

Hands-on Exercises for Model Renovator Initial Course

Hands-on Exercises

The following exercises can be used in place of the hands-on exercises or as supplemental activities. Exercise worksheets and answers are provided.

- Skill Set #1 Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure
- Skill Set #2: Setting Up Barriers, Signs and Flapped Entry Doors
- Skill Set #3: Cover or Remove Furniture
- Skill Set #4: Establish Interior Containment
- Skill Set #5: Establish Exterior Containment
- Skill Set #6: Personal Protective Equipment
- Skill Set #7: Interior Final Cleaning
- Skill Set #8: Exterior Final Cleaning
- Skill Set #9: Bagging Waste
- Skill Set #10: Visual Inspection
- Skill Set #11: Cleaning Verification Procedure

Recommended Supplies for Hands-on Activities

Test Kit Supply List

- Disposable plastic drop cloth 2 ft by 2 ft
- Disposable shoe covers
- Disposable wet cleaning wipes
- Disposable, non-latex gloves
- EPA-recognized test kit(s) w/ manufacturer's instructions
- Heavy-duty garbage bags
- HEPA vacuum with attachments
- Kit-specific supplies as required in the manufacturer's instructions
- Manufacturer-provided test verification card with lead-based paint layer.
- Painted wood surface with no lead-based paint layer
- Participant Progress Log
- Pen or pencil
- Tape (duct, painters, and masking)
- Test Kit Documentation Form
- Digital camera (Optional)
- Numbered index cards (Optional)

Paint Chip Collection Supply List

- Resealable rigid walled container for use as paint collection containers, e.g. screw-top plastic centrifuge tube. Note: Resealable plastic bags are not suitable for holding and transporting dried paint samples due to potential losses of paint chips during laboratory handling.
- Steel or plastic measuring ruler-metric only with millimeter and centimeter divisions
- Cloths for cleaning purposes
- White paper for making paper funnels (paint chip collection trays)
- Masking and duct tape
- Indelible (permanent) marking pen

- Personal safety gear
- Cutting and scraping tools:
 - Sharp-edged razor knife
 - Single-edged safety razor blades
 - Pocket knife with locking blade
 - Rigid blade paint scraper with extra blades
 - Flexible putty knife
 - Chisels
 - Hammer
- Flashlight
- Trash bags
- Plastic gloves, powder-less
- Painted wood surface with no lead-based paint layer
- Paint Chip Sample Collection Form

Setup Supply List

- Barrier tape
- Broom handle, or dowels, or 1" x 1" x 30" wood or metal stock
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Disposable tack pad
- Doorway to use for work area entry setup
- Fencing stakes
- Heavy-duty plastic sheeting
- Magnetic covers
- Orange cones
- Rope and/or barrier tape (bright color preferable)
- Stapler and Staples
- Tape (duct, painters, and masking) Tape measure
- Warning signs
- Pre-engineered containment systems (Optional for Skill Set #2)

Personal Protective Equipment (PPE) Supply List

- Disposable coveralls
- Disposable non-latex gloves
- Disposable foot covers
- Eye protection
- Leather or canvas work gloves
- N-100 respirators
- Disposable waste bags
- Duct tape
- Hand washing facilities and hand soap

Cleanup Supply List

- Baby powder or corn starch
- Cleaning verification card, one per student to take away and retain
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Disposable foot covers
- Disposable non-latex gloves
- Disposable wet cleaning wipes
- Electrostatically charged, white, disposable cleaning cloths designed for cleaning hard surfaces
- Flashlight
- Garden sprayer
- Heavy-duty plastic bags
- Heavy-duty plastic sheeting
- HEPA vacuum with attachments and a powered beater bar
- Long-handled mop designed for wet cleaning wipes
- Tape (duct, painters, and masking)
- Tape measure
- Two-sided mop bucket with wringer (or equivalent), disposable mop heads, long handled mop to which disposable cleaning cloths can be attached; or, a wet mopping system.
- Watch or clock

Participant Progress Log: Hands-on Activities

Name of Trainee	Module 3 (15 min.)							Module 4 (45 min.)		Module 5 (10 min.)	Module 6 (50 min.)			

Date of Training: _____ Certified Renovator Name: _____

Certified Renovator Hands-On Skills Assessment

Date: _____ Address: _____ City & State: _____

Student Name: _____ Student Signature: _____

Skill Set	Skill Description	Student has demonstrated proficiency at the following skills consistent with the requirements of the EPA RRP Rule	Trainer's Initials
#1	Using EPA-Recognized Test Kits and Paint Chip Sample Collection Procedure	Using test kits and collecting paint chip samples for laboratory lead analysis to properly test for lead-based paint and document results.	
#2	Setting Up Barriers, Signs and Flapped Entry Doors	Placing critical barriers and posting signs to isolate work area from access by unauthorized individuals.	
#3	Cover or Remove Furniture	Identifying the proper steps in determining when and how to cover or remove furniture and belongings from the work area.	
#4	Establish Interior Containment	Using the proper steps to cover floors and close and seal doors and windows in the work area.	
#5	Establish Exterior Containment	Taking proper steps to restrict entry to the exterior work area and to protect the ground under and around the work area from becoming contaminated.	
#6	Personal Protective Equipment	Using dust reduction techniques while performing common renovation, repair, and painting work activities.	
#7	Interior Final Cleaning	Cleaning the interior work area after the completion of work and prior to the visual inspection and cleaning verification procedure or dust clearance examination.	
#8	Exterior Final Cleaning	Cleaning the exterior work area after the completion of the work and prior to visual inspection and (if required) cleaning verification or dust clearance examination.	
#9	Bagging Waste	Taking steps to bag and gooseneck waste, wrap large pieces of debris, and to carry them out of the work area.	
#10	Visual Inspection	Conducting a visual inspection of the work area prior to the cleaning verification procedure.	
#11	Cleaning Verification Procedure	Conducting cleaning verification procedure.	

