Lead Awareness in Indian Country: Keeping our Children Healthy!

Train-the-Trainer Session
Train-the-Trainer Outline

- Objectives
- Introduction
- Curriculum Materials
- *Actions to Reduce Potential Lead Exposure* Infographic
- Navigate [www.epa.gov/lead/tribal-lead-curriculum](http://www.epa.gov/lead/tribal-lead-curriculum)
- Steps to Prepare: Demonstration with Module 3
- Teaching Strategies & Discussion
Objectives

• Understand the purpose of the curriculum and key actions to reduce childhood lead exposure
• Understand curriculum components
• Learn how to navigate materials
• Discuss teaching & outreach strategies
• Share and discuss best practices
Introduction
Collaboration between the:

- National Tribal Toxics Council;
- National-EPA Tribal Science Council; and
- U.S. Environmental Protection Agency
Partners

• Over 200 tribal representatives contributed to the success of this Curriculum by developing content, reviewing information, evaluating messages and use
The Curriculum

• Also known as:
  • Curriculum
  • Tribal Lead Curriculum
  • Lead Awareness Curriculum
Purpose

• Raise awareness about childhood lead exposure
• Expand understanding of lead’s potential impacts on children’s health and cultural practices
• Encourage actions that can be taken to reduce and/or prevent childhood lead exposure
## Target Audiences

<table>
<thead>
<tr>
<th>Instructors</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>Parents</td>
</tr>
<tr>
<td>Outreach specialists</td>
<td>Grandparents</td>
</tr>
<tr>
<td>Educators</td>
<td>Tribal leader</td>
</tr>
<tr>
<td>Environmental staff</td>
<td>Daycare workers</td>
</tr>
<tr>
<td>Social workers</td>
<td>Healthcare providers</td>
</tr>
<tr>
<td>Community health workers</td>
<td>Youth (ages 12 and up)</td>
</tr>
<tr>
<td>Youth leaders</td>
<td>Anyone interested in learning more about lead and protecting children</td>
</tr>
</tbody>
</table>
Curriculum Materials
Overview of Materials

• Preface
• Introduction
• Using the Curriculum
• Four Modules, each includes:
  • Lesson Plan
  • Presentation
  • Worksheet
  • Key Messages
  • Kids Activity Sheets
• Four Appendices
Module 1: Understanding Lead

- Educates participants on potential sources of lead exposure, and lead’s impacts and health effects on humans, wildlife, the environment and cultural practices
Module 1: Understanding Lead

1. Introduction
2. Potential Sources of Lead Exposure
3. Vulnerable Populations
4. Impacts and Effects of Lead Exposure
5. Taking Action

Photo by Jelleke Vanooteghem on Unsplash
Module 2: Effective Cleaning Techniques

• Explains and demonstrates cleaning techniques recommended to reduce household lead dust and potential lead exposure in the home
Module 2: Effective Cleaning Techniques

1. Introduction
2. Lead Dust Traps
3. Recommended Cleaning Techniques
4. Helpful Hints
Module 3: Personal Hygiene and Nutrition

• Focuses on how good personal hygiene habits and healthy nutritional practices may assist in reducing the absorption of lead in a child’s body
Module 3: Personal Hygiene and Nutrition

- Personal Hygiene
- Nutrition
Module 4: Hiring Certified Lead Professionals

- Informs participants on what to do if a home, child care facility or preschool built before 1978 contains lead-based paint

Photo provided by Shaun West, Environmental Programs Manager, Cherokee Nation
Module 4: Hiring Certified Lead Professionals

1. Introduction
2. Deteriorating Lead-Based Paint Hazards
3. Testing Your Home for Lead
4. Lead Abatement
   • Renovation, Repair and Painting (RRP) Rule
5. Lead Abatement Versus RRP Projects
Lesson Plan

Module 1: Understanding Lead provides an overview of lead, its impacts and actions that can be taken to reduce potential lead exposure and lead poisoning. This module is developed to ensure that attendees understand the seriousness of lead exposure and steps to prevent lead poisoning. By the end of Module 1, participants will:

- Recognize potential sources of lead exposure;
- Understand impacts and effects of lead exposure;
- Learn simple actions to reduce lead exposure; and
- View the importance of testing children for elevated blood lead levels.

