



Health and Safety Initial Induction Training

Ladder and Step Ladder Safety

This training has been designed to provide information to help you understand the correct way to use and care for portable ladders.

Please complete the test at the end of the training

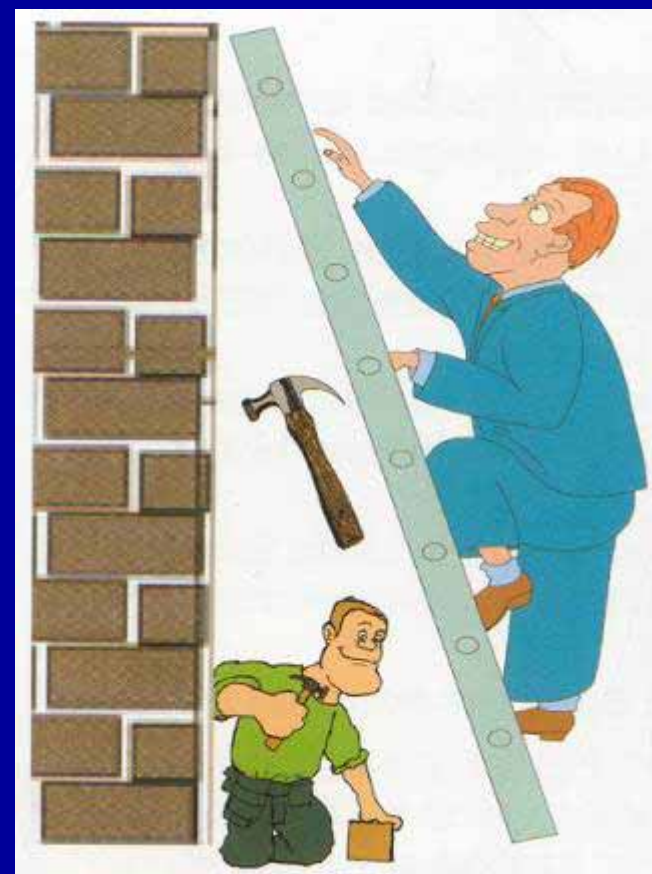
More information available at on the

[Health and Safety Unit page: Working at Height](#)



Introduction

- Ladders are possibly man's oldest and most universally used tool for the purpose of gaining access to another level
- Each year many people die or are left disabled as a result of workplace ladder accidents
- Planning and care are required to ensure their safe use
- Since there is no room for error, ladder safety concerns everyone



Introduction continued....

- Ladder accidents are usually caused by improper selection, care or use
- Many of the hazards which cause the accidents such as instability, electrical shock and falls are preventable
- Prevention requires proper planning, correct ladder selection, good working procedures and adequate ladder maintenance





Introduction continued....

- The use of ladders and stepladders is not banned
- Consideration must be given to their use
- They should only be used when other more suitable equipment is not appropriate
- They should only be used as a workplace for light work of short duration





Planning

Before using a ladder you should ask:

- can I plan my work so that I do not need to work above ground level?
- e.g. different storage arrangements, bringing the work to ground level etc.

If you have to work above ground level

- can I use something other than a ladder
- e.g. a platform, mobile stairs etc.



Ladder Platform
An example of an alternative to steps



Before using a Ladder

Consideration should be given to the :-

- Task
- Working conditions/environment
- Duration, frequency and location of the task
- Selection, use and suitability of the work equipment
- Access and egress
- Distance and consequences of a fall
- Emergency and rescue procedures (if appropriate)
- Competence and physical capabilities of those involved



Ladder selection



Selecting the correct ladder is important

They can be made of steel, aluminium, glass fibre, wood etc.

They can be general or specialised use

The correct type of ladder should be selected





Ladder Selection -step ladders



There are many different types of step ladders so selecting the correct one is important



Ladder selection continued....