I am the trainer for the Certified Renovator course offered on the date and location described above. I verify that the student has demonstrated the skills as described above.

Trainer Name: _____ Trainer Signature: _____

Trainer Phone: _____ Organization: _____ Date: _____

Skill Set #1: Using EPA-Recognized Test Kits and Collecting Paint Chip Samples for Laboratory Lead Analysis

Time: 25 minutes

Purpose: The purpose of this hands-on exercise is to teach students how to correctly use EPA-recognized test kits to determine if lead-based paint is present on components and surfaces affected by renovation work. In addition, students will learn an alternative method for determining the presence of lead-based paint by collecting paint chip samples that are submitted to a NLLAP-recognized laboratory for analysis.

- *Note to Instructor: Read the purpose of this activity to students and remind them to document all areas where the paint color or substrate reactions may cause an incorrect result. These surfaces should not be tested with a test kit, but should either be tested by certified inspectors or risk assessors; or must be assumed to contain lead-based paint.*

Demonstration: The course instructor must show and explain all of the steps involved in the use of EPA-recognized test kits as well as the collection of paint chip samples for lead analysis. The demonstration should not take longer than 5 minutes for each method including the time needed to hand out materials.

Evaluating the Students: Allow students to practice the required steps on the following pages. Watch each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. This should take no longer than 10 minutes. Students must complete all required steps to be “Proficient”. Evaluate the work of each student and once the student can use a test kit and sample paint chips correctly, the instructor should write the word “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #1 and that particular student’s name.

Materials Needed: It is strongly suggested that instructors prepare plastic bags containing all materials needed for the hands-on exercises, prior to the exercise, in order to meet the time limits allocated to Skill Set #1.

Test Kit Supply List

- EPA-recognized test kit(s) w/ manufacturer’s instructions
- Kit-specific supplies as required in the manufacturer’s instructions
- Disposable plastic drop cloth 2 ft by 2 ft
- Tape (duct, painters, and masking)
- Disposable, non-latex gloves
- Disposable shoe covers
- Manufacturer-provided test verification card with lead-based paint layer.
- Disposable wet cleaning wipes
- Heavy-duty garbage bags
- Painted wood surface with no lead-based paint layer
- Test Kit Documentation Form
- Participant Progress Log
- Pen or pencil
- Digital camera (Optional)
- Numbered index cards (Optional)
- HEPA vacuum with attachments

Paint Chip Collection Supply List

- Resealable rigid walled container for use as paint collection containers, e.g. screw-top plastic centrifuge tube.
- Steel or plastic measuring ruler-metric only with millimeter and centimeter divisions
- Cloths for cleaning purposes
- White paper for making paper funnels (paint chip collection trays)
- Indelible (permanent) marking pen
- Personal safety gear
- Masking and duct tape
- Cutting and scraping tools:
 - Sharp-edged razor knife
 - Single-edged safety razor blades
 - Pocket knife with locking blade
 - Rigid blade paint scrapper with extra blades
 - Flexible putty knife
 - Chisels
 - Hammer
- Flashlight
- Plastic gloves, powder-less
- Trash bags
- Painted wood surface with no lead-based paint layer
- Paint Chip Sample Collection Form

Using EPA-Recognized Test Kits Skills Practice

Test Kit Procedure

Step 1: Read the manufacturer's instructions

Step 2: Write required information and observations about the test location on the Test Kit Documentation Form.*

Step 3: (Optional) Secure a small disposable plastic drop cloth (2 ft x 2 ft) on the floor beneath the test location with masking tape.

Step 4: Put on disposable non-latex gloves and shoe covers.

Step 5: Follow the manufacturer's instructions for use of the test kit to conduct the test.* If possible, perform one test where a positive test result can be observed; and conduct one test of a painted wood surface with no lead-based paint layer to observe a negative test result.*

Step 6: Use one wet cleaning wipe to remove residual chemicals left on the surface tested. Use a second cleaning wipe to remove any visible debris or dust on the floor beneath the sample collection area and place the used cleaning wipe in the trash bag.*

Step 7: Check documentation for completeness and note the result of the testing on the Test Kit Documentation Form.*

Step 8: (Optional) Number the test location in sequence on the Test Kit Documentation Form, then select the corresponding numbered index card and tape it next to the test location with masking tape and take a picture of the numbered test location to photo-document conduct and possibly the result of the test.

*Indicates required skills that must be accomplished for a "Proficient" rating.