Instructor Preparation

To fully prepare for module 1: Understanding Lead, the instructor should take the following steps:

- Preview the Lesson Plan to identify sections where examples, stories, and local information may be inserted.
- Reach out to tribal personnel and seek other resources to find local information and partners, if possible.
- Invite a local healthcare provider or environmental health professional to participate in the session and be available to answer attendees’ questions about childhood blood lead levels and testing. Review the CDC website for information on their recommendations on children’s blood lead levels at http://www.cdc.gov/nceh/lead/prevention/look-out-for-lead.html.
- Research and identify sources of lead exposure(s) in your community.
- Discuss with tribal leaders, elders, and staff your intentions to conduct the training and whether they have any stories related to lead and lead exposures they would like shared during this session.
- Make copies of the Module 1 Worksheet, Key Messages, Kids Activity Sheet (1 copy per participant), and Slides to incorporate relevant stories, images and videos. Remove Presentation Slides you do not plan to use during the session.

Instructor Notes written in italics can be found throughout this Lesson Plan. These notes are intended to guide the instructor through the discussion and presentation and are not meant to be read out loud during the session.

Suggested Materials

- Lecture and projector to display Presentation Slides
- Flip chart
- Markers
- Module 1 Worksheet
- Module 1 Key Messages
- Module 1 Kids Activity Sheet
- Pens or pencils
- Hard copies of presentation slides to hand out to participants (optional)

If access to technology is limited, you can use hardcopies of Presentation Slides.

Outcomes

Upon the completion of Module 1, participants will be able to:

- List three sources of lead exposure;
- List three health effects of lead exposure in children;
- Explain how lead impacts our cultural practices and wildlife; and
- List three actions that can minimize or eliminate potential exposure to lead.

Outline (75 minutes)

I. Introduction (10 minutes) .................................................. 11

II. Potential Sources of Lead Exposure (15 minutes) ........ 16

   a. What is Lead? ................................................... 16
   b. Where is Lead Found and How is it Used? ........ 16
   c. Far Creek Superfund Site ______________________ 16
   d. Are There Other Sources of Lead in the Community? 16

III. Vulnerable Populations (5 minutes) ............................. 21

   a. Children ................................................... 21
   b. Adults, Including Pregnant Women ................... 21

IV. Impacts and Effects of Lead Exposure (15 minutes) .... 23

   a. Health Effects of Lead ...................................... 23
   b. Health Effects of Lead on Wildlife ...................... 23
   c. Potential Impacts of Lead on Cultural Practices .... 23
Lesson Plan

Notes:

VII. References

The following is a list of the documents and websites that are specifically referenced in this Lesson Plan.

Presentation

Introduction

1. How many of you have ever heard of lead or lead poisoning before today?

2. What are some things you have heard about lead or lead poisoning?

3. Does anyone know what year their house or apartment was built; was it before or after 1978?
Worksheet

 Lead Awareness in Indian Country: Keeping Our Children Healthy

EFFECTIVE CLEANING TECHNIQUES

LEAD DUST TRAPS

Lead in household dust (lead dust) can form when lead-based paint is scraped, sanded, or heated. It also forms when painted surfaces containing lead bump or rub together. A lead dust trap is a space or object where lead dust can easily gather on it or under.

Directions: This home has at least 6 lead dust traps. Find and circle them all.

LEAD DUST CLEANING TECHNIQUES

Directions: Draw a line to match each lead dust trap with recommended cleaning technique. A cleaning technique can be matched to more than one lead dust trap. Choose one technique recommended for cleaning more than one area in the home.

