of involving them directly and bringing their parents in to watch them perform. It may make a better end-of-year activity rather than a kick-off. You may also want to consider asking local high school students to play the roles in the Lena skit or one you create yourselves. We think some sort of program with the children and/or the parents is an excellent way to introduce or reinforce the key messages in this curriculum. Visual materials are available for your use. Copies of the Sesame Street video are at regional Head Start offices. The script for the skit, costume patterns and a model for a hand puppet for the children to use are included as Appendix 1. The State Health Department has stickers and coloring books for the children, as well as educational materials for parents about reducing exposure to lead.

We encourage you to make this curriculum work for you. You may want to follow the five units as they are written. In our pilot effort we learned that some Head Start programs prefer to select different pieces that fit in with whatever theme they happen to be working on. It is important to involve parents and care givers. Sending letters home with children may work, as may handing out packets on parent program nights, conducting home visits, mailing letters to the home, or putting on the skit with children as mentioned earlier.

We're interested in hearing more about how you use this curriculum and what you think the children and their parents/care givers may be getting out of it. We would appreciate your using the evaluation forms for kids, teachers and parents that are included in Appendix 2.

We also revised the curriculum to include a list of resources for more information about lead. Teachers who were using the curriculum activities throughout the year requested a simplified, consolidated letter to parents to use instead of the letters for each of the five units. The consolidated letter and resource list are included as Appendix 3. Both the resource list and the letter reflect the student-directed learning techniques employed by Head Start more accurately than the teacher-directed model envisioned for the 3-4 year old curriculum.

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*NOTE*: Each unit contains facts and background information which are important to the presentation and success of this lead curriculum.

## Dear Teacher:

The lead poisoning prevention curriculum is designed for use with 4 & 5 year old Pre-K students.

Lead poisoning is the nation's number one **preventable**, environmental health problem facing our children today. The curriculum brings children, parents/care givers, and teachers together to help prevent this problem.

Developed and tested by experts in child development, public health education, nutrition and health care, the curriculum contains five complete, flexible units. They can be tailored and adapted to meet the needs of your students.

In this packet you will find:

- A Teacher's Guide with an overview of the lead poisoning problem and suggestions for using the curriculum.
- Five units complete with learning objectives, teacher background information, guidelines for program implementation, activities, follow-up discussion questions, songs and ideas for optional arts and crafts projects.
- A full complement of informational materials for parents or care givers.
- The curriculum materials, stories, songs and recipes.

We hope you will find these activities both instructive and enjoyable. They will assist you in teaching your children to become "helpers" in preventing lead poisoning.

If you have any questions or comments about the curriculum materials, please share them with us. On behalf of the Preschool Lead Poisoning Prevention Curriculum Committee, we appreciate your willingness to help PREVENT LEAD POISONING.

Sincerely, Lead Poisoning Prevention Curriculum Committee

Questions or comments to: c/o Developmental Disabilities Prevention Program/People, Inc. 1219 North Forest Road, P.O. Box 9033, Williamsville, NY 14231-9033 (716) 634-8132

#### Teacher's Guide Lead Poisoning Prevention Curriculum for Preschool Children

#### Target Population:

Four and five year old Pre-K students and their families.

## General Educational Objectives:

To make children aware of the dangers of lead in their environment and to have children demonstrate behaviors that will help prevent them from becoming lead poisoned. The ultimate goal of the curriculum is to alert parents/care givers to the dangers of lead poisoning in their home in order that they may implement the precautions needed to protect their children from becoming lead poisoned.

#### Specific Learning Objectives:

Each child will be able to:

- 1. Identify three <u>primary</u> sources of lead in the environment. These are: paint, dust and soil.
- 2. Identify lead as a poison found in the environment and demonstrate a <u>minimum</u> of two behaviors which will help prevent lead poisoning.
- 3. Identify one or two foods that are rich in iron which will help prevent children's bodies from absorbing environmental lead.
- 4. Identify one or two foods that are rich in calcium which will help prevent children's bodies from absorbing environmental lead.
- 5. Identify the main points of objectives 1 through 4 above. Name at least two (2) ways that he/she can be a lead poisoning prevention helper.

## Why This Curriculum is Important

## Teacher Facts and Background Information:

Fact:

Lead poisoning has been referred to as the "silent epidemic." Rarely are there visible symptoms. A child may not look or act sick. Lead poisoning is our nation's number one childhood environmental health problem. When lead accumulates within a child's body it affects that child's normal growth and impacts upon his health, behavior and intellectual development.

## Background:

The Centers for Disease Control (CDC) in Atlanta GA, consider children between nine months and six years old, exposed to houses built before 1978, to be at greatest risk. This is the age when the brain undergoes its greatest development and body weight is at its lowest. The CDC estimates that 3 to 4 million children between the ages of nine months and six years of age are at risk for lead poisoning.

The effects of lead poisoning depend on how much lead has been absorbed into the body and the duration of the exposure to lead. Symptoms are often hard to detect and may lie dormant for many years. A child poisoned at two years might be more likely to drop out of high school or have a lower IQ than his contemporaries.

## Fact:

The only sure way to determine whether a child has a high blood lead level is to have that child tested annually for lead poisoning. This is particularly true for those children living in older homes where the risk of lead poisoning is greater. Consult with your physician.

#### Background:

In the majority of lead poisoning cases there may be no warning signs or signs may be as common as fatigue, loss of appetite, irritability, sleeping problems, or sudden behavioral changes. More serious indications include pica (the eating of non-edible items), clumsiness or loss of muscle control, weakness, abdominal pain, vomiting, constipation and changes in consciousness. In severe cases, coma and death can occur.

## HOW TO USE THE LEAD POISONING PREVENTION MATERIALS

## General Information:

Each of the five units, like the Teacher's Guide, is introduced with lead poisoning facts and background information. This helps the teacher understand why children need to learn lead poisoning prevention behaviors. Throughout the curriculum, children are introduced to the dangers of lead poisoning and how it can be prevented. The units are self-contained. Each unit contains specific learning objectives. The curriculum is flexible enough to be used within a week, a month or over the course of a term. The teacher can then reinforce lead poisoning prevention habits throughout the year.

The curriculum has been designed to involve parents/care givers as an integral part of the child's learning experience. Adult involvement is essential to the success of the curriculum. *Parents/care givers need to be aware of the effects of lead poisoning and steps they can take to reduce their child's risk of becoming lead poisoned.* At the end of each unit a letter will be sent home to parents/care givers suggesting activities which can be done together.

After completing the curriculum each child can be awarded a certificate indicating that he/she is a helper in preventing lead poisoning. The certificate can be as creative as the teacher wishes.

#### Before Introducing the Curriculum:

The first step in using the Lead Poisoning Prevention Curriculum is to read through the Teacher's Guide to familiarize yourself with the program. Points felt important for teachers to stress are noted in the learning objectives. Teachers are encouraged to use their imagination and to use the ideas provided, improvising and tailoring them to their needs.

NOTE: <u>The day prior</u> to using this curriculum, send home the suggested introductory letter to parents found at the end of this section of the Teacher's Guide.

#### Methods:

Concepts about lead poisoning prevention will be taught in the following ways:

- An introductory letter to parents/care givers informing them of the lead poisoning prevention curriculum.
- Take home letters to parents/care givers accompany each unit to encourage home participation.
- Take home information to share with parents/care givers such as recipes, etc.
- Hands on classroom activities.
- Stories about lead poisoning prevention.
- Classroom discussion.
- Songs and arts and crafts projects.
- Certificate of completion indicating that a child is a Lead Poisoning Prevention Helper. (Certificate created by the teacher.)
- For interested parents and care givers, teachers are encouraged to arrange for a supplemental session on lead poisoning prevention by calling their local County Lead Poisoning Prevention Program for a speaker. Please refer to the Resources Section found in Appendix 4 for a list of County Lead Prevention Programs and their phone numbers.

#### Curriculum Components:

#### Stories

Stories are provided for teachers to use with the children.

- Little ... (you add name of insect) Goes Exploring
- <u>The Bug Family Learns About Lead</u>

#### Songs

Songs to reinforce concepts and ideas concerning lead can be found within this section of the Teacher's Guide. Sending songs home for parents/ care givers allows them to sing along with their children.

## Activities

Ideas for implementing craft activities are in the Crafts Section of the Teacher's Guide.

#### **Dramatic Activities**

Role playing provides children with opportunities to be creative while dramatizing behaviors and good habits to prevent lead poisoning.

Children enjoy being helpers. Dramatic activity provides a way to express their helpful natures. Role playing situations suggested by the teacher can serve to reinforce ideas and concepts from the lessons.

#### Lead Poisoning Prevention Helper for a Day

Designate a child to be a lead poisoning prevention helper for the day. The child will help remind others to wash their hands, not put objects in their mouths, etc.

## Storytelling

Using the children's ideas and words, the teacher creates a story that can be printed up and sent home.

## Food Activity

Make a doll or puppet with an open mouth. Use a see-through net or long sock for the doll's body. Ask children what things are good to put into their mouth. Those things that are good can be placed in the doll's mouth. Those things that are not good can be placed in a trash can. Inappropriate items include: paint chips, toys, railings, window ledges (use pictures), etc. Items to be eaten include all of the foods recommended in Units 3 and 4.

Brochures can be acquired through your local Department of Health.

## LEAD POISONING PREVENTION STORIES

#### LITTLE (add insect name of your choice) GOES EXPLORING

#### by Don Levin

This is a story that happened once upon a time ...

Little (add insect name here) lived with his Mother in a room in a very big, very old house.

Each day, Little \_\_\_\_\_\_ asked his mother, "May I walk through the rest of our house? I would like to meet our neighbors and play in their rooms."

Mother would say, "This is a very big, very old house, and you must wait until you are bigger and older before you may explore it."

Little \_\_\_\_\_\_ sighed, and said, "I understand."

Walking about he explored all the nooks and crannies of the windows in his room.

And he explored the baseboards. And the cabinets. And the floor.

Each day his Mother reminded Little \_\_\_\_\_\_ not to eat the paint chips that sometimes fell on the floor. And to wash the dust from his hands with soap and water. And to keep his hands out of his mouth.

"There may be <u>lead</u> in the dust around the windows," his mother told him. "And in the paint chips from the baseboards, and on the cabinets, and on the floor in our room. Lead is very bad for you. It will make you sick, and make it hard for you to learn new things. So you must always remember to wash the dust off your hands after exploring, and never put paint chips in your mouth."

Little \_\_\_\_\_\_did what his mother asked him to do.