- Portable ladders are designed as 'one person' equipment with proper strength to support the worker, their tools and materials.
- There are three general classes of ladder construction - heavy, medium and light duty.
- They are supplied in four types offering differing load capacities as follows: -

Types

1A Industrial - heavy duty

1 Industrial - heavy duty

113kg (250lbs)

2 Commercial - medium duty (suited for painting and similar tasks)

3 Household - light duty

Load Capacity

136kg (300lbs)

102kg (225lbs)

90kg (200lbs)





Ladder selection continued....

Prior to using the ladder, you should :

- Select the right type
- Check its condition

You should not use:

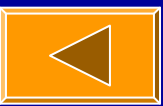
- Unmarked ladders
- Ladders which are overdue for inspection
- Defective ladders
- Ladders belonging to contractors etc.

Considerations to be taken into account before use

Before use, you should consider the following factors:

- Can the ladder be securely fixed and / or footed?
- Site conditions, e.g.
 - environment?
 - persons?
 - vehicles?
- Will the user be close enough to the work?
- Is the ladder so long or flexible that sway or vibration could cause loss of balance?
- The strength, condition and type of structure against which the ladder is to rest
- The nature of the work, type of tools required and weight of any articles to be fixed





Ladder Checks

- Is it a University ladder?
 - (you should not use non-university ladders)
- Has it a current inspection label?
- General condition sound?
 - (clean & dry, free from wet paint, oil, mud, etc)
- No cracks?
- No rungs missing or loose?
- Connecting ropes OK? (step ladders)
- Not painted?
 - (ladders should not be painted as paint can hide damage)

Ladder N° XX
Belonging to XX
Next Inspection
01/01/XX



Ladder checks continued....

- No stiles damaged or bent?
 - (stiles are the outside uprights on a ladder)
- No warping or splitting? (timber)
- No corrosion? (metal)
- No sharp edges or dents? (metal)
- No rungs bent? (metal)
- Caps/rubber fittings OK?
 - (all metal ladders should have slip-resistant rubber or plastic feet.)





Good working practices

Whilst using a ladder:

Do

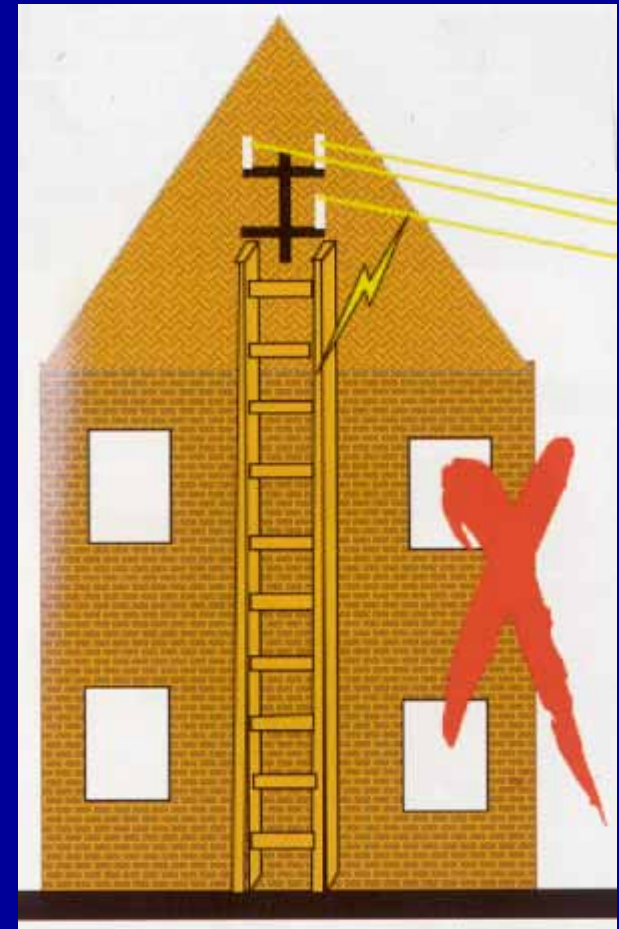
- Wear shoes with clean, non-skid soles
- Position the ladder where you can safely reach without losing your balance
- Face the ladder whilst climbing up or down
- Hold the side rails with both hands
- Keep your body centred on the ladder
- Keep the areas around the top and bottom of the ladder clear
- Space the ladder base one foot out for every four feet it reaches up
- Completely open a stepladder



Good working practices continued....

