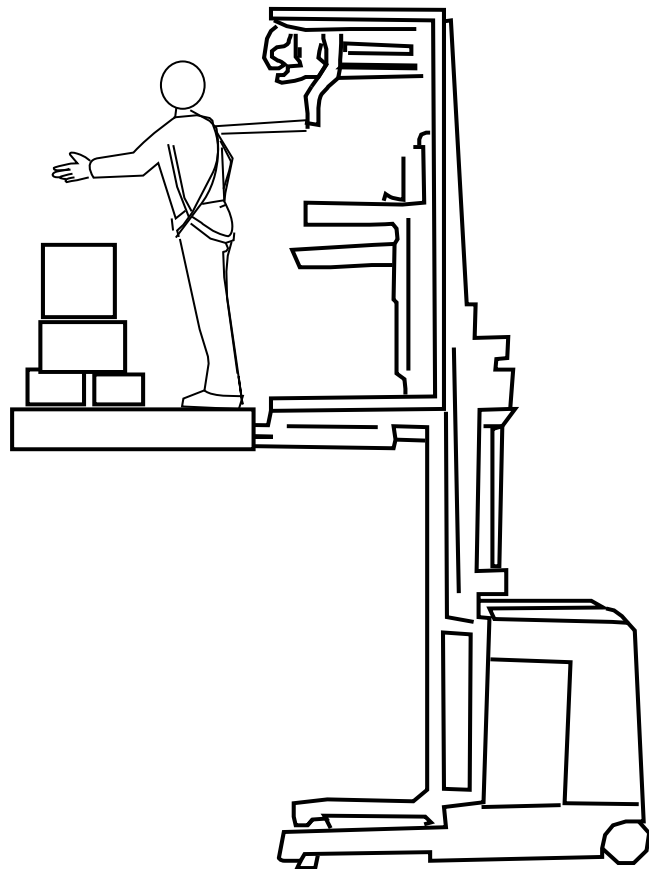


Fall Prevention

**For the Fruit and Vegetable Preserving and
Specialty Foods Manufacturing Industry**



KSTATE Research and
Extension
Kansas State University

*“Knowledge
for Life”*

Fall Prevention

Contents

Introduction	
What's Inside?	3
Lesson 1	
Take Control of Your Own Safety.....	4
Lesson 2	
Stairways, Clutter and Slippery Floors.....	9
Lesson 3	
Using Ladders Safely.....	14
Lesson 4	
Working Safely on Raised Surfaces.....	21
Conclusion	27
Quiz Yourself Answers	29

Written by:

Mitch Ricketts, Coordinator, Health, Safety and Environmental Quality, K-State Research and Extension

Pamela Riemenschneider, Information specialist

Disclaimer

This material was produced under grant number 46G4-HT13 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

This booklet was produced by K-State Research and Extension, Kansas State University, Manhattan, Kansas.

The information in this publication has been compiled from a variety of sources believed to be reliable and to represent the best current opinion on the subject. However, neither K-State Research and Extension nor its authors guarantee accuracy or completeness of any information contained in this publication, and neither K-State Research and Extension or its authors shall be responsible for any errors, omissions, or damages arising out of the use of this information. Additional safety measures may be required under particular circumstances.

What's Inside?

This booklet teaches important practices to follow to prevent falls in the fruit and vegetable preserving and specialty foods manufacturing industry.

Safety tips, along with real accident reports, have been combined to give you a better understanding of the risks associated with this type of work.

Use this booklet along with hands-on safety training.

Lesson 1

Objectives

1. Discuss common causes of falls.
2. Recognize fall prevention messages and signs in work zones.

Take Control of Your Own Safety

Greatest Dangers

The most commonly reported causes of serious falls in the fruit and vegetable preserving industry are:

1. Slippery Floors, Clutter and Stairways

Make sure floors are clean and dry and work areas are free of clutter. If you work in a wet environment, make sure to wear non-slip footwear and use appropriate walkways. Always use handrails on stairways.

Accident Report Worker Slips and Breaks Wrist

Summary of OSHA Accident Investigation 170812580

A worker was walking along a floor that had puddles of water, tomato sauce and mineral oil from leaking machinery. She slipped, fell and broke her wrist.



Clean up spills immediately.

2. Improper Use of Ladders

Choose a ladder that is appropriate for the job you are doing.

Accident Report Worker Killed After Ladder Slips

Summary of OSHA Accident Investigation 103342606

A worker was using a 12-foot aluminum stepladder to get to the top of a freezer that was 14 feet above the floor. He leaned the stepladder against the side of the freezer. The base of the stepladder slipped away from the freezer and the employee fell to the floor, where he hit his head. He was killed.



Never use an unopened stepladder or a ladder that is too short for the job.

3. Climbing on Equipment and Materials

Never climb on boxes, pallets, trash bins, shelves or other materials instead of a ladder. Use only the appropriate stairs, walkways and ladders.

Accident Report

Worker Killed in Fall From Flume

Summary of OSHA Accident Investigation 170617146

A worker was trying to break up a jam in a tomato conveyor with a plastic shovel. He climbed over the guardrail and stood on the flume to get to a better position. He slipped and fell 22 feet and landed on the floor. He was killed.



Do not climb over guard rails. Talk to your supervisor before attempting new tasks.

Accident Report

Employee Injured After Falling From Drum

Summary of OSHA Accident Investigation 125960120

A worker was standing on a 55-gallon steel drum, loading bottles onto a conveyor. The drum he was standing on tipped and he fell, hitting his head. He suffered serious head and arm injuries.



Do not climb on equipment or materials. Use an approved ladder.

4. Falls From Raised Work Areas

Stay on approved work surfaces, such as platforms, catwalks, scaffolds and secured lift devices. Watch out for openings in roofs, floors and walls. Stay behind guard rails.