Interpreting the Results of Test Kit Sampling: The manufacturer's instructions will indicate how to determine the absence of lead in paint. Once the test is conducted, note the result and refer to the manufacturer's guidelines for interpreting the result. All painted surfaces where lead is not determined to be absent must be treated as lead-based paint until additional testing performed by a certified lead inspector or risk assessor proves it is not.

Documenting Test Kit Results: A report of the findings from use of the test kit must be submitted to the person contracting the work within 30 days following the completion of the renovation work. The completed Test Kit Documentation Form should be kept by the certified firm for 3 years after the work is completed.

Owner Information

Name of Owner/Occupant: _____

Address: _____

City: _____ State: _____ Zip code: _____ Contact #: (_____) _____ - _____

Email: _____

Renovation Information

Fill out all of the following information that is available about the renovation site, firm, and certified renovator.

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

Certified Firm Name: _____

Address: _____

City: _____ State: _____ Zip code: _____ Contact #: (_____) _____ - _____

Email: _____

Certified Renovator Name: _____ Date Certified: ____/____/____

Test Kit Information

Use the following blanks to identify the test kit or test kits used in testing components.

Test Kit #1

Manufacturer: _____ Manufacture Date: ____/____/____

Model: _____ Serial #: _____

Expiration Date: ____/____/____

Test Kit #2

Manufacturer: _____ Manufacture Date: ____/____/____

Model: _____ Serial #: _____

Expiration Date: ____/____/____

Test Kit #3

Manufacturer: _____ Manufacture Date: ____/____/____

Model: _____ Serial #: _____

Expiration Date: ____/____/____

Renovation Address: _____ Unit#: _____
 City: _____ State: _____ Zip code: _____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Test Location # _____ Test Kit Used (Circle one): Test Kit #1 Test Kit #2 Test Kit #3
 Description of component tested, including location: _____

 Result: Is lead present? (Circle only one) YES NO Presumed
 Date of Test: ____/____/____

Collecting Paint Chip Samples Skills Practice

Paint Chip Collection Procedure

Step 1: Read the Paint Chip Sample Collection Guide (Appendix 9)

Step 2: Write required information and observations about the test location on the Paint Chip Sample Collection Form.

Step 3: Mark the collection area either using a template or freehand.

Step 4: Set up a paint collection tray using a sheet of letter-sized white paper for making a paper funnel for paint sample collection.

Step 5: Remove the paint using a cold scraping method (see step 5-1 below). Wear plastic gloves as appropriate.

Step 5-1: Cold Scraping Method. Using the appropriate cutting tool, begin removing the paint from the substrate. Carefully scrape away all paint within the marked area down to the substrate and ensure that all the scraped paint lands in or is pushed into the paint collection tray

Step 6: Clean all cutting tools used during paint sample collection.

Step 7: Check documentation for completeness on the Paint Chip Sample Collection Form.

Step 8: Transfer the collected sample to the paint collection container.

Step 9: Label the container with sufficient information to uniquely identify the sample. Be sure to record the dimensions of the sample surface, including the measurement units.

Step 10: Submit the paint chip sample for lead analysis to a NLLAP-recognized laboratory. Record all results reported from the laboratory.

Documenting Paint Chip Sample Lead Analysis Results: A report of the findings from the submitted paint chip samples to a NLLAP-recognized entity must be given to the person contracting the work within 30 days following the completion of the renovation work. The certified firm should keep the completed Paint Chip Sample Collection Form for 3 years after the work is completed.

Client/Project Information

Name of Owner/Occupant: _____

Address: _____

City: _____ State: _____ Zip code: _____ Contact #: (_____) _____ - _____

Email: _____

Renovation Information

Fill out all of the following information that is available about the renovation site, firm, and certified renovator.

Renovation Address: _____ Unit#: _____

City: _____ State: _____ Zip code: _____

Certified Firm Name: _____

Address: _____

City: _____ State: _____ Zip code: _____ Contact #: (_____) _____ - _____

Email: _____

Certified Renovator Name: _____ Date Certified: ____/____/____

Paint Chip Sample Information

For each sample collected, fill out all of the following information

Sample Identifier: _____

Sample Collector Name: _____

Sampling Location: _____

Sampling site description: _____ Date of Collection: ____/____/____

Sample Dimensions (cm): _____ Calculate Sample Area (cm²): _____

NLLAP-recognized entity and location: _____

Submission date: ____/____/____ Results: _____ Result Date: ____/____/____

Paint Chip Sample Collection Form

Renovation Address: _____ Unit#: _____
City: _____ State: _____ Zip code: _____

For each sample collected, fill out all of the following information

Sample Identifier: _____
Sample Collector Name: _____
Sampling Location: _____
Sampling site description: _____ Date of Collection: ____/____/____
Sample Dimensions (cm): _____ Calculate Sample Area (cm²): _____
NLLAP-recognized entity and location: _____
Submission date: ____/____/____ Results: _____ Result Date: ____/____/____

For each sample collected, fill out all of the following information

Sample Identifier: _____
Sample Collector Name: _____
Sampling Location: _____
Sampling site description: _____ Date of Collection: ____/____/____
Sample Dimensions (cm): _____ Calculate Sample Area (cm²): _____
NLLAP-recognized entity and location: _____
Submission date: ____/____/____ Results: _____ Result Date: ____/____/____

