Safety, Health & Environment Orientation
For Construction Volunteers
Course Outline

1. SHE Policy for Habitat for Humanity
2. Worker Responsibilities
3. General Safe Work Practices
4. Personal Protective Equipment (PPE)
5. Emergency Response
6. Equipment and Materials Hazards
7. Job Specific Hazards
8. Restricted Activities
9. Review
10. SHE Quiz
1. SAFETY, HEALTH AND ENVIRONMENT POLICY OF HABITAT FOR HUMANITY

Your Safety is vital!

Our Safety, Health & Environment (SHE) policy is:

- Posted at every build site
- Included in your Home Builder’s SHE Handbook

Please take the time to read it.

Our top priority when working at a build site is to prevent all accidents and SHE incidents.
2. WORKER RESPONSIBILITIES

As a Habitat volunteer, it is your responsibility to:

1. Participate in all required SHE training: SHE Orientation Course & daily safety-training sessions.
2. Wear appropriate personal protective equipment and work clothes, as instructed.
3. Report to work in a fit condition: no alcohol or drugs.
4. Report all incidents to the Site Supervisor immediately.
5. Report unsafe acts or conditions to your supervisor.
3. GENERAL SAFE WORK PRACTICES

- Practice good housekeeping at all times. Keep work areas clean and clear.
- Work at a safe speed, never run on the job.
- Learn the right way to do your job.
- Make sure all tool guards and other protective devices are in place and adjusted.
- Never work while you are ill or fatigued.
- Never handle or tamper with any electrical equipment or materials.
- Horseplay and playing around are not permitted.
3.1 UNSAFE WORKING CONDITIONS

Some of the most common unsafe working conditions are:

- Inadequate guarding and protection from fall hazards, electricity, or moving machinery
- Poor housekeeping causing slips, trips & falls
- Defective tools, equipment and materials
- Improper use, handling, and storage of chemicals
- Inadequate warning system or emergency response plans
- Inadequate illumination or ventilation

Report all Unsafe Conditions to your site supervisor immediately!
3.2 REPORTING & CORRECTING UNSAFE CONDITIONS

If you see an unsafe condition or activity:

- Stop the unsafe activity immediately if safe to do so.
- Report it to the Site Supervisor.
- Talk with the persons involved, discuss and agree on how to do the job safely.
4. PERSONAL PROTECTIVE EQUIPMENT (PPE)

- **Hard hats** must be worn at all times.
- **Safety boots** must be worn at all times.
- **Safety glasses** when eye hazards are present.
- **Other PPE** for specific tasks: ear plugs, gloves, dust masks, and fall protection.
4.1 HARD HATS

- Must be worn at all times on the job site, (legally required)
- Must be worn properly, with the cap facing front, and
- Should not be decorated with stickers (as they may hide cracks or damage)
4.2 SAFETY SHOES

- Must be worn at all times on the job site
- Must be CSA-certified, labeled with the green triangle patch
- Should be checked regularly for damage

WHAT IF I FORGET TO WEAR MY SAFETY SHOES TO THE SITE?

- Ask the Site Supervisor if there are any that you can borrow
- If not, you will need to get them
- You will not be allowed on the build site without safety shoes
4.3 SAFETY GLASSES

- Must be worn whenever eye hazards are present
- Should have side shields
- Should be CSA approved industrial quality

Eye hazards:

- Wood chips
- Steel particles when hammering
- Dust
- Dripping adhesives
- Material falling during overhead work
- Protruding materials in your path
4.4 OTHER PERSONAL PROTECTIVE EQUIPMENT

**Ear Plugs or Ear Muffs**

- When using power saws, drills or other loud equipment.

**Gloves**

- When loading or unloading materials, or working with cement or other corrosive materials.

**Dust Masks**

- When sawdust, concrete dust, drywall dust, fiberglass insulation or paint vapors are present.

**Personal fall protection**

- When working at a height of more than 10 feet without safety rails. This PPE requires **special training** and a written record of the training.
4. PERSONAL PROTECTIVE EQUIPMENT (PPE)

You must obtain and use the necessary protective equipment.