Accident Report

Employee Falls From Raised Pallet and Dies

Summary of NIOSH FACE Inspection 01MI068

An employee was standing on a pallet. The pallet was raised by a lift truck to a height of six feet. While he was working, he lost his balance and fell head first to the floor. He died from his injuries.



Use only approved lift devices, and make sure workers are properly secured while raised.

Accident Report

Worker Falls From Grain Elevator and Dies

Summary of OSHA Accident Investigation 10255415

A worker was cleaning the top floor of a grain elevator. He fell 70 feet through an opening in the floor that had been left unguarded. He died from his injuries.



Do not work near unguarded floor openings.

Help Yourself

Safe work habits are important. Here are three actions you can take to be safe on the job site:

1. Learn all you can

Pay close attention to your workspace to prevent falls. Always read and follow directions for ladders and lift devices. Pay attention to safety instructions and labels. Stop and ask your supervisor if you have questions.

2. Concentrate on working safely

Sometimes you may be tempted to take risky shortcuts. Remember that an accident can leave you permanently injured or cut your life short. For your safety and the safety of those around you, do not take unnecessary risks. No deadline is so pressing you can't take the time to do your work safely.

3. Additional Precautions

Do not operate equipment or climb on ladders if you are fatigued or if you have taken drugs or alcohol. Talk to your doctor or pharmacist about working safely if you are on medication.



Safety Messages and Signs

Manufacturers put important safety messages on tools and materials and in operator manuals. It is critical to read, understand and follow these messages.

The triangle shape is the symbol for caution. The exclamation mark in the center means “Pay Attention”. In some instances, the sign will show a picture. Other times, words explain the sign.

Many safety messages use the words Caution, Warning and Danger to get your attention. Each of these signs will have a written message, and perhaps a picture, about an unsafe condition. Caution signs are usually yellow, warning signs are orange and danger signs are red. Here are some examples of safety messages and signs you might see in the workplace:

Caution means you need to be careful. Follow the directions on the sign or you could get hurt.



WARNING is more serious and means you need to follow the directions on the sign or you could be seriously injured or killed.



DANGER is the most serious safety message. If you don't follow the directions, you will be seriously injured or killed.



Images displayed in the caution, warning and danger boxes have been recreated from images taken with permission from ASAE S441.4, FEB04, Safety Signs.

Quiz Yourself

Answers can be found on page 29.

Use the list of words to fill in the blanks:

opening

ladder

clutter

danger

1. Never climb on boxes, pallets, trash bins, shelves or other materials instead of a _____.
2. _____ is the most serious safety message.
3. You could be seriously injured or killed if you fall through an _____ in the roof, floor or wall.
4. Make sure floors are clean and dry and work areas are free of _____.

Match the safety sign with its meaning:

CAUTION:
SLIPPERY WHEN WET



DANGER:
FALLS FROM ELEVATION
WILL RESULT IN SERIOUS
INJURY OR DEATH



Stairways, Clutter and Slippery Floors

Safety on Stairs

- ▶ Always use the hand rail.

Accident Report

Worker Falls Down Stairs, Breaks Ankle

Summary of OSHA Accident Investigation 170205876

A worker was searching for her identification card while walking down a flight of stairs. She was distracted and tripped on the stairs. Her ankle was broken in the fall.

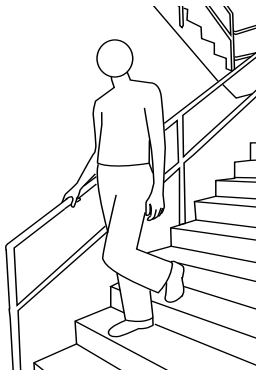


Pay attention and use the handrail while on stairs.

- ▶ Never store anything on stairs. You could trip over boxes, tools or other clutter.
- ▶ Do not carry large loads up and down stairs. Split the load between trips so you can have a hand free to use the hand rail or use the elevator.
- ▶ Tell your supervisor if you see any signs of damage or weakness on stairs or hand rails.
- ▶ Stay to the right to allow other traffic room to pass.
- ▶ Do not run up or down stairs.

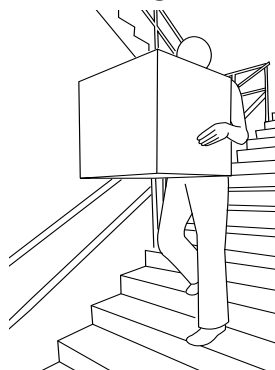
Walk Safely on Stairs:

YES



Do not run; use hand rail.

NO



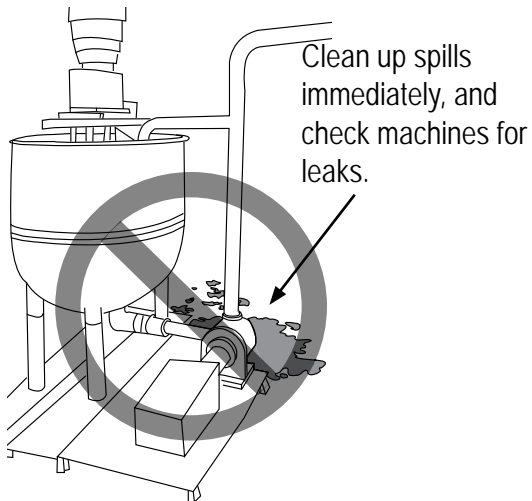
Do not carry large loads.

