Essentials for Healthy Homes Practitioners
Exercise #1: Make the Connections – See the Big Picture

**Typical Answers – Lines should connect the various items making it clear that there are many interactions.**

| Health Impacts | Housing Hazards | Corrective Action | Resources |
|---|---|---|---|
| Asthma – Causes | Damp indoor spaces | Keep It Dry | Federal Grants |
| Asthma Triggers | Cockroaches | Keep It Clean | Landlord Investment in Property |
| Neurological Problems | Dust mites | Keep It Pest Free | Avoiding Duplication |
| Lung Cancer | Mold | Keep It Ventilated | Resolving Core Problems |
| Death | Pet Dander | Keep It Safe | Leveraging Other Investments Such as Weatherization. |
| Injuries | Mice | Avoid Contaminants | Nurses |
| Stomach illness | Rat | Maintain the Home | Housing Contractors |
| | Trash | *The outline/agenda for the course* | Code Enforcement |
| | Lead Dust | | Energy raters |
| | Paint Chips | | |
| | Lead in Soil | | |
| | Carbon Monoxide | | |
| | Sharp Edges | | |

Essentials for Healthy Homes Practitioners
Exercise #2 – Get a Handle on Healthy Homes Statistics

***Instructions**:*
*From the References tab in your binder, take out the "American Housing Survey – National 2007" packet. See "Connections – Page 13 of 29." If you have a separate packet on a specific Metropolitan Statistical Area (MSA), take that out too. Then answer the following questions using the national data or MSA data as assigned by the instructor. The instructor may assign you or your group specific questions to answer.*

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**About the 2007 American Housing Survey National Data Packet:** The packet is eleven pages long and consists of two parts:

- **Part 1 Tables from American Housing Survey – Six Pages**
  - Page 1 – General Information: Occupancy, Units in Structure, Year Structure Built, and Foundation
  - Page 2 – Exterior Information: External Building Conditions and Water Leakage During Last 12 Months
  - Page 3 – Interior Information: Damage, Water Leakage During Last 12 Months, Rodents, and Electrical
  - Page 4 – Sanitation & Water Information: Lack of Facilities, Drinking Water Safety; and Sewage Disposal / Safety Equipment:
  - Page 5 – Heating & Fuel Information: Main Heating Equipment, Water Heating Fuel, Clothes Dryer Fuel, and Heating Problems
  - Page 6 – Selected Physical Problems: Severe Physical Problems, Moderate Physical Problems, and Overall Opinion of Structure

- **Part 2 About the American Housing Survey – Five Pages**
  - Page 7 – Overview
  - Page 7 & 8 – Key Definitions Related to Healthy Homes
  - Page 9 – AHS's Rating System for Physical Problems
  - Page 10 & 11 – Potential Errors in American Housing Survey

The packet for a specific MSA is similar to the 2007 AHS National Data with the following changes:

- The following columns are excluded:
  - Construction < 4 years
  - Manufactured Housing
  - Moved in during the past year
  - Urban Total
  - Rural Total
- The MSA Data information is compared to next closest National Data. For example, 2002 data is compared to the 2000 National Data.
- National data is only listed when it is more than 5% different than the national data and both data is more than 0.1%.
- The packet is seven pages instead of six.

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Essentials for Healthy Homes Practitioners
Exercise #2 – Get a Handle on Healthy Homes Statistics

Write the number for each characteristic. See *www.healthyhomestraining.org/AHS/AHS_National_2007_Full_12-30-08.pdf for answers.*

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| | |
|---|---|
| 1.8 million | # of homes with severe physical problems (note that units are thousands of homes) |
| 4.0 million | # of homes with moderate physical problems |
| 5.8 million | # of homes with either severe or moderate problems |
| 17.5% | % of homes with exterior physical problems |
| 10.3% | % of homes with exterior water leakage in past 12 months |
| 7.9% | % of homes with interior water leakage in past 12 months |
| 0.7% | % of homes with signs of rats in past 3 months |
| 5.5% | % of homes with signs of mice in past 3 months |
| 71.7% | % of rental homes built before 1980 |
| 19.8% | % of homes with a septic tank, cesspool or chemical toilet |
| 1.1% | % of homes with fuel-burning room heaters without a flue as main heating equipment |
| 62.9% | % of homes with gas-fired warm-air furnaces |
| 51.4% | % of homes with piped gas for water heating |
| 21.3% | % of homes with piped gas for clothes dryer |
| 52.5% | % of homes with residents with severe problems rating home 8 to 10 with 10 as best |
| 69.7% | % of homes with severe problems caused by plumbing |

Checkmark the most common cause of each type of problem. (answers in bold)

Exterior water leakage

- ☐ Walls or window problems
- ☐ Basement problems
- ☐ **Roof problems**
- ☐ Other / Unknown

Interior water leakage

- ☐ **Leaking pipes**
- ☐ Broken fixtures
- ☐ Broken water heater
- ☐ Other / Unknown

Severe Physical Prob.

- ☐ **Plumbing**
- ☐ Heating
- ☐ Electric
- ☐ Upkeep

Moderate Physical Prob,

- ☐ Plumbing
- ☐ Heating **(close)**
- ☐ Upkeep **(close)**
- ☐ **Kitchen**

# Essentials for Healthy Homes Practitioners
# Exercise #3 – Get a Handle on a Model Housing Code

***Instructions**: From the References tab in your binder, take out the "International Property Maintenance Code - 2003" packet. It is six pages long. Using the packet, please answer the following questions using this model code. If the packet contains information about the housing code in your community, write down the correct answer for your community too. The instructor may assign you or your group specific questions to answer.*

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**About the Packet:** The packet is six pages long and consists of two parts. The first four pages are selection provisions of the International Property Maintenance Code related to healthy homes. The last two pages provide background and details for the Code.

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**Questions:**

1. If rats are found, is simply killing them sufficient to comply with the code?
   a. Yes b. No c. Maybe

2. Is a crack in an exterior brick wall a violation of the code?
   a. Yes b. No c. Maybe

3. Is a disconnected downspout a violation of the code?
   a. Yes b. No c. Maybe

4. What must be done to repair flaking interior paint?
   a. Fix cause of peeling b. Remove all paint whether peeling or not
   c. Test for lead dust hazards d. Correct defective surface condition

5. Which room is not allowed to have carpeting?
   a. Kitchen b. Bathroom c. Child's Bedroom

6. Does the exhaust of an electric clothes dryer have to be vented outside?
   a. Yes b. No c. Maybe

7. Must a bathroom have an exhaust fan that vents outside?
   a. Yes b. No c. Maybe

8. Can a landlord let the air temperature go below 60ºF under any circumstances?
   a. Yes b. No.
   c. Only if it is colder than the outdoor design temperature and the heating system is running at full design capacity.

