

Bridging the Employment Gap

# Grounds Maintenance



*Simcoe/Muskoka  
Literacy Network*



Human Resources and  
Social Development Canada

Ressources humaines et  
Développement social Canada

# **GROUNDS MAINTENANCE**



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# Bridging the Employment Gap

- Focus on Level 1 Essential Skills
- Based on National Occupation Code Profiles for jobs in 5 sectors
  - Clerical
  - Grounds Maintenance
  - Janitorial
  - Kitchen Help
  - Retail
- Emphasis on community partnerships with job coaches / job developers and with employers
- Student units include Learning Activities (Essential Skills identified), Teaching Aids, Student Activity Sheets, and Demonstrations (including instructor notes, tasks, and assessment.)

## **READY FOR WORK** includes

- **ESSENTIAL SKILLS** training module for tutors
  - Exploring the Essential Skills
  - LBS / ES alignment charts
  - How to Use the Ontario Skills Passport (including NOC)
- **STUDENT UNITS** focused on skills all people need – especially the “soft skills”
  - **Before Applying for the Job**
    - Choosing a Job
    - Fit for the Job
    - Keep Fit
    - Using a Personal Information Wallet Card
    - Going for the Interview
  - **On the Job**
    - Pay Information
    - Form Filling
    - Succeeding in the Workplace: Personal and Interpersonal Skills
      - Working with Others
      - Employee Responsibilities
      - Employer Responsibilities
    - Messages
    - Bus Smart
    - Time
      - Units of Time Measurement
      - Digital Clock
      - Analog clock
      - Measuring Elapsed Time
      - Managing Time
- **EVALUATION**
  - For the Employer
  - For the Support Worker
  - For the Student

## CONTENTS OF SECTOR MANUALS

### CLERICAL

- Safety
- Collating
- Photocopying
- Preparing Envelopes for Mailing
- Taking Telephone Messages
- Making a Telephone Call

### GROUNDS MAINTENANCE

- Safety
- Understanding Hazardous Product Labels
- Tools and Fasteners
- Lawns and Gardens: Tasks and Tools
- Lawnmowers
- Flower Gardens
- Communicating on the Job

### JANITORIAL

- Safety
- Understanding Hazardous Product Labels
- Understanding Signs
- Garbage Bags and Recycling
- Floors, Tables and Windows
- Cleaning the Washroom

### KITCHEN HELP

- Safety
- Loading and Unloading the Dishwasher
- Counting and Patterns
- The Condiment Station: Sorting and Storing Food
- Setting Temperatures: Burners and Ovens
- Measuring Ingredients

### RETAIL

- Safety
- Counting Money
  - Previous experience
  - Loonies and toonies
  - \$5
  - \$10 & \$20
  - Pennies
  - Quarters
  - Nickels & Dimes
  - Putting it all Together
- Sorting Sizes
- Matching UPC Numbers
- Stocking Shelves

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# Background

This is part of Phase 2 of ***Bridging the Employment Gap for Learners with Low Level Literacy Skills***, a project begun in 2001. The focus of Phase 1 of the project was students with the lowest level literacy and basic skills, especially the developmentally challenged population. These students are the hardest to place in jobs and they face significant challenges in getting and keeping employment.

Phase 1 produced job specific sector manuals. These manuals presented step-by-step learning activities for selected tasks in the following sectors:

- Clerical
- Grounds Maintenance
- Janitorial
- Kitchen Help
- Retail.

Activities and teaching aids, as well as some demonstrations, were produced for each of the above sectors. Tasks selected were representative of jobs in which students were being placed. These manuals have been successfully used by a number of agencies, and this led to requests for their augmentation and fuller circulation.

In Phase 2, the focus was expanded to include all Essential Skill Level 1 learners, not just those who are developmentally challenged. To accomplish this, more activities requiring greater skill were created. All the activities have been aligned to the Essential Skills and to the selected National Occupation Classification (N.O.C.) profiles. A summary of the N.O.C. profiles and their Level 1 tasks is included; however, some of the Level 1 tasks from the profiles have yet to be developed. Demonstrations and authentic documents have been added to complement the activities.

As a result of focus group meetings with representatives from Ontario Works, Employment Resource Centres, Community based programs, job developers from Job Connect, job coaches, and literacy instructors, a need for the development of the “soft skills” was identified. There are many other non sector-specific job related skills needed by all employees, for example, form filling skills. **Ready for Work** is the resource which has been developed to address these needs. **Ready for Work** should be used as a complement to each sector manual.

The **Grounds Maintenance** manual will help individuals who may have the opportunity to work for a landscaping company or the municipality doing general yard and garden care, outdoor maintenance, and minor repairs. It includes seven main units: Safety; Understanding Hazardous Product Labels; Tools and Fasteners; Lawns and Gardens: Tasks and Tools; Lawnmowers; Flower Gardens; and Communicating on the Job.

# How to Use This Resource

## NATIONAL OCCUPATION CLASSIFICATION AND THE ESSENTIAL SKILLS

Several N.O.C. profiles were used in planning what tasks to include in the resource manual. The Level 1 skills for the several profiles are printed as they appear in the profiles, and they are also summarized in chart form. Indication is made as to whether that task has been addressed, and if so, in which manual: Clerical, Ready for Work, another sector manual. Sometimes, the specific task has not been taught, but the necessary skill has. If the task has not been taught, it is one that could be developed at some later time, if funding becomes available. Instructors and students can access the full profile by going to the Essential Skills website (Google "Essential Skills.")

## UNIT ORGANIZATION

### • INTRODUCTION

These pages outline the intent of the unit as a whole, and they include the following sub-headings:

- Description of unit
- Prerequisite and additional skills not taught in this unit
  - Skills a student should have before attempting the activities and tasks.
- Objectives
  - Measurable goals which should be met by the end of the unit.
- Materials
  - Materials the instructor/job coach/volunteer will need to gather prior to teaching the unit.
- Vocabulary
  - The words the students will need to be able to recognize, read or hear by the end of the unit. Specific vocabulary exercises are not provided.
  - Instructors/job coaches/ volunteers should be prepared to teach new vocabulary as it arises.
  - New words could be written on vocabulary cards which should then be laminated for multiple usages.
  - Some students will only recognize the words orally, while others may be able to copy and/or spell the words.
  - Some students may benefit from making their own vocabulary cards.
- Resources
  - Sources of information used to develop the unit plus other resources which could be used to augment the learning.

### • ESSENTIAL SKILLS CHART

- The Essential Skills are named across the top of the chart (the abbreviations noted above have been used)

- The Activity Descriptions are listed numerically down the left-hand column of the checklist.
  - The final activity, named D, is the Demonstration.
  - Each learning activity in the unit has been named, numbered and the Essential Skills used in the activity are identified and leveled. This will enable instructors / job coaches/ volunteers to locate tasks which will develop particular skills.
- **LEARNING ACTIVITIES**  
The Learning Activities contain detailed steps which are necessary for low level students. Some students may be able to omit steps in certain units depending upon their expertise in a particular area. A listing of the Essential Skills contained in the activity and the materials needed to complete the activity precede the instructions.
  - **DOCUMENTS**  
Authentic documents have been used as appropriate. We encourage everyone using this resource to gather authentic materials appropriate to their geographic area and /or job placement.  
e.g. Local bus schedules/time-tables;  
Local business application forms
  - **TEACHING AIDS**  
These materials are cross-referenced in the Learning Activities. Their inclusion should facilitate the preparation process. Some of the Teaching Aids incorporate role play situations. These should be laminated or mounted on card stock to make them durable for posting and multiple usage
  - **STUDENT ACTIVITY SHEETS**  
Students will work on these sheets. They will be required to fill in forms, charts, checklists and/or answer questions. These should be photocopied as needed.  
  
On the CD, doc forms of the student sheets are included so that instructors may individualize these for their students
  - **DEMONSTRATION - INSTRUCTOR PAGE**  
This page acts as a summary for the instructor/job coach/volunteer. The skills and achievement indicators of the unit are itemized.
  - **DEMONSTRATION TASKS**  
Demonstration Tasks will be completed by the student at the end of the unit. The skills inherent in the tasks have been taught and practiced throughout the unit (in the Learning Activities and in the Student Activity Sheets.) These demonstration tasks act as a summation of the unit, and may be collected for a student portfolio or for a workplace portfolio. The Task sheets should be photocopied as required.

- **DEMONSTRATION - ASSESSMENT**

This form will show how the student has performed on the tasks and will be a useful tool for instructors/job coaches/volunteers and employers. It could be included in a portfolio to be taken to a job placement or interview. An indicator on all demonstration assessments is student self-assessment. This will help the individual to recognize his or her areas of strength as well as the skills he or she will need to practise further in order to meet with success in the workplace.

## **WHAT I HAVE LEARNED AND SKILLS PRACTISED**

This is a standard self assessment form that can be used at the completion of each demonstration. The object is for the student to understand what Essential Skills have been practiced in the unit and shown in the demonstration. This form may be included in a portfolio, or may be used with a job developer or job coach as a resume is being written. It will also help the student to feel confident about his or her skills, and hopefully will help the student to be able to articulate strengths when interviewed for a job.

## **ABBREVIATIONS USED FOR ESSENTIAL SKILLS (on charts)**

<b>RT</b>	Reading Text
<b>DU</b>	Document Use
<b>W</b>	Writing
<b>N</b>	Numeracy
◦ <b>MM</b>	◦ Money Math
◦ <b>SBA</b>	◦ Scheduling or Budgeting and Accounting
◦ <b>MC</b>	◦ Measurement and Calculation
◦ <b>DA</b>	◦ Data Analysis
◦ <b>NE</b>	◦ Numerical Estimation
<b>TS</b>	Thinking Skills
◦ <b>PS</b>	◦ Problem Solving
◦ <b>DM</b>	◦ Decision Making
◦ <b>JTPO</b>	◦ Job Task Planning & Organization
◦ <b>SUM</b>	◦ Significant Use of memory
◦ <b>FI</b>	◦ Finding Information
<b>WVO</b>	Working With Others
<b>CU</b>	Computer Use
<b>CL</b>	Continuous Learning

## NATIONAL OCCUPATION PROFILES AND THE ESSENTIAL SKILLS

**Three NOC profiles are included in this category: NOC 7621 – Public Works and Maintenance Labourers, NOC 7422 Public Works Maintenance Equipment Operators, and 8612 – Landscaping And Grounds Maintenance Labourers.**

**NOC 7621:** Public works and maintenance labourers perform a variety of labouring activities to maintain sidewalks, streets, roads and similar areas. They are employed by municipal, provincial and federal government public works departments or by private contractors under contract to governments.

Public works and maintenance labourers perform some or all of the following duties:

- Clean and maintain sidewalks, streets, roads and public grounds of municipality and other areas, working as member of crew
- Sweep debris and shovel snow from streets, sidewalks, building grounds and other areas, and load snow and debris into carts or trucks
- Shovel cement and other materials into cement mixers, spread concrete and asphalt on road surfaces using shovels, rakes and hand tampers, and perform other activities to assist in maintenance and repair of roads
- Spread sand or salt on sidewalks for snow and ice control
- Dig ditches and trenches using shovels and other hand tools
- Operate jackhammers and drills to break up pavement
- Operate power mowers and cutters to cut lawns and grass along roadsides
- Cut trees, trim branches, rake leaves, apply fertilizer and insecticides by hand, and water public lawns, trees and shrubs
- Load and unload trucks with supplies and equipment
- Collect money from coin boxes of parking meters along established route
- Collect and load refuse on garbage trucks
- Assist equipment operators to secure attachments to equipment or trucks
- Assist in routine maintenance and repair of equipment
- Assist skilled tradespersons such as carpenters, plumbers and mechanics
- May operate mobile sidewalk-cleaning equipment

**NOC 7422:** This unit group includes workers who operate vehicles and equipment to maintain streets, highways and sewer systems and operate garbage trucks to remove garbage and refuse. They are employed by municipal, provincial and federal public works departments and by private contractors under contract with government public works departments. This unit group includes workers who operate vehicles and equipment to maintain streets, highways and sewer systems and operate garbage trucks to remove garbage and refuse. They are employed by municipal, provincial and federal public works departments and by private contractors under contract with government public works departments

Public works maintenance equipment operators perform some or all of the following duties:

- Operate garbage trucks to remove garbage and other refuse and dump loads at designated sites
- Operate street cleaning equipment such as street sweepers or other vehicles equipped with rotating brushes to remove sand, litter and trash
- Operate snowploughs or trucks fitted with plough blades to remove snow from streets, highways, parking lots and similar areas
- Operate sewer maintenance equipment such as rodders and sewer jet cleaners to maintain and repair sewer systems
- Operate trucks equipped with road sanding and other similar apparatus
- Check, lubricate, refuel and clean equipment and report any malfunctions to supervisor.

**NOC 8612:** Landscaping and grounds maintenance labourers perform manual work to assist in the construction of landscapes and related structures and to maintain lawns, gardens, athletic fields, golf courses, cemeteries, parks, landscaped interiors and other landscaped areas. They are employed by landscaping and lawn care companies, golf courses, cemeteries, and by landscaping departments of governments and private establishments.

Landscaping and grounds maintenance labourers perform some or all of the following duties:

- Spread top soil, lay sod, plant flowers, grass, shrubs and trees and perform other duties to assist with the construction of a landscape and related structures
- Cut grass, rake, fertilize and water lawns, weed gardens, prune shrubs and trees and perform other maintenance duties as directed by supervisor
- Operate and maintain power mowers, tractors, snow blowers, chain saws, electric clippers, sod cutters, pruning saws and other landscape maintenance equipment
- Spray and dust trees, shrubs, lawns and gardens, as directed, to control insects and disease
- Perform other manual duties to clean and maintain landscaped environments.