Lesson 2

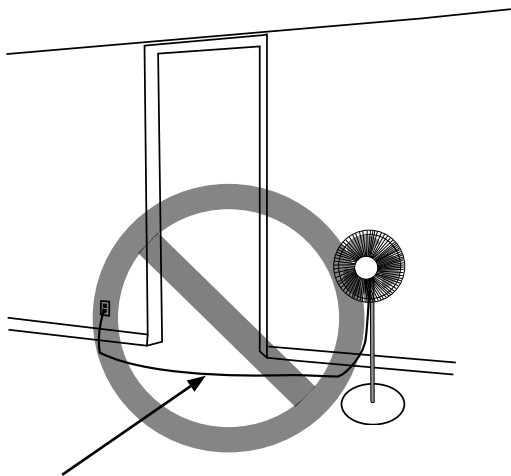
Objectives

1. Discuss safe housekeeping practices for the workplace.
2. Identify safe footwear.

Keep Your Workplace Safe



Clean up spills immediately, and check machines for leaks.



Never string cords across a doorway.

Store unused housekeeping supplies in a designated area.



Keep Your Workspace Clean and Organized

- ▶ Clean up spills immediately. Make sure areas around machines are free of debris.
- ▶ Use a temporary sign to mark a floor that is wet or being cleaned.
- ▶ Do not string cables or cords across a doorway or walkway.
- ▶ Make sure floor mats, rugs and carpets lie flat.

Accident Report

Worker Dies After Slipping on Fruit

Summary of OSHA Accident Investigation 014348205

A worker was walking on a concrete floor near a pear peeling machine. He slipped on a pear rind and hit his head on the concrete floor. He died later at the hospital.



Clean up any spilled materials immediately.

- ▶ Store unused tools, brooms, mops and other housekeeping supplies in their proper place.
- ▶ Close all cabinet doors, drawers and secure loose machine parts.
- ▶ Keep all stairs, floors and aisles clutter-free and in good repair. Park lift trucks and pallet jacks away from pedestrian traffic.
- ▶ Report uneven or broken floors to your supervisor immediately.

Avoid Fall Hazards

Always look around for hazards such as vehicles, clutter, coworkers and other dangers.

- ▶ Never carry anything too tall to see over. You should be able to see where you are going at all times. If necessary, make more than one trip or use a pallet jack to transport loads.

Accident Report

Worker Seriously Injured by Tripping

Summary of OSHA Accident Investigation 170762579

A worker was alone in the cooling floor area of a warehouse, removing cases from a conveyor and placing them on a pallet. He forgot there was a platform behind him and he tripped over it. His hip and leg were broken.



Pay attention and look around for trip hazards.

- ▶ Stay on pedestrian walkways. Do not take short cuts by climbing over or under machines or conveyor belts.
- ▶ Stay off wet floors. If you must work in the area, wear non-slip footwear.
- ▶ Always turn lights on when you enter a dark room, even if you only need be in the room briefly.
- ▶ Use a flashlight in dark areas that have no overhead lights.
- ▶ Do not run.

Accident Report

Worker Seriously Injured After Fall On Wet Floor

Summary of OSHA Accident Investigation 111920609

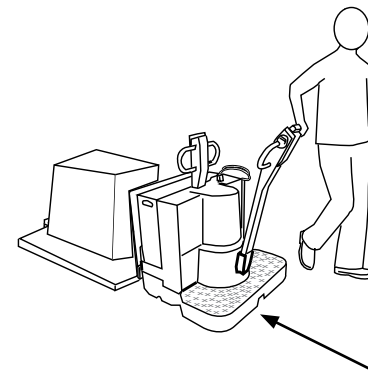
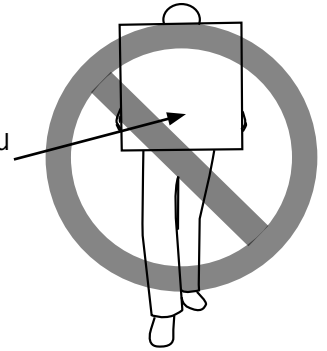
A worker was walking close to a garlic dryer, where the floor is always wet. He heard someone shout. He quickly turned and slipped on the wet floor. He broke four ribs and punctured a lung.



Avoid walking on wet floors. When you must walk in an area with a wet floor, wear non-slip footwear.

Avoid Fall Hazards

Never carry anything so big you can't see over it.





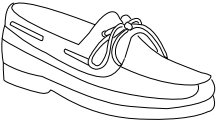



Use a hand truck, pallet jack or cart to transport larger loads.

Wear Appropriate Footwear

Wear sturdy non-slip footwear while on the job. Talk with your supervisor about what kind of non-slip footwear is appropriate for your working conditions.

- ▶ Make sure your shoelaces are tied.
- ▶ Wear shoes that are in good condition and fit properly. If the tread on your shoes is worn smooth, you should replace them.
- ▶ Shoes with a high heel, open toes, or an open back are not recommended.

Safe Shoes:	
YES	NO
	
	
	

Quiz Yourself

Answers can be found on pages 29 and 30.

Use the list of words to fill in the blanks:

lights

worn

aisles

spills

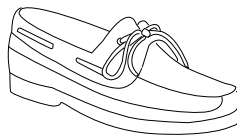
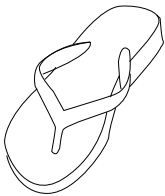
1. Clean up _____ immediately.
2. If the tread on your shoes is _____, you should replace them.
3. Keep _____ clear of clutter and unused machinery. Park lift trucks and pallet jacks away from pedestrian traffic.
4. Always turn _____ on when you enter a dark room, even if you only need be in the room briefly.

Circle the picture of the safer footwear:

5.



6.



7.



Lesson 3

Objectives

1. Recognize types of ladders.
2. Explain safe ladder use in the workplace.

Using Ladders Safely

Choose the Right Ladder for the Job

It is important to choose the right ladder. You could fall from a ladder that is not designed for the job. Always inspect ladders before use; never use a damaged ladder.

- ▶ Use a ladder of the right length so you do not have to stretch or reach.
- ▶ Make sure your ladder has a slip-resistant base.