One day, Mother was busy making a polka dot quilt when all of a sudden a gust of wind blew in through the open window - and blew the door open the tiniest bit.

Little \_\_\_\_\_\_ peeked out into the longest hallway he had ever seen. Quick as a wink another gust of wind came in through the window and blew Little \_\_\_\_\_\_ right out into the hallway. And blew the door closed behind him!

At first, Little \_\_\_\_\_\_was afraid to be out in the hallway all by himself. Then, he realized he finally had the chance to explore his old house.

He walked down the hallway until he came to an open doorway. He went into the room.

Inside he found ten fat cats sitting around giving each other baths with their tongues, as cats like to do.

"Hello," said one of the cats. "Welcome to our room. Please explore it, if you would like to."

"Thank you," said Little \_\_\_\_\_.

He went up to the window, where he explored the nooks and crannies of the window sill and the well where the window slid up and down.

"Did your mother tell you that you should wash the lead dust from your hands with soap and water after you explore?" a fat cat asked Little \_\_\_\_\_.

"Oh yes," said Little \_\_\_\_\_\_. "I must wash the lead dust off so I don't get sick." And he washed his hands, and said good-bye to his new friends, and went out into the hallway again.

There he found another open doorway. Inside another room, he found twenty scampering hamsters.

One of the scampering hamsters said, "Hello, Little \_\_\_\_\_. Welcome to our room. Would you like to explore?"

"Oh yes, very much!" said Little \_\_\_\_\_.

And he went to the baseboard, where he explored every nook and cranny.

He found a big piece of paint chip that had fallen off the baseboard. He brought it into the group of scampering hamsters. "Look what I found," he said. "I bet this is good to eat."

"No!" said a hamster. "Didn't your mother tell you that you must never eat paint chips? They will make you very sick."

Little \_\_\_\_\_\_ put the paint chip in the waste basket, and washed his hands. Then he said good-bye to his new friends, and went out into the hallway and into the next open doorway.

There Little \_\_\_\_\_\_found another room with forty silly billy goats, standing around and chewing.

One of the silly billy goats said, "Hello, Little \_\_\_\_\_. Please explore our room."

He went around the floor, where he explored every nook and cranny.

He remembered all by himself not to put the paint chips from the floor into his mouth.

He remembered all by himself to wash his hands as his mother had taught him.

"Won't you join us, Little \_\_\_\_\_?" one of the silly billies asked. "We're chewing on some

paint chips we found on the floor and chewing on the paint on the window sill and licking the dust off our hooves."

Little \_\_\_\_\_\_ said, "You shouldn't eat paint chips, and you shouldn't put dust near your mouth. You may get lead poisoning. It will make you sick, and make it hard for you to learn new things."

But the forty silly billies ignored him, and chewed their paint chips, and gnawed on the window sill.

Just then Little \_\_\_\_\_\_ heard his mother. "Little \_\_\_\_\_\_! Where are you?"

Little \_\_\_\_\_\_ went out into the hallway.

"Little \_\_\_\_\_," his mother cried. "There you are! What happened?"

Little\_\_\_\_\_\_ told her about the wind that blew him into the hall. And he told her about the ten fat cats, and the twenty scampering hamsters, and the forty silly billies chewing on paint.

"That is very dangerous," said his Mother. "Lead in the paint chips and in the dust can make them very sick. I will let their mothers know about what they are doing, so they can learn how to protect themselves from lead poisoning".

"And do you know what else? I remembered to wash my hands with soap and water after exploring, and to keep my dirty fingers out of my mouth," said Little \_\_\_\_\_\_ proudly.

Mother smiled at her child. She knew Little \_\_\_\_\_\_was finally big enough to go exploring on his own after all.

And after that day, he did.

And he never ate paint chips, and he never put dust in his mouth. And when he played outside when the springtime came, he always washed the dust and dirt off his hands because he knew the soil contained lead dust from the paint chips which had fallen off the house into the soil. And he learned to help his mother keep the house clean and lead free.

And Little \_\_\_\_\_\_ and his mother were happy and healthy, ever after.

The End

## THE BUG FAMILY LEARNS ABOUT LEAD

## by Brian English

Once upon a time, a family of bugs lived in a garden. There was Momma Bug, Poppa Bug and their daughter, Latasha. After a rain filled night, the bugs awoke to bright sunshine.

"Good morning! How did everyone sleep last night?" asked Poppa Bug.

"Great. I was tired from working in the garden yesterday," answered Momma Bug.

Latasha, their daughter replied, "The rain kept me up, raindrops kept dripping on my leaf." She did look tired.

From the kitchen Momma called, "Breakfast is ready."

Latasha ran into the kitchen and sat at the table.

With a frown on his face that Latasha didn't notice, Poppa asked, "Latasha, have you forgotten something?"

"Yes, I left my doll in my room," answered Latasha. "I planned to take her with me this morning to Tina's house."

"That's not what I meant," said Poppa Bug.

Latasha looked puzzled. "Well, Dad, what DID you mean?" she said.

"You sat down at the table and forgot to do something very important before eating your breakfast," Poppa reminded her. "Would you please go wash your hands?"

Latasha ran to the sink. She grabbed the soap and began to scrub her hands. Momma and Poppa Bug joined her.

"Dad, why is it we ALWAYS have to wash our hands before eating?" asked Latasha as she was drying her hands.

"Even though you can't see the dirt on your hands, it is there. By keeping your hands clean you are protected from having dirt get on the food which you eat. You see, dirt has LEAD in it. When lead gets into your body it CAN MAKE YOU SICK," warned Poppa Bug.

As Latasha sat down to breakfast she could smell the toast, eggs and oatmeal Momma Bug had made. Momma Bug made sure her family ate good, healthy food. She knew it was important to prepare foods high in calcium and iron to keep them healthy and strong.

After finishing her breakfast, Latasha kissed her parents goodbye and left for Tina's house.

Poppa and Momma Bug got a pail of soapy water to mop the leaves of their garden home. They used a damp dust rag to dust the furniture to help protect their family from lead poisoning. They often told Latasha about how lead found in the dust, dirt and soil could make them sick. As they worked, they hummed the song *Lead Can Hurt Us.* 

Latasha knocked on Tina's door. Tina welcomed her and suggested they take Tina's baby sister with them up to her room to play house. "We can watch the baby while we play," she said. "You know what? I got a new kitchen set for my birthday," Tina told Latasha.

"Goody, let's play with it. Shall we pretend to make cookies?" asked Latasha.

They took out the play dishes and toy stove. Tina found flour in her play cabinet and began to mix the dough. Some flour got on Latasha's wings, making them all white. The baby started laughing and knocked her pacifier on the floor. Tina quickly picked it up and was about to put it back in her sister's mouth when Latasha cried, "Stop, don't do that."

"Why not?" asked Tina. Latasha explained how in school they had learned about a poison called LEAD which could make them sick.

"My teacher said it was important to keep our hands away from our mouths. She told us that if baby things like pacifiers and toys fell to the floor they should be washed. She told us how to become lead poisoning prevention helpers." Latasha washed the pacifier and gave it to the baby.

"Hey, thanks, Latasha, for watching out for my sister," said Tina. "I thought the only way to get poisoned from lead is to eat paint chips."

"Yes," said Latasha. "You are right. NEVER EAT PAINT CHIPS. But eating paint chips is not the ONLY WAY we can become lead poisoned. We need to remember to wash our hands before we eat, to eat healthy foods and to keep our hands and toys out of our mouths. If we see a baby or our friends doing these things we must tell an adult. Either our parent or our care giver."

"You are a smart bug," Tina told Latasha. "You have helped me to learn and you have helped my sister, too. Thanks for washing off her pacifier. Thanks for helping her not to become lead poisoned. I am going to tell my mother about the things you taught me."

"Well," said Latasha proudly. "My teacher taught me to be a LEAD POISONING PREVENTION HELPER. I like being a lead poisoning prevention helper."

"How do you know if you have lead in your body?" asked Tina.

"When I was little, my mom took me to the clinic to have my blood tested," replied Latasha.

"I'm going to ask my mom if I ever had my blood tested like you," said Tina. "Let's finish making our cookies."

After they finished playing, Latasha went home for lunch.

"Hi, Latasha, did you have fun at Tina's?" Momma Bug asked. Latasha told her mother about playing at Tina's and about washing the pacifier.

"Well that was a very good thing to do. You're learning to be a Lead Poisoning Prevention Helper," said Momma Bug.

"I'm hungry, what's for lunch?" asked Latasha.

"We are having peanut butter and jelly, along with a fruit cup. But what is it we need to do before we eat?"

"I remember, I must wash my hands," said Latasha.

"That's right. You're such a good helper. Now hurry so we can eat," said Poppa Bug who had just returned from the hardware store.

The Ladybug family had their lunch, and then happily took their naps knowing that they were doing the right things to help keep their home lead safe.

The End

#### <u>ACTIVITY</u>

- 1. Teach the children the song *Lead Can Hurt Us* found in the Teacher's Guide.
- 2. Read the story.
- 3. DISCUSSION QUESTIONS
- What are some of the things NOT to put into your mouth?
- What kinds of chips should we NOT put in our mouth?
- What poison might get into our body and make us sick?
- What should we do before we eat?
- What are some of the GOOD things you should eat to make you big and strong?
- What are things we should wash if they fall on the floor?
- What should we do if we see a friend, brother, or sister doing something that may cause them to become lead poisoned?

## LEAD POISONING PREVENTION SONGS

Lead Can Hurt Us (Tune of Frere Jacques)

Lead can hurt us. Lead can hurt us. What to do? What to do? We must tell our parents. We must tell our parents Right away. Right away.

Lead's a poison. Lead's a poison Stay away. Stay away. We want to be healthy. We want to be healthy Now we know. What to do.

Staying Healthy (Tune of Here We Go Round the Mulberry Bush)

These are the things that we can do We can do, we can do These are the things that we can do So we will stay healthy.

This is the way we wash our hands, etc. So we will stay healthy.

This is the way we eat good food, etc. So we will stay healthy.

This is the way we wash our toys, etc.

This is the way we run the water, etc.

This is the way we care for our friends (Children dramatize washing off pacifiers.) Care for our friends Care for our friends This is the way we care for our friends So they will stay healthy, too.

These are the things our parents can do Parents can do, parents can do These are the things our parents can do To keep us healthy. This is the way they dust the rooms, etc. This is the way they mop the floors, etc. They always use a damp cloth...

This is the way they call the doctor (dial pretend phones) Call the doctor, call the doctor This is the way they call the doctor To make sure we are healthy.