## SUMMARY OF LEVEL 1 TASKS

Essential Skill	Sample tasks	This resource	Ready for Work	Other	To be developed
READING TEXT	<ul style="list-style-type: none"> <li>Work orders re assignments</li> </ul>	✓	✓	All	
DOCUMENT USE	<ul style="list-style-type: none"> <li>Labels – contents</li> <li>Road signs</li> <li>Hazardous product labels</li> <li>Codes, identification letters &amp; numbers</li> <li>Lists</li> <li>Time sheets</li> <li>Route sheets</li> <li>Symbols and icons on machinery</li> <li>Complete variety of forms – check lists, etc.</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>Kitchen</li> <li>Janitorial</li> <li>Retail</li> <li>Clerical</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
WRITING	<ul style="list-style-type: none"> <li>Time sheets</li> <li>Notes to foreman</li> <li>Daily work reports</li> <li>Log entries (equipment use, etc.)</li> <li>Lists</li> <li>Reminder notes to self</li> <li>Complete variety of forms</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>Clerical</li> <li>Retail</li> <li>Retail</li> <li>Retail</li> <li>Clerical</li> <li>Retail</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
NUMERACY					
Money Math	<ul style="list-style-type: none"> <li>Purchase gas/diesel</li> <li>Total fuel receipts &amp; enter in fuel log book</li> <li>Accept payments</li> </ul>		✓	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	
Measurement & Calculation	<ul style="list-style-type: none"> <li>Measure size of bolts etc for re-ordering</li> <li>Height of trucks – fit under bridge</li> <li>Read gauges (in truck)</li> </ul>	✓		Kitchen	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>
Data Management (Data Analysis)	<ul style="list-style-type: none"> <li>Read graphs and compare</li> </ul>				✓

Numerical Estimation	<ul style="list-style-type: none"> <li>Estimate time required for task</li> <li>Estimate ratio of sand to salt etc.</li> </ul>		✓	Kitchen/ Janitorial	✓
ORAL COMMUNICATION	<ul style="list-style-type: none"> <li>Call out to co-workers when backing up vehicles</li> <li>Listen to called out directions</li> <li>With co-workers &amp; supervisors re task</li> <li>Two-way radio</li> <li>With public re questions about work</li> <li>With suppliers re ordering</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>All</li> <li>Retail /Clerical</li> <li>Clerical</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
THINKING SKILLS					
Problem Solving	<ul style="list-style-type: none"> <li>Weather conditions that interfere with job</li> <li>Equipment breakdowns</li> <li>Problem performing task – solve problem or explain reason for not doing task</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>Clerical</li> <li>All</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
Decision Making	<ul style="list-style-type: none"> <li>Amount of material needed for job</li> <li>Decisions based on weather conditions</li> <li>What garbage to take/leave based on recycling guidelines, etc.</li> <li>Location of public litter baskets</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>		<ul style="list-style-type: none"> <li>Kitchen</li> <li>Janitorial</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>
Job Task Planning & Organization	<ul style="list-style-type: none"> <li>Follow work plan set by supervisor</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>All</li> </ul>	
Significant Use of Memory	<ul style="list-style-type: none"> <li>Operating procedures for equipment</li> <li>Routes for plowing &amp; sweeping</li> <li>Recyclables &amp; hazardous materials in municipality</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>		<ul style="list-style-type: none"> <li>All</li> <li>Janitorial</li> <li>Janitorial</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>
Finding Information	<ul style="list-style-type: none"> <li>Look at road maps – addresses, routes</li> <li>Refer to municipal by-laws</li> <li>Consult mechanics or manufacturers re equipment operation &amp; maintenance</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> </ul>	<ul style="list-style-type: none"> <li>Janitorial / Clerical</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>

WORKING WITH OTHERS	<ul style="list-style-type: none"> <li>• Work alone or independently</li> <li>• As member of a work crew</li> </ul>	✓ ✓	✓ ✓	All All	
COMPUTER USE	<ul style="list-style-type: none"> <li>• Use computer-operated machinery</li> </ul>			Clerical/ Retail	✓
CONTINUOUS LEARNING	<ul style="list-style-type: none"> <li>• Training on new equipment</li> <li>• Safety courses including WHMIS</li> <li>• Sometimes certification required (pesticide application)</li> <li>• On-the-job</li> <li>• Manuals, courses</li> </ul>	✓ ✓ ✓ ✓	✓  ✓ ✓	All All All All	✓  ✓ ✓

**LEVEL 1 ESSENTIAL SKILLS: (reprinted from profile)****Reading Text**

- May read daily orders from supervisors
- Read work orders describing assignments

**Document Use**

- May read labels on boxes to verify contents and destinations.
- May read parking and snow removal signs.
- May read hazardous materials signs
- Complete identification stickers for items to be placed in storage.
- May check off codes on lists to indicate the condition of items being transported.
- May fill in hours worked on invoice forms.
- May read time sheets for a crew of workers.
- May read signs, such as street signs and traffic signs
- May read route sheets, such as garbage pickup lists which indicate both regular and extra pick-ups
- May read identification letters and numbers, such as those on manhole covers
- May read labels on machine parts and on chemical products. The labels may contain symbols or icons
- May fill in checkoff sheets to denote damaged garbage bins and to indicate streets where the collection has been completed
- Read signs to obtain information about directions and warnings.
- Complete a variety of forms, such as time sheets and safety checklists, for record-keeping purposes

**Writing**

- May fill in work reports of tasks completed and hours spent on various activities.
- May complete a "daily comment sheet" to note problems such as the presence of dangerous goods or blocked access to tracks or to roads
- May write notes to foremen to request new equipment or to note problems
- Complete daily report forms to indicate any problems that they had with their vehicles or with customers on the route.
- Make daily log entries to show the number of hours the vehicle was used and the servicing it received.
- May jot reminder notes during meetings with their supervisor or write notes to their supervisor for clarification on an aspect of their work assignment.
- May write lists of needed materials.

- May complete forms, using numbers, words and phrases to record information about job hazards, measurements, production, materials used or time spent in performing various duties.
- May maintain a log book or journal to record information about the day's events, such as the work accomplished and any unusual incidents which occurred.

## **Numeracy**

- Money Math
  - May accept payment from companies bringing loads to landfill dumps
  - Purchase gasoline or diesel for their vehicles.
  - Add fuel receipts and enter them into a fuel log book.
- Measurement and Calculation Math
  - Measure the size of bolts or other items when ordering replacements.
  - Measure the height of their trucks and any extensions to be sure that they will fit under bridges
  - Read gauges in the truck for temperature, amperage, oil and hydraulic pressure to ensure they are within acceptable limits
  - Read gauges in the truck for temperature, amperage, oil and hydraulic pressure to ensure they are within acceptable limits
- Data Analysis
  - May read graphs showing water pump efficiency and compare them to graphs for previous time periods
- Numerical Calculation
  - Estimate how long it will take to perform a task such as snowplowing a stretch of road.
  - Estimate the ratio of sand to salt in the load of a road maintenance vehicle to determine if the ratio should be increased or decreased.

## **Oral Communication**

- Call out to co-workers to guide them when they are backing up vehicles.
- Discuss instructions and schedules with foremen
- Listen for co-workers yelling instructions at a distance, such as a swamper yelling instructions to the driver from the back of a garbage truck.
- Talk to staff at the landfill and the recycling depot concerning the placement of loads.

- Interact with supervisors to receive work assignments and discuss problems.
- Talk with the public to answer their questions concerning what the department is doing.
- Communicate with co-workers via the two-way radio in the cab of the truck to exchange information and co-ordinate tasks.
- May communicate with suppliers. For example, landscaping and grounds maintenance labourers contact suppliers to arrange for the timely delivery of products such as sod.
- Communicate with supervisors to discuss instructions and task. For example, landscaping and grounds maintenance labourers discuss procedures for mixing fertilizers.

### Thinking Skills

- Problem Solving
  - May encounter icy road conditions which make it difficult to position vehicles at garbage bins or storage pick-up areas
  - May find that a load does not fit properly in the truck. They may have to unload the truck completely and begin again.
  - May experience difficulty in using a sidewalk sweeper on narrow streets or on hills. They may have to leave the vehicle and use a manual sweeper and shovel in some areas
  - May encounter poor driving conditions caused by rain, snow or ice. They drive slowly and cautiously, coping with reduced visibility.
  - May find that a garbage can is too heavy to lift. They report the address and the reason for not emptying the can.
  - May have equipment breakdowns. They report the problem and have the equipment taken in for repair. They may have to use alternate equipment during repairs.
- Decision Making
  - May decide on the most suitable locations for public litter baskets.
  - May decide to bring more repair material than the foreman requested, based on their experience of possible additional needs at the work site
  - Decide what garbage to leave at the curb, based on guidelines about recyclable articles.
  - Decide which mixture of sand and salt or calcium to spread on the road based on the weather and road conditions.

- **Job Task Planning and Organization**
  - Public works and maintenance labourers and railway and motor transport labourers follow a work plan set by their supervisors, although they have flexibility in the sequencing of their activities.
- **Significant Use of Memory**
  - Remember the unique operating features of different types of equipment such as compactors, weed eaters and small graders.
  - Remember the routes for plowing and sweeping.
  - Remember what items fall within the various classes of recyclable and hazardous materials.
  - Remember their equipment's operating capacity under certain conditions, such as varying temperatures or icy roads.
  - Remember regular routes and pick-up areas.
  - Remember which nozzles and hoses on sewer flushing equipment are best for various types of problems.
- **Finding Information**
  - Look at road maps to find addresses for pickups, deliveries or repair work.
  - Refer to municipal bylaws to verify parking restrictions or dumping regulations.
  - Consult with mechanics or manufacturers to obtain information about equipment operation and maintenance.
  - check maps when looking for new streets or clients

### **Working With Others**

- Public works and maintenance labourers may work alone to carry out assigned duties such as sweeping streets, collecting coins from parking meters or doing minor road repairs. They often work independently, co-ordinating their activities with co-workers nearby. For instance, parking meter repairs will be done in the shop alongside co-workers performing similar tasks. Mainly, they work as members of a maintenance crew.
- Public works maintenance equipment operators mainly work independently. They may work jointly with a partner or helper or as a member of a team to operate equipment and co-ordinate job tasks.

### Computer Use

- Use computer-operated machinery. For example, they may use a leak correlator which detects leaks by detailing the volumes of water flow and how long pumps were turned on.
- Use computer-operated machinery. For example, they may use a leak correlator which detects leaks by detailing the volumes of water flow and how long pumps were turned on.
- Use other computer applications. For example, they use computer-controlled equipment such as electronically monitored hydraulic systems or electronically controlled sanders which allot the proportions of sand and salt through computer commands

### Continuous Learning

- Public works and maintenance labourers and have a recurring requirement to learn. For example, they receive training on equipment and machine operation.
- Public works maintenance equipment operators receive training from their employer to update their equipment operating skills as new equipment is introduced. They take courses in safety and the handling of dangerous goods and materials.
- Landscaping and grounds maintenance labourers and logging and forestry labourers may also require certification in areas which are subject to regulation, such as the application of herbicides and pesticides.
- Learning may be acquired:
  - As part of regular work activity.
  - From co-workers.
  - Through training offered in the workplace.
  - Through reading or other forms of self-study
    - At work.
    - Using materials available through work.
  - Through off-site training

### Other Information

- **Physical Aspects**  
Primary production labourers use a variety of body positions including crouching, crawling, standing and walking.
- **Attitudes**  
The primary production labourers interviewed felt that primary production labourers

should be safety-conscious and have a positive attitude. They should be willing to work under adverse conditions, either related to weather or to working underground.

- **Future Trends Affecting Essential Skills**

Primary production labourers may encounter heightened regulatory requirements in the areas of health and safety and in the transportation and use of dangerous goods. They may need to upgrade their text reading and document use skills to deal effectively with materials used to prepare for certification exams.



# What I Have Learned and Skills Practised

Name: \_\_\_\_\_ Activity: \_\_\_\_\_

## Essential Skills

<i>Essential Skills Used</i>	Reading Text	Document Use	Writing	Numeracy	Oral Communication	Thinking Skills	Working with Others	Computer Use	Continuous Learning
What I Did									



# Safety



# Safety

This unit deals with a worker's guide to health and safety in the workplace. It is a generic unit, not sector specific, but it is included in each sector manual. As the authentic material is written for the general population, it may be necessary to read aloud most of the Teaching Aids for students with the lowest literacy skills.

The activities are mostly in discussion format, although tasks related to the classroom, which are transferrable to the workplace, have been included. Several government publications are available through the Internet to augment these materials. These websites should always be checked before using to be sure that they are up to date.

Because mechanical equipment, such as lawnmowers, leaf-blowers, and snow-blowers are used by workers in this sector, special training for safe operation **must be** given at the workplace on the specific piece of equipment.

Hazardous products are also often used by workers in this sector, so the same unit as is found in the **Janitorial** resource manual on understanding the hazardous product labels (WHMIS) is included in this manual. WHMIS training would be required at the workplace.

## PREREQUISITE AND ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Using Internet to access a website
- Filling in a simple chart
- Locating information in lists, charts and texts using key words, skim and scan, etc.
- Making simple inferences
- Filling in blanks with appropriate words
- Reflecting on past experience and thinking about future possibilities

## OBJECTIVES

The student will

- Understand the general rights and responsibilities of both employers and workers with regard to workplace safety
- Know how to ask for training in order to be safe
- Know how to refuse unsafe work
- Know about reporting accidents or injuries
- Know how to keep a workplace safe
- Know how to recognize hazards in a workplace

## MATERIALS

- *Understanding Hazardous Product Labels* in the **Janitorial** resource manual: This is the sector that deals more fully with WHMIS issues because of the products used on a daily basis.
- **Ready for Work** resource manual: The *Succeeding in the Workplace: Personal and Interpersonal Skill*, *Fit for the Job*; and *Form Filling* units are referenced as providing additional or supportive activities for this unit.
- Collection of articles from newspapers about workplace accidents or injuries. Collect these over time and keep in a file.
- Posters from local safety associations, WSIB, etc.