Accident Report

Employee Dies After Falling From Ladder

Summary of OSHA Accident Investigation 200672863

A worker was using an extension ladder to make some machinery repairs. He set the feet of the ladder on smooth concrete floor. After he was finished with repairs, he was coming down the ladder when it slipped. He fell 8 feet onto his head and died. The rubber feet on the ladder were broken.



Inspect all ladders before use. Always check the base to make sure it is stable and secure.

- ▶ Do not use ladders that are weak, wobbly, damaged or have missing rungs.
- ▶ Do not use metal ladders near electrical equipment. You could be electrocuted. Use a fiberglass ladder instead.
- ▶ Never splice two ladders together to make a longer ladder.
- ▶ If your work requires both hands, you should not use a ladder. You could fall if you are not able to hold on to the ladder. Use an elevated work platform such as a personnel lift or scaffold.
- ▶ Do not stand on a ladder for long periods of time—you could become fatigued and fall. Use a scaffold, personnel lift or other elevated platform.

Check Your Ladder Rating

Ladders are rated for use according to the amount of weight they can support. There are four ratings of ladders. This information is usually posted on the side rail of the ladder.

Ladder Ratings:		
Type IA	Heavy Duty Industrial	300 lbs. capacity
Type I	Industrial	250 lbs. capacity
Type II	Commercial	225 lbs. capacity
Type III	Household Duty	200 lbs. capacity

- ▶ Remember to add the weight of your tools and materials to your weight. This combined weight should not be over the ladder's capacity.
- ▶ Never remove, paint or cover the rating information on a ladder.

Inspect Ladders Before Every Use

Always inspect the ladder before use. Do not use a damaged ladder. If you find any damage on the ladder, tell your supervisor. Mark the ladder "Dangerous, Do Not Use" and take it out of service immediately. Never paint wooden ladders — signs of rot and damage could be covered up by the paint. See the checklist, right, for areas to inspect.

Accident Report Worker Injured After Fall From Damaged Ladder

Summary of OSHA Accident Investigation 170206882
A worker was using an extension ladder to take apart a vinegar tank. The worker knew the ladder had been taken out of service, but he used it anyway. It had a broken side rail that had been patched. The ladder failed, and the worker fell about 6 feet to the ground. He suffered a serious neck injury.



Inspect all ladders for damage before use. Do not use a damaged ladder.

Ladder Inspection Checklist

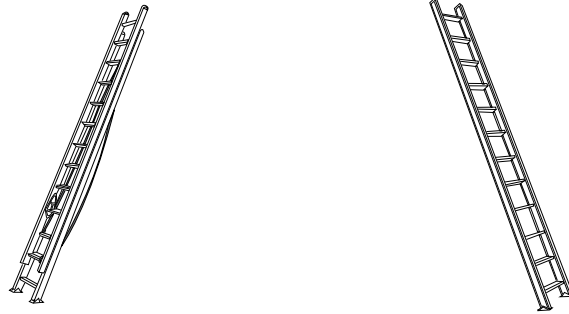
Needs Repair	OK	General
		Loose steps or rungs (considered loose if they can be moved at all by hand)
		Loose bolts or other metal parts
		Cracked, split, or broken uprights, braces, steps or rungs
		Slivers on uprights, rungs, or steps
		Damaged, worn or missing nonslip bases
		Rusting
		Oil, grease or other slippery deposits
Stepadders		
		Wobbly
		Loose or bent hinge spreaders
		Stop on hinge spreaders broken
		Broken, split or worn steps
		Loose hinges
Extension Ladders		
		Missing and defective brackets and locks (do not seat properly when ladder is extended)
		Damaged rope or pulley

Types of Ladders

Straight and Extension Ladders

These ladders are portable and are leaned against a roof or other secure surface. You need a ladder that is at least three feet higher than the surface you are trying to reach. These ladders should never be used horizontally as a work platform.

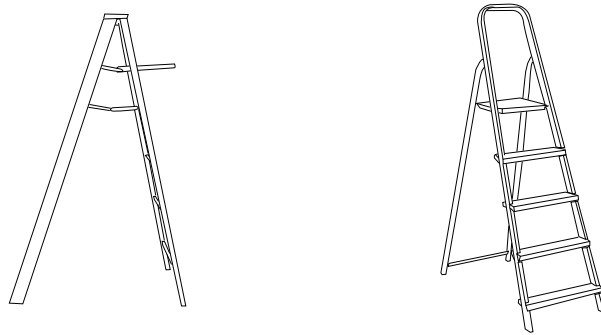
Examples of Straight and Extension Ladders:



Stepladders

These ladders are portable and stand on four legs. Since they are free-standing, they do not lean against a wall for support. Never use a folded-up stepladder instead of a straight or extension ladder or as a horizontal work platform.

Examples of Stepladders:



Setting up straight or extension ladders:

1. Place the ladder at an angle so that the base is one foot out for each four feet of height you need to reach. To find out how far away from the wall your ladder base should be, you can use this equation:

$$\text{height of wall} \div 4 = \text{distance from wall to ladder base}$$

Examples: If the surface to be reached is 8 feet from the ground, divide 8 by 4.

$$8 \div 4 = 2$$

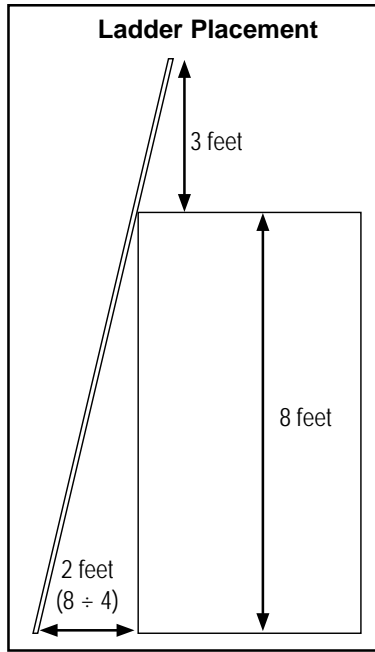
The ladder base should be two feet from the wall.