Do

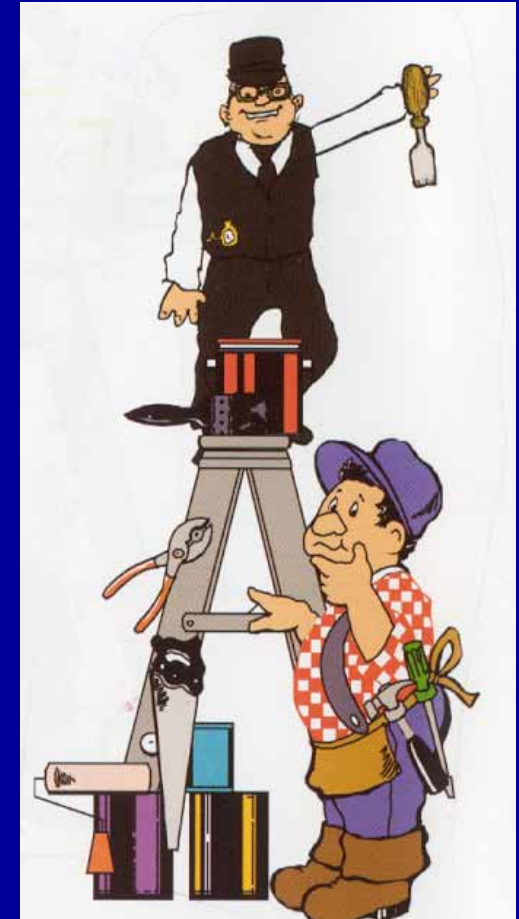
- Avoid working near overhead power-lines
-(Metal or a wet ladder will conduct electricity)
- Consider using a scaffold if the work requires greater flexibility
- Consider the weight of the ladder.
-(Get help if it is too heavy for you to move it alone)
- Consider using ladders with non-skid pads fitted for use on a hard, smooth surface
- Maintain the ladder so that it is free from grease and oil
- Have both locks in place whilst using extension ladders
- Withdraw defective ladders from service



Good working practices continued....

Don't

- Carry loads on a ladder by hand.
 - Carry tools on a belt or hoist them in a bag.
- Step on the top two stepladder steps or the top three straight ladder rungs.
- Use a folding stepladder in a folded position.
- Have more than one person on a ladder at a time.



Good working practices continued....

Don't

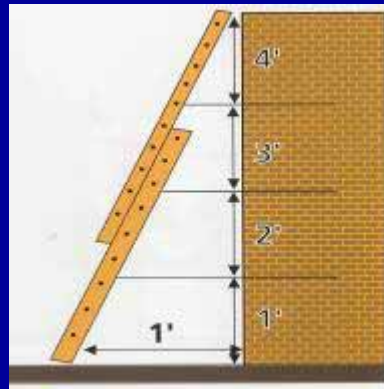
- Place ladders on unstable bases such as barrels, truck beds, boxes or uneven ground
- Use a ladder which hasn't been tied or footed
- Throw things down from a ladder
- Place a ladder in a doorway or a passageway
- Walk a ladder whilst you are standing on it
- Use a metal ladder near power-lines.



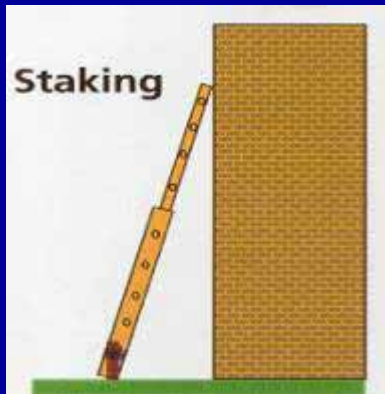


Setting up a ladder

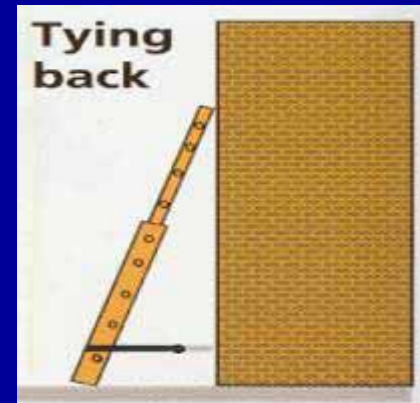
The ideal angle is about 75 degrees (1 out and 4 up)