## VOCABULARY

- |             |                        |
|-------------|------------------------|
| • Accidents | • Orientation          |
| • Control   | • Personal             |
| • Danger    | • Procedures           |
| • Emergency | • Protect / Protective |
| • Equipment | • Responsibility       |
| • Hazard    | • Rights               |
| • Immediate | • Safety               |
| • Law       | • Training             |
| • Long term | • WHMIS                |
| • Operating |                        |

## RESOURCES

- [www.worksmartontario.gov.on.ca](http://www.worksmartontario.gov.on.ca) This is the main site. Select “My Health and Safety at Work” and use the menu to find appropriate resources.
- [www.labour.gov.on.ca/english/hs/ohsaguide/index.html](http://www.labour.gov.on.ca/english/hs/ohsaguide/index.html) This is the Ministry website for the complete Occupational Health and Safety Act, 1990. It is a very long document and not in student-friendly language; however, it is referenced here as a possible resource for specific questions you may encounter.
- [www.whsc.on.ca](http://www.whsc.on.ca) The Workers Health and Safety Centre provides general health and safety training as well as programs and training modules specific to each industry sector
- [www.ohcow.on.ca](http://www.ohcow.on.ca) The Occupational Health Clinics for Ontario Workers provides information and diagnostic services about occupational diseases such as repetitive strain injuries, noise induced hearing loss, respiratory problems and cancer.
- [www.wsib.on.ca](http://www.wsib.on.ca) The Workplace Safety and Insurance Board is a comprehensive resource. Search “Launching a Safe Start” and choose “Right and Responsibilities”.
- <http://www.nald.ca/library/learning/wkplace/cover.htm> Go to the chapter on WHMIS.

- [www.labour.gov.on.ca](http://www.labour.gov.on.ca) search for “Protecting Yourself: Tips for Young Workers (This is printed in the Teaching Aids, but there is lots more available here.)
- Contact your local WSIB office to find brochures and use their resource personnel as guest speakers or to help you find additional job specific information or teaching aids.
- [www.ccohs.ca/oshanswers/occup\\_workplace/landscapers.html](http://www.ccohs.ca/oshanswers/occup_workplace/landscapers.html) This site discusses risks to people in this sector.
- <http://www.uta.edu/policy/forms/ehs/15ground.pdf> This site is a pdf resource for grounds maintenance safety: it has sections on power and hand tools as well as general lawn safety.

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Rights and responsibilities									2	1	1		*				*
2.	Everyone has a part to play	1	1							2	1	1		*				*
3.	The employer plays a part	1	1							2	2	2		*				*
4.	Hazards	1	1							2	2	2		*				*
5.	Learn how to protect yourself									2				*				*
6.	Personal protective equipment (PPE)	1	1							2	1	1		*				*
7.	Safe operating procedures (SOPs)	1	1							2	1	2		*				*
8.	Emergency procedures	1	1							2	2	2		*				*
9.	Protecting yourself	1	1							2	1	1		*				*
10.	Reporting injuries	1	1							2	2	1		*				*
11.	Special risks									2	2	1		*				*
D	Safety in the Workplace	1	1	1						2	2	1		*	1			

## LEARNING ACTIVITIES

<p><b>1. RIGHTS AND RESPONSIBILITIES</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>My Basic Health and Safety Rights</i></li> </ul>
<p>Explain to students that whenever they start a new job, they need to know their rights and their responsibilities.</p> <p>Ask students if they understand a “right” (something they are entitled to), and a “responsibility” (something they need to do to play their part.) For example, they can vote after they are 18 years old (right), and they should go and vote (responsibility). Another example: (right) they have the right to feel safe in their workplace; (responsibility) they must do their part to keep the workplace clean and safe and to treat others fairly.</p> <p>Discuss other scenarios of rights and responsibilities with students. (If you give new scenarios and ask students to say what they should or should not do, then the Problem Solving and Decision Making become Level 2 as the consequences of not perceiving the complete problem, or of making wrong decisions become more serious.)</p> <p>Refer to Teaching Aid: <i>My Basic Health and Safety Rights</i> from Work Smart Ontario website (see RESOURCES).</p>	

<p><b>2. EVERYONE HAS A PART TO PLAY</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>The Law</i></li> <li>• Teaching Aid: <i>Rights and Responsibilities.</i></li> </ul>
<p>Explain to students that workers have rights and responsibilities in the workplace. Refer to Teaching Aids: <i>The Law</i> and <i>Rights and Responsibilities</i>. Read and discuss each bullet. For example:</p> <ul style="list-style-type: none"> <li>• They must participate in keeping the workplace healthy and safe. What might be some ways to keep a store healthy and safe? (aisles clear, etc)</li> <li>• They must recognize and refuse unsafe work. What might be unsafe in a warehouse?</li> <li>• They must practise safe work procedures. Think of examples.</li> <li>• They must wear protective equipment required by the job. (steel-toed shoes might be required; etc.)</li> </ul> <p>They must not do anything on the job that would endanger themselves or others.(examples)</p> <p>** This Teaching Aid and several that follow are from the WSIB “Launching a Safe Start” resource, which is available on-line. See RESOURCES for website.</p>	

<p><b>3. THE EMPLOYER PLAYS A PART</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>The Law</i></li> <li>• Teaching Aid: <i>Rights and Responsibilities.</i></li> <li>• Student Activity Sheet: <i>I Don't Feel Safe</i></li> </ul>
<p>Refer to Teaching Aids: <i>The Law</i> and <i>Rights and Responsibilities.</i></p> <p>Find the employer's responsibilities. For example, the employer must make sure that safety equipment is provided and that machinery is used properly and maintained well. How do you think an employer might do this? Who might help him with this on the jobsite? What might happen if the employer does not fulfill his responsibilities? (example, fails to keep machinery in good working order, or does not provide training.)</p> <p>Use Student Activity Sheet: <i>I Don't Feel Safe</i></p>	

<p><b>4. HAZARDS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What is a Hazard?</i></li> <li>• Teaching Aid: <i>Hazards</i></li> <li>• Teaching Aid: <i>Hazard Control</i></li> </ul>
<p>Ask students if they understand the meaning of the word “hazard”.</p> <p>Explain that they encounter hazards every day in their lives: for example, walking across a busy street. Ask what they do to face that hazard. How did they learn this? Did someone teach them?</p> <p>Refer to Teaching Aid: <i>What is a Hazard?</i> The instructor will need to choose examples that relate to students’ specific situations or plans. Do not attempt to read this Teaching Aid directly with students as it is very complex.</p> <p>Now, say that they will need to be trained to recognize and deal with hazards in the workplace. Each workplace will be different. Discuss examples and come up with more of your own. Sometimes protective equipment must be worn. (See Learning Activity 6)</p> <ul style="list-style-type: none"> <li>• Landscaping equipment such as lawnmowers and leaf blowers make a lot of noise. If it is too loud, it can be a hazard to your hearing.</li> <li>• If boxes are left lying in the aisles, this could cause a falling hazard.</li> <li>• Maintenance workers often use tools that are very sharp and powerful. They can be dangerous if not used properly or if they are not in good working order.</li> <li>• Products such as pesticides are toxic, and there will be safe handling procedures to be learned.</li> </ul> <p>Discuss the concepts of immediate and long term hazards. Immediate hazards must be rectified right away (such as a spill.) Long term hazards (such as loud noise,) should be reported promptly but the solution may take time.</p> <p>Discuss what they should do if they recognize a hazard at work: for example, spilled cleaning product. Because there is an immediate danger to anyone in the area, it must be dealt with right away. Should they tell someone? Should they clean it up themselves? (No one answer) What should be done to prevent further problems?</p> <p>Use Teaching Aids: <i>Hazards</i> and <i>Hazard Control</i> for further discussion.</p>	

<p><b>5. LEARN HOW TO PROTECT YOURSELF</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• <i>Understanding Hazardous Product Labels</i> in this manual</li> <li>• Sample home cleaning products showing WHMIS symbols</li> </ul>
<p>Ask if students have heard the term “WHMIS.”</p> <p>Tell the students the letters stand for “Workplace Hazardous Materials Information System.” Explain that this system was designed to help workers know how to handle chemicals and other products safely. You should show samples of hazardous industrial cleaning products as they might relate to their jobs, and draw students’ attention to labels on the product.</p> <p>The <i>Understanding Hazardous Product Labels</i> in this manual will further develop skill in this area.</p> <p>Ask if they have seen some of these symbols on products at home. Show a couple of examples. Explain that some household cleaning materials might not have a hazardous symbol displayed on the label; however, a manufacturer’s size requires a label and these should be recognized by the student. Tell students that if a chemical has been poured from a large container to a smaller one, then the workplace is required to display the warning label on the smaller label too.</p>	

<p><b>6. PERSONAL PROTECTIVE EQUIPMENT (PPE)</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Hazard Control</i></li> <li>• Teaching Aid: <i>Learn How to Protect Yourself</i></li> <li>• <i>Understanding Hazardous Product Labels</i> in this manual</li> </ul>
<p>Explain that if they are working with chemicals, some protective equipment might be necessary. For example, gloves if handling strong detergent or bleach; closed, non-slip shoes or boots anywhere in a warehouse.</p> <p>Again, use the <i>Understanding Hazardous Product Labels</i> in this manual for further learning activities.</p> <p>Use the Teaching Aids: <i>Hazard Control</i> and <i>Learn How to Protect Yourself</i>. Read and discuss each point. Make sure students can identify the protective clothing icons.</p>	

<p><b>7. SAFE OPERATING PROCEDURES (SOPS)</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Student Activity Sheet: <i>I Can Do It</i></li> <li>• <b>Ready for Work</b> resource manual</li> </ul>
<p>Ask students what it means to operate a piece of equipment safely. Explain that equipment comes in all shapes and sizes: for example, a stapler is a piece of equipment; a can opener is a piece of equipment. Some equipment might require a special license for operation, such as a fork-lift.</p> <p>Explain that all equipment needs to be used safely, and workers need to be shown how to use it properly.</p> <ul style="list-style-type: none"> <li>• Ask students what kind of equipment they might have to use in maintenance or landscaping: for example, lawn mower, a wheel barrow, a hammer.</li> </ul> <p>Use common pieces of equipment found in the classroom or at home to demonstrate safe operation. First you should give “training” on how to use the equipment safely. Then, ask students to demonstrate that they can use the equipment safely. For example: coffee maker, stapler, hammer. Focus on their <b>ability to remember and use “training”</b> that you gave.</p> <p>Use Student Activity Sheet: <i>I Can Do It</i> as a follow up. Add items to the list, and delete ones that you did not use.</p> <p>Refer to <i>Fit for the Job</i> in <b>Ready for Work</b>. There is an opportunity to list pieces of equipment they have used, or know how to use, safely.</p>	

<p><b>8. EMERGENCY PROCEDURES</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Student Activity Sheet: <i>Health and Safety in the Classroom</i></li> <li>• <b>Ready for Work</b> resource manual</li> </ul>
<p>Explain that every workplace has emergency procedures and plans. Workers must get to know these emergency procedures as soon as they are hired.</p> <p>Your classroom is a workplace. The emergency procedures for the classroom will be similar to those in the workplace. Ask students the following. (Add more of your own.)</p> <ul style="list-style-type: none"> <li>• Where is the fire exit?</li> <li>• Where is the first aid kit?</li> <li>• What should be in the first aid kit? (This will vary from workplace to workplace.)</li> <li>• What is expected of you in the classroom to keep it safe?</li> <li>• What is expected of you in the classroom to be respectful to others?</li> <li>• Do you have to wear protective clothing for any activities? For example, if you are allowed to cook in your classroom, are there oven mitts?</li> </ul> <p>Use Student Activity Sheet: <i>Health and Safety in the Classroom</i>. Emphasize that all the safety procedures they are using in the classroom are transferrable to workplaces. When they start a new job, they will be given an orientation. Safety and emergency procedures should be included. If they are not, what should they do? (Ask for training. See Learning Activity 3 and Student Activity Sheet: <i>I Don't Feel Safe</i> if they have forgotten.)</p> <p>Set up a scavenger hunt in the classroom. Before students arrive, make several unsafe situation: spilled water, blocked aisles, overturned chair, too many chairs in a stack, overhead projector cord running across classroom floor, garbage, etc. Tell students to find the unsafe or unhealthy things in the classroom. Discuss their findings. Make sure to correct each situation before proceeding with class.</p> <p>**</p> <p><i>Succeeding in the Workplace: Personal and Interpersonal Skills</i> in <b>Ready for Work</b> contain activities about respect and harassment, which fall under personal safety.</p>	

<p><b>9. PROTECTING YOURSELF</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Articles from newspaper about workplace accidents, health or safety</li> <li>• Teaching Aid: <i>Protecting Yourself</i></li> </ul>
<p>Tell the students that an average of 42 young workers are injured or killed on the job every day in Ontario. Explain that workplace accidents can happen at any job and can cause serious injuries. That is why health and safety is so important.</p> <p>Refer to Teaching Aid: <i>Protecting Yourself</i>.</p> <ul style="list-style-type: none"> <li>• Read “Candace’s Story” to the students. Discuss the students’ reactions to this situation.</li> <li>• Examine each section on the Teaching Aid and discuss with students. You will probably need to read this aloud, or you could photocopy and enlarge each section to present separately.</li> <li>• Make flashcards of the bolded words from the final section, “How to Protect Yourself” with the students. Discuss them then display them in the classroom. Encourage students to refer to these frequently.</li> </ul> <p>Ask if students have seen commercials on TV about health and safety in the workplace.</p> <p>Clip articles from the local paper that report on workplace accidents; keep these in a file or post on the walls to use as discussion starters.</p> <p>Contact local safety associations for posters, etc. Ask someone to come as a guest speaker from WSIB or other safety association.</p>	