If the surface to be reached is 14 feet from the ground, divide 14 by 4.

$$14 \div 4 = 3.5$$

The ladder base should be three and a half feet from the wall.

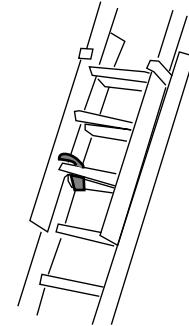
2. Place the top of the ladder so that both rails are fully supported.
3. Make sure the ladder extends at least three feet above the top landing.
4. Never lean ladders against loose boxes or other unsecured surfaces.
5. Never place a ladder against a window or sash. Securely lash a board across the top of the ladder so that it overlaps each side of the window.
6. Make sure the base of the ladder is stable and level.
7. Tie the ladder in position (top and bottom) when using it to reach scaffolds or when necessary to make secure.



Extension Ladder Overlap

The upper section of an extension ladder must always overlap on the climbing section of the ladder.

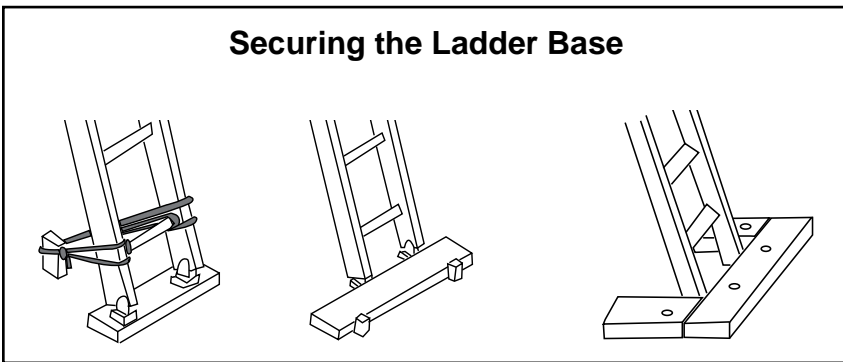
Example of ladder overlap:



The amount of overlap should be:

For ladders up to 36 feet.....	at least	3 feet
Ladders 36-48 feet.....	at least	4 feet
Ladders 48-60 feet.....	at least	5 feet

Securing the Ladder Base



8. Make sure the two sections of the ladder are locked in place. The upper section must always overlap on the climbing side of the ladder. See column, right, for ladder overlap requirements.

Setting up a Stepladder:

1. Choose a flat, stable surface that is free of puddles and debris to set up the stepladder.
2. Open the ladder fully and lock the metal spreader before starting to climb.
3. Before setup check that the ladder feet are stable, level and secure.

Working Safely on Ladders

- ▶ Always face toward the ladder when climbing up or down.
- ▶ Always maintain at least three points of contact with the ladder. This means that at all times, both hands and one foot, or both feet and one hand should be in contact. This is called a three-point stance and it is the safest way to climb up and down a ladder.

Accident Report

Worker Injured After Missing Ladder Step and Falling

Summary of OSHA Accident Investigation 170354773

A worker was standing on an 8-foot ladder to check the product level in a storage tank. As he was going down, he missed the third step from the bottom and lost his balance. He fell to the cement floor, and was hospitalized with a fractured hip.



Watch where you step when climbing up or down a ladder. Hold on with both hands and step on every rung.



Do not sit on a stepladder

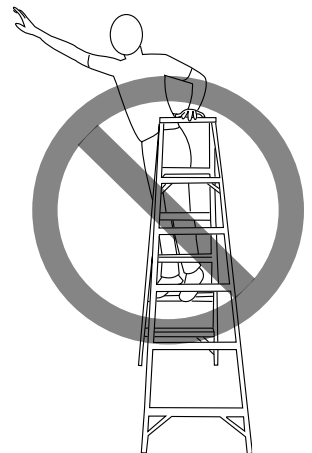
▶ Do not carry things in your hands while you are climbing a ladder. Have a coworker send them up with a rope or by other means, once you have reached your work area.

▶ Never stand or sit on the top steps of a step-ladder—the ladder could tip over. Unsafe steps are marked “Do Not Stand or Sit.”

▶ Do not reach away from the center of the ladder. A good rule of thumb is to never let your belt buckle go beyond the side rail of the ladder.

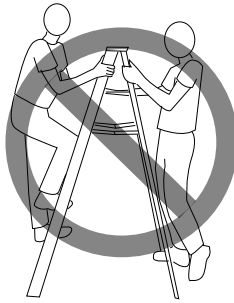
▶ Never try to move a ladder while you are on it. Always get off the ladder and reposition it. Always reposition ladders from the ground — not from above.

▶ Only one person is allowed on a ladder at a time. Do not allow anyone to climb the opposite side of a stepladder.



Do not reach

- ▶ Never put a ladder in front of a door that opens toward the ladder, unless the door is locked or guarded. Use a barricade to keep traffic away when you use a ladder in a parking lot or doorway.



- ▶ Do not use ladders as a horizontal work platform.
- ▶ Do not place the ladder on top of boxes, barrels or other unstable surfaces to make them higher.
- ▶ Do not leave ladders unattended.

One person only

Ladder Storage

- ▶ Store ladders out of the weather in a place with good ventilation. Do not store them near radiators, stoves, steam pipes or other places with excessive heat or dampness.
- ▶ Do not store fiberglass ladders in direct sunlight—they can be weakened.
- ▶ Store them so that people will not trip over them, and so they will not fall on anyone.