Lead Dust Trap

1. Floors, stairways, corners, and CRAP
   - Wet cloth or sponge
   - Wet mop, cloth or sponge
   - Dust with furniture polish and a cloth
   - Wet mop, cloth or sponge and all-purpose cleaner

HELPFUL CLEANING HINTS

1. After cleaning your house using these recommended techniques, what should you do to avoid re-concentrating the areas you just cleaned? Select all that apply.
   - Wash hands and cleaning supplies in a sink (or area) that probably is not used for food preparation.
   - Wash the toilet bowl after washing the cleaning supplies so that lead dust does not remain in the sink.
   - Shower and wash hair when you finish cleaning.
   - Wipe all your doors after cleaning to avoid tracking dust around your home.

2. TRUE or FALSE - I should move or wash curtains and floor blinds as I need them. Windows.

3. TRUE or FALSE - Many items in my home are potential lead dust traps and clutter could prevent me from effectively cleaning my home.

After today I am going to start using the following cleaning technique(s) in my home:

Key Messages

**PERSONAL HYGIENE AND NUTRITION**

Good personal hygiene habits and healthy nutritional practices can limit absorption of and reduce exposure to lead.

**WHAT ARE PERSONAL HYGIENE HABITS THAT CAN REDUCE POTENTIAL LEAD EXPOSURE?**

One way young children ingest lead is through dust or soil that settle on their hands as they play. When children put their hands in their mouths, they may swallow lead-contaminated dust or soil, which can then get into their bloodstream. Good personal hygiene habits, such as consistent handwashing, reduces the likelihood of this happening and is the best way to reduce the number of times on children's hands in most situations. Children should wash their hands with soap several times a day using the Six Steps of Handwashing:

1. Wet hands with clean, running water.
2. Add soap, then rub hands together making a soapy lather. Do this away from the running water; be careful not to wash this lather away.
3. Scrub the hand and back of hands, between fingers and under nails. Wash for at least 20 seconds; the amount of time it takes to sing the ABCs once or the Happy Birthday song twice.
4. Rinse hands from wrists to fingertips under clean, running water. Let the water run back into the sink, not down to your elbows.
5. Dry hands thoroughly with a clean towel or paper towel.
6. Turn off the faucet with the used towel. Remember, dirty hands turned on the faucet.

**HOW CAN WE REDUCE POTENTIAL EXPOSURE TO LEAD WHILE OUTDOORS?**

Children may be exposed to lead in outdoor environments through contaminated soil or breathing in dust containing lead. To reduce potential exposure to lead while outdoors we can:

- Check the interior of your home, including windows and front doors, for deteriorating paint.
- Wash outdoor toys and playground equipment regularly.
- Use dissolvable picnic mixes, camping, hiking, and biking areas.
- Use water from clean sources for drinking, cooking or washing.
- To avoid tracking soil into your home:
  - Put on shoes outside and inside all entryways.
  - Remove shoes before coming inside.
  - Wipe pet's paws prior to bringing them indoors.

**HOW MAY NUTRITION ASSIST IN REDUCING THE ABSORPTION OF LEAD?**

Eating a variety of foods gives children the vitamins and minerals they need to grow up healthy. When children do not have enough calcium or iron in their bodies, their bodies may absorb lead instead of these nutrients. A diet that includes foods rich in calcium, iron and vitamin C may assist in reducing the absorption of lead.

Important facts to understand are:

- An overall unhealthy diet high in fat and oil may increase the rate of lead absorption, and
- A child with an empty stomach will absorb more lead.

**WHAT ARE SOME MEALS THAT CONTAIN CALCIUM, IRON AND/OR VITAMIN C?**

**BREAKFAST:**
- Oatmeal, sliced banana and 100% orange juice
- Vegetable omelet, apple sauce and low-fat milk
- French toast, orange slices, yogurt and 100% fruit juice
- Iron-fortified cereal with low-fat milk, topped with nuts
- Wild rice porridge with berries

**LUNCH:**
- Turkey & tomato sandwich, cottage cheese and low-fat milk
- Tuna salad sandwich on whole-grain bread and pear slices
- Lean cheesburger on a whole-grain bun and 100%, cranberry juice
- Shrimp, squash and Brussels sprouts