Skill Set #2: Setting Up Barriers, Signs and Flapped Entry Doors

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps in determining where to place critical barriers, and to give them practice in erecting barriers and posting signs to isolate the work area from access by unauthorized personnel.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished.*

Demonstration: The course instructor must show and explain all of the steps involved in establishing a critical barrier and in placement of signage. Critical barriers are plastic sheeting barriers secured over openings, doors, and windows that must remain in place until cleaning verification or clearance below the dust-lead action levels is achieved in order to keep dust inside of the work area. While they are not always required, they can assist with controlling the spread of dust to other areas of the home. Use students to assist in the erection of the demonstration critical barriers. Note: In the interest of time, use precut barriers for installation in the doorway. Velcro attached barriers may be used for demonstration and practice. Velcro sign attachments may also be used.

Evaluating the Students: The instructor should allow students to practice the steps on the following page while watching each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be "Proficient". Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as "Proficient" in the field on the Participant Progress Log that corresponds to Skill Set #2 and that particular student's name.

Materials Needed: It is strongly suggested that instructors prepare plastic bags containing all materials needed for the hands-on exercises, prior to the exercise, in order to meet the time limits allocated to Skill Set #2.

- Barrier tape
- Warning signs
- Doorway to use for work area entry setup
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Heavy-duty plastic sheeting
- Tape (duct, painters, and masking)
- Stapler and staples
- Broom handle, or dowels, or 1" x 1" x 30" wood or metal stock
- Optional: Pre-engineered containment systems may also be used for this exercise.

Setting Up Barriers, Signs and Flapped Entry Doors Skills Practice

Step 1: Ask occupants to leave and remain out of the room where work will be done.

Step 2: Have them stay out until the cleaning verification procedure is complete or until clearance below the dust-lead action levels is passed. Install barrier tape to establish a controlled perimeter.

Step 3: Post a “Do Not Enter” sign at the doorway to the work area.* Also post a sign that states that no eating, drinking, or smoking is allowed the doorway to the work area.*

Step 4: Cover the work area entry doorway with 2 layers of plastic sheeting, by doing the following:*

Step 5: Cut first plastic sheeting layer slightly wider and longer than (about 3 inches longer) than the door frame.*

Step 6: Make a small “S” fold at the top of plastic sheeting and tape so that all layers are secured to the top of the door frame.* Make a similar “S” fold at the bottom of the plastic sheeting and tape so that all layers are secured to the floor.* This will ensure that the plastic sheeting is not tight and allows it to give instead of tearing when people move through it. Secure both sides of the plastic sheeting to the door frame with tape.

Step 7: Staple top corners to the door frame for reinforcement.*

Step 8: For exiting and entering the room, use duct tape to create a vertical line about the size of a man from floor to header in the middle of the plastic sheeting on both sides.* Cut a long vertical slit through the duct tape; leave about 6 inches at the top and the bottom uncut.* Reinforce the top and bottom of the slit with horizontal duct tape to prevent the plastic sheeting from tearing.*

Step 9: Tape a second layer of plastic sheeting to the top of the door frame.* This layer is cut slightly shorter than the door frame so that it will hang down flat against the first sheet of plastic sheeting.

Step 10: Weight the bottom of the second layer of plastic sheeting by taping a dowel rod to the bottom of the second layer of plastic sheeting with duct tape. This creates a self-sealing flap over the doorway and seals the opening that was cut in the plastic sheeting during step 8.

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #3: Cover or Remove Furniture

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps for determining when and how to cover or remove furniture and belongings from a work area.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished. Also remind them that the best solution to the problem of moving furniture and belongings is to notify residents to remove them prior to the work. Remind them also that it is better to remove personal property than to cover it. Provide students with the opportunity to observe/practice both methods (covering and removal).*

Demonstration: The course instructor should explain all of the steps involved in covering and/or removing furniture and belongings from the work area. Use students to demonstrate moving chairs out of the work area. Then cover a table with plastic sheeting and secure the plastic sheeting with tape so that no part of the table is exposed. Discuss placing other items under the table for maximized efficiency in preparing the work area. The demonstration should not take longer than 3 minutes including the time needed to hand out materials.

Evaluating the Students: The instructor should allow students to practice the steps on the following page while watching each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. *Option: Have students say the steps as they work.* Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #3 and that particular student’s name.

Materials Needed:

- Heavy-duty plastic sheeting
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Tape (duct, painters, and masking)

Cover or Remove Furniture Skills Practice

Step 1: Move all the furniture out of the work area.

- **Note:** If the training area is small, designate an area against one wall that is “out of the work area”, where furniture removed from the work area can be placed. In a classroom setting, move the chairs and most of the tables to the designated area, and cover the tables.

Step 2: Have the students team into groups of 2 to 6 per group. Cover several of the tables where students were sitting. This is done as follows:

Step 3: Cut a piece of plastic sheeting large enough to cover the table and to overlap the floor by 3-6 inches.*

Step 4: Secure the plastic sheeting to the table and/or the floor with tape.*

Step 5: If the table will not need to be moved during the work, the plastic sheeting can be secured to the floor using duct tape or masking tape as is appropriate to the surface.*

Step 6: If the table will need to be moved during the work, wrap the table with plastic sheeting including the legs and secure the plastic sheeting to the table with tape. Take care when applying tape so that there is no damage to the finished surfaces of the furniture.*

- **Note:** Students should understand that they are to remove or cover all window treatments, furniture and rugs within 6 feet of surfaces that will be renovated, repaired or painted. Removal of furniture is recommended whenever possible.