9. What other model codes apply to existing buildings that are not being reconstructed?
   a. International Residential Code
   b. International Fire Code
   c. International Existing Building Code
   d. All of the above.

10. What is the minimum temperature for hot water at the tap?
    a. 43ºF b. 110 º F c. 125 º F 68 º F

# Essentials for Healthy Homes Practitioners
# Exercise #3 – Get a Handle on a Model Housing Code

# ANSWERS
# Do not include in Student Packet

1. If rats are found, is simply killing them sufficient to comply with the code?
   a. Yes **b. No** c. Maybe
   ***Section 302.5 explicitly requires that proper precautions be taken to eliminate harborage and prevent reinfestation. Note that it addresses rats not rodents or mice.***

2. Is a crack in an exterior brick wall a violation of the code?
   **a. Yes** b. No c. Maybe
   ***Section 304.2. There is no minimum cutoff. The cracks must be maintained weather resistant and water-tight. See also Section 304.6. A crack would be a break in an exterior wall.***

3. Is a disconnected downspout a violation of the code?
   **a. Yes** b. No c. Maybe
   ***Section 304.7. Drainage must be sufficient to prevent dampness or deterioration in the walls or interior of home. Downspouts must be in good repair. Discharge must not create public nuisance.***

4. What must be done to repair flaking interior paint?
   a. Fix cause of peeling b. Remove all paint whether peeling or not
   c. Test for lead dust hazards **d. Correct defective surface condition**
   ***Section 305.3 requires that the defective surface condition be fixed. This is not required for exterior paint. It still does not require that the cause of the peeling such as a source of moisture be repaired.***

5. Which room is not allowed to have carpeting?
   a. Kitchen **b. Bathroom** c. Child's Bedroom
   ***Section 503.4 requires that a bathroom have a smooth, hard, non-absorbent surface.***

6. Does the exhaust of an electric clothes dryer have to be vented outside?
   a. Yes b. No **c. Maybe**
   ***Section 403.5 requires the clothes dryer to be exhausted according to the manufacturer's instructions. The label on the dryer may indicate how the dryer is to be exhausted. For a healthy home, the clothes dryer must always be exhausted outside.***

7. Must a bathroom have an exhaust fan that vents outside?
   a. Yes **b. No** c. Maybe
   ***Section 403.2 coupled with Section 403.1 requires that a bathroom have ventilation. The ventilation can be from a window or an exhaust fan. According to Section 402.1, the window must be have an openable area of 8% of the square footage of the bathroom. If an exhaust fan is used it must vent outside not the attic and must not be recirculated.***

8. Can a landlord let the air temperature go below 60ºF under any circumstances?
   a. Yes b. No.
   c. Only if it is colder than the outdoor design temperature and the heating system is running at full design capacity.

   ***The first exception to Section 602.3 allows the temperature to go below 60ºF if it is an extraordinarily cold day and the furnace is running as hard as possible.***

9. What other model codes apply to existing buildings that are not being reconstructed?
   a. International Residential Code
   b. International Fire Code
   **c. International Existing Building Code**
   d. All of the above.

   ***See page 5 of the handout. The International Existing Building Code clearly applies to existing buildings – when they are being rehabilitated. The other codes apply to additions, alterations or repairs but do not require the existing structure to comply with all the requirements of those codes, unless otherwise states. Additions, alterations, or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.***

10. What is the minimum temperature for hot water at the tap?
    a. 43ºF **b. 110 º F** c. 125 º F 68 º F

    ***Section 505.4 requires a minimum hot water temperature of 110ºF. 110 ºF is equivalent to 43 ºC. The maximum recommended temperature for hot water is 120ºF but that is not a requirement of the code.***

# Essentials for Healthy Homes Practitioners
# Exercise #4 – Use the Epidemiologic Triangle

The purpose of this exercise is to help you better understand the epidemiologic triangle and how it can be used for addressing healthy housing issues.

The Epidemiological Triangle can be used whether the disease or illness is acute (causes symptoms that are immediately recognizable) or chronic (symptoms develop over time and for that reason may not be readily identified with the exposure). The triangle can also be useful to understand the process involved with unhealthful conditions, such as those that cause physical injury.

*Instructions:*
*For each of the scenarios described below draw an epidemiological triangle. Identify the host (as well as any factors that make the host susceptible), environment, agent, and vector. Fill in the corners of the triangle.*

Scenarios:

**1) Acute disease**

An adult visits the home of a friend and quickly develops a severe allergic reaction. The patient is allergic to animals, but the friend has never had a pet of any type in his home. However, the friend does state that he frequently has problems with mice in the home.

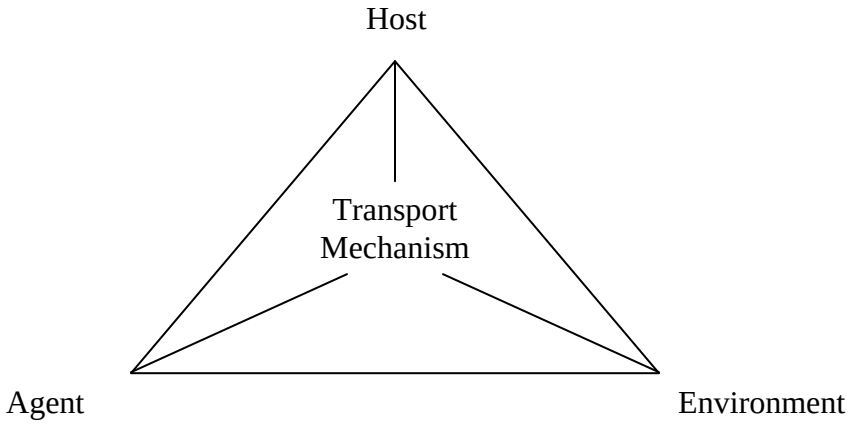
**2) Chronic disease**

While her parents are finishing remodeling their 1950's home, a young child falls and incurs severe trauma on her arm. An x-ray is taken at the hospital and while no breaks have occurred, the doctor sees strong lines on the x-ray outlining the bones. This can be an indication the child has been exposed to the metal lead.