<p><b>10. REPORTING INJURIES</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Student Activity Sheet: <i>I Had an Accident</i></li> <li>• <b>Ready for Work</b> resource manual</li> </ul>
<p>Whenever an accident occurs, or when someone is injured, it must be reported. There will often be a form to complete.</p> <p>Who would they report to in the classroom? Who do they think they should report to in a workplace? How would they know who this person would be?</p> <p>Role play some possible scenarios for how to report an accident. Use Student Activity Sheet: <i>I Had an Accident</i>. The student should say who should be told, and should practise telling it. (Improvise questions to ask the injured person.) What does the student think should happen next?</p> <p>There is a sample Accident Reporting form as the demonstration activity for <i>Form Filling</i> in the <b>Ready for Work</b> resource manual.</p>	

<p><b>11. SPECIAL RISKS</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Computer with Internet access</li> </ul>
<p>Explain that people working maintaining grounds, especially in public parks, face special risks. These include</p> <ul style="list-style-type: none"> <li>• Exposure to infectious human and animal waste</li> <li>• Irritation or allergic reaction to plants, insect bites or stings</li> <li>• Certain viruses, like West Nile</li> <li>• Exposure to pesticides and other chemicals</li> <li>• Pain or injury from lifting or carrying heavy objects, or from working in awkward positions</li> <li>• Noise, especially from power equipment</li> <li>• Extreme temperatures and exposure to sun</li> <li>• Working near power lines</li> <li>• Working with heavy machinery</li> </ul> <p>Discuss each risk and ask them how they think they might protect themselves. Emphasize that they should always ask for training on the safe way to do any job they are given.</p> <p>Safety will be a part of each of the units and specific procedures discussed. Wearing or using personal protective equipment, including sunscreen, insect repellent, hats, sunglasses or safety goggles is a main way they can protect themselves.</p> <p>The website <a href="http://www.ccohs.ca/oshanswers/occup_workplace/landscapers.html">www.ccohs.ca/oshanswers/occup_workplace/landscapers.html</a> discusses risks to people in this sector.</p>	





Ministry of  
Labour

[www.WorkSmartOntario.gov.on.ca](http://www.WorkSmartOntario.gov.on.ca)  
**My basic health & safety rights**

The Occupational Health and Safety Act gives every worker important rights.

### What are some of my basic rights?

1. **The right to know.** You have the right to know the hazards in your job. Your employer or supervisor must tell you about anything in your job that can hurt you. Your employer must make sure you are provided with the information you need so that you can work safely.

[Want to know more about hazards?](#)

2. **The right to participate.** You have the right to take part in keeping your workplace healthy and safe. Depending on the size of the company, you can be part of the Health and Safety Committee or be a Health and Safety Representative. You also have the right to participate in training and information sessions to help you do your job safely.

[Want to know more about Health and Safety Committees?](#)

3. **The right to refuse unsafe work.** If you believe your job is likely to endanger you, you have an obligation to report the unsafe situation to management. If the situation is not corrected and you feel your health and safety is still in danger, you have the right under the OHS Act to refuse to perform the work without reprisal.

[Want to know more about refusing unsafe work?](#)



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## The Law

Federally regulated workplaces include:

- post office
- airlines
- airports
- inter-provincial transportation
- telephone
- banks

There are two sets of laws and regulations for health and safety in Ontario:

- *Canada Labour Code (CLC), Part II* for workplaces under federal jurisdiction
- *The Occupational Health and Safety Act (OHSA)* for workplaces under provincial jurisdiction

These laws and regulations outline the rights, roles and responsibilities of workers, supervisors, employers and other workplace parties.

Most workplaces in Ontario are provincially regulated. Examples of workplaces under federal jurisdiction are listed at the side.

If you are not sure if your workplace is under provincial or federal jurisdiction, contact the Ministry of Labour office or Human Resource and Skills Development Canada. See who to contact on page 12 for more information.

[http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/\\$File/ASafeStartWorker.pdf](http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/$File/ASafeStartWorker.pdf)

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## Rights and Responsibilities

### Worker rights

You have the right to

- Know about hazards in your workplace
- Participate in keeping the workplace healthy and safe
- Refuse unsafe work

### Worker responsibilities

- Always practice safe work procedures
- Report unsafe conditions as quickly as possible to your supervisor or employer
- Properly wear any protective equipment the job requires
- Do not do anything on the job that will endanger yourself or others

### Employers must

- Take every reasonable precaution to protect a worker's health and safety
- Make sure necessary safety equipment is provided, used properly and maintained
- Inform workers and supervisors of any hazards and how to handle them
- Ensure that safe procedures are followed in the workplace
- Provide information, instruction and competent supervision to protect the health and safety of workers

### Supervisors must

- Take every reasonable precaution to protect a worker's health and safety
- Inform workers of job hazards and ensure they are trained to do their jobs safely
- Ensure that workers work safely and use the equipment and protective devices properly where required

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## What is a hazard?

A hazard is generally anything that can hurt you or make you ill.

### Table of Contents

1. [What's the difference between hazards at work and in everyday life?](#)
2. [How can I recognize hazards at work?](#)
3. [What if I recognize a hazard at work?](#)

### What's the difference between hazards at work and in everyday life?

You deal with hazards in your life every day walking across busy streets, driving and playing sports. Generally, you don't worry too much about these situations. Why? Because you've learned from an early age how to deal with everyday hazards.

You've learned from your own experiences, and you've been trained by parents, teachers and coaches. Municipalities install traffic lights and pedestrian crossings, car manufacturers install safety equipment. You might have taken driver's training and you probably wear protective gear playing sports.

***But you haven't been trained how to recognize, assess and control hazards found in the workplace.*** That's one of the reasons why young workers are so likely to be injured at work.

You need to do some quick studying about workplace hazards so you're as comfortable with spotting hazards and dealing with them at work as you are at home, in the car and on the street.

### How can I recognize hazards at work?

The first step to protecting yourself is being able to recognize hazards in the work you're assigned and in the conditions you're working in. There are four main types of hazards:

**Physical hazards** are the most common and will be present in most workplaces at one time or another. They include unsafe conditions that can cause injury, illness and death.

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## What is a Hazard, pg 2.

They are typically easiest to spot but, sadly, too often overlooked because of familiarity (there are always cords running across the aisles), lack of knowledge (they aren't seen as hazards), resistance to spending time or money to make necessary improvements or simply delays in making changes to remove the hazards (waiting until tomorrow or a time when "we're not so busy").

None of these are acceptable reasons for workers to be exposed to physical hazards.

Examples of physical hazards include:

- electrical hazards: frayed cords, missing ground pins, improper wiring
- unguarded machinery and moving machinery parts: guards removed or moving parts that a worker can accidentally touch
- constant loud noise
- high exposure to sunlight/ultraviolet rays, heat or cold
- working from heights, including ladders, scaffolds, roofs, or any raised work area
- working with mobile equipment such as fork lifts (operation of fork lifts and similar mobile equipment in the workplace requires significant additional training and experience)
- spills on floors or tripping hazards, such as blocked aisle or cords running across the floor.

**Biological hazards** come from working with animals, people or infectious plant materials. Work in day care, hospitals, hotel laundry and room cleaning, laboratories, veterinary offices and nursing homes may expose you to biological hazards.

The types of things you may be exposed to include:

- blood or other body fluids
- fungi
- bacteria and viruses
- plants
- insect bites
- animal and bird droppings.

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## What is a Hazard, pg 3.

**Ergonomic hazards** occur when the type of work, body position and working conditions put strain on your body. They are the hardest to spot since you don't always immediately notice the strain on your body or the harm these hazards pose. Short-term exposure may result in "sore muscles" the next day or in the days following exposure, but long term exposure can result in serious long-term injuries.

Ergonomic hazards include:

- poor lighting
- improperly adjusted workstations and chairs
- frequent lifting
- poor posture
- awkward movements, especially if they are repetitive
- repeating the same movements over and over
- having to use too much force, especially if you have to do it frequently.

**Chemical hazards** are present when a worker is exposed to any chemical preparation in the workplace in any form (solid, liquid or gas). Some are safer than others, but to some workers who are more sensitive to chemicals, even common solutions can cause illness, skin irritation or breathing problems.

Beware of:

- liquids like cleaning products, paints, acids, solvents especially chemicals in an unlabelled container (warning sign!)
- vapours and fumes, for instance those that come from welding or exposure to solvents
- gases like acetylene, propane, carbon monoxide and helium
- flammable materials like gasoline, solvents and explosive chemicals.

The Workplace Hazardous Materials Information System (WHMIS) is designed to make sure you have the information you need to evaluate any hazards and take action to protect yourself.

Looking for more information on [WHMIS?](#)

[www.WorkSmartOntario.gov.on.ca](http://www.WorkSmartOntario.gov.on.ca)

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## What is a Hazard, pg 4.

### What if I recognize a hazard at work?



Some hazards, such as unguarded machinery, pose immediate dangers: a worker could lose a finger or arm. Other types of hazards, such as ergonomic hazards can injure a worker over a long period of time, but the full extent of the damage (such as chronic strain or a muscle impairment) may not show up until after several months or years of exposure to the hazard.

Both types of hazards need to be fixed. Some require immediate attention because exposure to them can cause injury to you and fellow workers NOW. They can be quickly fixed by cleaning up the floor, putting a guard back on or installing a guardrail, for instance. Hazards that can hurt you in the long term also need to be identified and reported promptly. Interim solutions should be sought right away, such as rotating tasks with other workers, but permanent elimination of the hazard may take a little more time to achieve.

Once you've recognized a hazard, assessing its potential to cause injury and the extent of the hazard is a necessary step in determining how the hazard can be addressed.



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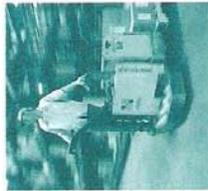
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## Hazards

A workplace hazard is any condition, practice, behaviour, or a combination of these that can cause injury or illness to a person or damage to property. Here are some examples.



- Health hazards**
- Excessive noise
  - Radiation
  - Biological agents such as infectious diseases
  - Ergonomic problems such as repetitive motion, force or awkward body positions
  - Chemicals



### Safety hazards

- Poor housekeeping
- Machine belts and pulleys, sharp blades, and moving parts
- Energy hazards: electricity, hydraulics, steam, heat, or gravity
- Material handling using conveyors, lift trucks, tow motors and manual lifting
- Inappropriate or unsafe work practices

**What should you do?**  
Be sure to receive training specific to the equipment, materials and work processes in your workplace.

Ask questions about the potential hazards in your job and the hazards in the workplace around you.

Always be on the lookout for hazards. Report hazards to your supervisor as soon as you identify them.



Machinery is guarded with a metal cage to protect the worker.



A lockout device is used to ensure that no one can start a machine while a worker is cleaning, repairing or maintaining it.

[http://www.wsib.on.ca/wsib/wsbsite.nsf/LookupFiles/PreventionToolsLaunchingSafeStartWorkersGuide/\\$File/ASafeStartWorker.pdf](http://www.wsib.on.ca/wsib/wsbsite.nsf/LookupFiles/PreventionToolsLaunchingSafeStartWorkersGuide/$File/ASafeStartWorker.pdf)

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## Hazard Control

### What should you do?

Be aware of hazards that can result in injury or death.

- ✓ slips and falls
- ✓ electrical hazards
- ✓ machinery
- ✓ confined space
- ✓ moving vehicles
- ✓ hazardous chemicals
- ✓ over-exertion
- ✓ falling objects
- ✓ burns
- ✓ workplace violence
- ✓ explosions and fires
- ✓ collapsing platforms or equipment

Hazards should be eliminated or at least controlled to minimize exposure to risk. Here are a variety of ways to control hazards.

- Substitution with a less hazardous material, process or equipment
- Re-engineering equipment or a work process
- Installing physical barriers like machine guarding
- Personal protective equipment (PPE)
- Ventilation



Worker wearing personal protective equipment



Worker in control room isolated from sound and other hazards

Personal protective equipment may be necessary in some environments.



boots



gloves



hardhat



eyegoggles



earmuffs



earplugs

[http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/\\$File/ASafeStartWorker.pdf](http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/$File/ASafeStartWorker.pdf)

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## Learn how to protect yourself

### WHMIS

WHMIS is the Workplace Hazardous Materials Information System. This system was designed to make sure that workers across Canada know how to safely handle chemicals. It is also the law. Everyone in the workplace must receive WHMIS training that relates to the workplace, including you.

WHMIS has three parts;

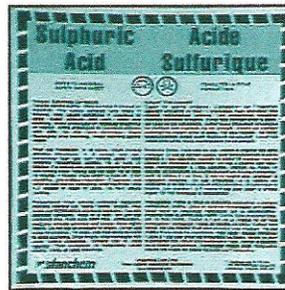
- Warning labels
- Material Safety Data Sheets (MSDS)
- Worker Training

### Personal protective equipment (PPE)

You are responsible for properly wearing any special protective equipment that your job requires. Using it will help protect you from injury and illness. Be sure it fits right and meets approved standards.

Here are some examples.

- Hard hats to protect your head
- Hair nets to keep your hair from becoming caught in machine parts
- Non-slip safety boots – look for CSA approval
- Gloves to protect your hands
- Hearing protection to block out dangerous levels of noise
- Safety glasses or goggles to protect your eyes



WARNING LABEL

### What should you do?

Be sure to receive WHMIS training.