#### <u>I'm Healthy When I'm Lead Free</u> (Tune of: I'm Happy When I'm Hiking)

I'm HEALTHY when I'm lead free Free to learn and grow I'm HEALTHY when I'm lead free Free to learn and grow With hands that are clean and a room free of dust I'm HEALTHY, yes HEALTHY (shout it out) When I'm lead free.

\*Songs by Mrs. Thelma Young of the Bethel Head Start Program.

## LEAD POISONING PREVENTION

## **CRAFT SECTION**

#### ADDITIONAL CRAFT IDEAS

- Make a mobile, collage or poster showing proper foods and/or sources of lead using pictures from magazines.
- Provide children with the opportunity to make a puppet from a paper bag or a paper plate. Or have them paste pictures of foods that fight lead poisoning on a paper plate.
- Make a bulletin board collage showing sources of lead paint, preventive measures, good foods, etc.
- Make a poster using multicolored silhouettes of the children done by means of shadow drawings of each child's face. Use the caption: *Helpers in Preventing Lead Poisoning.*
- Make a finger-paint poster with a rainbow theme. The rainbow can be made using the children's hands to form the multi-colored arches of the rainbow. Each child's hand will be identified using his/her name. The caption: *Helping Hands To Prevent Lead Poisoning.*
- An enlarged photograph of the children demonstrating the tug-of-war activity might be used with the caption: *Pulling Together to Prevent Lead Poisoning.*
- Create a doll or puppet for the food activity on page 5.

## LEAD CAN MAKE YOUR CHILD SICK

Dear Parent/Care giver:

This week we will be learning about lead poisoning. Childhood lead poisoning is a serious disease. It can be **PREVENTED.** 

We will talk about:

- Lead as a poison.
- Where lead is found in our environment.
- Behaviors which will help children keep lead out of their bodies.
- How you and your child can become lead poisoning prevention helpers.

#### We need your help to make this program work.

Your child will be bringing home information on lead poisoning prevention. Please read it over. Then talk to your child about what he or she is learning. Try some of the ideas and activities together. This is how you can help as we PULL TOGETHER TO PREVENT LEAD POISONING.

For additional information about lead poisoning or how to prevent it, call toll free 1-800-LEAD-FYI which is the same as 1-800-532-3394 for either English or Spanish messages. In New York, you can call the State Health Department at 1-800-458-1158.

Sincerely,

Teacher

#### Unit 1: Lead Sources

#### Lead Poisoning Prevention Curriculum for Preschool Children

#### Objective 1

Each child will be able to identify three <u>primary</u> sources of lead in the environment. These are: paint, dust and soil.

#### Facts and Background Information:

Fact:

The most significant sources of exposure for children are: lead based paint; leaded dust and lead-contaminated soil. Eighty percent of lead poisoning is caused by deteriorated leaded paint which is cracking, chipping or peeling. The leaded paint from exterior painted surfaces falls into the soil and is ground into the soil in the form of dust. Similarly, the friction of windows and painted cabinets being opened and closed, results in small particles of dust falling upon carpets, furniture and curtains. Children chewing on lead painted surfaces is also a concern. Brass faucets, soldered pipes (solder contains lead) and leaded pipes are the primary sources of lead found in water.

#### Background:

Lead paint is found in paint chips, paint dust around window sills and window wells/ledges, front porches, porch railings, around kitchen cabinets and shelves, doors, walls, baseboards, radiators, and other painted surfaces.

#### Fact:

Dust from lead based paint is a major factor in lead poisoning among children. Dirt surrounding homes, garages, and sheds (within four feet from the structures) is particularly susceptible to lead dust as a result of paint chipping and falling to the ground.

#### Background:

Wet mopping, damp dusting and routine cleaning of air ducts, including cleaning and/or replacing furnace/air conditioning filters, and safe paint-removal practices are essential. (Call your local health department for specific advice).

## Teacher Guidelines:

## <u>Goal:</u>

Children will be able to identify three primary sources of lead in their environment. These are: Paint, Dust and Soil.

## Unit 1 - Activity

## <u>Materials:</u>

Story by Donald Levin: <u>Little (name of insect of your choice) Goes Exploring.</u> Letter #1 to parents for children to take home.

#### Procedure:

- 1. Read the story to the children soliciting as much student participation as possible.
- 2. Review the places in the story where lead could have been found. Answers: paint chips, paint dust, around window ledges and window sills, baseboards, and hands.

#### Discussion Questions:

- 1. <u>General.</u> What can "Little \_\_\_\_\_\_" do to help keep himself healthy and lead safe? (Wash hands, wet mop, damp dust, wash pacifier (toys), eat nutritious meals, each year ask their health care provider for a blood lead test, tell an adult if they see someone eating paint chips, remind friends not to put their hands in their mouths, etc.)
- 2. <u>Hand washing</u>. When is it important to wash hands? (Before eating, before nap time, before bed time, after playing, etc.)
- 3. <u>Toys.</u> What is important to remember when playing with toys? (Not putting toys in the mouth, washing baby's pacifier. Dust and dirt gets on toys.)
- 4. <u>Dirty hands.</u> What do we do with dirty hands? (Wash them, keep them out of our mouth, etc.)
- <u>Window and window ledge.</u> What is very important to remember about windows? (Not to chew or suck on window ledges. If a child is seen doing this to report it to an adult. The dust and dirt found in window ledges can blow into the room and get on toys, carpet, furniture,etc.)

 <u>Paint chips.</u> What do we have to remember about paint chips? (They are poisonous. They make us sick. They make it hard for us to learn.) What do we do if we see a child eating paint chips? (Tell an adult.)

#### <u>Follow-Up:</u>

- 1. Distribute Unit 1 letter for the children to take home to their parent/care giver (found on the last page of this section).
- 2. The day after the letter is sent to parents discuss the home activity suggested in the letter.

#### **Optional Activities:**

- 1. Using a doll house have children explore the house, pointing out dangerous lead paint areas within and outside the house.
- 2. Introduce role playing or dramatic play. Have the children pretend they are various characters and re-enact scenes from the story.
- 3. Have children construct a puppet(s) to act out the story.

#### Dear Parent or Care giver:

Today the children heard the story, <u>Little - Goes Exploring</u>. The purpose of this story was to introduce children to the problem of lead poisoning and help them to understand where lead is most often found around the house:

- In leaded paint
- In household dust
- In the soil outside

The story also talks about:

- The importance of hand washing
- The importance of wet mopping and damp dusting homes to keep the house free from dust

Tonight, to help your child act on this lesson, please take a few minutes to:

- Ask your child about the story.
- Ask your child to watch you damp dust an area of your home to help you keep the house lead safe.
- Wash your hands together after the activity.

Thanks!

Teacher

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Parent/Care giver: Please fill out this form and return it with your child tomorrow.

Last night, we talked about keeping our home free of lead dust and the importance of washing our hands to prevent lead poisoning.

(Parent/Care giver signature)

#### UNIT 2: Lead Is a Poison

#### Lead Poisoning Prevention Curriculum for Preschool Children

#### Objective 2

On request, each child will be able to identify lead as a poison found in the environment and be able to demonstrate a minimum of two behaviors which will help prevent lead poisoning.

#### Facts and Background Information:

## Fact:

Lead is a highly toxic metal. Because it is stable and easy to work with, it has been used for a variety of purposes. Nevertheless, lead can produce a range of adverse human health effects, particularly in children and fetuses. Effects include nervous and reproductive system disorders, delays in neurological and physical development, cognitive and behavioral changes, and hypertension. The human body has no need for even the smallest amount of lead.

## Background:

The most common sources of lead exposure in and around the home are lead based paint, household dust (that contains lead from deteriorating lead paint) and soil. Often lead is present today from past uses that have been banned, such as lead based paint (banned in 1978 upstate and 1960 in New York City) and lead in gasoline (the trend toward unleaded gas started in 1976).

Lead poisoning can affect people of any age, race, geographic region or socioeconomic level. Anyone who is exposed to lead and who eats or breathes it in may develop an elevated bloodlead level.

#### Fact:

Lead can harm virtually every system in the human body. Lead is particularly harmful to the developing brain and nervous system of fetuses and young children. In many cases, there are no visible symptoms of lead poisoning.

## Background:

If symptoms do occur, they may include general fatigue, irritability, difficulty concentrating, hyperactivity, tremors, headaches, abdominal pain, nausea, vomiting, weight loss, or constipation. These symptoms may be mistaken for other disorders. Only a blood test for lead poisoning can determine if a child is lead poisoned. Lower levels can adversely affect the central nervous system, kidneys, and blood formation system. Blood-lead levels as low as 10 ug/dl which do not cause distinctive symptoms, may be associated with decreased intelligence

and impaired neurobehavioral development. (In scientific terms, lead levels are measured in micrograms per deciliter - ug/dl. In simpler terms, one ug/dl is even less than a speck of dust in a third of a cup of liquid.) Many other effects begin at these low levels, including decreased stature or growth, decreased hearing acuity, and decreased ability to maintain a steady posture. Very severe lead exposure in children (blood-lead levels greater than 80 ug/dl) can cause coma, convulsions, and even death.

## Fact:

Children are at a greater risk from exposure to lead than adults.

## Background:

Children are more vulnerable to damage because their bodies and nervous systems are still developing. Frequent hand-to-mouth activity places a child at greater risk for lead poisoning. Children absorb and retain a larger percentage of ingested lead per unit of body weight than adults, which increases the toxic effects of the lead.

## Fact:

All children should have a blood lead test at ages 1 and 2. Other children up to 6 years of age should be tested if their doctors think they are at risk. A blood lead level of 10 ug/dl or greater is a concern.

## Background:

The need for and frequency of retesting depends on previous blood-lead test results and whether the child is at high or low risk for exposure to lead.

## Teacher Guidelines:

## <u>Goals:</u>

- Children will learn that lead is a poison which can harm them
- Children will be able to identify three sources of lead
- Children will be able to demonstrate a minimum of two behaviors which will help prevent lead poisoning

## <u>Materials:</u>

- Dusty surface (chalk dust or flour might be used)
- Letter #2 to parent for child to take home

## Procedure:

- 1. Discuss poisons.
  - a. Have children give examples of things that are poisonous and should not go into the mouth.
  - b. Ask the children what poisons do to their body (give examples that the children can relate to). Emphasize that poisons can make you very sick and can hurt your body.
  - c. Identify lead as a poison that can make you sick and make it difficult to learn new things.