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #4: Establish Interior Containment

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps in covering floors, and closing and sealing the doors, windows and HVAC in the work area.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished.*

Demonstration: The course instructor should explain all of the steps involved in covering and sealing floors and other horizontal surfaces in the work area, and in closing and sealing doors and windows between the work area and non-work areas. Use students to demonstrate closing and taping the windows and doors with masking tape. Remind them that they are trying to keep dust from escaping the work area.

Evaluating the Students: Allow students to practice the steps for covering the floors, closing and sealing windows, and closing and sealing doors. Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #4 and that particular student’s name.

Materials Needed:

- Orange cones
- Rope and/or barrier tape (bright color preferable)
- Warning signs
- Tape measure
- Tape (duct, painters, and masking)
- Heavy-duty plastic sheeting
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Magnetic covers
- Disposable tack pad

Establish Interior Containment Skills Practice

Step 1: At each non-entry doorway leading from the work area, place an orange cone, barrier tape, and a “Do Not Enter” sign.*

Step 2: Close all doors and windows leading to/from the work area.*

Step 3: Tape the seams around each door and window casing with painter’s tape, masking tape, or duct tape.*

Step 4: Cut plastic sheeting so that it covers all exposed surfaces within 6 feet of the component(s) that are to be affected by the work.*

Step 5: Secure the plastic sheeting to the floor and walls as appropriate with tape.*

Step 6: Use plastic sheeting floor runners to avoid stepping on the carpet or floors when walking out of the work area. Secure them to the floor with tape.*

Step 7: Close and cover all air and heat diffusers and intakes with magnetic covers, tape, or plastic sheeting and tape.* Also, if possible, turn off the HVAC system while working.* HVAC units may be turned on after cleaning verification or clearance below the dust-lead action levels has been achieved.

Step 8: Stage all of the tools, supplies and equipment you will need to conduct the renovation, repair or painting work on the plastic sheeting in the work area to avoid contaminating the work area.*

Step 9: Place a disposable tack pad at the corner of the plastic sheeting nearest the entry door to control tracking dust off of the plastic sheeting.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #5: Establish Exterior Containment

Time: 15 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps for restricting entry to the exterior work area, and to protect the ground under and around the work area from becoming contaminated.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 20 ft² of paint on components that have been determined to be lead-based paint, or, whenever window replacement or demolition is to be accomplished.*

Demonstration: The course instructor should explain all of the steps involved in restricting access to and containing dust within the work area. Emphasize to students that proper setup will restrict access, and will keep dust and debris from escaping the work area.

Evaluating the Students: Allow students to cover the ground and establish barriers to prevent unauthorized access to the work area. Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #5 and that particular student’s name.

Materials Needed:

- Orange cones
- Rope and/or barrier tape (bright color preferable) and fencing stakes
- Warning signs
- Heavy-duty plastic sheeting
- Tape (duct, painters, and masking)
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Tape measure
- Disposable tack pad

Establish Exterior Containment Skills Practice

Step 1: At each non-entry doorway leading into the work area, place an orange cone, barrier tape, and a “Do Not Enter” sign.*

Step 2: Close all doors and windows within 20 feet of the work area.*

Step 3: Place plastic sheeting as ground cover a minimum of 10 feet in all directions from the actual location of a paint disturbance.*

Step 4: Weigh down the edges of the plastic sheeting with 2x4s or bricks or stake down the edges of the plastic sheeting.*

Step 5: Secure the plastic sheeting to the floor and walls with tape or furring strips and tacks.*

Step 6: Place barrier fencing or a rope around the perimeter of the work area 20 feet from the work area and on all exposed sides.*

Step 7: Establish an entry point to the work area and place a “Do Not Enter, No Food or Drinks or Smoking Allowed” sign.*

Step 8: Curb the edges of the plastic sheeting to prevent dust from blowing off.* Curbs can be made by running a low rope near the ground and draping the plastic sheeting over the top of the rope. The rope should be only a few inches above the ground. A staked 2x4 may also be used to raise the edges of the plastic sheeting instead of the rope method.

Step 9: Stage all of the tools, supplies, and equipment you will need to conduct the renovation, repair, or painting work on the plastic sheeting in the work area to avoid contaminating the work area.*

Step 10: Place a disposable tack pad at the corner of the plastic sheeting nearest the entry door to control tracking dust off of the plastic sheeting.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #6: Personal Protective Equipment

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps for putting on (donning) and taking off (doffing) personal protective equipment (PPE), and the steps for decontaminating and disposing of used equipment.

- *Note to Instructor: Read the purpose of this activity to students.*

Demonstration: The course instructor should explain all of the steps involved in putting on PPE while actually dressing a volunteer student in PPE. Emphasize to students that this equipment prevents their exposure to lead as well as prevents the contamination of areas outside of the work area.

Evaluating the Students: Watch each student as they follow the steps on the next page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. *Option: Have students say the steps as they work.* Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #6 and that particular student’s name.