Check warning labels and ask to see the MSDS before you start handling substances.

Read and follow the guidelines for use.

### What should you do?

Ask if there is any protective equipment that you should be wearing when doing your job. If there is, learn how to wear it properly.

[http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/\\$File/ASafeStartWorker.pdf](http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/PreventionToolsLaunchingaSafeStartWorkersGuide/$File/ASafeStartWorker.pdf)

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## Protecting Yourself

### Tips for --Young Workers

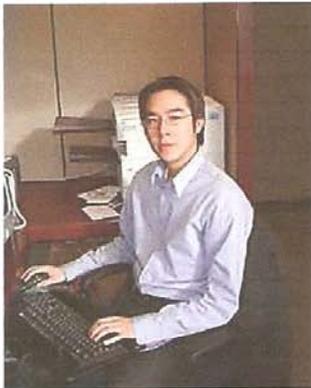
Health and Safety Tip Sheets

Issued: June 2004

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Other ways to get copies of this Guideline



By law, you have basic rights, including:

1. The Right to Know about what hazards there are in your workplace and to know what to do to prevent injuries from them.
2. The Right to Participate in health and safety activities in your workplace without fear of discipline.
3. The Right to Refuse work that you reasonably believe can be dangerous to yourself or others.

However, you also have responsibilities including:

1. Work Safely: use all

### Don't say it'll never happen

An average of 42 young workers are injured or killed on the job every day in Ontario. Workplace accidents can happen at any job and can cause serious injuries. Just read Candace's story.

#### Candace's Story

Safety wasn't the first thing on Candace Carnahan's mind when she began a summer job in a paper mill. Tragically, however, in a near fatal episode her foot became caught in a conveyor belt, dragging her helplessly until the machine could be stopped. The catastrophe left her with an amputated leg. It almost claimed her life. Proper safety practices could have prevented this and countless other tragedies, which affect thousands of young workers every year.

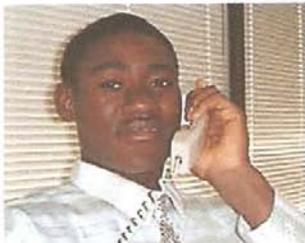


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[www.passporttosafety.com](http://www.passporttosafety.com)

[www.labour.gov.on.ca/english/hs/tips/tips\\_youngworkers.html](http://www.labour.gov.on.ca/english/hs/tips/tips_youngworkers.html)

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- machinery and equipment the way you were trained to.
2. **Report Hazards:** if you know that Ontario's health and safety laws are not being followed, you must report the circumstances to your supervisor or employer as soon as possible.
  3. **Use or Wear Protective Devices:** don't remove a guard or device designed to protect you. Wear your safety gear--it's the law.



Protect yourself. Know your rights and responsibilities.

For more information for young workers go to [www.youngworker.ca](http://www.youngworker.ca) or [www.WorkSmartOntario.gov.on.ca](http://www.WorkSmartOntario.gov.on.ca)

If you need help with a concern about safety in your workplace, call the local office of the Ontario Ministry of Labour (listed in the blue pages of your phone book) or 1-800-268-8013.

You go to driving school to become a safer, smarter driver, so why not get the same advantage in the workplace? A \$9.00 lifetime Passport to Safety membership provides a standardized safety test, a nationally recognized safety transcript for you to attach to your résumé, and 24/7 access to workplace safety resources. Find out more about it at: [www.passporttosafety.com](http://www.passporttosafety.com)

**Produced by the Ontario Ministry of Labour, June 2004**

*The Ontario Ministry of Labour does*

### Questions we often ask ourselves about our jobs:

- How do I look?
- What will my co-workers think about me?
- Will I be able to keep the job?
- How much money will I make?

### However, we need to consider other issues:

- Will I be trained enough in order to do my job safely?
- Am I able to recognize possible hazards?
- Do I know my rights and responsibilities?
- Could an accident disfigure me or cost me my life?

### Some signs that a workplace may be unsafe . . .

- Other employees are getting injured on the job
- You work without direct supervision
- You have not been trained properly
- Equipment is unguarded or broken
- Chemical containers aren't labelled
- Shortcuts are used to save time
- Poor housekeeping and maintenance, e.g. floors are slippery and electrical cords are frayed

### How to protect yourself . . .

- **Learn** to do the job safely. Are you in any danger?
- **Think** the job through. Know what to do when there's an injury or emergency situation.
- **Ask, Ask, Ask**--There are no stupid questions.
- **Get help**, especially if you have to lift something heavy.
- **Wear the gear**--Find out what to wear to protect yourself, how to wear it and how to maintain it.
- **Inform** your supervisor if you see anything unsafe that may hurt you or someone else.
- **Report injuries**--If you get hurt, it's your job to tell your supervisor.
- Talk to your family about your job. Sometimes they know something you don't know!

Minimum Age Requirements for Working in Ontario	
<b>14 years old</b>	Establishments such as offices, stores, arenas, restaurant serving areas.
<b>15 years old</b>	Factories (other than logging operations), restaurant kitchens and warehouses.
<b>16 years old</b>	Construction, surface mine (except the working face); logging operations; mining plants.
<b>18 years old</b>	Underground mining or a working face of a surface mine; window cleaning.

[www.labour.gov.on.ca/english/hs/tips/tips\\_youngworkers.html](http://www.labour.gov.on.ca/english/hs/tips/tips_youngworkers.html)

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**If you think your job is unsafe, do something about it.**

 **Ontario**  
*Protecting our most valuable resource*

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# Don't Feel Safe

Read each situation, or listen to your instructor read it. Role play what you would do with another student or with your instructor as the supervisor.

## SITUATION 1

The cord on the power drill has frayed. You have even seen sparks. You are told to use this tool to drill holes in the wall to mount a sign. You do not feel safe. What should you do?

## SITUATION 2

There is an **unlabelled** container that you have been told contains a strong pesticide. You do not feel safe. What should you do?

## SITUATION 3

You are told to go in the truck for the day to a wooded park that needs clean-up. Only one other person will be working with you. This person has frequently made rude or inappropriate comments to you and tried to grab you. You do not feel safe. What should you do?



## I Can Do It

For each example, check if you received training, and check when you can do it.

I can	Took the training	Did it
Use a hammer.		
Use a coffee maker		
Use a stapler safely		
Refill a stapler safely		
Put on protective equipment such as gloves, eye goggles, and face mask		
Pour liquid from a large, heavy, plastic jug without spilling it.		
Lift a heavy bag of dirt safely		
Use a wheelbarrow safely		



## Health and Safety in the Classroom

Complete the checklist. Anything that you answer “No”, you need to ask about. Then go back and answer “Yes”.

I know	Yes	No
Where the fire exit is		
Where the first aid kit is		
What protective equipment I need to wear or use		
How to treat others with respect		
How to ask questions		
Who to go to if I have a problem		
How to keep the classroom clean and safe		
Why safety is important		



# I Had an Accident

Read each situation. Who should you tell? Role play with another student or with your instructor. That person will ask questions about the accident and you must answer.

## Situation 1

You slipped on ice while clearing the snow from a parking lot. When you fell, you landed on your hands and knees. You are a bit wet and shaken up, but not really hurt.

## Situation 2

You were cleaning up some broken glass and got some in your hand. It hurts a lot, and it is bleeding.

## Situation 3

You were using a strong cleaner to remove some paint that had been sprayed on the side of a building. You knocked over the jug and some splashed on your pants. It ate through the material and got to your skin. It is now red and very sore.

## Situation 4

You have been spraying the roses in the park garden. You began to feel really dizzy. Suddenly, you throw up.



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**DEMONSTRATION INSTRUCTOR PAGE**

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***Safety in the Workplace***

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**ESSENTIAL SKILLS**

- Reading Text 1
  - Document Use 1
  - Writing 1
  - Oral Communication 2
  - Thinking Skills
    - Problem Solving 2
    - Decision Making 1
    - Significant Use of Memory
    - Finding Information 1
- 

**DEMO DESCRIPTION**

The student will identify hazards in a variety of pictured workplaces. These will be discussed orally. The student will also identify training requirements in a workplace.

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**INSTRUCTOR NOTES**

- Photocopy and use Tasks 1 & 2.
- Task 1 is oral. The student should be able to identify the right and wrong way to work in several situations.
- Provide *What I Have Learned and Skills Practised* to link the demonstration tasks to the Essential Skills.

**With student**

- Read tasks aloud if necessary.
- 

**ACHIEVEMENT INDICATORS**

- Located and categorized hazards
  - Discussed safety issues in a variety of workplaces and work situations
  - Identified equipment requiring training, both shown and not shown
  - Made simple inferences
  - Assessed own performance
-



# ***Safety in the Workplace***

## **TASK 1: Spot the Hazards**

Look at the pictures. Discuss each picture with your instructor.

- Tell what the hazard is, or what the person is doing safely.
- What safety issues might there be in this workplace?
- Is training needed?





# ***Safety in the Workplace***

## **TASK 1: Spot the Hazards, cont.**





# ***Safety in the Workplace***

## **TASK 1: Spot the Hazards, cont.**





# ***Safety in the Workplace***

## **TASK 1: Spot the Hazards, cont.**





## ***Safety in the Workplace***

### **TASK 2: Happy at Work**

Look at the picture of the woman at the computer.

She has had to learn several pieces of equipment shown in the picture.

List the equipment shown she would have had to learn to use safely.

- 
- 

She works in an office.

What other pieces of equipment might she need to use (not shown in picture.)

- 
- 
-



# ***Safety in the Workplace***

## **TASK 2: Happy at Work, cont.**





## ***Safety in the Workplace*** **TASK 2: Happy at Work, cont.**

What pieces of office equipment must Patsy be trained on?

How is this office prepared for worker comfort and health during hot weather?





**DEMONSTRATION ASSESSMENT**

## *Safety in the Workplace*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

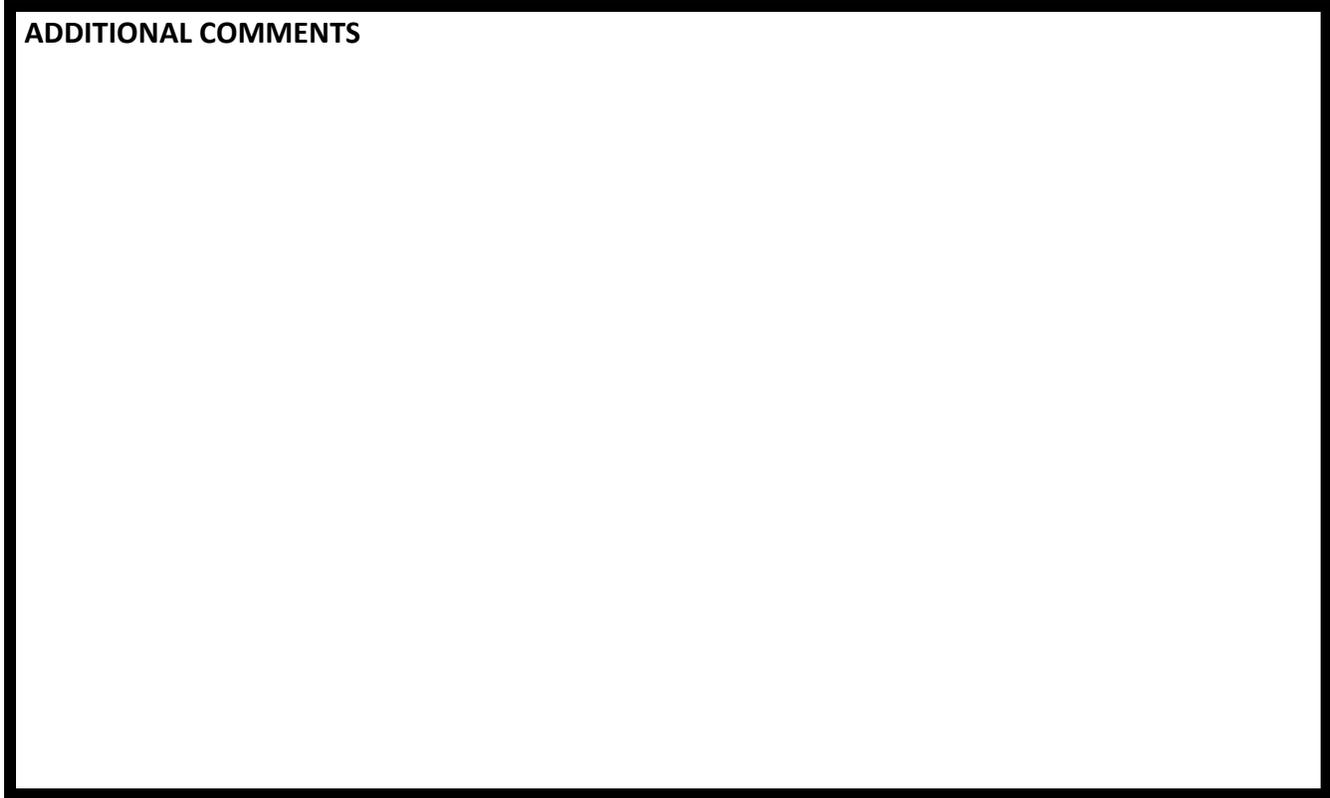
**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- Reading Text 1
- Document Use 1
- Writing 1
- Oral Communication 2
- Thinking Skills
  - Problem Solving 2
  - Decision Making 1
  - Significant Use of Memory
  - Finding Information 1

<b>ACHIEVEMENT INDICATORS</b>	<b>BEGINNING</b>	<b>DEVELOPING</b>	<b>ACCOMPLISHED</b>
• Located and categorized hazards			
• Discussed safety issues in a variety of workplaces and work situations			
• Identified equipment requiring training, both shown and not shown			
• Made simple inferences			
• Assessed own performance			

**ADDITIONAL COMMENTS**



# **Understanding Hazardous Product Labels**



# Understanding Hazardous Product Labels

This unit will introduce students to labels found on hazardous products, many of which are used in landscaping. It will help them to identify the WHMIS symbols on the label and will help them to determine the safety equipment needed and the precautions that should be taken to be safe when using the products.