Secure the foot of a ladder.
by staking



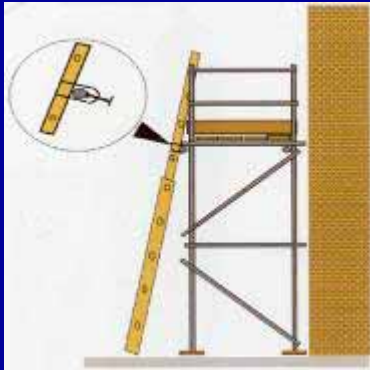
Securing the foot of a ladder
by tying back.



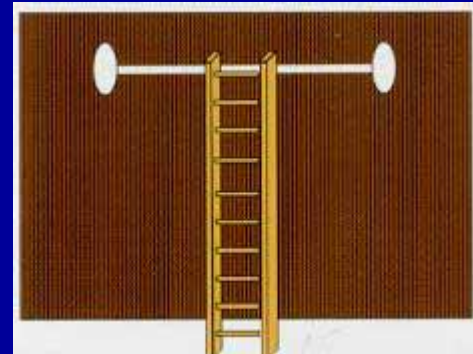


Setting up a ladder continued....

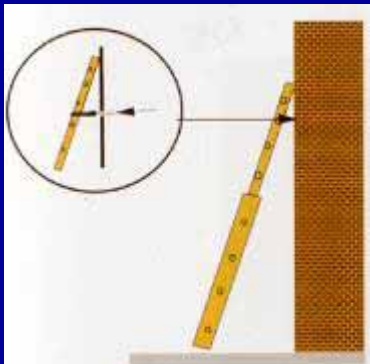
Securing the head of a ladder by using a proprietary clamp.



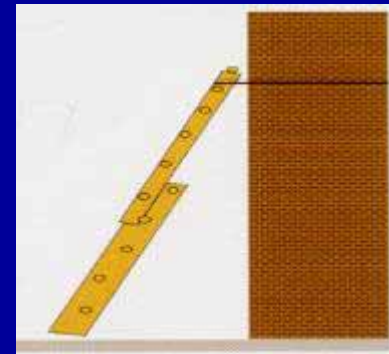
Securing the head of a ladder by using a stabilizing bar.



Securing the head of a ladder by using a Hilti insert.

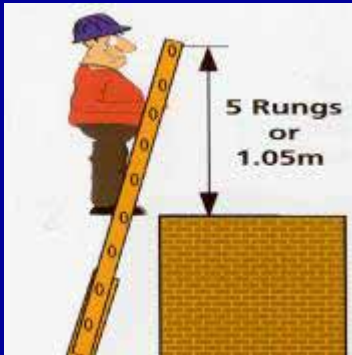


Securing the head of a ladder by using a lashing

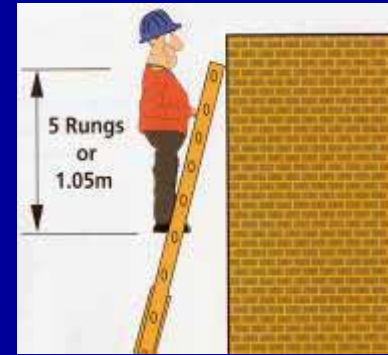


Setting up a ladder continued....