## 2. Where do we find lead?

- a. Discuss the sources of lead.
- b. Lead is found in the paint in older homes.
- c. Lead is found in paint chips. Refer to the window with chipping paint. Ask the children, "What other areas inside the house might have chipping paint?" (door frames, baseboards, shelves, cabinets, spindles of stair railings, etc.)
- d. Lead is found in paint chips outside the house too. Refer to the area outside the home where paint is chipping. Ask the children "What other areas outside the home might have chipping paint?" (garage, shed, house siding, porch railings, porch floors, etc.)

Prior to the lesson, have paint chips collected by the teacher in a clear plastic bag for the children to see (with the adult being the only one who handles the plastic bag).

- e. Lead paint dust. Prior to the lesson, have chalk dust or flour in a plastic bag for the children to see how the dust sticks to the inside of the bag just like it would on their hands (with the adult being the only one who handles the plastic bag.)
- f. Lead in the soil. *Prior to the lesson, put dirt in a plastic bag so that children can see the dirt* as you explain that it is a lot like dust, it sticks to your hands and may contain lead. Playing in the dirt near the house is a problem.
- 3. Let's make sure you do not get poisoned by lead.
  - a. Do not eat paint chips. Have the children identify paint chips. Review all possible paint chip areas inside and outside the house.
  - b. Wash hands after touching surfaces that might have lead. Have children identify when it is important to wash their hands after touching dust and dirt.

- c. Wash pacifiers and toys that are dusty. Toys can be covered with the dust, just like your hands.
- d. Be a helper: if you see any paint chip areas in your home, tell your parents. Be watchful of younger children so they will not get lead poisoned.
- 4. Have the children wash their hands to remove the dust.

#### Discussion Questions:

Presented during the lesson.

#### Follow-Up:

- 1. Review the sources and ways to prevent lead poisoning. Teachers are encouraged to reinforce the concepts and to put the prevention suggestions into practice throughout the class day as appropriate. This will help children keep the things they have been taught in their minds.
- 2. Discuss the home activity in which children participated the night before.
- 3. Send each child home with parent/care giver letter for Unit #2 pertaining to the day's activities.

#### **Optional Activities:**

- 1. Reinforce, whenever appropriate throughout the day, the importance of hand washing, and the invisible dust around the room that might contain poison. Remind the children that they do not want this poison to get inside their bodies. It is important they keep their bodies healthy.
- 2. Designate a lead poisoning prevention helper for the day.
- 3. Teach the proper procedure for hand washing. The hand washing lesson below has been taken from: Helping Your Children Develop Good Health Habits. *Scholastic Pre-K Today,* November/December, 1992, pages 54-55.

#### Hand washing component of the lesson:

Concept: Germs on our hands can make us sick and/or spread illness to others.

<u>Objectives:</u> Children will be able to describe when it's important to wash their hands, and will learn to wash their hands thoroughly using soap - without assistance.

<u>Materials</u>: Liquid or bar soap, paper towels, sink with running water, and experience-chart paper.

<u>Discuss</u>: Talk about when it's important to wash hands - after blowing our noses, after using the bathroom, before eating or cooking, after playing outside or on the floor, before nap time and before bedtime, etc. Compile a list with your students and record their responses on an experience chart.

#### Activity:

Demonstrate proper hand washing:

- 1. Rinse hands under warm running water.
- 2. Lather hands with soap to loosen dirt and bacteria.
- 3. Rub hands together vigorously. Friction helps remove microorganisms and dirt.
- 4. Rub soap between fingers and under nails.
- 5. Rinse off all dirt and soap under running water. Keep hands lower than elbows to prevent dirty water from running up the arms.
- 6. Dry well with a paper towel and then throw it away.

As you demonstrate this technique to your children, try making up a song or story about how much your hands like taking a bath! Then invite each child to wash his or her hands under your supervision. By the way, it should take about 20 seconds for hands to be washed well, which is about as long as it takes to sing a verse of Old MacDonald Had a Farm!

A poster encouraging children to wash their hands is available from the NYS Health Department, Outreach and Education Unit. Additional materials are available, including static clings and the loan of a hand washing demonstration kit. See Appendix 4 for ordering information.

Consider setting up a messy art activity using finger paint, clay or glue. Ask children to look at their hands before and after washing them. Remind them of the value of washing hands.

Note: See Crafts Section. Make a rainbow poster with finger paints placing the children's hands in the formation of a rainbow.

#### <u>Resources:</u>

NYS Department of Health Lead Poisoning Prevention Program Empire State Plaza Corning Tower Building, Room 1395 Albany, New York 12237-0618 Phone: (518) 402-7600

The Alliance to End Childhood Lead Poisoning 227 Massachusetts Avenue, N.E. Washington, DC 20003 Phone: (202) 543-1147 Dear Parent/Care giver:

Your child has been learning about sources of lead around the home. We talked about places where lead is commonly found. Again, we stressed the importance of proper hand washing.

Ask your child to tell you about the lesson. He/She should be able to tell you where lead is found and how to avoid getting poisoned by lead. This is a good time for you and your child to inspect your home to make sure it is lead safe.

Sincerely,

Teacher

Facts:

Lead is a dangerous poison. All children should have a blood lead test at ages 1 and 2. Other children up to 6 years of age should be tested if their doctors think they are at risk.

Paint chips should not be eaten.

Frequent hand washing helps prevent lead poisoning.

Wet mopping and damp dusting the home two times a week helps prevent lead poisoning.

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We talked about the places where lead can be found in and around our home.

(Please sign and return with your child tomorrow.)

Parent/Care giver signature

# Unit 3: Foods High in Iron

#### Lead Poisoning Prevention Curriculum for Preschool Children

# Objective 3

On request, students will be able to identify one or two foods that are high in iron which will help prevent their bodies from absorbing environmental lead.

#### Facts and Background Information:

# Fact:

Children exposed to lead in their environment and who have a low iron intake are at greater risk for lead poisoning.

# Background:

Even at low levels, the presence of lead in the bloodstream has been found to slow a child's development. Children may begin displaying learning and behavioral problems, excitability/hyperactivity, an inability to pay attention and quick frustration. They may also develop poor vision that can lead to blindness and damage to the nervous system, kidneys, reproductive system and mental development. Extremely high blood lead levels can result in death.

A child's nutritional status impacts on the amount of lead absorbed from the environment. Children with healthy diets, who eat from a variety of foods, tend to absorb less ingested lead. Iron-rich blood cells have little room for lead to bind onto. The presence of iron in the daily diet helps to block lead from reaching the muscles and bone.

# Fact:

Eating foods rich in iron daily will help reduce the amount of lead absorbed. NOTE: Dietary changes alone will not prevent lead from entering the body.

# Background:

Iron is well distributed in the American food supply: lean red meat, eggs, vegetables and cereals (especially fortified cereal products) are the principal sources. Iron availability may be enhanced by consumption of foods containing Vitamin C.

There are many reasons that children may not eat adequate amounts of iron-containing foods, including lack of access to such foods, low income, or individual preferences.

# Teacher Guidelines:

# <u>Goal:</u>

• To encourage children to eat foods rich in iron daily to help reduce the effects of lead poisoning.

# Unit 3 - Activity

# Materials:

- 1. Flannel board, bulletin board or flip chart paper.
- 2. Easily recognizable pictures of foods high in iron: spinach, red meat, raisins, dried beans, iron rich cereal, winter squash, turkey.
- Supplemental materials: Unit #3 letter to parents Snack ideas for the classroom Easy to prepare recipes using foods high in iron to make at school or at home

# Procedure:

- 1. Review with students why lead is harmful to the body.
- 2. Introduce today's concept: One way to keep lead out is to put iron in.
- 3. Define iron: Students can't see or taste iron but it is an important mineral found in many foods. Iron helps our blood give us the energy to grow and play.
- 4. Distribute food pictures. Students identify the food pictured on each.

# Discussion Questions:

- 1. Which of these foods that are high in iron are vegetables? What color are they?
- 2. Which of the foods make good snacks?
- 3. Which ones have you tried?

# Follow-up:

- 1. Prepare a snack that includes an iron-rich food (Ideas attached).
- 2. At lunch time, identify foods that contain iron.
- 3. Send home to parents a fact sheet on nutritious recipes they can make with their children.

#### **Optional Activities:**

- Prepare a bulletin board of high-iron food pictures.
- Create a mobile and dangle iron food pictures from it.
- Create a poster or collage of iron food pictures.

#### <u>Resources:</u>

For additional nutrition information on this unit contact your primary care provider or the local or regional office of:

- Women, Infant and Children Program
- Nutrition Education and Training Program
- Cornell Cooperative Extension
- Cornell Cooperative Extension 4-H Program
- New York State Department of Health

# **Iron-Rich Snacks and Recipes**

Celery stuffed with mashed beans, topped with cheese

Banana dipped in juice, then rolled in crushed high-iron cereal

Iron fortified oatmeal served with raisins

Turkey breast slice wrapped around a cheese stick

Pear/peach half topped with cottage cheese, then raisins

Tortilla filled with cooked **beef**, **turkey**, or mashed **beans**. Top with cheese, lettuce, tomatoes.

Whole grain waffle with applesauce or molasses

Bean dip served with vegetable sticks

Chili with beans and/or turkey or beef

Bold face indicates food containing iron

Increase the iron availability in these by serving them with food high in vitamin C:

Tomato juice	Green pepper sticks
Orange juice	Broccoli spears
Orange slices	Kiwi
Grapefruit sections	Strawberries
Potatoes	Mangos

# EASY RECIPES FOR HIGH-IRON SNACKS

Bold face indicates food containing iron

#### **TRAIL MIX**

Wheat Chex cereal Cheerios Raisins Peanuts Sunflower seeds Pretzel logs

Mix together in equal amounts. Serve.

# **PING PONG BALLS**

½ cup peanut butter1/4 cup honey1/4 cup dry milk powderCrushed Wheat Chex cereal

Stir peanut butter, honey and milk powder together in a bowl. Wet hands and form mixture into small balls. Roll in crushed cereal. Store covered in refrigerator.

# SWEET POTATO PONE

2 eggs
1/4 cup brown sugar
2 ½ cups raw sweet potato, grated or chopped
1/4 cup molasses
½ cup milk
2 Tbsp melted margarine
½ tsp each—cinnamon, nutmeg, ground cloves

Beat eggs and sugar in bowl until fluffy. Stir in remaining ingredients. Turn onto oiled 1 qt. dish or loaf pan. Bake at 350 for 1 hour. Serve warm or cold in slices.