The instructor should become familiar with WHMIS: the symbols, the label, the law about where a label is required, and the employer/employee responsibilities. The WHMIS website and the Canadian Centre for Occupational Health and Safety (CCOHS) website are excellent.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Identifies letters by sound and name
- Some recognition of warning signs around them (See *Understanding Signs* unit in the **Janitorial** resource manual.)
- Some sight vocabulary of signs around them (See *Understanding Signs* unit.)
- Understanding of cause and effect relationships

## OBJECTIVES

Students will

- Identify warning signs in the workplace
- Read labels on products
- Identify WHMIS symbols on labels
- Know the different types of protective equipment
- Know when to use the appropriate protective equipment
- Know when and how to ask for help when not feeling safe

## MATERIALS

- Blank cards to use for vocabulary, etc.
- Laminating facilities for vocabulary cards, posters, etc.
- Gardening product bottles (empty and washed) with labels intact.
- Samples of protective equipment: especially gloves, boots (steel-toed and rubber), dust mask, goggles, face shield, apron, work overalls. (may be available at your location, or get from building supply or hardware store)
- WHMIS symbol cards
- Computer with Internet access
- Chart paper and markers

## VOCABULARY

- Apron
- Body
- Breathing
- Caution
- Caution
- Corrosive
- Danger
- Equipment
- Explosive
- Eye/ eyes
- Face
- Feet
- Flammable
- Foot
- Glasses
- Goggles
- Hands
- Hazard / hazardous
- Head
- Keep Closed
- Keep Out
- Labels
- Mask
- No Eating
- No Smoking
- Personal
- Poison
- Protective
- Safety
- Signs
- Skin
- Toxic
- Ventilate
- Warning
- Wash
- WHMIS

(Review all vocabulary taught in the *Safety* unit of this manual.)

## RESOURCES

- [www.labour.gov.on.ca/english/hs/whmis](http://www.labour.gov.on.ca/english/hs/whmis) - search the table of contents for appropriate topics – many good visuals
- [www.whmis.net](http://www.whmis.net) on-line training – you ask for a password
- [www.DuraLabel.com](http://www.DuraLabel.com) free WHMIS guide available
- [www.ccohs.ca](http://www.ccohs.ca) search WHMIS, then OSH answers: excellent site.
- Use a search engine for WHMIS sites, then look at sponsored links for on-line trainings: some free items, others must be purchased: These could be valuable training in how to take on-line trainings, which are common in the workplace, especially for delivering WHMIS training
- <http://www.nald.ca/library/learning/wkplace/cover.htm> : Unit IV: WHMIS Made Easy – pdf format.

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Hazards									1	1	1		*				*
2.	Hazards in the workplace	1	1							1	1	1		*			2	*
3.	Labels		1							1	1	1		*	1			*
4.	Hazard symbols	1	1	1						1	2	2		*	1			*
5.	Examining WHMIS labels		1							1				*				*
6.	Why do we need protection?		1							1	2	2		*				*
7.	Poison (poisonous)		1							1	1	2		*	1			*
8.	Poison (poisonous): prevention	1	1							1	1	2		*	1			*
9.	Poison (poisonous): be safe	1	1							1	1	2		*	1			*
10.	Corrosive	1	1							1	1	1		*	1			*
11.	Spilling corrosive materials		1							1	1	1		*				*
12.	Corrosive: be safe	1	1	1						1	1	1		*	1			*
13.	Flammable	1	1							1	1	1		*	1			*
14.	Flammable risks: be safe	1	1	1						1	1	1		*	1			*
15.	Explosive / compressed gas	1	1							1	1	1		*	1			*
16.	Other WHMIS symbols	1	1							1	1	1		*				*
17.	Unknown symbol		1							1	1	1		*		*		*

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
D	Hazard symbols		1							2	1	1		*				

## LEARNING ACTIVITIES

<p><b>1. HAZARDS</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b> None</p>
<p>Ask students if they know the meaning of a hazard (a danger), and if they understand the word “hazardous” (dangerous).</p> <p>Teach vocabulary: danger/dangerous; hazard/hazardous; warning; caution. Post these words in plain view for frequent reference.</p> <p>Explain that each day we all experience situations which could be dangerous if we did not know the correct way to deal with them. (crossing the road, riding a bike, using the stove, working a machine, etc.).</p> <p>Ask students if taking a bath or shower is dangerous. If they say No, ask if it could be dangerous. Point out that people could slip and fall in the bathtub or shower; they could burn themselves if the water is too hot; they could even kill themselves if they took something electric into the tub with them. Assure students that taking baths or showers is safe as long as they take some safety precautions. Ask what are some of the things they could do to keep themselves safe in this situation.</p> <ul style="list-style-type: none"> <li>• Use rubber mats</li> <li>• Use handrails</li> <li>• Keep bathroom door unlocked (or locked in rooming house)</li> <li>• Get help when needed</li> <li>• Test water temperature before stepping in</li> <li>• Keep electrical appliances away</li> </ul> <p>Discuss other situations that could be dangerous if not handled correctly; for example:</p> <ul style="list-style-type: none"> <li>• Medication</li> <li>• Knives</li> <li>• Fireplaces</li> <li>• Sun</li> <li>• Etc.</li> </ul>	

<p><b>2. HAZARDS IN THE WORKPLACE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>WHMIS Label &amp; Symbols</i></li> <li>• Computer with Internet access</li> <li>• Websites – see <i>Resources</i> at the beginning of this unit: check that it works for your students</li> </ul>
<p>Explain that workplaces can also have hazards. Gardeners are often asked to handle fertilizers or pesticides that could cause harm if not used properly with the proper protective equipment. Some chemicals can burn the skin; some might cause difficulty breathing; some could harm the eyes. That is why workplaces have rules to follow to keep the worker safe when using chemicals.</p> <p>Labels on dangerous products should tell you what the danger could be and tell how to protect your body from harm. Sometimes words are used and sometimes symbols. Explain the meaning of “symbol”: a picture or sketch that stands for something. Give examples. (thumbs up, picture of man on washroom door, etc.)</p> <p>Explain that there are some standard hazard symbols used in Canada. Show the Teaching Aid: <i>WHMIS Label &amp; Symbols</i>. Tell the students that WHMIS means “Workplace Hazardous Materials Information System” – they do not need to remember the full name, just WHMIS. It is not necessary to talk about each individually now (later activity), but they should learn to recognize what is and is not a WHMIS symbol. Explain that WHMIS is the law: it is there to protect workers from accidents in the workplace. They should always receive WHMIS training on the job.</p> <p>In the USA, a different labeling system is used: NFPA (National Fire Protection Agency). For more advanced students, you could examine this system as well: use a search engine to find websites.</p> <p>Use one or more of the websites if possible, to examine labels and safety precautions. Some of the sites have animated on-line trainings. These are commonly used in workplaces, so this is a good opportunity for guided instruction! By the end of this unit, you could use one of these sites for review or extended learning.</p> <p><b>***It is extremely important that you, as the instructor, have learned some of the WHMIS requirements before teaching these. They are legal requirements for the workers’ safety. Use the CCOHS website. Go to OHSANSWERS section.</b></p>	

<p><b>3. LABELS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Selection of household products: RAID, ant traps, plant food, toilet cleaner, strong cleaner to remove rust or stains, bleach, mildew remover, etc. <b>Make sure bottles are either empty and washed, or securely fastened with no drips on bottle.</b></li> <li>• <i>Mopping – Following a Pattern</i> in the <b>Janitorial</b> manual for more reading of product labels</li> <li>• Teaching Aid: <i>WHMIS Label &amp; Symbols</i></li> </ul>
<p>Mention that sometimes gardeners use products bought at the hardware store or garden centre. Ask students what chemicals they use at home.(cleaning, bug control, etc) Make a list and photocopy a label for each product mentioned if possible. (There are some labels and label reading activities in the <i>Mopping</i> unit of the <b>Janitorial</b> manual.)</p> <p>Show students a variety of household products used for different tasks: You might give each student a different product. Use the photocopied labels as well.</p> <p>Ask what the purpose of a label is. (It identifies the product and gives other important information.) Ask what they would expect to find on the label. (name of product, what it is used for, hazard symbol, precautions to take, first aid.)</p> <p>Tell students to examine each label to see if it tells whether or not the product is hazardous.</p> <ul style="list-style-type: none"> <li>• (Look for the words “DANGER” or “WARNING” or “HAZARD” and needs to be “handled with care”.</li> <li>• Tell them to look for hazard symbols like those they saw on the WHMIS website. (Refer to Teaching Aid: WHMIS Label &amp; Symbols).</li> <li>• Look for other symbols that they think may indicate a danger. (bony hand, explosion, etc.)</li> </ul> <p>Explain that household products do not all have WHMIS labels, BUT that large industrial size containers used in workplaces <b>MUST</b> have a WHMIS label with a symbol. If they are asked to use a product without a WHMIS label in the workplace, they should always make sure to get full safety instruction first. (Ask for training; someone to read the full instructions and warnings; demonstration of use, etc.) If the product has been poured into smaller containers at work, then each small container <b>MUST</b> be labeled with the WHMIS label.</p> <p>Ask if they would use a cleaning product that had no label. (Perhaps it had been torn off.) Why not? (Wouldn't know how to use it safely.)</p>	

<p><b>4. HAZARD SYMBOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Selection of products with hazard symbols (danger, warning, caution, like on Student Activity Sheet)</li> <li>• Student Activity Sheet: <i>Shapes of Symbols</i></li> </ul>
<p>Point out that the most important part of the label is the hazard symbol. Many household products that do not have WHMIS labels still do use some hazard symbols.</p> <p>Ask students to point to the hazard symbol on each product. What does it mean if there is no hazard symbol on a household product?</p> <ul style="list-style-type: none"> <li>• Is it safe? (Generally, if used according to the instructions.)</li> <li>• Should they drink it? (No)</li> <li>• Could it irritate their skin or eyes? (It might)</li> <li>• Should they inhale any fumes? (Probably not.)</li> <li>• What should they do? (They must read the words, looking for warnings and first aid information.)</li> <li>• What if reading is hard for them or they do not understand what is written? (Ask for help!!)</li> </ul> <p>Use the Student Activity Sheet: <i>Shapes of Symbols</i>.</p> <ul style="list-style-type: none"> <li>• Ask students which one resembles a Stop sign. Explain that this one means “Danger”. Be very careful before using this. Which of their products has this shape symbol? Remind them that red is another indicator of danger.</li> <li>• Explain that the upside-down triangle means “Warning”. This one is the same shape as the “Yield” traffic sign. (Traffic that may be coming can go straight through: you would need to stop and look first before entering the road.) Which of their products has this shape symbol?</li> <li>• Explain that the diamond shape is like the yellow “Caution” signs on the road that tell of a curve in the road, or of something else that they have to be careful of. Which of their products has this shape symbol?</li> <li>• Complete the activity sheet.</li> </ul>	

<p><b>5. EXAMINING WHMIS LABELS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>WHMIS Label &amp; Symbols</i></li> <li>• WHMIS labels</li> </ul>
<p>Use the Teaching Aid: <i>WHMIS Label &amp; Symbols</i>.</p> <p>Begin by explaining that WHMIS labels all have the same border.</p> <ul style="list-style-type: none"> <li>• Describe the border. Is it a solid line or broken (dashes, dotted)?</li> <li>• Explain that whenever they see this border, they should look inside for a hazard symbol.</li> </ul> <p>Ask if they recognize any of the symbols. Some may be different from those on household products, but many are the same.</p> <ul style="list-style-type: none"> <li>• Notice that the symbols are all inside circles.</li> </ul> <p>Emphasize that whenever they see this border or these symbols, they know there is something dangerous inside. You may need some special equipment when handling the product, and it will need special care.</p> <p>Show some actual WHMIS labels to see the border and the symbols.</p> <ul style="list-style-type: none"> <li>• Tell students that the left side has English and the right side has French.</li> <li>• Explain that they would need to read the entire label in the workplace, or to have someone read it to them or explain it.</li> <li>• Tell them that there is another sheet: Materials Safety and Data Sheet with detailed information, that must be at every workplace, to match with all the hazardous products. They would receive training about those on the job.</li> </ul>	

<p><b>6. WHY DO WE NEED PROTECTION?</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Samples of protective equipment: especially gloves (rubber &amp; work), boots (steel-toed), dust mask, goggles, face shield, apron.</li> <li>• Teaching Aid: <i>Personal Protective Equipment</i> (make separate cards with labels on reverse for extra learning))</li> <li>• Student Activity Sheet: <i>Wear It For Safety's Sake</i></li> <li>• Student Activity Sheet: <i>Know Your Body</i></li> </ul>
<p>Ask the students why they think that the body needs to be protected from certain chemicals. Explain that cleaning products can hurt the outside of the body (skin or eyes), or they can get inside the body and make the person sick.</p> <p>Ask how a hazardous product might get on the skin. (You spill it, you touch some, some spray gets on the skin,) and how it might get in the eyes (splash, mist in the air, dust from the product.)</p> <p>Ask how things get inside the body:</p> <ul style="list-style-type: none"> <li>• Through the mouth: on food, on cigarettes, on hands touching the mouth, food or cigarettes.</li> <li>• Through the nose: breathing in dangerous products in the air.</li> <li>• Through the skin pores: touching dangerous materials.</li> <li>• Through wounds: a cut or other broken skin.</li> </ul> <p>Point out that sometimes these things have an effect right away (irritation or sickness); other times it takes years, the person getting a little sicker over time, or even years later (such as cancer).</p> <p>Ask students how they protect themselves from rain and snow and cold weather. (They wear special clothing.) Teach body parts vocabulary as you identify what special clothing is worn. Point out that protective clothing must often be worn in the workplace to protect the body from dangerous products.</p> <p>Use the Teaching Aid: <i>Personal Protective Equipment</i>. Show actual protective equipment that you have gathered. Discuss each piece of equipment.</p> <ul style="list-style-type: none"> <li>• What is it called?</li> <li>• What part of the body does it protect?</li> <li>• How is it worn?</li> <li>• When might they need to wear this?</li> <li>• What could happen if it is not worn?</li> </ul> <p>Use Student Activity Sheets: <i>Wear It For Safety's Sake</i>, and <i>Know Your Body</i> as a review.</p>	