Quiz Yourself

Answers can be found on page 30.

Use the list of words to fill in the blanks:

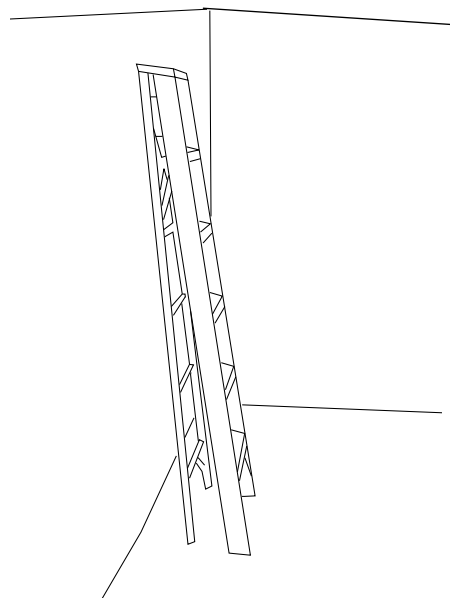
3 feet
horizontal
toward
electrical equipment

1. Always face _____ the ladder when climbing up or down.
2. Do not use ladders as a _____ work platform.
3. The top of an extension ladder should extend _____ above the top landing.
4. Do not use metal ladders near _____. Use a fiberglass ladder instead.

Is this safe?

Circle the correct answer.

You decide to use a stepladder leaned against a wall to reach this ceiling because you don't have an extension ladder.



Safe

Unsafe

Working Safely on Raised Surfaces

Get to Equipment Safely

Do not climb on equipment. Stay on safe walking and climbing surfaces, such as stairs and platforms. Use a ladder or lifting device to get to hard-to-reach areas.

- ▶ Do not climb on shelves, pallets, boxes or other materials. Use a ladder instead.

Accident Report

Worker Dies From Fall After Climbing Tote Bins

Summary of OSHA Accident Investigation 111326930

A worker was changing light fixtures. He was working from a scissor lift platform. He stepped off the lift and on to a stack of tote bins to reach a light fixture. The bins tipped and he fell almost 15 feet to the concrete floor and died.



Stay on work platforms with guard rails and fall protection.

- ▶ Never walk or climb on equipment that does not have appropriate steps, walking surfaces or hand rails.

Accident Report

Workers Slips on Conveyor Rollers

Summary of OSHA Accident Investigation 170622625

A worker was at a conveyor line. Some boxes became jammed. He shut off the conveyor and climbed up onto the rollers. His foot got caught between two rollers and he fell onto the line. He was treated at the hospital for his injuries.



Never step on conveyor rollers or any other type of machine that is not designed for walking.

- ▶ Never climb under or over machines.
- ▶ Use ladders, lifting devices or scaffolds for hard-to-reach areas.
Note: Scaffolds require training that is beyond the scope of this book. Ask your supervisor about training if you need to use a scaffold.

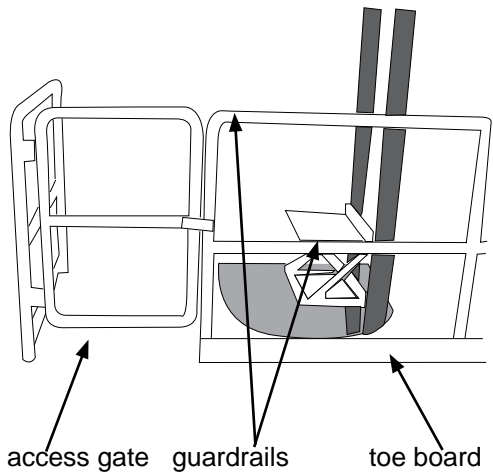
Lesson 4

Objectives

1. Discuss methods to get to hard-to-reach areas.
2. Identify methods of fall protection.

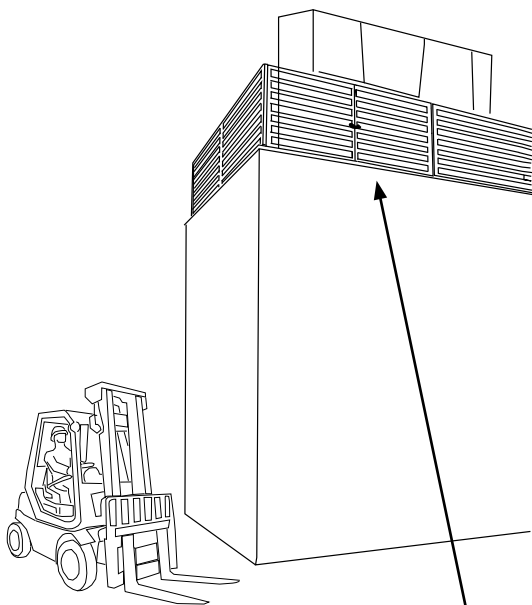
Fall Protection

Guarding a floor opening



These protect workers from the manlift opening in the floor.

Guarding a raised work area



This gate should only be opened while loading items into the elevated storage area.

Accident Report

Worker Injured When Platform Fell From Lift Truck

Summary of OSHA Accident Investigation 105941470

A worker was in a platform on the forks of a lift truck. A coworker operated the controls. The platform was not secured to the forks or carriage. The worker was removing pipe and accidentally cut a vinegar line. The coworker operating the controls backed the truck away.

The platform with the worker on it fell from the forks. The worker fell about 10 feet to the floor and the platform fell on top of him. He was hospitalized.



Use only approved work platforms, and always secure them properly.

Fall Protection Devices

Guardrails, Handrails and Toe Boards

All raised work areas should have guard rails, hand rails and toe boards installed to protect workers.

- ▶ Do not remove fall protection devices. Talk to your supervisor if your work requires you to work without guardrails, handrails or toe boards. Never leave an area unattended where you have removed handrails, guardrails or toe boards.