**DINNER:**
- Sloppy Joe, watermelon and low-fat milk
- Macaroni and cheese, slowed tomatoes and melon slices
- Chicken, rice, green beans and barley
- Salmon, rice and bell peppers

**WHERE CAN I LEARN MORE?**

For more information, contact the National Lead Information Center (NLIC) at 1-800-424-LEAD (5323) or visit www.epa.gov/lead.
Kids Activity Sheet

Crossword Puzzle

Down:
1. Use the clues to the left to fill in the crossword puzzle for areas in your home where lead dust may be found. Lead dust is dust that contains lead.

Across:
1. Wet washing uses a wet cloth, sponge or mop for cleaning.

Connect the Dots

Seek and Find

To keep our homes clean and lead dust free, we should clean weekly. Can you find the supplies needed to clean this home?

- Bucket
- Cloth
- Mop
- Furniture Polish
- Sponge
- All-purpose Cleaner
- HEPA Vacuum

Tell an adult if you find peeling paint.
Appendices

APPENDIX A: FOODS THAT CONTAIN CALCIUM, IRON & VITAMIN C

Over 150 foods that contain varying amounts of calcium, iron and/or vitamin C are listed below. This table is an unofficial source (provided by tribal representatives) that provides examples of local/traditional foods and items found in a grocery store that can be part of an overall healthy diet. For more detailed information about nutrient content in the foods below, please visit the U.S. Department of Agriculture’s FoodData Central at https://fdc.nal.usda.gov/

<table>
<thead>
<tr>
<th>Food</th>
<th>Calcium</th>
<th>Iron</th>
<th>Vitamin C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acorn</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Almonds</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Almonds in shell</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Asparagus</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Avocado</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td>x</td>
<td>x</td>
<td></td>
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<tr>
<td>Beans</td>
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<td>Beans</td>
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<td></td>
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<tr>
<td>Beans</td>
<td>x</td>
<td></td>
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</tr>
</tbody>
</table>

Instructor Note: Use this table to identify foods during Module 3.

APPENDIX B: RENOVATION, REPAIR AND PAINTING PROJECTS FOR DO-ITYOURSELVERS

The Lead Renovation, Repair and Painting (RRP) Rule typically does not apply to homeowners renovating, repairing or painting their own homes, unless the home or a portion of the home is a rental or is used to provide child care services. Do-it-yourself projects can easily create dangerous lead dust. Protect your family and home — work safely. Control the dust and clean up completely.

Follow these safeguards to prevent lead dust from spreading throughout your home and exposing your family to lead dust.

Work Safely

- Remove all furniture, area rugs, curtains, food, clothing and other household items until cleanup is complete.
- Items that cannot be removed from the work area should be tightly wrapped with plastic sheeting and sealed with tape.
- Cover floors with plastic sheeting.
- If working on a larger job, construct an airlock at the entry to the work area.
  - The airlock consists of two sheets of thick plastic. One sheet is completely taped along all four edges.
  - The plastic sheet is then cut down the middle.
  - The second sheet is only taped along the top and acts as a flap covering the slit in the first sheet of plastic.
- Turn off forced-air heating and air conditioning systems. Cover vents with plastic sheeting and tape the sheeting in place.
- Close all windows in the work area.
- If disturbing paint, when using a hard tool, spray water on lead-painted surfaces to keep dust from spreading.

Get the Right Equipment

- It is important to get the right equipment to protect you and your family from lead exposure.
- NIOSH-certified disposable respirator with a HEPA (High-Efficiency Particulate Air) filter (N-100, R-100, or P-100).
- HEPA filter-equipped vacuum cleaner. Regular household vacuums may release harmful lead particles into the air.
- Wet-sanding equipment (e.g., spray mister), wet/dry vacuum, wet-sanding sponges, water sprayer, sponges and mops often.
- Heavy-duty plastic sheeting and heavy-duty plastic bags.
- Tape. Use tape to completely seal the plastic sheeting in place (e.g., covering furniture and air vents to construct an airlock).
Appendices

**APPENDIX C: GLOSSARY**

**Blood lead level** - The amount of lead in blood, measured in micrograms per deciliter (µg/dL).

**Blood lead test** - Test that measures how much lead is in blood.

**Elevated blood lead level** - A single blood lead test at or above the U.S. Centers for Disease Control and Prevention (CDC) blood lead reference value. For more information on CDC’s current blood lead reference value, visit: https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm.