# SUNSHINE SALAD

1 lb carrots, peeled and shredded
 ½ cup raisins
 8 oz. low-fat vanilla yogurt

Mix all ingredients together in a bowl. Cover and refrigerate at least 15 minutes to allow flavors to blend. Toss before serving.

#### SWISS OATMEAL

- 1 cup rolled oats
- 1 cup boiling water
- 2 Tbsp honey or **molasses**
- 2 cups chopped fruits: choose apples, **prunes**, **raisins**, berries, peaches, grapes, etc.
- 1/2 to 1 cup plain yogurt or skim milk

Add oatmeal to water and soak overnight in refrigerator. Before serving, add fruit and yogurt or milk.

#### SPINACH SALAD

1 head or bag **spinach** leaves, washed and stems removed

Place spinach in salad bowl. Add any of the following: grated carrots, **raisins**, chopped apple, chopped boiled **egg**, sunflower seeds, sesame seeds, **chick peas** 

Add low-fat or non-fat dressing and toss before serving.

#### **IRON KEBABS**

Cubes of **liver sausage**, boiled **ham**, **turkey**, or **chicken** breast, cheese, tomato, green pepper. Wooden picks

Cut meat, cheese and vegetable into cubes. Serve as lunch or snack with crackers and dip into mustard.

# **BEAN STALKS**

½ stalk celery1 Tbsp mashed, cooked **beans** (or use refried)1 tsp grated cheeseChili powder

Fill stalk with beans. Top with cheese and chili powder.

#### SUPER SQUASH

Acorn **squash**, sliced in half, seeds removed. For each half:

1 tsp black strap **molasses** 

1 tsp margarine

Bake squash cut side down in 350 oven for 30 minutes. Turn up. Add margarine and molasses. Bake 15 - 20 minutes longer, until soft.

#### WINTER FRUIT

Combine equal amounts of dried **prunes**, **raisins**, **apricots** and apples in saucepan. Add 1 cup water for each cup of fruit. Add cinnamon stick.

Simmer over low heat until very soft. Serve cold or at room temperature. Top with vanilla yogurt if desired.

#### EASY SPINACH QUICHE

¾ c Bisquick
3 eggs
1½ c milk
1 pkg frozen chopped spinach, thawed, drained
1 large onion, finely chopped and sauteed in margarine until clear
1½ c cheese (Swiss, cheddar) cut or broken into small cubes

Spread spinach, onion and cheese in a well-greased, 10-inch pie plate. Mix first three ingredients well and pour over vegetables and cheese. Bake in oven preheated to 375 for about 50 minutes or until the top is puffy and slightly browned.

Dear Parent or Care giver:

Today in class your child learned about the importance of good nutrition and to identify foods that are good sources of iron. A healthy diet can actually make a difference in whether lead found in the environment makes its way to your child's bones and muscles. One important nutrient is IRON. Eating foods that contain IRON every day is one way to fight against lead poisoning.

IRON is present naturally in many foods:

lean red meat	shellfish	dry beans
egg yolks	whole grains	
tuna	pork chops	
turkey	raisins prunes	

It is also added to many ready-to-eat cereal and grain products like spaghetti and macaroni. Read the label to see if the food is a good source of iron.

We are sending home some recipe ideas. Perhaps your family would enjoy preparing and eating some of these foods.

Teacher

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Today, we talked about and made a snack or had foods which contained iron.

Parent/Care giver Signature

# Unit 4: Foods High in Calcium

# Lead Poisoning Prevention Curriculum for Preschool Children

#### Objective 4

On request, students will be able to identify one or two foods that are high in calcium which will help prevent their bodies from absorbing environmental lead.

### Facts and Background Information:

Fact:

Iron is not the only mineral that can combat lead. Eating foods rich in calcium daily also helps. Lead is absorbed through the same pathway as calcium. When there is adequate calcium in the diet, lead cannot enter as readily. Diet, alone, however, will not completely prevent lead absorption.

# Background:

Milk is the best source of calcium in a child's diet. All types of liquid milk contain similar amounts of calcium. Other milk group foods include: yogurt, cheese, ice cream, cottage cheese and puddings.

Children need at least 3 daily servings from this group. A serving size is one 8 ounce glass of milk. Because of their smaller stomach capacity, it is suggested that children be given smaller portions with more frequency during the day. For children who will not drink milk, other sources of calcium are available. Tofu, cheese, yogurt, pudding, sardines, salmon, broccoli, calcium fortified orange juice, and green leafy vegetables such as collard greens are good choices.

# Teacher Guidelines:

<u>Goal:</u>

• To encourage children to eat foods rich in calcium daily to help reduce lead absorption and block lead from reaching the bones.

# Unit 4 - Activity

# Materials:

- 1. Flannel board, bulletin board or flip chart paper.
- 2. Easily recognizable pictures of foods high in calcium: broccoli, milk, cheese, yogurt, cottage cheese, raw or cooked greens, sardines, canned salmon, tofu, ice cream, pudding, calcium-fortified orange juice.

- 3. Doubles can be used as needed so there is one picture for each student.
- 4. Supplemental materials:
  -Unit 4 letter to parents
  -Snack ideas for the classroom
  -Easily prepared recipes high in calcium to make at school or at home

#### Procedure:

- 1. Review with students why lead is harmful to the body.
- 2. Introduce today's concept: One way to keep lead out of your body is to put calcium in.
- 3. Define calcium: Calcium is in many different foods but can't be seen or tasted. Calcium makes our teeth and bones strong and helps us to grow.
- 4. Distribute food pictures. Students identify the food pictured on each.
- 5. Prepare a snack that includes food high in calcium.

#### **Discussion Questions:**

- 1. Which of the foods are vegetables?
- 2. Which foods are made with milk?
- 3. Which of the foods make good snacks?
- 4. Which ones have you tried?
- 5. Summary question: What did we learn today? Evaluation: Students are able to verbalize the importance of high-calcium foods and identify them.

#### Follow-Up:

- 1. At lunch time, identify foods that contain calcium.
- 2. Send home to parents recipes they can make with their children.
- 3. Prepare a bulletin board of high-calcium food pictures.
- 4. Create a mobile using pictures of foods containing calcium.
- 5. Create a collage of high-calcium food pictures.

# <u>Resources:</u>

For additional nutrition information, contact your primary care provider or the local or regional office of:

\*New York State Department of Health

\*Women, Infant and Children Program

\*Nutrition Education and Training Program

\*American Dairy Association and Dairy Council

\*Cornell Cooperative Extension and 4-H programs

# Calcium-Rich Snacks and Recipes

(Bold face contains foods rich in calcium)

Low-fat yogurt: plain, lemon, or vanilla

Low-fat frozen yogurt: top with fresh fruits or drained canned fruits

Pizza bagel: use ½ bagel, English muffin, or rice cake. Top with pizza sauce and grated low-fat **cheese**. Heat briefly.

Yogurt popsicles

Veggie dip: non-fat plain yogurt with any herbs. Use broccoli and/or cauliflower sticks to dip

String cheese sticks

Salmon salad: mix with non-fat yogurt. Serve on crackers

Green cheese: wrap fresh spinach leaves around small cheese cubes

Sardines and crackers

Frittata: fold cooked **greens** into an omelet, top with grated **cheese**. Serve omelet in small slices at room temperature.

Harvest toast: toasted **wholewheat bread** slice topped with sliced apple, sliced or grated **cheddar cheese**, then broiled briefly.

# EASY RECIPES FOR HIGH CALCIUM SNACKS

# **ORANGE NOG**

2 cups cold water <sup>1</sup>/<sub>2</sub> cup dry skim **milk** powder 6 oz. can frozen orange juice concentrate

Mix all ingredients in a blender at high speed until well-mixed and frothy. Chill until ready to serve.

# PIZZA CAKE

- 1 rice cake
- 2 Tbsp pizza sauce
- 2 Tbsp grated mozzarella **cheese**

Spread sauce on rice cake. Top with grated cheese. Bake in hot oven until cheese melts.

# **COTTAGE CHEESE PANCAKES**

½ cup low-fat cottage cheese
1 egg
1 teaspoon oil
3 Tbsp whole wheat flour
Applesauce

Beat egg in large bowl. Add cottage cheese, oil and flour. Stir until well mixed. (Cottage cheese may be strained if smoother texture is desired). Spray griddle with nonfat vegetable spray; heat. Spoon batter onto grill forming pancakes. Cook on both sides until lightly browned. Serve with applesauce.

# **BREAKFAST SHAKE**

very ripe banana
 cup pineapple juice
 cup strawberries, washed with stems removed
 cup low-fat yogurt

Peel banana, break into small pieces and place in blender with remaining ingredients. Blend until smooth. Serve immediately.

#### **HIGH POWER SHAKE**

2 cups skim or 1% milk or 1½ cups plain yogurt

- 2-3 frozen bananas
- 3 Tbsp peanut butter

Combine all ingredients in a blender. Blend until smooth. Serve immediately.

#### MUD DIP

½ cups cooked pinto beans
 (If using canned, drain and rinse well)
 1 Tbsp Mexican spice mix
 6 oz. grated low-fat cheese

Mash beans with fork or potato masher. Stir in spice mix and grated cheese. Spoon into soft tortilla or pita pocket. Heat in toaster or microwave oven until cheese melts.

Mexican spice mix: Mix well and store in zip-lock bag; 1/4 tsp. garlic powder, 1 Tbsp onion powder, 1 Tbsp cumin powder, 2 Tbsp chili powder.

# VEGETABLE STICKS AND DIP

1 carrot, 1 cucumber, 1 zucchini peeled and sliced into sticks or rounds

1 head each broccoli, cauliflower, broken into pieces

10 - 12 mushrooms, cherry tomatoes, radishes

1 head each lettuce, spinach separated into leaves and rolled

DIP: <sup>1</sup>/<sub>2</sub> cup low-fat cottage **cheese**, <sup>1</sup>/<sub>2</sub> cup non-fat plain **yogurt**. Pinch each of any variety of spices: curry, parsley, dill, oregano, basil, chili. Mix well.

Wash all vegetables well before preparing. Spear with toothpicks or use fingers for dipping.

# **YOGURT POPSICLES**

8 oz. non-fat plain **yogurt** 

6 oz. can frozen orange juice

Mix yogurt and frozen juice well together in a bowl—use beater if necessary. Spoon into popsicle molds or into small paper cup and insert stick into center. Freeze until solid. Grape or other juice may be used also.