Materials Needed:

- Disposable coveralls
- Disposable non-latex gloves
- Disposable foot covers
- Eye protection
- Leather or canvas work gloves
- N-100 respirators
- Disposable waste bags
- Duct tape
- Hand washing facilities and hand soap

Personal Protective Equipment Skills Practice

Step 1: Put on (don) a set of protective coveralls.*

Step 2: Put on disposable gloves.*

Step 3: Put on boot covers over shoes.*

Step 4: Put on safety glasses.*

Step 5: Put on work gloves.*

Step 6: When dressed in this personal protective equipment, discuss the use of respirators and show the proper method for putting on and securing the respirator in place.

Note: Students should not wear a respirator if they are not currently enrolled in the training firm's respiratory protection program. Watch the demonstration but do not try on a respirator if this note applies you.

Step 7: Remove the work gloves and place them in a marked waste bag.*

Step 8: Remove the boot covers by pulling them off from the heel and rolling the cover inside out as it is rolled toward the toes. Once removed, place them in a marked waste bag.*

Step 9: Remove your suit by unzipping it and rolling it dirty side in to prevent releasing dust. Once removed, place the suit in a marked waste bag.*

Step 10: Remove your disposable non-latex gloves by grasping the cuff of one glove and peeling the glove inside out off of the hand. Hold the glove that was removed in the palm of the gloved hand. Place one finger under the cuff of the gloved hand and remove this glove by peeling it off of the gloved hand inside out and over the balled up glove you had already removed. Once removed, you should have one glove inside the other, with the dirty side contained. Dispose of the gloves in the marked waste bag.*

Step 11: Wash your hands, face and shoes with soap and water. Dry your hands and face with a disposable towel.*

*Indicates required skills that must be accomplished for a "Proficient" rating.

Skill Set #7: Interior Final Cleaning

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps for cleaning the interior work area after the completion of the work and prior to the visual inspection and cleaning verification procedure, or a clearance examination.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that they are trying to completely clean all visible dust and debris in the work area, and that their work will be checked. Remind them that this level of cleanliness is achievable, but does require attention and careful execution.*
 - *The course instructor should explain all of the steps involved in cleaning the work area. Emphasize to students that there are no short cuts to passing the visual inspection.*
 - *Recommended personal protective equipment during final cleaning activities is a set of disposable coveralls, disposable gloves, and shoe covers.*
 - *If plastic sheeting is not already in place from previous exercises, have plastic sheeting for the floor or carpets put down.*

Evaluating the Students: Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #7 and that particular student’s name.

Materials Needed:

- Heavy-duty plastic sheeting
- Duct tape
- HEPA vacuum with attachments and a powered beater bar
- Garden sprayer
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Disposable wet cleaning wipes
- Heavy-duty plastic bags
- Two-sided mop bucket with wringer (or equivalent), disposable mop heads, long handled mop to which disposable cleaning cloths can be attached; or, a wet mopping system.

Interior Final Cleaning Skills Practice

Step 1: Wrap and seal, or bag all components and other large materials and then remove them from the work area.*

Step 2: Clean off the plastic sheeting using a HEPA vacuum (this procedure is not required, but it is faster than wiping up dust and debris by hand). Mist the plastic sheeting and fold dirty side inward. Either seal the edges of the folded plastic sheeting with tape or place it in a heavy-duty plastic bag. Dispose of the protective sheeting.*

Step 3: Remove all waste from the work area and place in appropriate waste containers.*

Step 4: Clean all surfaces within the work area and in the area 2 feet beyond the work area until no dust or debris remains. Start cleaning at the top of the walls and work down toward the floor, HEPA vacuum or wet wipe all wall surfaces in the work area. HEPA vacuum all remaining surfaces in the work area, including furniture and fixtures. Use the upholstery attachment for the window surfaces and the crevice tool along the edge of the walls. Use the HEPA vacuum with a beater bar for carpeting. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned.*

Step 5: Next, wipe all remaining surfaces and objects in the work area except for carpeted and upholstered surfaces, with a disposable wet cleaning wipes. Also mop uncarpeted floors using a two-bucket method or wet mopping system. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned. For carpeted areas, conduct a second pass with the HEPA vacuum using the beater bar attachment instead of wiping with a wet cleaning cloth.*

Step 6: If the property is HUD-regulated, repeat Step 4 for walls, countertops and floors, and then continue to Step 7. Otherwise, continue to Step 7.

Step 7: After completion of cleaning procedures, check your work. Conduct a careful visual inspection of the work area for visible dust and debris. If visible dust or debris is found, repeat Steps 4 and 5 as needed to make sure no visible dust or debris is present, and then re-check your work with a thorough visual inspection of the work area. When there is no visible dust or debris present, proceed to step 8.*

Step 8: Notify the certified renovator in charge of the project that the work area is ready for visual inspection.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #8: Exterior Final Cleaning

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show students the proper steps for cleaning an exterior work area after the completion of the work and prior to the visual inspection and (if required) the cleaning verification procedure or a clearance examination.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that they are trying to clean all visible dust and debris within the work area, and that their work will be checked. Remind them that this level of cleanliness is achievable, but does require attention and careful execution.*
 - *The course instructor should explain all of the steps involved in cleaning the work area. Emphasize to students that there are no short cuts to passing the visual inspection.*
 - *Recommended personal protective equipment during cleaning activities is a set of disposable coveralls, disposable gloves, and shoe covers.*
 - *If plastic sheeting is not already in place from previous exercises, have plastic sheeting for the floor or carpets put down.*

Evaluating the Students: Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #8 and that particular student’s name.