**EPA-administered** - In the absence of an EPA-authorized program, EPA retains program implementation authority and directly implements programs under federal environmental statutes in Indian country. Currently, EPA directly implements the vast majority of programs under federal environmental statutes in Indian country.

**EPA-authorized** - Several federal environmental laws provide authority for EPA to authorize eligible Indian tribes to administer environmental programs established under those statutes in the same manner as states. For more information, visit: https://www.epa.gov/tribal/tribal-authorization-federal-laws-laws-administer-

**High Efficiency Particulate Air (HEPA) filter** - A special filter which traps extremely small particles such as lead dust. For more information, visit: https://www.epa.gov/lead/high-quality-air/what-hepa-filter.

**Hygiene** - Actions taken to keep our bodies clean, such as washing our hands or hair and taking a bath.

**Lead** - A naturally occurring element found in small amounts in the earth’s crust.

**Lead abatement** - An activity designed to permanently eliminate lead-based paint hazards. There are four options: replacement, removal, enclosure and encapsulation. Replacement and removal activities completely remove lead-based paint. Enclosure and encapsulation methods are applied on top of lead-based paint in good condition without removing the lead-based paint.

**Lead-based paint** - Paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm²), or more than 0.05% by weight (as defined by the federal government).

**Lead-based paint hazard** - Any condition resulting from deteriorating (peeling, chipping, chalking or cracking) paint, which causes exposure to lead from paint, dust or soil.

**Lead-based paint inspection** - An activity conducted by a trained and certified lead-based paint inspector that tells you if your home has lead-based paint and where lead-based paint is located.

**APPENDIX D: SUPPLEMENTAL RESOURCES**

The following is a list of resources containing additional information on the topics covered in the Curriculum. Resources are categorized by topic.

**Blood Lead Levels**


**Cleaning**


**Exposure Sources**


Actions to Reduce Potential Lead Exposure Infographic
Clean your home once a week using a clean, wet or damp cloth, sponge or mop to minimize dust, which may contain lead.

Eat a well-balanced diet with foods high in calcium, iron, and vitamin C to help reduce the absorption of lead.

Use soap and water (warm or cold) to wash children’s hands several times a day, especially after playing outside or with animals.

Play in grass and dirt not contaminated with lead, and use designated picnic, camping and hiking areas.

Hire a certified lead professional when renovation, repair or painting will disturb painted surfaces in a home built before 1978. Keep family out of the work area.

Change and wash clothes, remove shoes and shower to avoid tracking lead into the home from soil, work sites, or hobbies.

Wash daily any items your child uses regularly, such as pacifiers and toys, to minimize exposure to dust, which may contain lead.

Flush your home’s pipes by running your tap, taking a shower or doing a load of laundry or dishes before drinking or cooking.

Run your water and wash toys, pacifiers & bottles to keep homes clean & dust free.

Wash hands after eating, playing, and using the bathroom.

Eat a diet high in iron, calcium & vitamin C to help reduce the absorption of lead.

Hire certified lead professionals when renovation, repair or painting will disturb painted surfaces in a home built before 1978. Keep family out of the work area.

Play in grass and dirt not contaminated with lead, and use designated picnic, camping and hiking areas.

Change and wash clothes, remove shoes and shower to avoid tracking lead into the home from soil, work sites, or hobbies.

Wash daily any items your child uses regularly, such as pacifiers and toys, to minimize exposure to dust, which may contain lead.