<p><b>7. POISON (POISONOUS)</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What the Symbols Mean</i> (make large posters of each card, or make laminated cards, ...)</li> </ul>
<p>Use the Teaching Aid: <i>What the Symbols Mean</i>.</p> <p>Show students the symbol for Poison. (skull and crossbones) Ask if they know what it means if someone is poisoned. (the person has swallowed or absorbed in some other way something that will cause immediate and serious sickness.) Read the paragraph beside the symbol.</p> <p>Show the symbol for Toxic substances. Read the paragraph beside the symbol. Explain that both symbols are for poisons; ask which one is more dangerous. Why? (immediate and serious effects)</p> <p>Look at products gathered for previous activities.</p> <ul style="list-style-type: none"> <li>• Do any of them have the poison symbol on them?</li> <li>• Do any have the Toxic symbol?</li> <li>• Would it be a good idea to swallow these products? Why not?</li> <li>• Would it be a good idea to get this on their hands or other skin? Why not?</li> <li>• Even if the poison label is not on the product, would it be a good idea to swallow it? Why not?</li> <li>• Are there other ways that the product could get in their mouths? (touching mouth when product is on hands, touching food or cigarette after handling the product)</li> <li>• How can this be avoided? (wash hands, wear gloves, keep hands away from mouth when working, don't eat, drink or smoke when handling hazardous products, etc.)</li> </ul>	

<p><b>8. POISON (POISONOUS):</b></p> <p><b>PREVENTION</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Teaching Aid: <i>Personal Protective Equipment</i></li> <li>• Face mask for display</li> </ul>
<p>Explain that sometimes hazardous products can produce dangerous fumes (like a mist in the air.) Filling gas motors is one situation where this is a risk.</p> <p>It is important to have good ventilation. “Ventilation” means lots of fresh air.</p> <ul style="list-style-type: none"> <li>• Ask students how they could get good ventilation. (use products outside; open windows and doors if inside, use a fan to move the air around.)</li> <li>• Ask students what else they could do to prevent breathing in the dangerous fumes (wear a mask covering nose and mouth.)</li> <li>• Show the safety sign “Use With Adequate Ventilation”. (Teaching Aids: <i>Safety Precaution Signs</i>) Identify key vocabulary and symbols. Guess at what sign says, then read together.</li> <li>• Use Teaching Aid: <i>Personal Protective Equipment</i>. Choose which protective equipment to use. Post sign in the room and the pictures of the appropriate protective equipment. (Display a face mask too if possible)</li> <li>• Discuss the differences between the various pieces of protective equipment used against fumes. A mask will be enough for some products, but a respirator with an oxygen canister may be needed if the material’s fumes are deadly (firefighters use these so they can breathe in very smoky situations.)</li> </ul>	

<p><b>9. POISON (POISONOUS): BE SAFE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 2</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Safety goggles, gloves, and face shield</li> </ul>
<p>Ask students what they would do if a product was very irritating to the eyes. (wear safety glasses)</p> <p>Ask what they would do if it was very irritating to the skin. (wear gloves, long sleeve clothing, full length pants, closed shoes.)</p> <ul style="list-style-type: none"> <li>• Show sign “Avoid Skin Contact”. (Teaching Aid: <i>Safety Precaution Signs</i>) identify known words; sound out other words and ask students to read. Post sign in room.</li> <li>• Use Teaching Aid: <i>Personal Protective Equipment</i>. Choose which protective equipment to use. Post sign in the room and the pictures of the appropriate protective equipment. (Display safety goggles, gloves, and face shield.)</li> </ul> <p>What other safety signs might be used in a workplace to ensure that employees work with poisonous materials safely? Some of these might be in the storage shed where the chemicals and equipment used are stored.</p> <ul style="list-style-type: none"> <li>• Show, read, and display “Eating and Drinking in Lunchroom Only”, “No Eating or Drinking in this Area”, “No Smoking in this Area”, “Wash Your Hands”. (Teaching Aid: <i>Safety Precaution Signs</i>) Discuss the reason for each sign. Post all signs.</li> </ul> <p>Look for First Aid instructions on the products selected. Make a chart, labeled “First Aid: Poisonous” and post. Note that each poison will have its own first aid instructions. (Some say to induce vomiting; others say not to induce vomiting. All will require a visit to the doctor or hospital.)</p>	

<p><b>10. CORROSIVE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What the Symbols Mean</i></li> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Household products that are corrosive (plus others that are not)</li> </ul>
<p>Show the household symbol for corrosive and the WHMIS symbol for corrosive. (Teaching Aid: <i>What the Symbols Mean</i>). Using the symbols, ask students if they can figure out what “corrosive” means. (It can burn the skin or burn metal: eat it away.) Read the paragraph beside the symbols.</p> <p>Ask if anyone has ever had a burn from a chemical.</p> <p>Show the word “corrosive” and help students to read it.</p> <p>Ask students to identify which products are corrosive. Point out that there are many cleaners in this group: toilet bowl cleaners, bleach, stain removers, etc.</p> <p>Ask which are the most corrosive of the household products. (Those with the octagon - stop sign - shape.)</p> <p>Point out that some powders or other chemicals become corrosive when mixed with water.</p>	

<p><b>11. SPILLING CORROSIVE MATERIALS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Teaching Aid: <i>Eye Wash Station</i></li> </ul>
<p>Ask students why a corrosive cleaning product should never be put into a metal container. (It will eventually burn a hole in the metal and leak out.)</p> <p>Look at the containers holding the corrosive cleaning products to see what type of material they are made of. (plastic for liquids, cardboard for powders.)</p> <p>Ask students how they might get a corrosive cleaner on their skin. (Spilling it on their hands, touching the cloth or brush used, from a leaking container.) Point out that a very corrosive product could easily burn through their clothes.</p> <p>Ask what they should do if they got a corrosive cleaner on their skin. (Wash or shower right away.) Point out that some workplaces have emergency showers for that reason.</p> <p>Ask what they should do if they spill corrosive material on their clothes. (Change right away, or even shower with clothes on.) What could they do to make this possible? (keep extra work clothes at work)</p> <p>Ask how they might get a corrosive cleaner in their eyes. (Splashing it when pouring it; mist from fumes) Point out that they would need to wash their eyes right away for at least 15 minutes and then get to a doctor. Show “Eye Bath” sign (Teaching Aid: <i>Safety Precaution Signs</i>) and Teaching Aid: <i>Eye Wash Station</i>.</p>	

<p><b>12. CORROSIVE : BE SAFE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Samples of cleaning products with corrosive symbols</li> <li>• Chart paper and markers</li> <li>• Samples of protective equipment needed: gloves, apron, safety glasses/goggles, overalls</li> </ul>
<p>Show students the safety signs “Avoid Contact With Skin”, “Wash Your Hands”, and “Eye Bath” (Teaching Aid: <i>Safety Precaution Signs</i>). Help students to read these signs and discuss each in turn, asking why the sign would be appropriate. Post in room.</p> <p>Ask students to locate corrosive symbols on cleaning products you have brought in.</p> <ul style="list-style-type: none"> <li>• Read any safety suggestions made for how to handle the product safely.</li> <li>• Are there any First Aid suggestions? Read them together. If none are given, discuss what they might be.</li> <li>• Make a chart of First Aid for Corrosive Products, and display in the room. Make sure they know where the First Aid box is in the room, and tell them they would need to know this at work too. They should be sure that the right materials are in the First Aid box. What if they are not? Whom should they tell?</li> </ul> <p>Ask what protective clothing might be needed for handling corrosive materials? (gloves, apron, safety glasses/goggles if pouring, face shield, protective clothing and even boots if material is very corrosive.) Explain that many workplaces have one-piece heavy-duty overalls that the worker puts on over top of his regular clothes to protect the clothing and person from dangers such as this. Display examples of the protective clothing.</p>	

<p><b>13. FLAMMABLE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What the Symbols Mean</i></li> <li>• Samples of cleaning products, some of which are labeled as flammable</li> </ul>
<p>Show the symbol for “Flammable” (Teaching Aid: <i>What the Symbols Mean</i>) and ask students what it is a picture of. (a flame or fire.) Ask what “flammable” means. Teach as a vocabulary word. Write the word “flame” on the board. Ask the students how the words are alike. Tell them that “flame” is the root word (where it comes from) for “flammable”. A flammable product catches fire or burns easily.</p> <p>Read the paragraph beside the “flammable” symbol.</p> <p>** Explain that “inflammable” means the same thing. The opposite is “non-flammable”.</p> <p>From the selection of hazardous products, ask students to identify which are flammable.</p>	

<p><b>14. FLAMMABLE RISKS: BE SAFE</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> <li>• Teaching Aid: <i>Personal Protective Equipment</i></li> <li>• Chart paper and markers</li> </ul>
<p>Discuss the risks associated with flammable products:</p> <ul style="list-style-type: none"> <li>• Ask students what starts a fire: a match, a spark, lightning, high heat (rubbing two sticks together until a flame starts), etc.</li> <li>• Ask why they would not want to get flammable liquid on their clothing. (It might catch fire if they got near a flame like a cigarette, and they would be burned.)</li> <li>• Explain that flammable products often give off a gas that we cannot see. This gas can catch fire.</li> </ul> <p>Discuss precautions:</p> <ul style="list-style-type: none"> <li>• Ask what they should do if they spilled some flammable cleaning product on their clothes. (Change the clothes).</li> <li>• Ask what they should keep flammable products away from. (Lit cigarettes, flames of any kind, heaters, things that can spark.)</li> <li>• Ask how they might prevent getting flammable cleaning products on their clothes at work. (Wear an apron or special clothes at work, and change to go home.)</li> <li>• Ask what they should do if they spilled some flammable cleaning product on their hands. (Wash them.)</li> <li>• Ask what they should do to keep any flammable gas inside the container. (Keep it tightly closed.)</li> </ul> <p>Safety</p> <ul style="list-style-type: none"> <li>• Show students the safety signs associated with flammable products: “No Smoking”, “Keep Away From Heat”, “Wash Your Hands”, “Keep Closed”, “No Matches or Open Flame”, “Store in a Cool Place”. (Teaching Aid: <i>Safety Precaution Signs</i>). Discuss why each sign is a good safety rule when working with flammable products. Post the signs.</li> <li>• Using the Teaching Aid: <i>Personal Protective Equipment</i>, have students select which items they should use when handling flammable products. Display the items with the warning signs.</li> <li>• Look for First Aid suggestions on products labeled as flammable. If none are give, discuss what they might be. Make a chart, similar to that for “Corrosive” and “Poisonous” and post.</li> </ul>	

<p><b>15. EXPLOSIVE / COMPRESSED GAS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What the Symbols Mean</i></li> <li>• Teaching Aid: <i>Safety Precaution Signs</i></li> </ul>
<p>Show the household symbol for "explosive" and ask students what is happening in this picture (something is blowing up or exploding). (Teaching Aid: <i>What the Symbols Mean</i>)</p> <p>Show the word card "explosive" and read it.</p> <p>Ask students to identify which of the cleaning products are explosive. Point out that most of these products are in spray cans. The cleaner is compressed (or pressed down) into the can until it can't hold any more. Compare it to blowing up a balloon. If you keep putting more and more air into it, eventually the balloon will burst.</p> <p>Show the workplace symbol for "compressed gas". Explain that they might see this symbol on a fire extinguisher. Like the spray cans, the gas is pressed into the fire extinguisher until it just can't hold any more. But compressed gas is much more explosive and dangerous than spray cans.</p> <p>Ask the students what makes a balloon explode? (more air pressure than it can hold, pricking or puncturing it, pressing it hard from the outside, heat) Explain that the same things are dangerous for spray cans and fire extinguishers: puncturing them or opening them, heat of any kind (hot water, heater, fire or flame) or external pressure caused by dropping them.</p> <p>Explain that fire extinguishers should be stored upright and fastened securely to the wall to avoid falling and puncturing.</p> <p>Look at the signs which might be posted near explosive materials: "No Smoking", "Keep Away From Heat", etc. (Teaching Aid: <i>Safety Precaution Signs</i>). Discuss each sign as before, and then post.</p>	

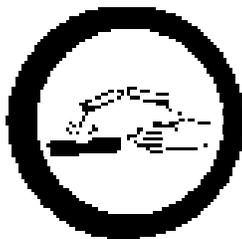
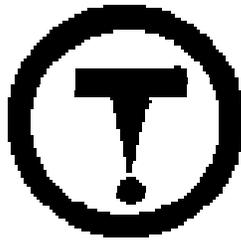
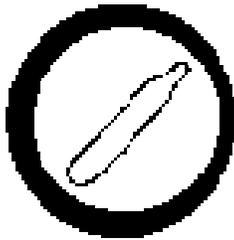
<p><b>16. OTHER WHMIS SYMBOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>What the Symbols Mean</i></li> </ul>
<p>Explain that the final 3 symbols are ones they will be unlikely to see. They are not found on gardening or products. However, they may sometime be in an area where these are hazards, and they need to recognize the symbols as representing a special danger. They should always receive special training on any job where these symbols would be seen.</p> <p>Show students the symbols for Oxidizing Material, Biohazardous Infectious Materials, and Dangerously Reactive Material. Read the paragraphs for each and discuss where they might see the symbols. (cupboards, storerooms, doors, waste containers, etc.)</p> <p>What signs might you see here? “Keep Out”, etc.</p>	