**3) Physical condition**

In a newly opened senior high rise living facility, there are reports of an alarming number of falls. Concerned that something in the construction of the apartments may be causing or contributing to the falls, the manager visits the residents to ask for details concerning the circumstances of each fall. The conditions in common are as follows: all the falls occurred at night or in the late afternoon after sundown; all apartments are fully carpeted except for the kitchen and bathroom; there is a raised marble threshold at the entrance to the kitchen and bathroom that separates the ceramic tiles of these two rooms from the carpeting on the other side of the threshold; and the majority of the falls occurred when entering or leaving either or both of these rooms.

# Essentials for Healthy Homes Practitioners
# Exercise #4 – Use the Epidemiologic Triangle




| Scenario | Host | Agent | Environment | Transport Mechanism |
|---|---|---|---|---|
| Acute Disease | | | | |
| Chronis Disease | | | | |
| Physical Condition | | | | |

# Essentials for Healthy Homes Practitioners
# Exercise #4 – Use the Epidemiologic Triangle

## Preferred Answers

| Scenario | Host | Agent | Environment | Transport Mechanism |
|---|---|---|---|---|
| **Acute disease**<br>An adult visits the home of a friend and quickly develops a severe allergic reaction. The patient is allergic to animals, but the friend has never had a pet of any type in his home. However, the friend does state that he frequently has problems with mice in the home. | Adult visitor<br><br>[Susceptibility Factor: allergies] | Airborne rodent protein (rodent hair, dried urine and fecal particles that have become airborne. | None | The friend's house |
| **Chronic disease**<br>While her parents are finishing remodeling their 1950's home, a young child falls and incurs severe trauma on her arm. An x-ray is taken at the hospital and while no breaks have occurred, the doctor sees strong lines on the x-ray outlining the bones. This can be an indication the child has been exposed to the metal lead. | Young child<br><br>[Susceptibility Factor: Young age – frequent hand to mouth activity] | Lead from lead-based paint | Household dust with lead in it | House that likely contains deteriorated lead-based paint. |
| **Physical condition**<br>In a newly opened senior high rise living facility, there are reports of an alarming number of falls. Concerned that something in the construction of the apartments may be causing or contributing to the falls, the manager visits the residents to ask for details concerning the circumstances of each fall. The conditions in common are as follows: all the falls occurred at night or in the late afternoon after sundown; all apartments are fully carpeted except for the kitchen and bathroom; there is a raised marble threshold at the entrance to the kitchen and bathroom that separates the ceramic tiles of these two rooms from the carpeting on the other side of the threshold; and the majority of the falls occurred when entering or leaving either or both of these rooms. | Elderly adults with impaired eyesight<br><br>[Susceptibility Factor: Older in age, possible problems with vision or walking] | Marble threshold between kitchen and bathroom and the rooms adjoining them | None | Newly constructed housing structure, and diminished lighting from the late time of day. |

# Essentials for Healthy Homes Practitioners
# Exercise #5 – Identify Moisture Problems

***Instructions**: Break up into small groups according to instructor's directions. Each group gets a set of photos.* Identify moisture problems and their potential source. Avoid writing on the photos. After 15 minutes, the instructor will review the photos and the answers with the class.

| Photo No. | Potential Moisture Problems | Potential Source of Moisture |
|---|---|---|
| #1 House w/Blue Tarp | Blue tarp indicates there was leakage. Primary problem is the lack of flashing by dormer. Plus flat roof indicates problems | Rain |
| #2 Stained drywall in basement | Drywall indicates water damage. Wood may have grey covering possibly indicating mold (or maybe dirt). Note basement floor and AC water drain to sewer. | Drywall may be touching concrete floor and absorbing moisture through it when groundwater high. Also AC drain (white tube may be cause. Sewer could back-up too. Drywall in basement is rarely good. |
| #3 Bathroom with loose tile | Four rows of tiles have separated from wall. New shower water will get behind wall in gap. Major damage below is likely. Note missing tile in lower left corner of photo. | Shower water. Once a problem starts, it is going to get very bad quickly. |
| #4 Dropped plaster from ceiling. | Water caused wood holding plaster to swell and crack plaster. Eventually plaster came down. A bathroom was above the ceiling. | Water from the bathroom – most likely from tub or toilet overflowing. It is helpful to explain how plaster looks to some students. |
| #5 Downspout and Basement | The downspout is disconnected. The water makes the foundation wet. Look through the basement window and see the mold on the inner wall of the basement | Rain water becoming ground water |
| #6 Warped bathroom floor | The linoleum on the bathroom floor has holes. The floor is clearly warped and failing. | Most likely from a toilet. Major damage and tough repair. |
| #7 Flashing on stucco | The flashing around the stucco is poorly done. Plus the stucco is broken off. When it rains, the water will get behind the wood and into the wall. The gobs of caulking is a short term solution and is not enough to stop problems. Water from the sloped board may force water under the shingles. | Rainwater |

| | | |
|---|---|---|
| #8 Brown and clear icicles | Note the absence of a gutter. The clear icicles are from an ice dam. The heat from the attic melts the snow/ice and then it refreezes at night. The process pushes water up under the shingles causing damage.<br><br>The brown icicles are from the cold roof condensing air in the humid air in the attic. The brown comes from the wood of the attic. This is serious damage.<br><br>The humidity came from a crawlspace through an open wall. The wall acted like a chimney for the moisture in the ground to get to the attic | Condensation from moisture in the attic. Moisture got in the attic from the crawlspace. |
| #9 Mold on exterior wall | Mold has formed at the top of an exterior wall. There is an attic above the ceiling.<br><br>The wind blew back the insulation from the edge of the attic. Without insulation, the wall became cold. Moisture inside the home condensed on the ceiling. | Moisture from inside the room |
| #10 Moldy AC coil | A-frame air conditioning coil has mold on it. The coil sits inside the furnace typically above the heat exchanger for the furnace. The coil is cold and removes moisture from the air in the home. The water drains down into a pan that drains in a tube i(see #2 for example).<br><br>When dirt gets on a coil, it is a likely place for mold to go. Dirt typically gets on the coil when the furnace filter is removed. | Moisture in air in home. |