Flush your home’s pipes by running your tap, taking a shower or doing a load of laundry or dishes before drinking or cooking.
Outreach Materials

Learn more about lead and how to protect your children

Lead Awareness in Indian Country: Keeping our Children Healthy!

HOST: [Insert organization's name]

ATTENDEES: Anyone interested in learning more about lead [or insert specific audience here]

DATE(S): [Insert date(s) of session(s)]

TIME(S): [Insert time(s) of session(s)]

WHERE: [Insert location]

For more information contact: [Insert name] [Insert phone number] [Insert email]
Outreach Materials

Lead Awareness in Indian Country: Keeping Our Children Healthy!

Take Action Now to Prevent Childhood Lead Exposure!

ACTIONS TO REDUCE POTENTIAL LEAD EXPOSURE:

- Run your water
- Keep homes clean & dust free
- Eat a diet high in iron, calcium & vitamin C
- Wash toys, pacifiers & bottles
- Wash hands
- Shower & change
- Hire certified lead professionals
- Play in grass

For more information, contact the National Lead Information Center (NLIC) at 1-800-424-LEAD (5323)
Navigate
www.epa.gov/lead/tribal-lead-curriculum
Steps to Prepare: Demonstration with Module 3
Steps For All Modules

• Preview lesson plan, presentation, worksheet, key messages, kids activity sheet, appendices
• Review “Instructor Preparation” section
• Determine partners
• Gather local information
• Modify curriculum
• Gather materials for demonstrations and optional activities

Instructor Preparation

To fully prepare for Module 1: Understanding Lead, the instructor should take the following steps:

• Preview the Lesson Plan to identify sections where examples, stories and local information may be inserted.
• Reach out to tribal personnel and seek other resources to find local information and partners, if possible.
• Invite a local healthcare provider or environmental health professional to participate in the session and be available to answer attendees’ questions about childhood blood lead levels and testing. Review the Center for Disease Control and Prevention’s (CDC) website for information on their recommendations on children’s blood lead levels: www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm.
• Research and identify sources of lead exposure(s) in your community.
• Discuss with tribal leaders, elders and staff your intentions to conduct the training and whether they have any stories related to lead and lead exposures they would like shared during this session.
• Make copies of the Module 1 Worksheet, Key Messages and Kid’s Activity Sheet (1 copy per participant).
• Edit the Module 1 Presentation Slides to incorporate relevant stories, images and videos. Remove Presentation Slides you do not plan to use during the session.

Instructor Notes: written in italics can be found throughout the Lesson Plan. These notes are intended to guide the instructor through the discussion and presentation and are not meant to be read out loud during the session.
Module 3: Instructor Preparation

• Preview the lesson plan
  • Where can you insert your own examples and stories?
  • What would you modify?

• Outdoor practices
  • Play in grass; play in areas not contaminated

• List of personal hygiene habits
  • Washing hands, washing toys
  • Insert local/cultural relevant practices
Module 3: Instructor Preparation

• Reach out to partners and find additional resources
  • Community Health Services
  • Wildlife, Fisheries, Natural Resource Departments
  • Cultural Resource Programs

• Compile a list of your community’s local/traditional foods and snacks
  • Specific nuts, fish, fruit

Photo provided by Zender Environmental and Health Group
Foods that May Help Reduce the Absorption of Lead

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Local/Traditional Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td>(mineral needed to build and maintain strong bones)</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
</tr>
<tr>
<td>(mineral critical to blood function)</td>
<td></td>
</tr>
<tr>
<td>Vitamin C</td>
<td></td>
</tr>
<tr>
<td>(vitamin that protects the body from disease and increases the absorption of iron)</td>
<td></td>
</tr>
</tbody>
</table>
Foods that May Help Reduce the Absorption of Lead