- Hard hats and safety glasses are usually provided.
- Bring your own safety boots.
- Bring ear plugs and gloves if you have them.
- If you feel you are safer wearing PPE, then do so.
5. **EMERGENCY RESPONSE**

As part of your on site safety orientation at any HFH build site you will be informed of the site EMERGENCY RESPONSE PLAN. This includes:

- Emergency evacuations
- First aid kits and Attendants
- Fire safety
- Chemical spill response procedures
5.1 EMERGENCY EVACUATIONS

Know how to evacuate your worksite in case of an emergency.

Be aware of all possible obstructions to access/egress routes and maintain clear paths.

Plan your escape path before starting work.

In the case of an emergency go to the designated safe gathering area.
5.2 MEDICAL EMERGENCIES AND FIRST AID

- Ask where the first aid station is when arriving at any job site.
- The first aid certificate of the qualified person is posted on the bulletin board at the first aid station.
- Get first aid for any injury, even the small ones.

**EYEWASH STATIONS:**
- Learn to use it BEFORE working with chemicals like adhesives & foam insulation.

**FOREIGN OBJECTS IN EYES:**
- Get medical help.
- Removing objects from eyes is not a job for an amateur.
Heatstroke Is A Medical Emergency!!

**Symptoms:**
- High temp (40 C)
- Hot dry skin
- Confusion
- Convulsions
- Unconsciousness
- Irrational Behavior

If you or anyone else shows any of these symptoms call the local emergency number or get them to a hospital right away!

**Prevention:**
- Wear loose, thin, light colored clothing
- Drink water (8 ounces) every half hour.
- Avoid coffee, tea, or beer.
- Avoid eating hot, heavy meals.
Cold Stress

**Symptoms:**
- Blue lips and fingers
- Slow breathing and heart rate
- Disorientation
- Confusion
- Poor coordination

Contact the Site Supervisor and/or first aider when experiencing any of these symptoms.

**Prevention:**
- Wear several layers of clothing rather than one thick one
- Wear synthetic fabrics next to the skin to wick away sweat.
- Wear a waterproof outer layer.
- Change out of wet clothes immediately.
- If you get hot, open your jacket but keep your hat and gloves on.
5.4 FIRE SAFETY

Prevention:
- Keep combustible material away from ignition sources.
- No open fires allowed.
- Store flammable liquids in approved containers.

In Case of Fire:
- Try to put out the fire.
- Contact Site Supervisor & call 911.
- Vacate the area of the fire.
- Meet the Fire Department at the site entrance.
5.5 CHEMICAL SPILL RESPONSE

- All chemical spills must be considered hazardous and require area evacuation.
- Only trained and qualified persons will attempt a rescue or a clean-up response.
- Do not come in contact with the spilled material.
- Always report any spill to the Site Supervisor.
- Never clean up a spill alone.
6. EQUIPMENT & MATERIAL HAZARDS

- Ladders
- Scaffolds
- Working Safely At Heights
- Material Handling
- Hand & Power Tools
- Electricity
- Chemicals
- Vehicle & Pedestrian Safety
6.1 LADDERS

Hazards:

- Broken or damaged parts
- Electrocution
- Falls

Safe Practices

**Step Ladders**

- Never climb past the second rung from the top
- Make sure spreaders are locked in place.
- Barricade nearby doorways

**Straight Ladders**

- Must rest against a firm surface.
- Use the 1:4 rule. 1 foot out for every 4 feet up.
- Tie off the ladder
- Must extend 3’ beyond the top landing.
- Safety feet on ladder must be intact.
<table>
<thead>
<tr>
<th>Safe Practices</th>
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<tbody>
<tr>
<td>✗ Check ladder for defects.</td>
</tr>
<tr>
<td>✗ If damaged, don't use it.</td>
</tr>
<tr>
<td>✗ Watch for overhead power lines.</td>
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<tr>
<td>✗ When using a power tool, never hold onto a grounded object.</td>
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<tr>
<td>✗ Set ladder on a firm level surface.</td>
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<tr>
<td>✗ Use ladders only for short-duration work.</td>
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<tr>
<td>✗ Maintain 3-point contact (2 hands &amp; 1 foot or 1 hand &amp; 2 feet).</td>
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<tr>
<td>✗ Don’t reach over the side.</td>
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<tr>
<td>✗ Tie yourself off to a fixed support when above 10 ft.</td>
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<tr>
<td>✗ Boots should not be wet or slippery.</td>
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<tr>
<td>✗ Clear the area around the ladder.</td>
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6.2 SCAFFOLDING