# Essentials for Healthy Homes Practitioners
# Exercise #6 – Identify Pest Problems

***Instructions**: Break up into small groups according to instructor's directions. Each group gets a set of photos.* Identify pest and pesticide problems and their potential source. Avoid writing on the photos. After 15 minutes, the instructor will review the photos and the answers with the class.

| Photo No. | Potential Problems | Potential Source of Problem |
|---|---|---|
| #1 Serving cart | Cart with pesticides (Garden Fogger), spray paint, cooking pans and cutting boards. Pesticide contamination is a possibility. | Pesticide – garden fogger |
| #2 Woodpile | Rat harborages. | Woodpile is a problem. Some housing or health codes call for woodpiles to be at least 18" from the ground. |
| #3 Raccoon nest | Raccoon in attic. Straw in corner keeps raccoon warm and happy. | Hole in attic to let raccoon get in and out. |
| #4 Droppings on Sill | Mouse droppings on window sill. They are pointed and small, so they are probably mice. | Mice like to hide behind curtains. Need to eliminate harborage and drink. Mice need sip of water each day. |
| #5 Bedroom Wall | Cockroach frass on baseboard behind headboard on bed. Frass is urine and feces from cockroaches. | Cockroaches are probably hiding in the wall. They only travel 5 to 10 feet from nest unless disturbed. |
| #6 Rodent hole in wall | Note carpeting. The hole is about 1" wide and ½" high. Probably a mouse based on size and location. There are probably more than one mouse. | Hard to tell. |
| #7 Boric acid on floor | There is a small mouse hole in wall just above baseboard. Note how it is gnawed. The powder is boric acid that someone put down to kill the mouse. | Boric acid is ineffective in thick layers, even for cockroaches. Only a dusting works. Plus boric acid is dangerous to kids. A couple teaspoons of boric acid can kill a toddler. |
| #8 Thermostat | Cockroach free behind thermostat. Frass is debris left by cockroaches. | Cockroaches live in walls. They like heat from appliances. |
| #9 Sticky traps | Cockroaches on sticky traps. Only three of the traps affected. In this case it was kitchen and bathroom. Pretty typical. | Traps are an effective way to monitor for cockroaches not kill them. It is not usual to capture more than 50 on a trap. The traps are $0.05 each. |
| #10 Trash on Porch | Debris on a porch attracts rats, mice and cockroaches. | Cardboard is like an apartment complex for cockroaches. |

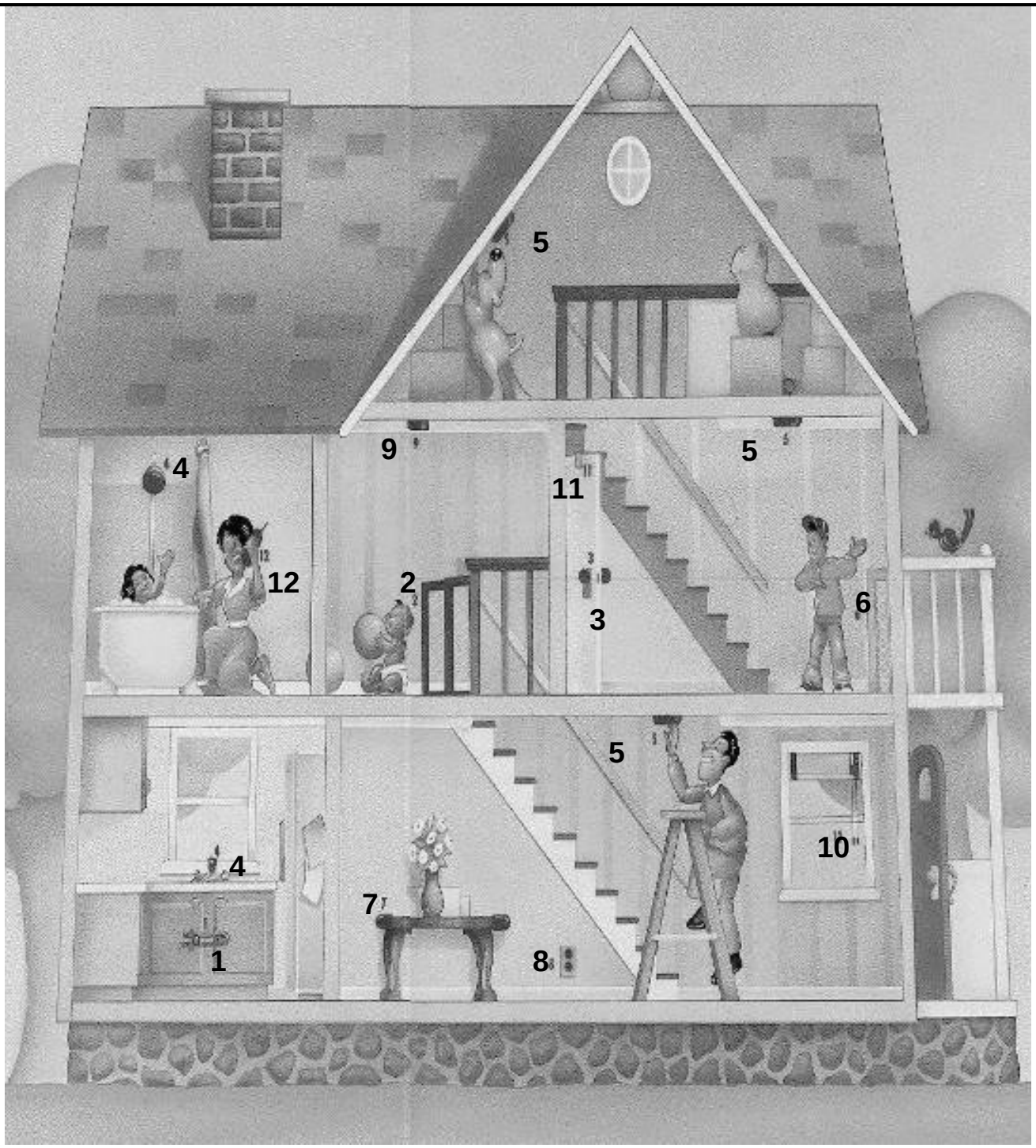
# Essentials for Healthy Homes Practitioners
# Exercise #7 – Identify Ventilation Problems