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Local/Traditional Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calcium</strong></td>
<td>acorns, barnacles, blue camas bulb, cattail, cholla buds, cow parsnip, fireweed leaves, mesquite bean flour, nettles, prairie turnip, sea cucumber, smelt, sochan, spruce tip tea</td>
</tr>
<tr>
<td>(mineral needed to build and maintain strong bones)</td>
<td></td>
</tr>
<tr>
<td><strong>Iron</strong></td>
<td>antelope, amaranth (grains and leaves), barnacles, beach asparagus, bear, beluga whale, bone broth, broadleaf arrowhead, butternuts, caribou, crab, duck, elk, fish liver, hickory nuts, lamprey eel, moose, pima lima bean, pine nuts, quail, quinoa, rabbit, sea lion, sea urchin, seaweed, seal, snail, squid, squirrel, tepary bean, walrus, willow leaves, wocas</td>
</tr>
<tr>
<td>(mineral critical to blood function)</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin C</strong></td>
<td>avocado, beech nuts, biscuit root/coush, bitter root, breadfruit, chokecherries, cloudberryes, dandelion greens, fiddleheads, New Mexico green chile, nodding onion, pine needles, purslane, ramps, rosehip, salmonberries, taro, tundra tea, yam</td>
</tr>
<tr>
<td>(vitamin that protects the body from disease and increases the absorption of iron)</td>
<td></td>
</tr>
</tbody>
</table>
Module 3: Instructor Preparation

- Make copies
  - 1 copy of each handout per person
- Gather materials
  - Handwashing Demo
  - Healthy Snack Activity
  - *Black Light Activity - optional*
  - *Reading Food Nutrition Facts Label Activity - optional*
- Edit and modify curriculum/slides
You’re Ready!
Module 3: Personal Hygiene and Nutrition

• Outline
  • Personal Hygiene
  • Nutrition
Nutrition

• Nutrition is important for a child’s overall growth, development and learning

• When children do not have enough calcium or iron, their bodies may absorb lead instead of these nutrients
## Key Nutrients

<table>
<thead>
<tr>
<th>Calcium</th>
<th>Iron</th>
<th>Vitamin C</th>
</tr>
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</table>
| ![Broccoli](https://via.placeholder.com/150)  
Photo by Annie Spratt on Unsplash | ![Beans](https://via.placeholder.com/150)  
Photo by Mel Elias on Unsplash | ![Oranges](https://via.placeholder.com/150)  
![Tomatoes](https://via.placeholder.com/150)  
Photo by Mel Elias on Unsplash |
Important Facts to Consider

• Foods high in fat and oil may increase the rate of lead absorption
• A child with an empty stomach will absorb more lead

Chips

Ice cream
What other foods do you think we can provide so children get calcium, iron and/or vitamin C in their diets?
<table>
<thead>
<tr>
<th>Nutrients</th>
<th>General Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calcium</strong></td>
<td>almonds, bone broth, broccoli, canned salmon, cheese, chia seeds, collard greens, cottage cheese, crab, edamame, figs, okra, milk, non-dairy milk, nopal cactus pads, prickly pear, sardines, seaweed, sweet potatoes, tofu, white beans, whole wheat bread, yogurt</td>
</tr>
<tr>
<td>(mineral needed to build and maintain strong bones)</td>
<td></td>
</tr>
<tr>
<td><strong>Iron</strong></td>
<td>apricots, asparagus, beans, beef, bison, black walnuts, chicken, clams, eggs, fish, fish eggs, hazelnuts, lentils, liver, mushrooms, mussels, mustard greens, oats, oysters, peanut butter, peas, pine nuts, pumpkin seeds, prunes, raisins, salmon, scallops, shrimp, spinach, venison, water potato, wild rice</td>
</tr>
<tr>
<td>(mineral critical to blood function)</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin C</strong></td>
<td>apples, bananas, bell peppers, blackberries, blueberries, brussels sprouts, cabbage, cantaloupe, cauliflower, chestnuts, citrus fruits, corn, green beans, honeydew, huckleberries, kale, kiwi, leeks, parsnips, pears, plums, potatoes, raspberries, rhubarb, squash, squid, strawberries, tomatoes, turnips, watercress</td>
</tr>
<tr>
<td>(vitamin that protects the body from disease and increases the absorption of iron)</td>
<td></td>
</tr>
</tbody>
</table>
Is the table missing any foods, specifically any local/traditional foods eaten in your community?
Foods that May Help Reduce the Absorption of Lead