Hazards:

- Electrical contact
- Falling off of scaffolding
- Falling while climbing

Safe Practices

- Scaffolding must be placed on a firm base.
- Never change or remove scaffold members.
- Do not alter scaffolding members or use make-shift securement.
- Do not ride on rolling scaffold. Secure the locks on rollers.
- Get Site Supervisor approval before erecting side rails.
- Know safe working loads of scaffolds.
- Do not allow tools to accumulate on scaffolds.
6.3 WORKING SAFELY AT HEIGHTS

Fall Protection

Falls cause:
• half of the deaths in construction each year.
• the most severe non-fatal injuries on construction sites.

- Install properly constructed guardrails.
- Cover floor openings. Secure the covers and mark them as covers.
- Use properly built scaffolds and work platforms.
6.3 WORKING SAFELY AT HEIGHTS

Personal Fall Protection Systems
• Full body harness
• Lanyard with shock absorber
• Fixed support or lifeline.

MUST Be Used When Working:

✗ 10 feet or more above ground or floor level
✗ above operating machinery
✗ above hazardous substances or objects
✗ while on an elevated work platform other than an acceptable scaffold with guardrails.

When working with a Personal Travel Restraint or Fall Arrest system:

✗ you must be trained in the particular system being used on site
✗ you must know how to inspect the equipment
✗ there must be a written record of your training
6.4 SAFE MATERIAL HANDLING

Plan and prepare for your material handling and moving work:

- Wear gloves and safety glasses
- Read MSDS sheets for hazardous materials
- Be sure loads are balanced and secured
- If something heavy starts to fall, LET IT FALL! Don’t try to catch it
- Get help when lifting heavy objects
- Never work underneath a suspended load
- Never work directly above other workers

Lifting:

- Bend your knees – not your waist.
- Avoid twisting
- Stretch out your muscles beforehand
6.5  HAND & POWER TOOLS

Hazards:
- Electric Shock
- Cuts, punctures and other wounds
- Severed or crushed fingers
- Shards or debris in the eyes

Safe Practices
- Disconnect power when moving or repairing tools
- Use tools only for their intended purpose
- Never bypass broken switches on tools by plugging & unplugging the cord
- Wear eye protection
- Ask for assistance when you need it
- Do not operate a power tool if you have not been trained to use it
- Do not use the electric cord to lift or lower the tool
Defective Tools are Dangerous!

- Double check tools before you use them
- Report defective tools!
- Never use a defective tool

Common tool defects to watch for:

- Loose, split or cracked handles on hammers
- Mushroomed heads on chisels, drills or steel wedges
- Files without handles
- Frayed electrical cords
- Broken, displaced, or inoperative guards
6.6 ELECTRICITY

- Use only GFCI outlets
- Use only properly grounded or double insulated tools
- Check double insulated tools for cracks.
- Disconnect from power source before moving or repairing tools or lights
- Check cords for damage
- Don’t fasten cords with staples or wire
- Check for electrical wires before drilling, nailing, cutting or sawing
- Locate all utilities before digging
- Be aware of overhead powerlines
WHMIS (Worker Hazardous Material Information System) is a Canada-wide system to protect health and safety.

The WHMIS system consists of:

- WHMIS Labels
- Material Safety Data Sheets (MSDS)
- Worker Education

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6.7 CHEMICALS

WHMIS LABELS

- Are attached to any hazardous materials
- Give the name of the material
- Warn of dangers
- Refer to the MSDS
- Give precautionary and first aid measures
- Show hazard symbols

Class A: Compressed Gas
Class B: Flammable
Class C: Oxidizer
Class D1: Acute Toxic
Class D2: Chronic Toxic
Class D3: Radioactive
Class E: Corrosive
Class F: Dangerously Reactive
6.7 CHEMICALS

MATERIAL DATA SAFETY SHEETS (MSDS)

- Are kept on site for all hazardous materials
- Contain detailed information for handling emergencies or clean-ups, and safe use of product
- The supplier or manufacturer is required to supply a MSDS for each hazardous material they sell
6.7 CHEMICALS