# SUPER SARDINE/SALMON

For individual servings:

- 1 Tbsp water-packed sardines, drained and mashed or use canned salmon
- 1/2 tsp lemon juice
- 1 tsp chopped pickle relish
- 1 tsp mayonnaise

Put all ingredients into small paper cup. Mix well. Spread on crackers, stuff celery or roll into lettuce leaf.

# **BUILD A SUNDAE**

½ cup of low-fat vanilla **yogurt**1/4 cup chopped fruit: kiwi, banana, strawberry, grapes, raisins, dates, etc.
Toppings: Total or Raisin Bran cereal, molasses, nuts

Spoon yogurt into individual bowls or paper cups. Add fruit and toppings.

# MIXED GREENS

2 bunches **mustard greens**, **turnip greens**, **kale** or **collards** Salt and pepper as desired

Rinse greens well and remove stems. In large pot of boiling water cook greens rapidly, covered, for about 25 minutes. Drain well. Two tbsp boiled ham or smoked turkey can be added for flavor.

Dear Parent/Care giver:

Today in class your child learned about the importance of good nutrition. A healthy diet can actually make a difference in whether lead found in the environment makes its way to your child's bones and muscles. One important nutrient is CALCIUM. Eating foods that contain CALCIUM every day is one way to fight against lead poisoning.

CALCIUM is found in many foods:

dairy products, like milk, yogurt and cheese

canned fish, like sardines, salmon, or anchovies

cooked dry beans

green leafy vegetables like spinach, collards and greens

If your child drinks milk, try to encourage at least 3 glasses every day. Yogurt or cheese provides a lot of CALCIUM also.

Offer your child a variety of foods. Encourage him or her to choose those that provide CALCIUM every day.

Teacher

-----CUT HERE-----

Today we talked about foods high in calcium and we made a snack or had food with calcium in it.

Parent/Care giver Signature

# **Unit 5: Preventing Lead Poisoning**

# Lead Poisoning Prevention Curriculum for Preschool Children

#### Objective 5

On request, each child will be able to identify the main points of objectives 1- 4 found in the preceding units. Each child will be able to demonstrate what it means to be a lead poisoning prevention helper.

#### Facts and Background Information:

#### Fact:

Lead poisoning is considered our nation's number one environmental health problem among children. It is found in every stratum of society and is PREVENTABLE. Renovation to homes built prior to 1978 should be done by a certified professional.

#### Background:

Children may become lead poisoned as a result of home renovation. The dirt and dust from sanding woodwork, knocking down walls, and improper removal of the dirt and debris following the renovation increase a child's risk for lead poisoning.

#### Fact:

Clean homes and homes kept in good repair are essential in promoting a "lead safe" environment. Inhaling and ingesting lead are ways the body absorbs lead. Pregnant women and children should not be around home renovations as the dust from lead-based paint can be harmful.

#### Background:

Damp dusting and wet mopping are recommended using a detergent. Dry dusting and sweeping stir up lead dust. A child's normal hand to mouth activity makes it essential that toys, pacifiers and hands be washed frequently so lead-dust is not placed in the mouth and absorbed by the body.

Home renovation can be dangerous and pose health problems to those doing the work if proper precautions are not taken. For this reason, it is recommended that a certified professional be hired to correct lead-based paint problems in homes.

# Teacher Guidelines:

# <u>Goals:</u>

- To reinforce in children behaviors which will minimize the risk of lead poisoning
- Proper hand washing
- Keeping their hands and toys out of their mouth
- Not eating paint chips
- Eating healthy foods
- To reinforce the concept that children are important lead poisoning prevention helpers

# Unit 5 - Activity

# <u>Materials:</u>

- Interaction story script "The Bug Family Learns About Lead" found in the Teacher's Guide
- Song, Lead Can Hurt Us, found in the Teacher's Guide
- Letter #5 to parents sent home with the children
- Certificate of completion for each child that the teacher creates: Being a Lead Poisoning Prevention Helper

# Procedure:

- 1. Seat children in a circle where each child can see one another.
- 2. Read the story "The Bug Family Learns About Lead" to the students.
- 3. Use the discussion questions as a method to help children learn about the dangers of lead poisoning.
- 4. Discuss the importance of being a LEAD POISONING PREVENTION HELPER.
- 5. Solicit ideas from the children as to how they plan to be LEAD POISONING PREVENTION HELPERS.

# Follow-Up:

To reinforce the concepts being taught, read, again, the story having children respond to the questions.

# **Optional Activities:**

- 1. Have children create a poster/collage using magazine pictures brought from home of places where lead can be found both inside and outside the home.
- 2. Assign characters and role-play the story.

Dear Parent/Care giver:

Today our class completed the units on lead poisoning and its prevention. Your child has been awarded a certificate as a Lead Poisoning Prevention Helper.

The children heard a story which stressed the importance of hand washing, eating nutritious foods, keeping their toys washed and hands out of their mouths and not eating paint chips. They were also encouraged to report any harmful activities to an adult.

Please discuss the story with your child. Your child may be too young to understand the effects of lead poisoning upon his body but as his/ her parent or care giver you know that lead poisoning can harm a child and affect his/her ability to learn and grow. Lead poisoned children may have difficulty concentrating or may be slower learners or hyperactive. Physical symptoms may not be obvious. Be certain that your child is tested by your health care provider at least each year.

The brochure I am sending home with your child today contains important information on lead poisoning along with numbers to call for more information. Please take time to read it.

Thank you for your help as we all WORK TOGETHER TO PREVENT CHILDHOOD LEAD POISONING.

Teacher

# Appendix 1

# Lead Poisoning Prevention Curriculum Program Kick-off for Head Start Children

[Narrator] After being introduced, tells the children that we came to tell them about lead . . . lead is something that is found everywhere in & outside our homes, in dust and dirt; even on Sesame Street. Lead gets into our bodies if paint chips or dust gets into our mouth. We came by today to show you some ways to stop lead from getting in our bodies by being "lead smart."

# Show Sesame Street movie

Main points from the movie:

- Stay away from peeling paint
- Leave your shoes at the door
- Wash your hands before you eat
- Get your blood tested for lead

[Narrator] "Now let's visit my friend Lena's house. Lena the Lion is lead smart. She's here today to show you how to keep the lead in your home **out** of your bodies. Lots of houses have lead paint in them. Lena's house has lead paint, too."

[Window] "I'm the window in Lena's house. I have lead paint on me. Here's the inside of the window, and here's the outside part. My lead paint breaks into chips and peels off." (Window pulls eggshells from the inside of the window. Shows how the shells can break into dust, using cornstarch or flour while crushing eggshells. Scatters chips and dust over Lena's play area, toys and the baby's basket.)

[Narrator] "If you put these chips into your mouth, they can make you sick. That's why we **stay away from peeling paint.** Lead in the dust can get on toys, too."

[Lena] (Comes in, stops at the doormat, takes off her backpack and tosses it aside, then wipes her shoes on the doormat.) "There might be lead in the dirt on my shoes. I better wipe my feet at the door. Should I get my snack first, or play? I know. I'll look outside to see if my friends are playing." (Goes to the window, starts to put hands on the sill, sees chips and dust, holds hands up away from the sill.) "There are chips and dust on this window. I'd better **stay away**."

[Narrator] "Lena knows to **stay away from peeling paint**. And Lena is lead smart. She knows to **wash her toys when they are dusty.**"

[Lena] (Washes her dusty toys in a basin.)

[Narrator] "Some jobs are too big for Lena. Here comes Grandma to help Lena keep the lead away."

[Grandma] (Enters with mop, sponge and bucket. Wipes table, mops floor, cleaning chips and dust.) "I try to mop twice a week, more often if it is dusty."

[Narrator] "Wet mopping is better than sweeping, because it doesn't raise dust. Lena also knows to watch out for her baby brother."

[Lena] (Picks up toy lion, wipes dust and chips from the pacifier, puts baby back in the basket and replaces the pacifier.)

[Narrator] "Now after all that lead-smart work, Lena is hungry. She's going to **get a healthy snack**. Another way to keep lead out of our bodies is to put good food in."

[Lena] (Goes to table, returns with a small carton of milk and box of raisins.)

[Narrator] "There's one more thing that Lena has to do before she eats. Does anybody know what that is?" ......Lena washes her hands before she eats.

[Lena] (Washes hands, dries with a towel. Sits to eat.)

[Narrator] "So, what have we learned today?" ......Stay away from peeling paint, wipe your shoes at the door, wash your hands before you eat, eat healthy snacks, watch out for your brothers and sisters.

(If used) [Narrator] "Here's a coloring book and story book about my friends Leo and Lena Lion." (Hands out folders, stickers.)

Props needed: toys, a small table, basin, bucket, sponge, soap, towel, eggshells, corn starch or flour, doormat, raisin box, milk carton, stuffed animal lion, basket or infant seat, diaper, pacifier, backpack.

A video of this skit being played for a group of Head Start children in Albany is available upon request.

Lena and window costumes, Sesame Street video: can be borrowed from the NYS Health Department, or in some instances, your regional head start office. Patterns are also available.

New York State Department of Health Outreach and Education Group ESP, Corning Tower Room 1642 Albany, NY 12237

(518)402-7530 or (800) 458-1158

# Skit Cast of Characters:



Narrator



Lena Lion



Grandmother



Window

# Sewing instructions Lena Lion Costume

# Fabric requirements:

Overalls:

3.5 yards of blue cotton twill or duck cloth.
Body, Hood, Booties, Tail and Mittens:

3 yards of tan plush felt.

Lining of Hood, inside Ears and Mitten palms:

1 yard of cotton knit.

Notions:

Matching thread.
Small amount of polyester fiber fill (for tail).
A few yards of yellow yarn (for tassel at end of tail).

One 21" zipper (for front of body).

Safety pins (for adjustable connections).

2 yards of elastic (for booties and mask).

3/4 yard of white, .5 inch wide ribbon or tape (for writing name on overall pocket)

1 yard of wide bias binding (for elastic casing of booties).

9" paper plate and colored crayons or felt tip pens (for face mask).

# **General instructions:**

1. Enlarge all pattern pieces and transfer to any convenient paper using a scale of 1 inch = 5 inches. The size is adult large and can be worn over clothes and adjusted with safety pins to fit comfortably.

2. Lay out and cut the pattern pieces on the straight of the designated fabric (folded with selvages together), making sure to cut the correct number of pieces, and matching fold lines where indicated.

All seams should be stitched with right sides together.