Accident Report

Worker Killed After Falling From Work Surface

Summary of OSHA Accident Investigation 303414841

A worker was on a scaffold, painting overhead. He slipped on the uneven surface and fell 45 feet through the opening below the top guardrail. He was killed. The scaffold guardrail system was missing both the midrail and the toeboard.



Report missing guardrails to your supervisor immediately. Do not work in raised work areas that are missing guardrails, handrails or toe boards.

- ▶ Report damaged or missing guardrails, toe boards and hand rails to your supervisor.
- ▶ Do not climb or stand on handrails or guardrails.
- ▶ If you must climb on machines, use handrails and steps designed for workers. Do not climb on machine parts that are not designed to hold your weight.
- ▶ Close gates as soon as you are finished walking through them. Do not leave gates open and unattended.
- ▶ Never reach over or lean against guardrails. You could lose your balance or the rail could give way and you could fall.

Accident Report
Worker Leans Over Guard Rail, Falls and Is Seriously Injured

Summary of OSHA Accident Investigation 112069349

A worker was using a long pole to clear a jam on a conveyor belt. She was standing on an elevated work platform. She leaned too far over the guardrail and lost her balance. She fell to the ground, about 12 feet below the platform. She suffered a broken jaw, pelvis and right arm.

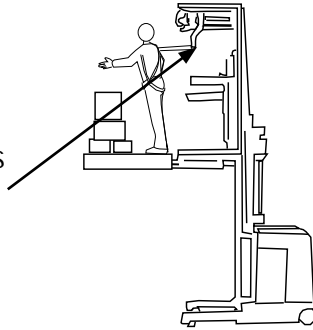


Do not lean over guard rails.

Personal Fall Arrest System

If you must work in an area more than four feet from the floor that does not have guardrails, handrails or toe boards, use a personal fall arrest system. These can include body belts, harnesses, lanyards or safety nets. You should be trained and authorized before you use personal fall protection.

This worker on an order picker is wearing personal fall protection attached to the lift truck.



- ▶ Inspect equipment before every use: check belts, harnesses and lanyards for cracks, cuts or broken stitching. Make sure all clips, buckles and rivets are not loose or broken.

Work Safely on Raised Surfaces

Catwalks, Runways and Platforms

- ▶ Do not run, and pay attention to where you are going.

Accident Report
Worker Injured in Fall From Runway

Summary of OSHA Accident Investigation 111790028

A worker was walking back to her position on a raised runway when she realized she left her gloves in the break room. She was hurrying back to the break room when she saw a coworker and waved to them. She was not paying attention and took a wrong turn and walked into a gate. The gate gave way and she fell 12 feet onto the concrete floor. She was hospitalized.



Walk slowly on elevated walkways, and pay attention to where you are going.

- ▶ Stay behind guardrails on catwalks, runways and platforms.

Skylights, Floor, Roof and Wall Openings

- ▶ Make sure openings are protected by guards or properly covered.

Accident Report

Worker Falls Through Skylight, Seriously Injured

Summary of OSHA Accident Investigation 126208016

A worker was on the roof with two coworkers. They were removing a steam exhaust duct through a 4-foot by 8-foot skylight. The worker lost his balance and fell through the skylight about 30 feet to the ground. He suffered serious injuries that required hospitalization.



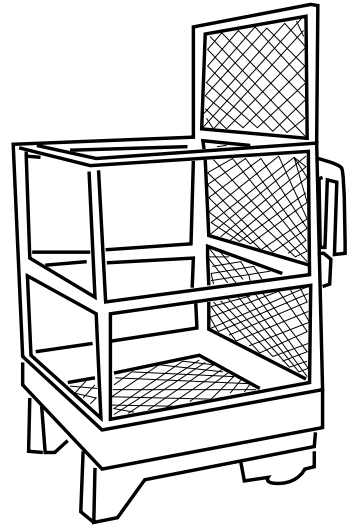
Use fall protection devices and never work in raised work areas without guardrails.

- ▶ Do not sit on, lean against or step on a skylight or covering.
- ▶ Tell your supervisor if you see unguarded skylights or openings.

Use Lift Devices Safely

Lifting devices can be attached to a lift truck's forks or can be a free-standing lift. Approved lifting devices have guards and safety restraints.

- ▶ Lift workers only while the lift truck is stationary and on a level surface.
- ▶ Follow safe parking procedures before allowing workers to enter the lift cage.
- ▶ The lift device should have a guard between the raised worker and the mast to prevent crushing accidents.
- ▶ Never lift workers standing on pallets, lift truck forks or other unapproved devices.
- ▶ Make sure the lift device is secured to the forks before lifting.
- ▶ Make sure the person who is raised is secured with a personal fall arrest system (such as a lanyard or body harness), standard guardrails or other type of restraint.



Accident Report
Worker Dies After Falling From Raised Pallet

Summary of NIOSH FACE Inspection 01MI068

A worker was standing on a pallet elevated by a lift truck to a height of six feet. While he was working, he lost his balance and fell head first to the floor. He died from his injuries.



Use only approved lift devices, and make sure workers are properly secured while raised.

- ▶ The lift truck operator must stay at the vehicle controls while the person is being raised.
- ▶ Raise and lower the platform slowly and smoothly.
- ▶ Make sure only one set of controls—either the lift truck controls or the device's controls—can be used at any one time.

Choose safety



Quiz Yourself

Answers can be found on page 31.