***Instructions**: Break up into small groups according to instructor's directions. Each group gets a set of photos.* Identify ventilation problems and their potential source. Avoid writing on the photos. After 15 minutes, the instructor will review the photos and the answers with the class.

| Photo No. | Potential Ventilation Problems | Potential Source of Problem |
|---|---|---|
| #1 Stucco room on roof | Smoke from white stack can blow into house. Two vents on either side are low and appear to have cap on them. | Bad design. It was probably an add-on.<br><br>Also note drainage problems |
| #2 Dryer exhaust outside | Dryer exhaust is taped closed. It is hard to see the tape. Gas and moisture would backup into home. Dangerous air plus little drying. | When these exhaust covers are shipped, the flappers are taped closed. People forget to remove the tape. |
| #3 Dryer exhaust inside | Dryer exhaust vents into room. Very dangerous if gas dryer. But even if electric, the moisture and odors can be a major problem. | Someone may be trying to save energy by keeping heat inside home. Bad idea. May be allowed by codes if label on dryer allows it. |
| #4 Flashback on water heater | Flame on water heater flashed back. Instead of combustion gases going up through heater, they go into room. Very dangerous. | Usually when a major exhaust fan sucks air through heater stack and pulls air past flame. |
| #5 Attic furnace | Attic furnaces are common in the South. The insulation on the ductwork is poorly done in the foreground better in the background. | Bad contractor. |
| #6 Space heater | Space heater may be generated moisture, carbon dioxide and carbon monoxide. Note the crack in the sliding glass door in the background. | Poor use of a space heater. Label usually only allows it in well ventilated room. But who uses a space heater with lots of ventilation. |
| #7 Exhaust in attic | Warm, moist air in bathroom is exhausted into attic. In winter, the moisture will condense on insulation ruining it. In summer, the attic will be covered with mold from condensate. Mold grows better in summer. | Bad installation. Vent exhaust outside not into attic. |
| #8 Bathroom filter | It looks like a bathroom exhaust but it is just a filter with a fan that recirculates the air. It is useless. | Fan only removes big particulate. |
| #9 Kitchen fan | Note the lack of exhaust ductwork above fan. Fan recirculates heat, smells and combustion gas (if gas stove). | Someone cut corners on fan. It should vent outside. It helps but not much. |
| #10 Furnace Vent | The air in the large silver duct must make a hard right turn to go outside. The small black duct must make two hard right turns. | The combustion gases are likely to get back into air. This looks like a makeshift design that is dangerous. The open electrical box is also a serious danger. |

# Essentials for Healthy Homes Practitioners
# Exercise #8 – Find the Child Safety Devices or Practices

***Instructions**: Below is a cross-section of a home. By each number is a safety precaution families can use to reduce the chances of injury. For each number, identify the safety device and the injury that it is designed to protect against.*



# Essentials for Healthy Homes Practitioners
# Exercise #8 – Find the Child Safety Devices or Practices

**Questions:**

| Safety Device # | Description of the Safety Device or Practice | Injury that Safety Device or Practice is Designed to Avoid |
|---|---|---|
| **1.** | | |
| **2.** | | |
| **3.** | | |
| **4.** | | |
| **5.** | | |
| **6.** | | |
| **7.** | | |
| **8.** | | |
| **9.** | | |
| **10.** | | |
| **11.** | | |
| **12.** | | |

# Essentials for Healthy Homes Practitioners
# Exercise #8 – Find the Child Safety Devices or Practices

**Answers:**

| Safety Device # | Description of the Child Safety Device or Practice | Injury that Child Safety Device or Practice is Designed to Avoid |
|---|---|---|
| **1.** | **Safety latches and locks for cabinets and drawers in kitchens, bathrooms, and other areas.** | **Poisoning by something in cabinet or drawer.** |
| **2.** | **Safety gates at top of stairs.** | **Child's injury from falling down stairs or entering dangerous areas.** |
| **3.** | **Door knob covers and door locks.** | **Child's injury from entering room with possible dangers.** |
| **4.** | **Use anti-scald devices for faucets and shower heads. Set the water heater temperature to 120ºF.** | **Scalding.** |
| **5.** | **Place smoke detectors on every level of the home and near bedrooms..** | **Injury due to fire or smoke.** |
| **6.** | **Window guards and safety netting on windows, balconies, or decks.** | **Child's injury from falling from window, balcony, or deck.** |
| **7.** | **Corner and edge bumpers on sharp edges of furniture and fireplace.** | **Child's injury from falling on sharp edge.** |
| **8.** | **Outlet covers and outlet plates on electric outlets.** | **Electrocution.** |
| **9.** | **Carbon monoxide (CO) alarm outside bedrooms.** | **Carbon monoxide poisoning.** |
| **10.** | **Cut window blind cords or use safety tassels and inner cord stops.** | **Child's strangulation.** |
| **11.** | **Door stops and door holders.** | **Child's injury to fingers and hands.** |
| **12.** | **Cordless phones make it easier to continuously watch young children when in dangerous areas.** | **Child's injury due to drowning or other incident when not supervised.** |

# Essentials for Healthy Homes Practitioners
# Exercise #9 – Practice Visual Assessment & Identify Potential Violations

***Instructions**: The purpose of this exercise is to familiarize you with a common visual assessment tool and help you understand its strengths and weaknesses so you may better evaluate the tools that will fit your program.*

*Step 1: Take the packet from the References section of the binder labeled "CEHRC Visual Survey" instructions. Look through the instructions. The trainer will review key elements of the instructions and then show you a series of photos. Based on the photos complete the visual assessment form. You do not need to complete the floor plan or site plan.*

*Step 2: Using the International Property Maintenance Code, identify which sections of the model code that were violated in the home. Indicate which problems are clearly violations and which ones require more investigation. If something requires more investigation, then identify what investigation is needed. If a local housing code is available, compare the completed Visual Survey with the local housing code.*

*Step 3 Identify three strengths and three weaknesses of the CEHRC Visual Survey.*

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**About the Packet:**
Healthy homes programs have developed many tools to conduct a visual assessment for healthy homes issues. Most of the healthy homes visual assessments are tailored to the particular needs of the program. Many community-based organizations used the CEHRC Visual Survey developed by the Alliance for Healthy Homes. CEHRC is a program of the Alliance. It stands for the Community Environmental Health Resource Center. The materials are available at www.cehrc.org or follow the link from www.afhh.org.