WORKER EDUCATION

- Done on site by Site Supervisor or SHE Coordinator
- Covers the specific hazardous materials you will be working with on the build site
- Explains work practices and emergency procedures relating to any hazardous materials you will be exposed to
6.8 VEHICLE & PEDESTRIAN SAFETY

Important things to remember when working around vehicles:

✗ Familiarize yourself with the various types of equipment and their travel routes
✗ Wear high-visibility clothing
✗ Never stand under a suspended load
✗ Avoid the swinging area of backhoes, cranes, and boom trucks
✗ Maintain eye contact with the vehicle operator, be aware of blind spots
This illustration shows how some personnel on foot are visible to the driver while others are not. The driver cannot see the dark figures because they are passing through blind spots at the front and rear of the truck.

Dark areas indicate operator blind spots
7. JOB SPECIFIC HAZARDS

- Framing Hazards
- Roofing Hazards
- Siding Hazards
- Insulation Hazards
- Drywall Hazards
- Landscaping Hazards
7.1 FRAMING & ROUGH-IN CARPENTRY

Hazards:
- Falls
- Trips
- Struck by objects
- Noise
- Overexertion
- Wood dust

Safe Practices
- Remove nails from discarded lumber right away.
- Use caution when walking on floor joists.
- Clean up as you go. Pick up after yourself.
- Do not work beneath areas being roofed.
7.1 FRAMING & ROUGH-IN CARPENTRY

Safe Practices

When standing up walls:
- Be sure there are enough people to safely lift and hold up the wall
- Have bracing ready so it can be fastened as soon as wall is up
- Make sure the wall is fully supported until the bracing is up

When putting up trusses:
- Tie in all interior partition walls first
- Never stand on the top plate of walls
- Work only from conventional scaffolding
- Make sure there are enough workers to spread trusses
7.2 ROOFING

Hazards:

- Falls
- Heat exhaustion/stroke
- Sun Exposure – UV radiation
- Overexertion
- Material falling on workers
- Cuts and abrasions
7.2 ROOFING

Safe Practices

- You must ensure 100% fall protection! Either:
  - scaffolding and/or railings, or
  - use a Personal Fall Protection System with full body harness
- Install a temporary 2x6 about 6” from the bottom of the roof
- Use caution climbing onto or off of the roof.
- Remove scrap debris and sawdust regularly
- Don't let sheathing lie loose on the roof
- Do not carry heavy material or tools up ladders
- Secure saws and other tools to the roof so they don’t fall
- Do not step backwards on a roof
- Wear good gripping shoes
- Never work on a roof alone
7.3 SIDING

**Hazards:**
- Falls
- Cuts
- Material falling on workers
- Electrical extension cords and tools

**Safe Practices**
- Make sure ladders and scaffolds used are in good condition and properly secured.
- Do not use step ladders as straight ladders.
- Wear gloves to protect your hands from sharp edges.
- Remove nails from scrap—dispose of properly.
- Do not overextend when working at heights.
- Wear eye protection if chipping is possible.
- Do not use power tools unless properly trained and authorized.
- Use proper hand tools that are in good condition.
7.4 INSULATION

Hazards:
- Fibre exposure to eyes
- Fibre exposure to skin
- Cuts

Safe Practices
- Wear safety glasses to avoid getting loose fibres in the eyes.
- Wear gloves and avoid touching fibre-glass batts to your skin.
- Wear a dust mask.
- When cutting is required, leave the knife on the floor or in your pouch before installing insulation. An open knife is a hazard.
7.5 DRYWALL

Hazards:

- Slips and falls – two thirds of slips and falls are drywall related
- Overexertion
- Cuts from drywall knives & screws

Safe Practices

- Work with a partner to carry and install long sheets of drywall.
- Keep feet shoulder length apart, and knees bent, when lifting and holding drywall to ceilings.
- Do not carry drywall or other material with an open knife in your hand
- Do not lean board against your leg to cut it. Lay it on the floor or lean it against the wall and cut away from yourself.
- Clean up your scrap material as you go to prevent trips and slips later.
- When sanding and finishing, wear an appropriate dust mask.
7.6 LANDSCAPING

Hazards:

- Dust exposure
- Back injuries from lifting
- Electric shock from buried power lines