Use the list of words to fill in the blanks:

unguarded

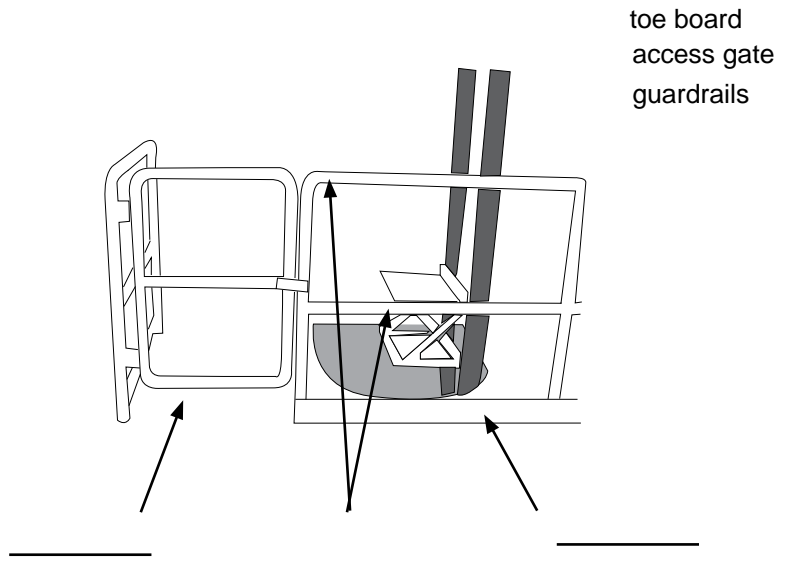
lean

ladders

1. Use _____, personnel lifting devices or scaffolds to access hard-to-reach areas.
2. Tell your supervisor if you see _____ skylights or openings.
3. Never reach over or _____ against guardrails. Stay behind them at all times.

Fall Protection Devices

Use the list of words to label the fall protection devices.



Conclusion

Practicing safe work habits can help prevent falls in the workplace. You have been presented with checklists, safety tips and exercises designed to help you avoid the most commonly reported causes of falls, as well as other important safety precautions to consider. Use this information to keep your workplace safe.

Quiz Yourself

Answers can be found on page 31.

Use the list of words to fill in the blanks:

stepladder

spills

flashlight

center

alcohol

1. Do not reach away from the _____ of the ladder.
2. Never use a folded-up _____ instead of a straight or extension ladder.
3. Do not work while under the influence of _____.
4. Use a _____ in dark areas that have no overhead lights.
5. Clean up _____ immediately. Make sure areas around machines are free of debris.

Quiz Yourself Answers

Lesson 1, Page 8

1. Never climb boxes, pallets, trash bins, shelves or other materials instead of a ladder.
2. Danger is the most serious safety message.
3. You could be seriously injured or killed if you fall through an opening in the roof, floor or wall.
4. Make sure floors are clean and dry and work areas are free of clutter.

Match the safety sign with its meaning:

CAUTION:
SLIPPERY WHEN WET



DANGER:
FALLS FROM ELEVATION
WILL RESULT IN SERIOUS
INJURY OR DEATH



Lesson 2, Page 13

1. Clean up spills immediately.
2. If the tread on your shoes is worn, you should replace them.
3. Keep aisles clear of clutter and unused machinery. Park lift trucks and pallet jacks away from pedestrian traffic.
4. Always turn lights on when you enter a dark room, even if you only need be in the room briefly.

(continued on next page)

Lesson 2, Continued

5.



6.



7.



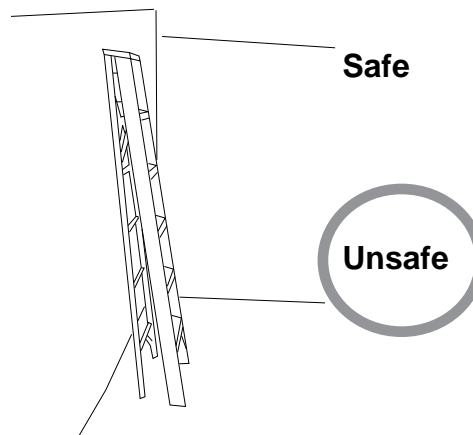
Lesson 3, Page 20

1. Always face toward the ladder when climbing up or down.
2. Do not use ladders as a horizontal work platform.
3. The top of an extension ladder should extend 3 feet above the top landing.
4. Do not use metal ladders near electrical equipment.
Use a fiberglass ladder instead.

Is this safe?

Circle the correct answer.

You decide to use a stepladder leaned against a wall to reach this roof because you don't have an extension ladder.

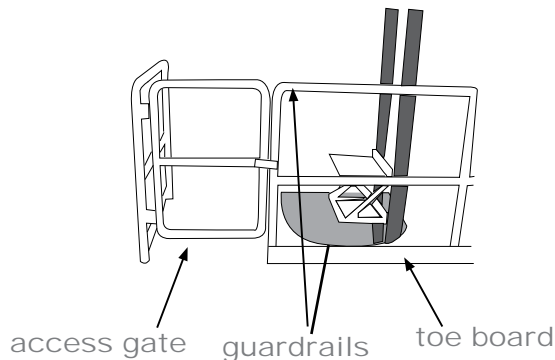


Lesson 4, Page 26

1. Use ladders, personnel lifting devices or scaffolds to access hard-to-reach areas.
2. Tell your supervisor if you see unguarded skylights or openings.
3. Never reach over or lean against guardrails. You could lose your balance or the rail could give way and you could fall.

Fall Protection Devices

Use the list of words to label the fall protection devices.



Conclusion, Page 28

1. Do not reach away from the center of the ladder.
2. Never use a folded-up stepladder instead of a straight or extension ladder.
3. Do not work while under the influence of alcohol.
4. Use a **flashlight** in dark areas that have no overhead lights.
5. Clean up spills immediately. Make sure areas around machines are free of debris



Kansas State University Agricultural Experiment Station
and Cooperative Extension Service

MF2761

February 2008

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Fred A. Cholick, Director.