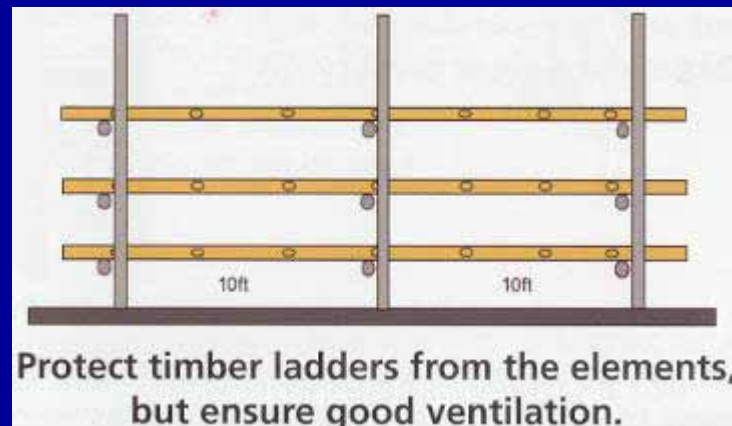
Correct height of the ladder for landing.



Correct height of the ladder for working.



Correct storage for timber ladder.





Bad practice

Placing ladder against moveable objects.



Erecting a ladder at a shallow angle.



Erecting a ladder at too steep an angle.



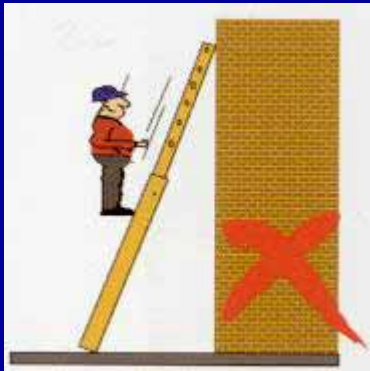
Lackadaisical footing of a ladder.



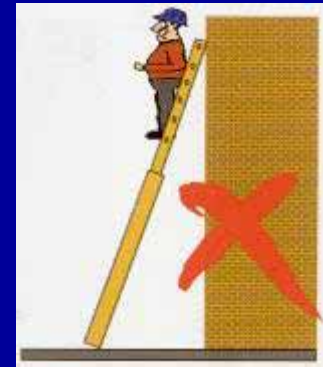


Bad practice continued....

Sliding down the ladder.



Descending the ladder facing in the wrong direction.



Have more than one person on a ladder at any one time.



Overreaching.



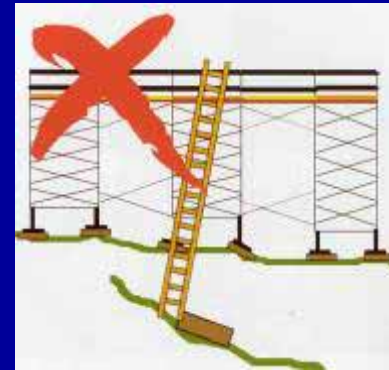


Bad practice continued....

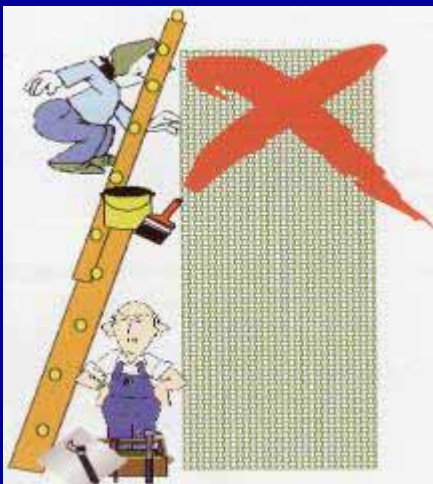
Erecting ladders in front of doorways.



Erecting ladders on sloping ground.



Working under ladders.



Using ladders horizontally.





Bad practice continued....

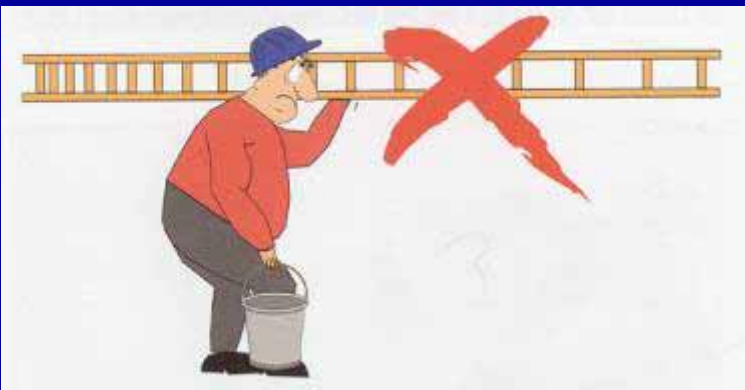
Using a rung support as a working platform.