# Body:

Stitch shoulder darts matching markings 3. Stitch fronts together below marking 7. Insert zipper above marking 7. Stitch center back seam matching markings 8 and 9. Stitch right sleeve to right front matching markings 1 and 4. Stitch right sleeve to right back matching markings 1 and 2.



Repeat for corresponding seams with the left sleeve.

Attach front facings to back facing.

Stitch facing to neckline, clip curved seam allowance, turn to inside, press and tack at shoulder seams and front opening.

Stitch side seam and underarm matching markings 1, 5 and 6, for each side.

# Tail:

Fold with right-side inside, stitch the full length and around the curve, leaving open at pointed end.

Turn right-side out and stuff lightly with polyester fiber fill.

Make a 4" tassel with yarn and attach it to curved end.

The other end will be pinned to the overalls in an appropriate place.

Mittens: (make 2)

For each mitten (right and left), sew together one plush felt mitten piece and one mitten lining piece (leaving open at bottom).

Turn and press.

These will be secured to sleeves with safety pins.

Booties: (make 2)

Fold on fold line matching markings 12 and 13.

Sew, leaving open at top and bottom.

Clip curved seam allowance, and press open.

Attach bias binding as a casing at top.

Insert a comfortable length (for fitting over foot) of elastic into casing and attach.

Cut 8 inch elastic for stirrup, and attach at markings 14.

Fold in and sew 5/8 inch hem at bottom.

# Hood:

Sew center of hood to side of hood matching markings 10 and 11 for each side.

Clip curved seams, turn and press.

Repeat for lining pieces.

Sew lining to hood all the way around, leaving open at bottom between markings 11. Turn right-side out, press.

Ears are optional (there are ears on face mask);

Sew around one ear and one lining, turn and press for each ear.

Secure with hidden safety-pins from inside, at an appropriate location on the hood. The hood can be closed with safety pins under the chin.

# Overalls:

Fold all strips (2 suspenders and 2 belts) in half the long way, right-sides together. Stitch across one end and the long side, turn and press.

Sew the two pant front seams together at center front. Clip curve, and press seam open. Repeat for pant back pieces.

Fold under 2" facing at top of pocket. Press and stitch close to fold.

Sew white ribbon on pocket to form "LENA".

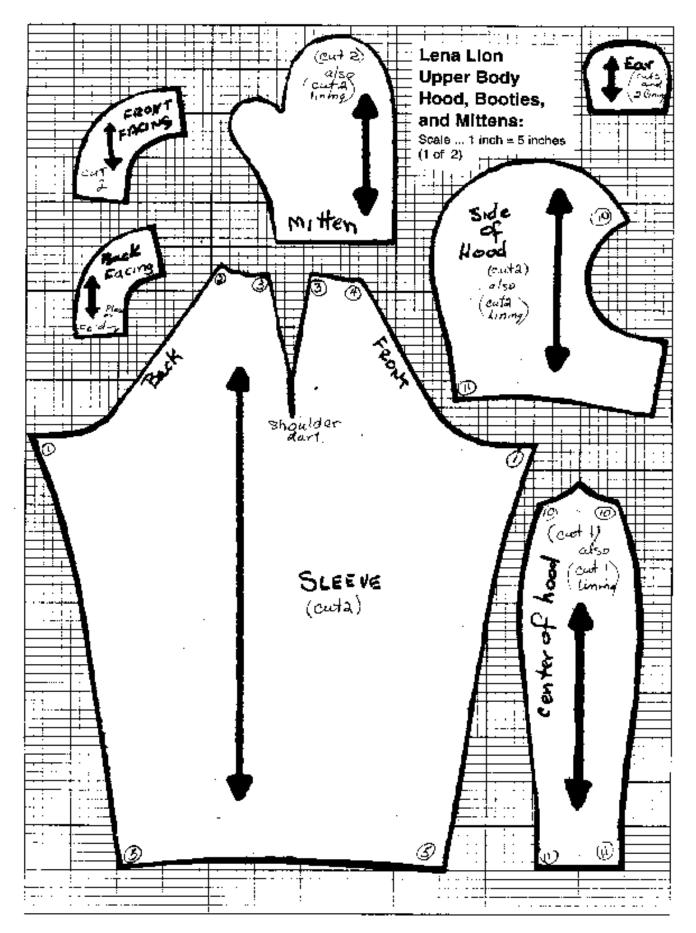
Fold under and press 5/8" seam allowance around the sides and bottom of pocket. Sew pocket to pants front as shown.

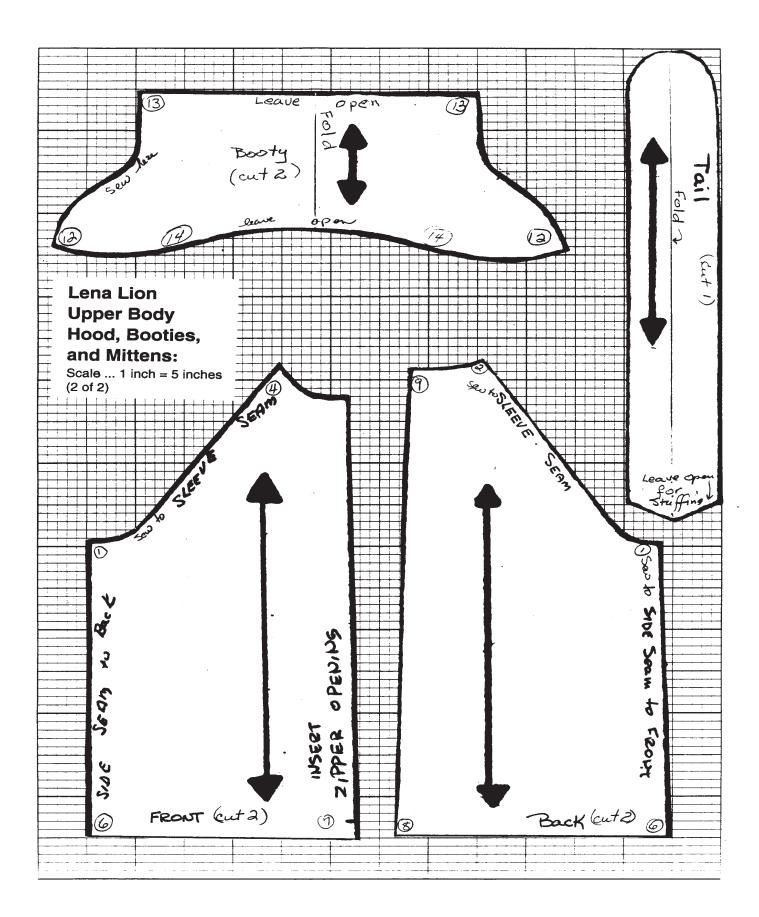
Place unfinished ends of belts at side seams, where shown, open front facing and sew to pants front at top, clip, turn and press.

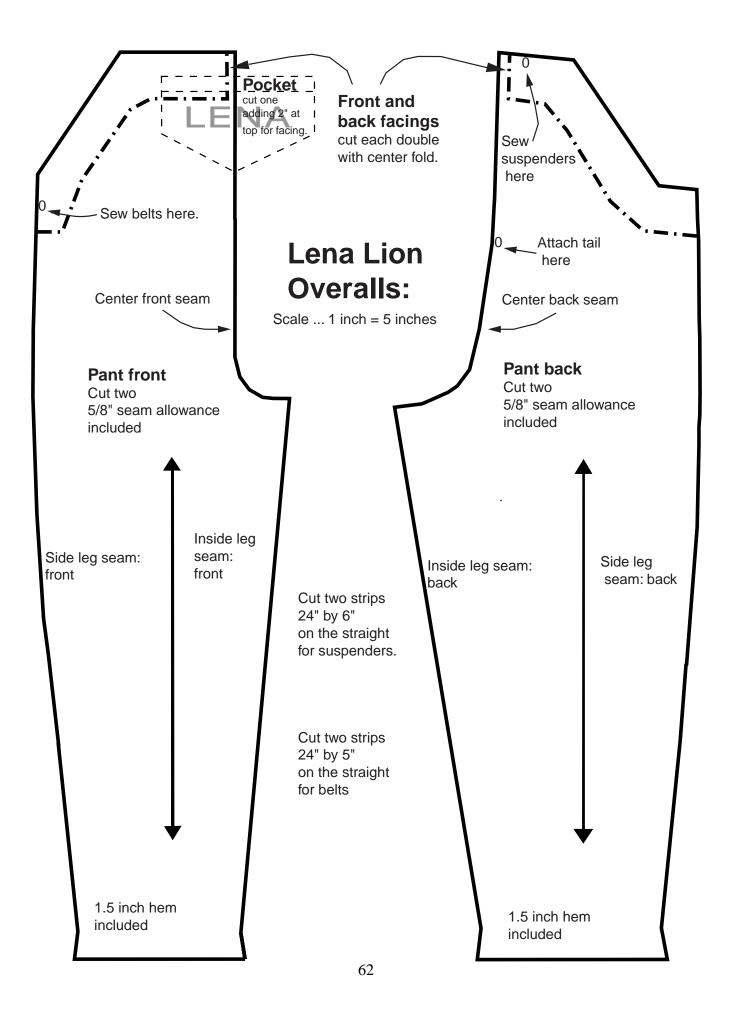
Place suspenders at center back, as shown, and sew back to back facing same as for fronts. Sew inside leg seam front to inside leg seam back, with one continuous seam for both legs. Sew side leg seam of front to side leg seam of back, leaving open above the lowest point where the belts are attached (both sides).

Safety pins can be used to make adjustable suspender connections in the front, and adjustable hems at the bottom of the legs.

The belts can be tied in the back at any comfortable tightness.







Lena Lion Face Mask.
Enlarge this outline to 130%.
Color face (golden), bow (purple), tongue (pink).
Cut out and glue to 9" paper plate.
Cut opening for eyes, nose and mouth to line up with wearers features.
Attach elastic to fit wearers head.

# Lena Lion Hand Puppet:

Transfer entire drawing to tan fabric.

Cut on outside solid line.