Materials Needed:

- Heavy-duty plastic sheeting
- Heavy-duty plastic bags
- Tape (duct, painters, and masking)
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Flashlight
- Disposable wet cleaning wipes
- HEPA vacuum with attachments
- Two-sided mop bucket with wringer (or equivalent), disposable mop heads, long handled mop to which disposable cleaning cloths can be attached, or, a wet mopping system.

Exterior Final Cleaning Skills Practice

Step 1: Wrap and seal, or bag all components and other large materials and then remove them from the work area.*

Step 2: Clean off the plastic sheeting using a HEPA vacuum (this procedure is not required, but it sure is faster than wiping up dust and debris by hand). Mist the plastic sheeting and fold dirty side inward. Either seal the edges of the plastic sheeting with tape or place it in a heavy-duty plastic bag. Dispose of plastic sheeting.*

Step 3: Remove all waste from the work area and place in appropriate waste containers.*

Step 4: Clean all surfaces in the work area and areas within 2 feet beyond the work area until no visible dust, debris, or paint chips remain.*

Suggested Cleaning Procedure For Exterior Cleanable Surfaces: Start cleaning at the top of the walls and work down to the floor, HEPA vacuum or wet wipe all cleanable surfaces in the work area, including furniture and fixtures. Use the HEPA vacuum with the upholstery attachment for windows and use the crevice tool along the walls. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned.

Step 5: After completion of cleaning, check your work. This is done by conducting a careful visual inspection of the work area for visible dust, debris, or paint chips on hard surfaces, and for visible dust, debris, or paint chips in the soil areas under the work area protective sheeting. If dust or debris is found, reclean, and then re-check your work with a thorough visual inspection of the work area. Once there is no visible dust, debris, or paint chips present, proceed to step 6.*

Step 6: Notify the certified renovator in charge of the project that the work area is ready for visual inspection.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #9: Bagging Waste

Time: 10 minutes

Purpose: The purpose of this hands-on exercise is to show the students the proper steps to bag and gooseneck waste, wrap large pieces of debris, and remove waste from the work area.

- *Note to Instructor: Read the purpose of this activity to students.*

Demonstration: The course instructor should demonstrate the proper gooseneck technique for sealing waste bags.

Optional Bagging Relay Race: This exercise can be conducted as a relay race. Divide students into teams and have each team member select a waste bag, load it with simulated waste material, make a gooseneck in the waste bag, vacuum the bag and submit it as complete in the simulated waste storage area. This will allow the instructors to observe proficiency in the method of closing the bags and making goosenecks and provides a fun way to learn for the students.

Evaluating the Students: Watch each student make a gooseneck closure on a waste bag. Students must complete all required Steps to be “Proficient”. Once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #9 and that particular student’s name.

Materials Needed:

- Used plastic sheeting and used personal protective equipment (from previous exercises)
- Dust and debris (from previous exercises)
- Heavy-duty plastic sheeting
- Heavy-duty plastic bags
- Cutting tool (e.g., razor knife, box cutter or scissors)
- HEPA vacuum with attachments
- Duct tape

Bagging Waste Skills Practice

- *Note: This exercise requires that the waste materials generated throughout the exercises be stored in unsealed bags or in sheets of plastic.*

Gooseneck procedure for waste bags:

Step 1: Each student should get a waste bag and place some material in it that will be discarded as simulated waste. Do not overfill bags.

Step 2: Gather the open end of the bag just below the opening into one hand.*

Step 3: Twist the bag so that the neck of the bag twists in the same direction and forms an 8"-10" column.*

Step 4: Fold the twisted column over on itself, in a similar manner to how you would fold a hose over onto itself to cut off the flow of water.*

Step 5: Grasp the folded neck of the bag in one hand and wrap tape around the folded neck to secure the fold in place.*

Step 6: Now wrap the tape about 2 or 3 inches from the top of the fold, several times so that the bag cannot come open. The resulting bag's neck looks like the neck of a goose folded back on itself (a gooseneck-seal).*

Step 7: Use the HEPA vacuum to remove any dust from the exterior of the bags. Carry the bags out of the work area to the appropriate waste container.*

Wrapping large pieces of debris:

Step 1: Cut a piece of plastic so that it can be wrapped around the debris to be disposed of.*

Step 2: Once wrapped in plastic, tape the seams of the package.*

Step 3: Wrap tape around the width of the package in three spots to keep the package from unraveling.*

Step 4: Use the HEPA vacuum to remove any dust from the exterior of the package and carry the wrapped debris out of the work area to the appropriate waste container.*

*Indicates required skills that must be accomplished for a "Proficient" rating.

Skill Set #10: Visual Inspection

Time: 5 minutes

Purpose: The purpose of this hands-on exercise is to show the students the proper steps for conducting a visual inspection of the work area prior to the cleaning verification procedure.