Using ladders near power lines.



Carrying ladders over 3m in length on your own.



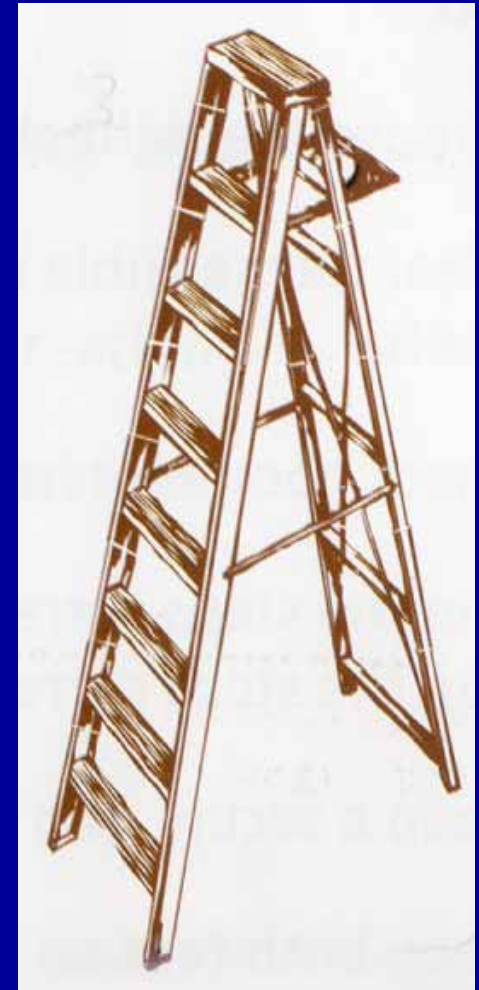
Transporting ladders in an unsafe way.





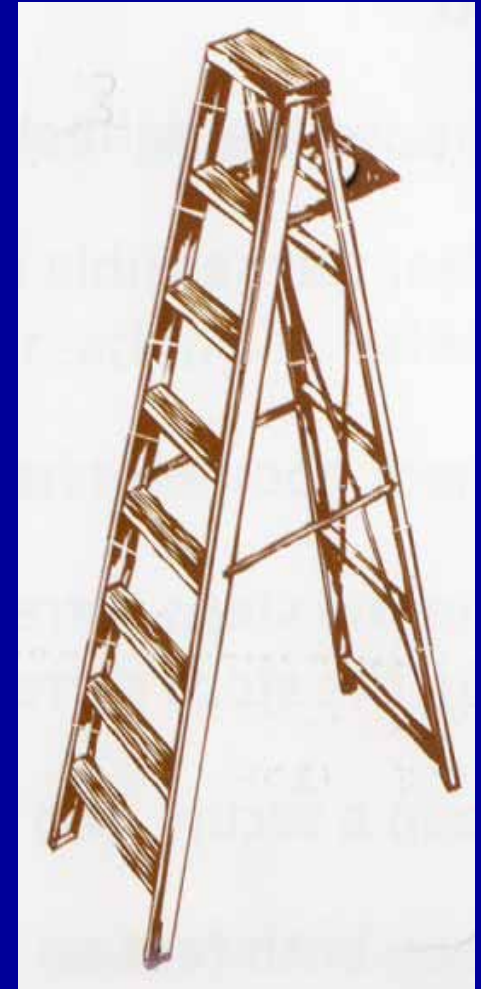
Safe use of stepladders

- Step ladders are not designed for any degree of side loading
- They should be spread to their fullest extent
- They should be properly levelled for stability
- They should be placed at right angles to the work
- Work should never be carried out from the top platform



Safe use of stepladders continued....