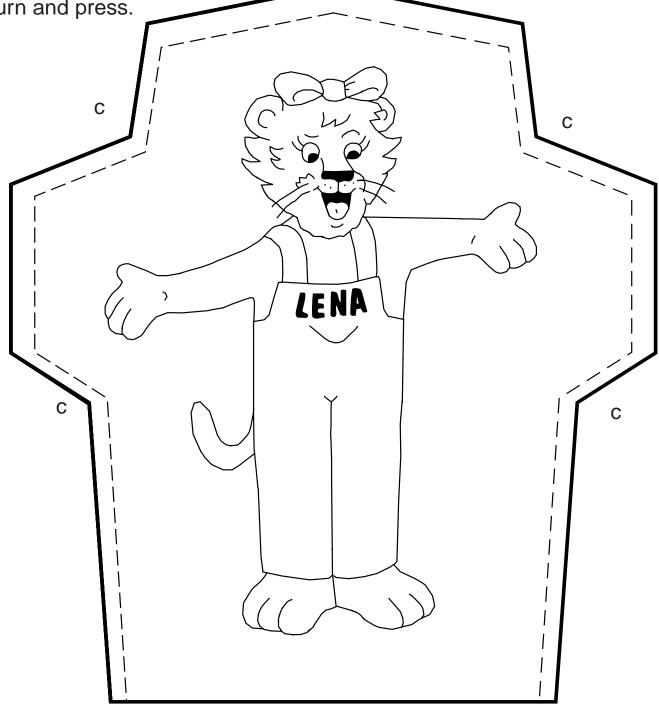
Cut a second piece of tan fabric along the same cutting line.

With right sides together, sew along dashed line leaving

open at bottom for hand.

Clip at 'C's.

Turn and press.



#### Appendix 2

#### TEACHERS - PLEASE TELL US WHAT YOU THINK ABOUT THE LEAD CURRICULUM!!

1. How much of the curriculum have you been able to use?

\_\_\_\_None \_\_\_\_Some \_\_\_\_Most \_\_\_\_All

- 2. What parts did you find especially useful?
- 3. What parts did you find the least useful?
- 4. How effective do you think the curriculum is in getting the messages across about reducing exposure to lead?

\_\_\_\_Not at all \_\_\_\_Somewhat \_\_\_\_Very

5. Which other pieces were you able to use?

\_\_\_\_\_the Sesame Street video \_\_\_\_\_useful\_\_\_\_somewhat useful\_\_\_\_not at all useful

\_\_\_\_the lead skit

\_\_\_\_\_parent handouts \_\_\_\_\_useful\_\_\_\_somewhat useful\_\_\_\_not at all useful

\_\_\_\_useful\_\_\_\_somewhat useful\_\_\_\_not at all useful

6. What suggestions do you have to help us improve:

the curriculum\_\_\_\_\_

the skit\_\_\_\_\_

the handouts\_\_\_\_\_

(Please return this and all evaluation forms to: NYS Department of Health, Center for Environmental Health, Outreach and Education Group, ESP, Corning Tower Room 1642, Albany, NY 12180, or call us with comments (1-800-458-1158)). Thank you!

# PARENTS OR GUARDIANS - PLEASE HELP US LEARN MORE AND ANSWER THESE QUESTIONS!!!

My child learned about lead in school (or day care) and told me about it. \_\_\_\_Yes\_\_\_\_No

I knew about lead before my child told me. I heard it from (you can check more than one): \_\_\_\_\_family/friends \_\_\_\_\_the doctor \_\_\_\_\_health dept.

\_\_\_\_\_\_the teacher \_\_\_\_\_\_TV, radio or news \_\_\_\_\_\_other

This is the first time I heard about lead. \_\_\_\_Yes\_\_\_No

This is a list of things that help you stay lead safe. Please tell us if they are easy or hard to do:					
	Easy to do	Hard to do			
Wash our hands before we eat					
Wipe our shoes at the door					
Eat healthy food and snacks					
Go to the doctor for a blood test					
Damp mop floors at least twice a week					
Wash dusty toys					
Stay away from peeling paint					
Get information from the health department					

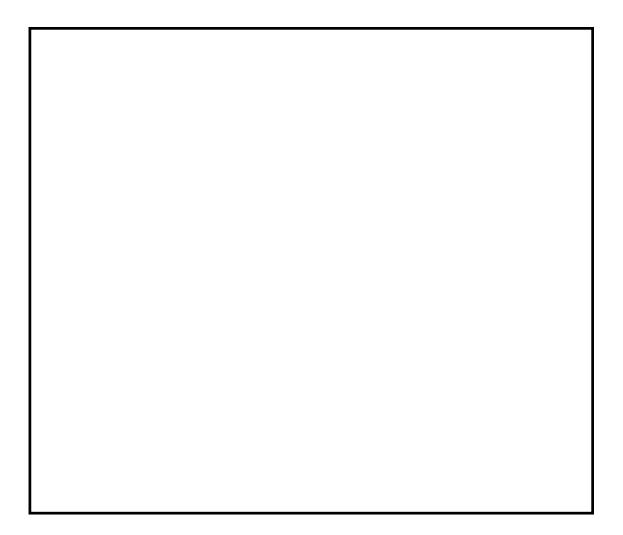
If you checked "hard to do" for any of the things listed above, please tell us why (we want to learn how to make it easier):

(Please return to your child's teacher.)

THANK YOU!

#### KIDS - DRAW A PICTURE OF HOW TO STAY LEAD SAFE!!

HINTS: Wash my hands before I eat Stay away from peeling paint Eat healthy foods and snacks Get a blood test at the doctor's office Watch out for my baby brother or sister Wipe my shoes at the door Wash my dusty toys



#### Appendix 3

#### **Resource List for Lead Information**

In New York Statre, lead programs are usually carried out by the local health units. Telephone numbers for lead programs are listed on the back of this page. The numbers are listed by county, except for New York City. Some counties are served by field offices from the New York State Health Department, and some are served by county or city health departments. Local health units provide most needed services for residents within their area, with additional services available from the state as needed. Typically, local services include targeted responses to the presence of lead in the community and inspections when children are diagnosed with elevated blood lead levels. They can assist families with referrals to other community services, such as lead-safe housing, medical clinics and building code enforcement.

Back-up services are provided by the State Department of Health who can supply educational materials and respond to questions about:

childhood lead poisoning prevention and education lead in drinking water lead hazards from remodeling and home repairs lead contractor training and curriculum development lead in consumer products occupational exposure to lead technical guidance for lead inspectors all other lead calls, including lists of laboratories and whether testing is needed.

You can reach the Department by calling (800) 458-1158. After finding out what kind of information you need, staff will direct you to the right specialist.

In addition, local poison control centers and occupational health clinics may offer specialized services. The US Environmental Protection Agency and the Consumer Product Safety Commission have informational brochures about lead safety and awareness. For copies of these brochures or more information about federal requirements and programs, call 1-800-LEAD-FYI.

There are probably additional resources available in your community. Contact your local community organization, your county Cooperative Extension Office, and the Women, Infant and Children (WIC) Program nearest you. Services include coupons for eligible families for free foods that are high in iron, calcium, and vitamin C, nutrition counseling, cookbooks and recipes.

## Local Lead Poisoning Prevention Programs

County	Telephone	County	Telephone
Albany	(518) 447-4691	Jefferson	(315) 786-3720
Allegany	(585) 268-9250	Lewis	(315) 376-5453
Broome	(607) 778-2887	Livingston	(585) 243-7299
Cattaraugus	(716) 373-8050	Madison	(315) 363-5490
Cayuga	(315) 253-1447	Monroe	(585) 274-6059
Chautauqua	(716) 753-4491	Montgomery	(518) 853-3531
Chemung	(607) 737-2028	Nassau	(516) 571-3436
Chenango	(607) 337-1660	New York City	(212) 676-6105
Clinton	(518) 565-4848	Niagara	(716) 439-7513
Columbia	(518) 828-3358, ext 1255	Oneida	(315) 798-5064
Cortland	(607) 753-5203	Onondaga	(315) 435-3271
Delaware	(607) 746-3166	Ontario	(585) 396-4558
Dutchess	(845) 486-3503	Orange	(845) 569-1571
Erie	(716) 961-6800, ext 6804	Orleans	(585) 589-2763
Essex	(518) 873-3509	Oswego	(315) 349-8316
Franklin	(518) 891-4471, ext 3006	Otsego	(607) 547-4230
Fulton	(518) 736-5720	Putnam	(845) 278-6558
Genesee	(585) 344-8506, ext 5496	Rensselaer	(518) 270-2626
Greene	(518) 719-3600	Rockland	(845) 364-3611
Hamilton	(518) 648-6141	Saratoga	(518) 584-7460
Herkimer	(315) 867-1430	Schenectady	(518) 386-2824

County	Telephone	County	Telephone
Schoharie	(518) 295-8474	Tompkins	(607) 274-6604
Schuyler	(607) 535-8140	Ulster	(845) 340-3090
Seneca	(315) 539-1920	Warren	(518) 761-6580
Steuben	(607) 664-2438	Washington	(518) 746-2400
St. Lawrence	(315) 386-2325	Wayne	(315) 946-5749
Suffolk	(631) 854-4034	Westchester	(914) 813-5229
Sullivan	(845) 292-0100, ext 2765	Wyoming	(585) 786-8890
Tioga	(607) 687-8614	Yates	(315) 536-5160

Dear Parent/Care giver:

This year we will be learning about lead poisoning. Childhood lead poisoning is a serious disease. The good news is that it can be prevented!

We will talk about:

- lead as a poison
- where lead is found inside and outside the house
- behaviors which help keep lead out of children-s bodies
- how children can help themselves and their brothers and sisters stay safe

We need your help to make this program work. Here-s how:

- Read the pamphlets we will send home with your child
- Talk to your child about what he or she is learning
- Check your home with your child to see if it is lead safe
- Try some of the snack recipes we send home
- Use posters or stickers from the school program at home

If you have any questions or need more information about lead poisoning and how to prevent it, call the State Health Department toll-free at 1-800-458-1158.

Turn this page over to read some facts about lead!!

Sincerely,

Teacher

# FACTS ABOUT LEAD



Lead is found in paint, dust and outside dirt



Washing hands often is important to keep lead dust away



Washing toys and pacifiers often will help keep lead dust out of the body



Damp mopping floors and windowsills twice a week also keeps lead dust away

All children should have a blood lead test at ages 1 and 2

Other children up to age 6 should be tested if the doctor thinks they are at risk



Keep children from eating paint chips

A healthy diet makes a difference in keeping lead away from children's bones and muscles



Calcium fights lead poisoning - foods like milk, yogurt, cheese, egg yolks, sardines, salmon, nuts, beans, whole grains and green leafy vegetables



Iron fights lead poisoning - foods like lean beef, beans, egg yolks, seafood, green leafy vegetables, fruits like raisins, nuts, whole grains, cereals or spaghetti that add iron









# **Curriculum Credits**

Appreciation and thanks are given to the conscientious and enthusiastic members of the Lead Poisoning Prevention Curriculum Committee.

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