The Visual Survey is the first step in the CEHRC hazard assessment process. The Visual Survey gives hazard investigators an initial opportunity to talk to residents about things they have noticed about their home. Looking around the outside and inside of the home, Hazard investigators can begin to understand the general condition of the home, and target sampling as appropriate. Some hazards will only be assessed through the Visual Survey as visual evidence of a hazard might be sufficient to trigger control measures or other action. Others require more sampling to quantify the particular hazard.

The CEHRC's Visual Survey consists of:
- Instructions;
- Visual Survey Report;
- Floor Plan; and
- Site Plan.

The materials are available in Spanish and English.

For this exercise, we will use the Visual Survey Report.

---

# Visual Survey Report

**Resident:** _____

**Alternate Contact:** _____

**Address:** _____

**Unit #** **Unique ID** _____

**Resident Phone:** _____

**Visual Conducted by:**

_____

**Date:**

_____

Make a checkmark (✓) if the problem appears in the room or area. For deteriorated paint and water damage, indicate the extent of the problem (see instructions) Use the extra rows to identify any other hazards you notice. Put an asterisk (∗) above any room(s) where a child sleeps or plays. Circle (◯) where you photograph a problem.

**ROOM OR AREA**

| **PROBLEM** | | Exterior | Porch | Entryway | Living Room | Dining Room | Kitchen | Bedroom 1 | Bedroom 2 | Bedroom 3 | Bathroom 1 | Bathroom 2 | Basement | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Deteriorated paint** | Walls | | | | | | | | | | | | | | |
| | Windows, door, or trim | | | | | | | | | | | | | | |
| | Paint chips on floor | | | | | | | | | | | | | | |
| **Soil with no grass or mulch** | | | | | | | | | | | | | | | |
| **Cockroaches** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| **Holes in wall** | | | | | | | | | | | | | | | |
| **Mold/ Mildew** | Obvious source of moisture | | | | | | | | | | | | | | |
| | No obvious source of moisture | | | | | | | | | | | | | | |
| **Water Damage:** walls wet/newly stained | | | | | | | | | | | | | | | |
| **Strong musty smell** | | | | | | | | | | | | | | | |
| **Natural gas/sewer gas smell** | | | | | | | | | | | | | | | |
| **Unvented gas oven/dryer/heater** | | | | | | | | | | | | | | | |
| **Worn-out carpeting** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |

**If renting, received lead hazard disclosure information from landlord?** **Yes** **No**

**Follow-up visit scheduled for:** **Date** _____ **Time:** _____

## Step 2: Identify the Potential Code Violations in Photos

| Section of Int'l Property Maintenance Code | Definite Violation | Potential Violation | Responsible Person | Information Needed |
|---|---|---|---|---|
| 302.1 Sanitation | | | | |
| 302.2 Grading and Drainage | | | | |
| 302.5 Rodent Harborage | | | | |
| 302.6 Exhaust Vents | | | | |
| 304.2 Protective Treatment | | | | |
| 304.5 Foundation Walls | | | | |
| 304.6 Exterior Walls | | | | |
| 304.7 Roofs and Drainage | | | | |
| 304.14 Insect Screens | | | | |
| 304.17 Guards for Basement Windows | | | | |
| 305.1 General | | | | |
| 305.3 Interior Surfaces | | | | |
| 307.1 Accumulation of Rubbish or Garbage | | | | |
| 308.1 Infestation | | | | |
| 308.2 Owner | | | | |
| 308.3 Single Occupant | | | | |
| 308.4 Multiple Occupancy | | | | |
| 308.5 Occupant | | | | |
| 403.1 Habitable Spaces | | | | |
| 403.2 Bathrooms and Toilet Rooms | | | | |
| 403.4 Process Ventilation | | | | |
| 403.5 Clothes Dryer Exhaust | | | | |
| 503.4 Floor Surface | | | | |
| 505.4 Water Heating Facilities | | | | |
| 602.2 Residential Occupancies | | | | |
| 602.3 Heat Supply | | | | |
| 603.2 Removal of Combustion Products | | | | |
| 603.5 Combustion Air | | | | |
| 603.6 Energy Conservation Devices | | | | |
| 607.1 General | | | | |

## Step 3: Evaluate CEHRC Visual Survey

Three Strengths:

1.

2.

3.

Three Weaknesses:

1.

2.

3.

# Exercise #9
# CEHRC Visual Assessment

# Visual Survey Report

**Resident:**

**Alternate Contact:**

**Address:**

**Unit #** **Unique ID**

**Resident Phone:**

**Visual Conducted by:**

**Date:**

Make a checkmark (✓) if the problem appears in the room or area. For deteriorated paint and water damage, indicate the extent of the problem (see instructions) Use the extra rows to identify any other hazards you notice. Put an asterisk (*) above any room(s) where a child sleeps or plays. Circle (◯) where you photograph a problem.

**ROOM OR AREA**

| **PROBLEM** | | Exterior | Porch | Entryway | Living Room | Dining Room | Kitchen | Bedroom 1 | Bedroom 2 | Bedroom 3 | Bathroom 1 | Bathroom 2 | Basement | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Deteriorated paint** | Walls | | | | | | | | | | | | | | |
| | Windows, door, or trim | | | | | | | | | | | | | | |
| | Paint chips on floor | | | | | | | | | | | | | | |
| **Soil with no grass or mulch** | | | | | | | | | | | | | | | |
| **Cockroaches** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| **Holes in wall** | | | | | | | | | | | | | | | |
| **Mold/ Mildew** | Obvious source of moisture | | | | | | | | | | | | | | |
| | No obvious source of moisture | | | | | | | | | | | | | | |
| **Water Damage:** walls wet/newly stained | | | | | | | | | | | | | | | |
| **Strong musty smell** | | | | | | | | | | | | | | | |
| **Natural gas/sewer gas smell** | | | | | | | | | | | | | | | |
| **Unvented gas oven/dryer/heater** | | | | | | | | | | | | | | | |
| **Worn-out carpeting** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |

**If renting, received lead hazard disclosure information from landlord?** **Yes** **No**

**Follow-up visit scheduled for:** **Date** _____ **Time:** _____

# Exterior

# Exterior

# Entryway

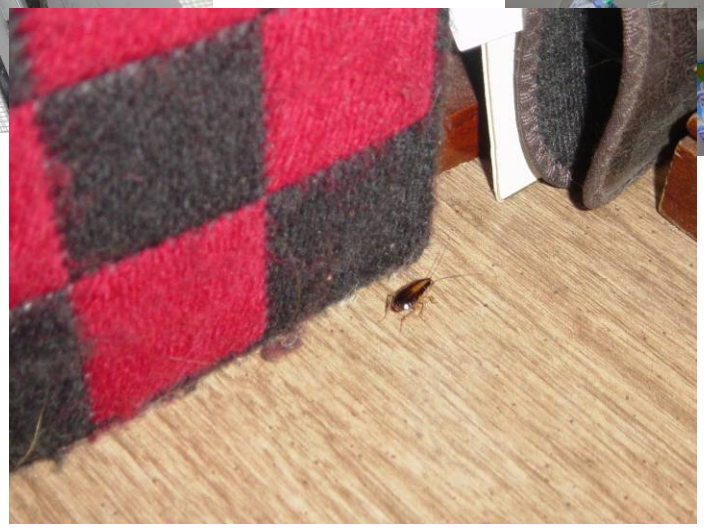
# Living Room

# Dining Room

# Kitchen

# Bedroom 1

# Bedroom 2

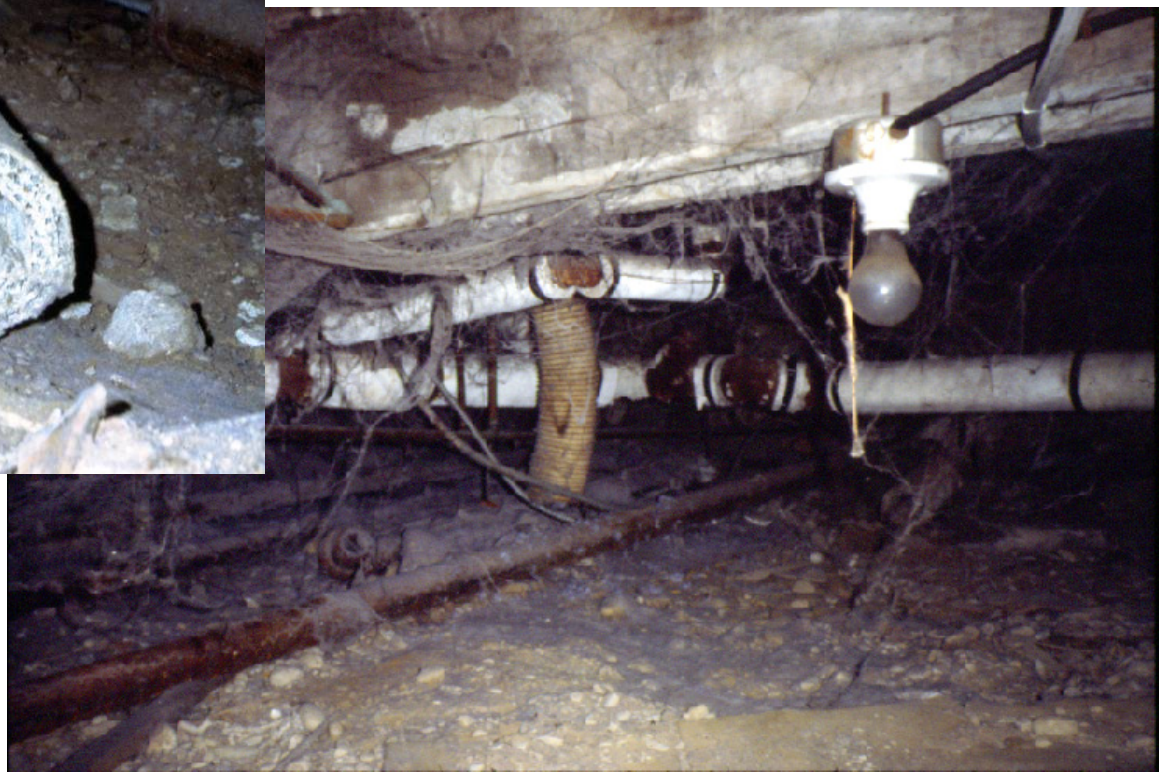


# Bathroom

# Basement

# Laundry Room

# Crawlspace



# Completed Visual Survey Report

www.cehrc.org

Make a checkmark (✓) if the problem appears in the room or area. For deteriorated paint and water damage, indicate the extent of the problem (see instructions) Use the extra rows to identify any other hazards you notice. Put an asterisk (*) above any room(s) where a child sleeps or plays. Circle (◯) where you photograph a problem.

**ROOM OR AREA**

| PROBLEM | | Exterior | ~~Porch~~ | Entryway | Living Room* | Dining Room | Kitchen* | Bedroom 1 | Bedroom 2* | ~~Bedroom 3~~ | Bathroom 1 | ~~Bathroom 2~~ | Basement | Laundry Room | Crawlspace |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Deteriorated paint | Walls | (H) | | | | | | | | | | | (E) | | |
| | Windows, door, or trim | (M) | | (L) | | | | | | | | | (M) | | |
| | Paint chips on floor | (✓) | | | | | | | | | | | | | |
| Soil with no grass or mulch | | (✓) | | | | | | | | | | | | | |
| Cockroaches | | | | | | | (✓) | | (✓) | | | | | | |
| Rodents | | | | | | | | (✓) | | | | | | | |
| Holes in wall | | | | | | | | | (✓) | | | | | | |
| Mold/ Mildew | Obvious source of moisture | | | | | | (✓) | | | | (✓) | | (✓) | (✓) | |
| | No obvious source of moisture | | | (✓) | | | | (✓) | (✓) | | | | (✓) | | |
| Water Damage: walls wet/newly stained | | (H) | | (H) | | | | | | | (L) | | | (M) | |
| Strong musty smell | | | | ✓ | | | | | | | | | | | ✓ |
| Natural gas/sewer gas smell | | | | | | | | | | | | | ✓ | | |
| Unvented gas oven/dryer/heater | | | | | | (✓) | | | | | | | | (✓) | |
| Worn-out carpeting | | | | | | | | | | | | | | | |
| Other: Trash at Corner | | (✓) | | | | | | | | | | | | | |
| Other: Asbestos Insulation? | | | | | | | | | | | | | | | (✓) |
| Other: | | | | | | | | | | | | | | | |
| Other: | | | | | | | | | | | | | | | |
| Other: | | | | | | | | | | | | | | | |