- *Note to Instructor: Read the purpose of this activity to students. Remind them that they are trying to verify that all visible dust and debris has been cleaned from the work area. Remind them that this level of cleanliness is achievable, but does require attention and careful execution. Also read the note to the students below.*
- *Note to Students: If a clearance examination is to be performed, the certified renovator should still conduct a visual inspection before submitting to the two-part clearance examination. A clearance examination consists of a separate visual inspection and dust wipe testing. The two-part clearance examination is conducted by a certified lead inspector, certified lead risk assessor, or certified lead dust sampling technician.*

Demonstration: The course instructor should explain all of the steps involved in performing a visual inspection in the work area. Emphasize to students that there are no short cuts to passing the visual inspection.

Evaluating the Students: Watch each student conduct a visual inspection and listen as they point out problems that must be fixed. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #10 and that particular student’s name.

Materials Needed:

- Disposable foot covers
- Flashlight

Visual Inspection Skills Practice

Step 1: Put on disposable foot covers so that you do not track dust and debris into the work area, then enter the work area.*

Step 2: Turn on all of the lights that are available in the work area. Bring a bright, white-light flashlight to make sure there is adequate lighting.*

Step 3: Systematically look at every horizontal surface in the work area, working from the farthest area from the entry to the entry without recovering your tracks. Get close to the surfaces you are inspecting.*

Note: Remember this is a visual inspection, but the cleaning verification is going to wipe dust up to compare with the cleaning verification card. If you suspect a surface to be dirty, have it re-cleaned with a wet cleaning cloth.

Step 4: If you find visible dust or debris, re-clean the work area and repeat step 3.*

Step 5: Once you have carefully inspected all of the surfaces and have found no dust or debris, proceed to the cleaning verification procedure in Skill Set #11.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

Skill Set #11: Cleaning Verification Procedure

Time: 15 minutes

Purpose: The purpose of this hands-on exercise is to show the students the proper steps for conducting the cleaning verification procedure.

Demonstration: The course instructor should explain all of the steps involved in performing a visual clearance in the work area. Emphasize to students that there are no short cuts to passing the visual inspection.

Evaluating the Students: Watch each student conduct the cleaning verification procedure and listen as they point out problems that must be fixed. Students must complete all required steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #11 and that particular student’s name.

Materials Needed:

- Baby powder or corn starch
- Disposable foot covers
- Flashlight
- Disposable non-latex gloves
- Disposable wet cleaning wipes
- Cleaning verification card (CVC), one per student to take away and retain
- Electrostatically charged, white, disposable cleaning cloths designed for cleaning hard surfaces
- Long-handled mop designed for wet cleaning wipes
- Tape measure
- Watch or clock

Cleaning Verification Skills Practice

Step 1: As you enter the work area put on disposable foot covers so that you do not track dust and debris into the work area.*

Step 2: Turn on all of the lights that are available in the work area. Make sure there is adequate lighting.*

For window sills:

Step 3: While wearing gloves, wipe each window sill in the work area with a clean, white, damp cleaning wipe.*

Step 4: Compare the cleaning wipe to the CVC. If the first wipe is the same as or whiter (lighter) than the CVC, the window sill is clean; and continue to Step 6. If the first cleaning wipe is not the same as or whiter (lighter) than the CVC, re-clean the window sill, and, repeat Step 3 and then proceed to Step 5 (skip this step).*

Step 5: Compare the second cleaning wipe to the CVC. If the second wipe is the same as or whiter (lighter) than the CVC, the window sill is clean; continue to Step 6. If the second cleaning wipe is not the same as and not whiter (not lighter) than the CVC, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then re-clean the surface with a dry, electrostatically charged, white, disposable cleaning cloth designed for use on hard surfaces. The window sill is now clean and has completed the cleaning verification procedure.*

*Indicates required skills that must be accomplished for a “Proficient” rating.

For floors and countertops:

Step 6: While wearing gloves, wipe each floor or countertop in the work area with a clean, white, damp cleaning wipe. For floors, use a long handled mop designed to hold a wet cleaning wipe. For floors, wipe no more than 40 ft² per wipe. For countertops wipe the whole surface of the countertop up to 40 ft² per wipe.*

Step 7: Compare each floor and countertop cleaning wipe to the CVC. If the first wipe is the same as or whiter (lighter) than the cleaning verification card, the floor or countertop is clean. If the first cleaning wipe is not the same as and not whiter (not lighter) than the CVC, re-clean the floor section or countertop section, wipe the floor or countertop section with a wet cleaning wipe, and repeat Step 6 for that section and proceed to Step 8 (skip this step).*

Step 8: Compare the second floor or countertop cleaning wipe to the CVC. If the second wipe is the same as or whiter (lighter) than the CVC, the floor or countertop section has been adequately cleaned. If the second cleaning wipe is not the same as and not whiter (not lighter) than the CVC, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then reclean the surface with a dry, electrostatically charged, white, disposable cleaning cloth designed for use on hard surfaces. The floor or countertop section is now clean and has completed the cleaning verification procedure.*

Step 9: Once the cleaning verification shows that all areas have been adequately cleaned, remove the signs and critical barriers around the work area.*

*Indicates required skills that must be accomplished for a “Proficient” rating.