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Local/Traditional Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calcium</strong></td>
<td>acorns, barnacles, blue camas bulb, cattail, cholla buds, cow parsnip, fireweed leaves, mesquite bean flour, nettles, prairie turnip, sea cucumber, smelt, sochan, spruce tip tea</td>
</tr>
<tr>
<td>(mineral needed to build and maintain strong bones)</td>
<td></td>
</tr>
<tr>
<td><strong>Iron</strong></td>
<td>antelope, amaranth (grains and leaves), barnacles, beach asparagus, bear, beluga whale, bone broth, broadleaf arrowhead, butternuts, caribou, crab, duck, elk, fish liver, hickory nuts, lamprey eel, moose, pima lima bean, pine nuts, quail, quinoa, rabbit, sea lion, sea urchin, seaweed, seal, snail, squid, squirrel, tepary bean, walrus, willow leaves, wocas</td>
</tr>
<tr>
<td>(mineral critical to blood function)</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin C</strong></td>
<td>avocado, beech nuts, biscuit root/coush, bitter root, breadfruit, chokecherries, cloudberrries, dandelion greens, fiddleheads, New Mexico green chile, nodding onion, pine needles, purslane, ramps, rosehip, salmonberries, taro, tundra tea, yam</td>
</tr>
<tr>
<td>(vitamin that protects the body from disease and increases the absorption of iron)</td>
<td></td>
</tr>
</tbody>
</table>
Meal Ideas – Breakfast

• Oatmeal, sliced banana and 100% orange juice
• Vegetable omelet, apple sauce and low-fat milk
• Wild rice porridge with berries
Meal Ideas - Lunch

• Tuna salad sandwich on whole-grain bread and pear slices
• Shrimp, squash and brussels sprouts
Meal Ideas - Dinner

- Macaroni and cheese, stewed tomatoes and melon slices
- Chicken, rice, green beans and berries
- Salmon, rice and bell peppers
What other meal ideas do you have that include all three nutrients?
Healthy Snacks

• Air-popped popcorn
• Applesauce
• Fruit
• Peanut butter on whole-grain crackers, apples or celery
• Jerky
• Frozen 100% fruit juice pops
• Cheese and whole-grain crackers
• Nuts, sunflower seeds and dried fruits
Which of these foods, meals or snacks we covered today are you going to add to your children’s diet this week?
Teaching Strategies & Discussion
Teaching Strategies

• Adjust each session to capture and incorporate personal/local observations and real-life scenarios unique to your community

• Discuss issues of importance to your community and work toward identifying relevant solutions

• Make sessions interactive

• Customize presentation
  • Add stories, images, videos
  • Remove slides

Photo provided by Zender Environmental and Health Group
Teaching Strategies

• Identify additional resources that may be important to participants such as brochures and phone numbers

• Be aware of how you speak and interact with participants when discussing certain topics (e.g., hygiene)
Modify Materials

1. How could this be used by my community?
2. Who is my target audience?
3. Who should I partner with and consult?
4. Which modules should I present?
5. When should I facilitate sessions?
Modify Materials

6. What factors need to be considered when modifying the Curriculum?
7. What modifications do I need to make?
8. What resources are needed?
9. How can I facilitate sessions online?
Promote Attendance

• Keep it simple
• Pull a team together
• Convenient, appealing location
• Hold sessions in conjunction with other community events
• Advertise using innovative means
• Provide refreshments, free childcare or door prizes
Questions?
Thank you!

• Share on social media using:
  • #TribalLeadCurriculum
  • #LeadFreeKids

For more information contact:
  • Amanda Hauff, hauff.amanda@epa.gov
  • Shayna Sellars, sellars.shayna@epa.gov

www.epa.gov/lead/tribal-lead-curriculum