# Visual Survey Report

**Resident:** _____

**Alternate Contact:** _____

**Address:** _____

**Unit #** **Unique ID** _____

**Resident Phone:** _____

**Visual Conducted by:**

_____

**Date:**

_____

Make a checkmark (✓) if the problem appears in the room or area. For deteriorated paint and water damage, indicate the extent of the problem (see instructions) Use the extra rows to identify any other hazards you notice. Put an asterisk (∗) above any room(s) where a child sleeps or plays. Circle (◯) where you photograph a problem.

**ROOM OR AREA**

| **PROBLEM** | | Exterior | Porch | Entryway | Living Room | Dining Room | Kitchen | Bedroom 1 | Bedroom 2 | Bedroom 3 | Bathroom 1 | Bathroom 2 | Basement | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Deteriorated paint** | Walls | | | | | | | | | | | | | | |
| | Windows, door, or trim | | | | | | | | | | | | | | |
| | Paint chips on floor | | | | | | | | | | | | | | |
| **Soil with no grass or mulch** | | | | | | | | | | | | | | | |
| **Cockroaches** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| **Holes in wall** | | | | | | | | | | | | | | | |
| **Mold/ Mildew** | Obvious source of moisture | | | | | | | | | | | | | | |
| | No obvious source of moisture | | | | | | | | | | | | | | |
| **Water Damage:** walls wet/newly stained | | | | | | | | | | | | | | | |
| **Strong musty smell** | | | | | | | | | | | | | | | |
| **Natural gas/sewer gas smell** | | | | | | | | | | | | | | | |
| **Unvented gas oven/dryer/heater** | | | | | | | | | | | | | | | |
| **Worn-out carpeting** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |
| **Other:** | | | | | | | | | | | | | | | |

**If renting, received lead hazard disclosure information from landlord?** **Yes** **No**

**Follow-up visit scheduled for:** **Date** _____ **Time:** _____

National Center for Healthy Housing

# Exercise 8: Personalized Action Plan Worksheet

In each section there is a lot of material presented. In order to get you thinking about actions that you can take in your practice, please answer the following questions. Be as specific as you can.

It is important that you answer all the questions, as we will be using this form for an activity during the afternoon on day two of the training.

## Keep It Dry

1. In your daily practice, what three actions can you do to help prevent excess moisture in the homes you visit?

    a. _____

    b. _____

    c. _____

2. What three actions to help prevent excess moisture in the homes do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

## Keep It Clean

3. In your daily practice, what three actions can you do to help make the homes you visit more cleanable?

    a. _____

    b. _____

    c. _____

4. What three actions that make a home more cleanable do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

**Keep It Pest-Free**

5. In your daily practice, what three actions can you do to help keep the homes you visit pest-free?

    a. _____

    b. _____

    c. _____

6. What three actions to help keep homes pest-free do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

**Keep It Well-ventilated**

7. In your daily practice, what three actions can you do to help keep the homes you visit well ventilated?

    a. _____

    b. _____

    c. _____

8. What three actions that keep homes well ventilated do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

**Keep It Safe**

9. In your daily practice, what three actions can you do to help keep the homes you visit safe?

    a. _____

    b. _____

    c. _____

10. What three actions to help keep homes safe do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

**Avoid Contaminants**

11. In your daily practice, what three actions can you do to help people avoid contaminants in their home?

    a. _____

    b. _____

    c. _____

12. What three actions to help people avoid contaminants in their home do you think would be difficult to incorporate into your daily practice?

    a. _____

    b. _____

    c. _____

National Center for Healthy Housing

## Brain Storming Exercise

Working in groups of 5-6 individuals, discuss the following questions:

1. As a group, what do you think are the **top 3** things that a health person can do? What are the **top 3** things that a housing person can do? Is there overlap between the two groups?

   Health:

   a. _____

   b. _____

   c. _____

   Housing:

   a. _____

   b. _____

   c. _____

2. As a group, identify the **top 3** things that would be difficult for a health person to implement? What are the **top 3** things that would be difficult for a housing person to implement? Is there any overlap between the two groups?

   Health:

   a. _____

   b. _____

   c. _____

   Housing:

   a. _____

   b. _____

   c. _____

3. What are potential barriers that would affect implementing some of these actions?

_____

_____

_____

4. What are some possible strategies for overcoming these barriers? (Be creative)

_____

_____

_____

National Center for Healthy Housing

**Personalized Action Plan**
**Instructors Notes**

**Purpose:** The purpose of this exercise is to get students thinking about specific actions that they can take in their daily practice to help address healthy housing issues.
**Time:** 3-5 minutes at the end of each section (identified by a yellow slide). 30 minutes at the end of the training.

**Instructions:**
At the end of each section in Assessment and Treatment, ask the students to identify three actions based on what was just covered that they can do in their daily practice. Encourage them to be as specific as possible and provide them with an example.

> *Example:* A public health nurse may feel that he/she can add a question about possible pest problems to his/her checklist when conducting their initial assessment and refer the family to an appropriate person in their area if a problem exists. However, he/she may feel that it would be too difficult to assist the family in identifying and blocking the point of entry for the pests.

At the end of each section also ask for one housing person and one health person to volunteer one item that they can do.

**Brainstorming Exercise:**
Break the class into small groups of 5-6 individuals (combining health and housing). Ask them to take 15 minutes and discuss the following questions in their group:

1. As a group, what do you think are the **top 3** things that a health person can do? What are the **top 3** that a housing person can do? Is there any overlap between the two groups?

2. As a group, identify the **top 3** things that would be difficult for a health person to implement? What are the **top 3 t**hings that would be difficult for a housing person to implement? Is there any overlap between the two groups?

3. What are potential barriers that would affect implementing some of these actions?

4. What are some possible strategies for overcoming these barriers? (Be creative)

Reconvene as a large group. Ask the groups to comment on their discussions.