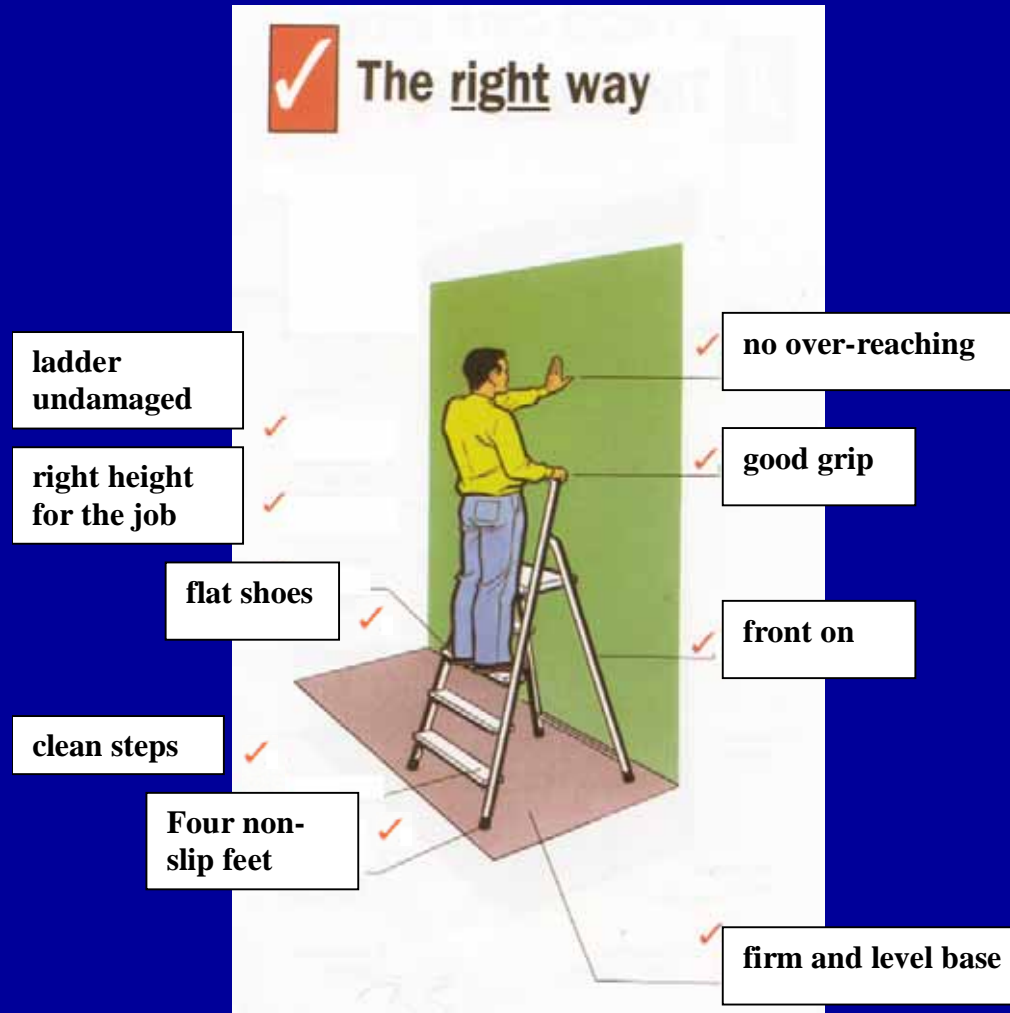
- Overhead work shouldn't entail overreaching
- Rear parts of the steps should not be used as a foot support
- Stepladders are prevented from spreading by means of stays, chains or cords. These should be equal length, kept in good order and should be renewed if found defective



Steps used the wrong way



Steps used the right way





Induction Training Course Test

Ladder Safety

Each member of staff instructed to complete this induction training MUST complete the attached small test. It will provide evidence that you have gone through the course and understand its content.

Print it off, answer the questions and send it to your Health and Safety Co-ordinator.



Return
to start



Click [here](#) to
take the test

More information available at on the
[Health and Safety Unit page: Working at Height](#)