Safe Practices

- To avoid dust exposure, wet the ground and/or wearing a dust mask
- Use caution with hand tools—swings, jabs or excessive force can result in injuries.
- Use proper tools for the job
- Do not over lift - place supplies as close to the work area as possible, get help if needed
- Before doing any digging, talk to the Site Supervisor to make sure the electric, gas, and phone companies have been contacted for the location of cables and pipes.
8. RESTRICTED ACTIVITIES

No employees or volunteers will enter the following restricted areas or perform the following activities without the express authorization of the Site Supervisor and successful completion of the site and job specific training as required by legislation:

- Entry into a confined space
- Trenching and excavation
- Concrete forming, placing, and finishing
- Crane or boom truck hoisting and lifting activities
9. REVIEW

- Report any condition that looks unsafe to your Supervisor immediately
- Wear steel toed / soled boots and a hard hat at all times
- Wear safety glasses or other eye protection when necessary
- Make sure you know how to evacuate your worksite
- The first aid certificate of the on-site first aid person is posted on the notice board at the first aid station.
- Check ladders for defects, don’t use if damaged
- When working at or above 10 ft always use some sort of fall protection
- When lifting materials, bend your knees – not your waist.
- Double check all tools before you use them, don’t use if damaged
- Check cords for cracks, cuts or damaged plugs, tag out of service if damaged
- Before handling chemicals, read the WHMIS label to find out about hazards.
- When working around moving equipment, be aware of the blind spots.
Complete all questions by circling the one best answer.

The quiz is not difficult, and is only meant to help you review the information covered in this course.

When you have completed the quiz, we’ll go over it together as a group to make sure everyone has the correct answers.
1. Our top SHE priority when working on a building site is to:
   a. Prevent all accidents and SHE incidents
   b. Wear our safety equipment properly
   c. Report all accidents promptly

2. When you identify an unsafe situation you should:
   a. Correct it immediately if possible
   b. Warn others in the area
   c. Report it to the Supervisor
   d. All of the above

3. One of the General Safe Work Practices is:
   a. Learning the right way to do a job
   b. Never touch protruding nails...leave them alone
   c. If a tool is defective, tell the Supervisor when you finish using it

4. One of the worker responsibilities is to:
   a. Report unsafe acts or condition to your supervisor
   b. Report all injuries, ‘near-miss’ incidents, and other SHE incidents (no matter how slight) to the Site Supervisor immediately
   c. All of the above.

5. The minimum Personal Protective Equipment required at all times on a construction site are:
   a. Long pants, shirt and a sun hat
   b. Green patch Safety boots
   c. Green patch Safety boots and a hard hat

6. One of the most serious health hazards when working on a hot sunny day is:
   a. Heavy sweating
   b. Heat stroke

7. In the case of an Emergency Evacuation you should:
   a. Get in your car and go home immediately
   b. Put away any tools you are using before evacuating
   c. Assemble at the designated safe gathering area

8. Before lifting heavy loads it is a good idea to:
   a. Sit down and relax
   b. Stretch out your muscles
   c. Notify everyone on the site that you are going to lift something

9. If you don’t have the right tool for the job, you should:
   a. Use whatever is handy so as not to waste any time
   b. Find the right tool and use it

10. If you must work at a height greater than 10 feet without proper guardrails or scaffolding you need:
    a. Excellent boots with a good grip
    b. A fall protection system
    c. A fall protection system and appropriate training

11. Before handling any hazardous chemicals you need to:
    a. Put on your work gloves
    b. Check the label and read the MSDS if unsure of what precautions to take
    c. Tell your Supervisor

12. When working around moving vehicles you need to:
    a. Be aware of common blind spots and stay clear of them
    b. Watch the vehicle until it leaves the job site
    c. Ignore it

13. When working with a power tool in wet conditions it is a good idea to:
    a. Wear rubber boots and a hat
    b. Use a ground fault circuit interrupter (GFCI) outlet
    c. Cover the tool with a plastic bag while you use it

14. When using a straight ladder you should:
    a. Make sure the ladder is positioned 1 foot out for every 4 feet up
    b. Always tie off the ladder at the top
    c. All of the above
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Please remember to sign the Volunteer Agreement at the back of the *Homebuilder’s SHE Handbook* and hand it in to the instructor.

Thank you.