<p><b>17. NO MIXING</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>No Mixing</i></li> </ul>
<p>Emphasize that cleaning chemicals should never be mixed.</p> <p>Sometimes a reaction between the two products will result in a highly dangerous new chemical. It could make them very sick, burn them, explode, ...</p>	

<p><b>18. UNKNOWN SYMBOL</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Working With Others</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Student Activity Sheet: <i>This Is Dangerous and It Could Hurt Me</i></li> <li>• Student Activity Sheet: <i>It Could Hurt Me</i></li> <li>• Cards with symbols</li> <li>• Cards with hazard words</li> <li>• Cards with hazard effects</li> </ul>
<p>Point out that we have not covered all of the hazard symbols that may exist.</p> <p>Ask what they would do if they came across a product that had a warning on it, but they didn't recognize it. Emphasize the importance of asking questions of a supervisor when they don't know something – especially when dealing with dangerous products.</p> <p>Ask what they would do if they came across a spill in the workplace from a large container with a hazardous product label (get a supervisor).</p> <p>Explain that there is a book in every workplace that gives a lot more information about every dangerous product in that workplace-including how to handle spills, cleanup, etc. They are not expected to know everything about every product they use.</p> <p>For review of the common symbols they will encounter, use Student Activity Sheets: <i>This Is Dangerous and It Could Hurt Me</i>. (You might have to read <i>It Could Hurt Me</i> to the student, and then have him/her copy the appropriate risk word.)</p> <p>You might want to play a game with the students to help them remember hazardous product symbols.</p> <ul style="list-style-type: none"> <li>• Place one of the symbols on each student's back. The student must guess what the symbol is by asking Yes/No questions of other students. The student may have only two guesses at the symbol, so needs to ask other questions before asking, "Am I explosive?" etc. (Vary this by using either the symbol or the name of the hazard or the effect of the hazard.</li> <li>• Have one student show a symbol and the other say what it is.</li> <li>• Play a matching game of symbols, words and effects.</li> <li>• Make a Hazard Bingo game. As a symbol is called out, the student must put a counter on the square with the symbol.</li> </ul>	



# WHMIS Label & Symbols





# Personal Protective Equipment



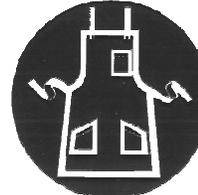
**Dust Mask**



**Air Purifying Respirator**



**Supplied Air Respirator**



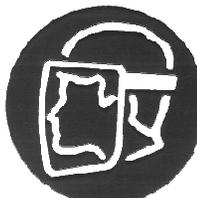
**Apron**



**Chemical Protective  
Clothing**



**Safety Goggles**



**Face Shield**



**Boots**

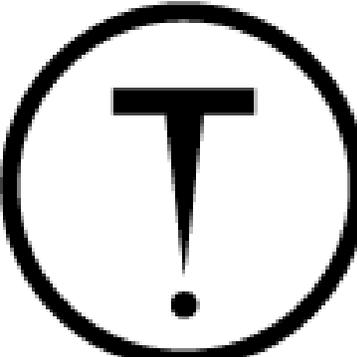


**Gloves**



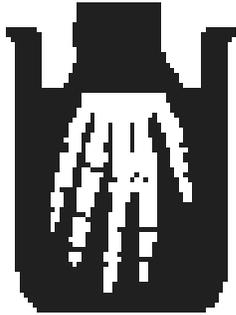
## What the Symbols Mean

 A black and white icon of a skull and crossbones, centered within a thick black circular border.	<p><b>Poisonous and Infectious Material: Immediate and serious toxic effects (WHMIS)</b></p> <p>Just a little can make you very sick or kill you right away.</p>
--	--

 A black and white icon of a large letter 'T' with a dot below it, centered within a thick black circular border.	<p><b>Poisonous and Infectious Material: Other toxic effects (WHMIS)</b></p> <p>May cause irritation. Many exposures may cause cancer, birth defects, or other permanent damage.</p>
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## What the Symbols Mean, cont.



### Corrosive Material

This is not a WHMIS symbol. It is a common symbol found on household products.

This product can cause burns to eyes, skin or respiratory system.



### Corrosive Material (WHMIS)

This product can cause burns to eyes, skin or respiratory system.

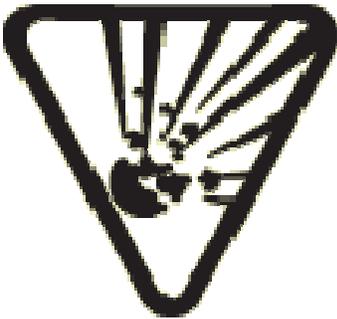


## What the Symbols Mean, cont.



### Flammable and Combustible Material (WHMIS)

May catch fire when exposed to heat, spark or flame. May burst into flames.

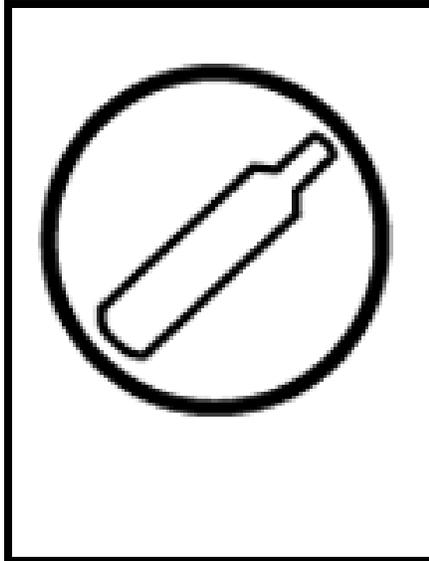


### Explosive

This is **not** a WHMIS symbol. It is a common symbol found on household products. The container or the products could explode if heated, compressed, or punctured.

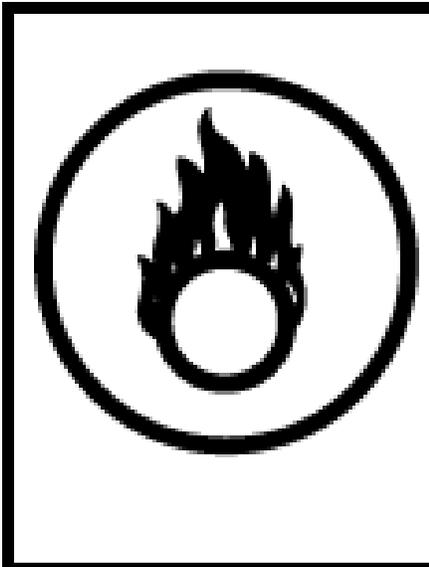


## What the Symbols Mean, cont.



### **Compressed Gas (WHMIS)**

The gas inside is under high pressure. The cylinder may explode or burst when heated, dropped or damaged.



### **Oxidizing Material (WHMIS)**

The contents may cause fire or explosion when in contact with wood, fuels or other combustible material.

Care must be taken when cleaning in areas that these products are stored or used.



## What the Symbols Mean, cont.



### **Poisonous and Infectious Material: Biohazardous infectious materials (WHMIS)**

May cause disease or serious illness.  
Drastic exposures may result in death.

You might see this symbol in a hospital. A discarded syringe (needle) is an example. These should be handled with great care.



### **Dangerously Reactive Material (WHMIS)**

These products may react violently causing explosion, fire or release of toxic gases, when exposed to light, heat, vibration or extreme temperatures.

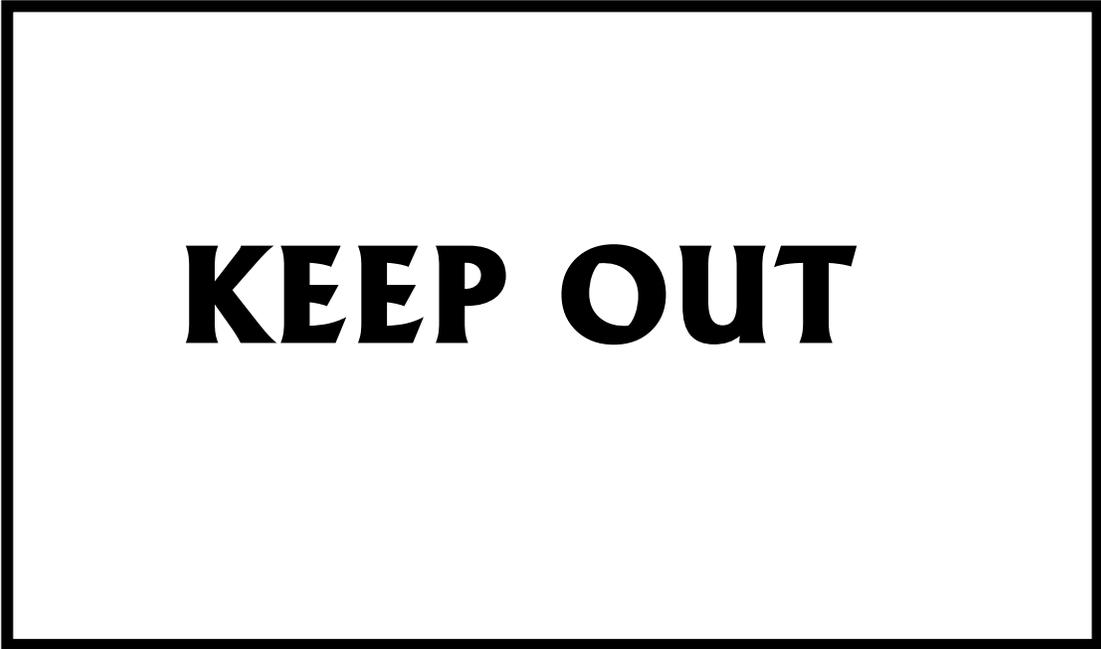
These may be used in industrial and manufacturing processes. Cleaning in these areas requires special care.



## Safety Precaution Signs



**AVOID  
CONTACT  
WITH SKIN**

A rectangular safety sign with a thick black border. The text is centered and reads "AVOID CONTACT WITH SKIN" in a large, bold, black, sans-serif font, arranged in three lines.

**KEEP OUT**

A rectangular safety sign with a thick black border. The text is centered and reads "KEEP OUT" in a large, bold, black, sans-serif font, arranged in one line.



## Safety Precaution Signs, cont.



**NO  
SMOKING**



**NO EATING  
OR DRINKING  
IN THIS AREA**



## Safety Precaution Signs, cont



**WASH YOUR  
HANDS**



**EYE BATH**



## Safety Precaution Signs, cont.



**KEEP CLOSED**



**KEEP AWAY  
FROM HEAT**



## Safety Precaution Signs, cont.

**USE WITH  
ADEQUATE  
VENTILATION**

**NO MATCHES  
OR OPEN  
FLAME**

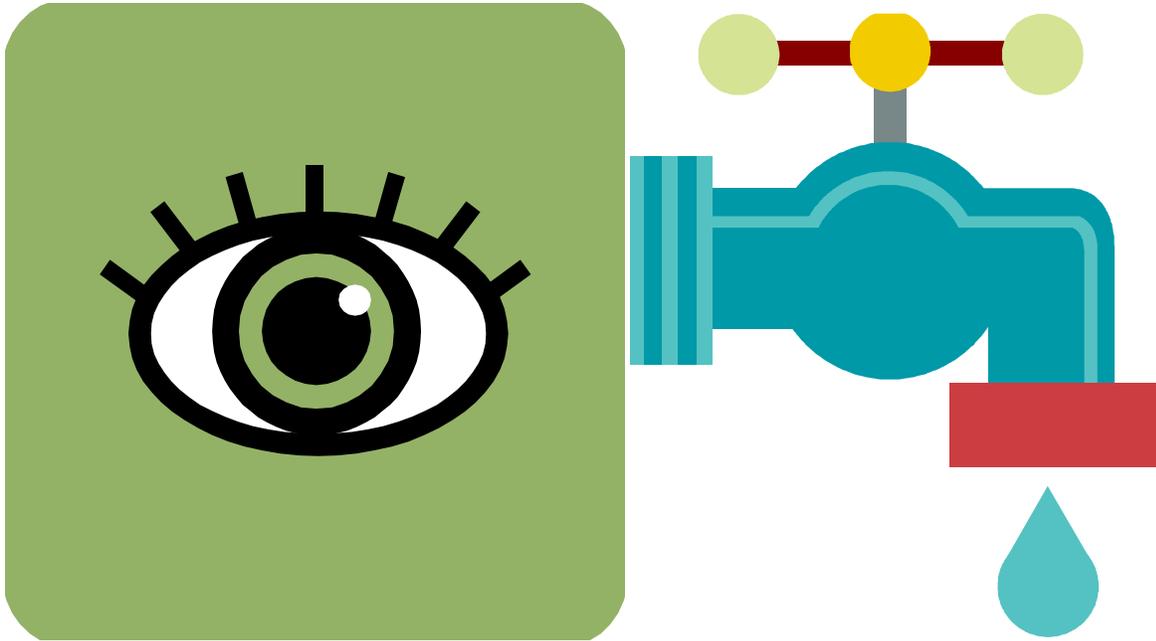


## Safety Precaution Signs, cont.





# Eye Wash Station





# No Mixing

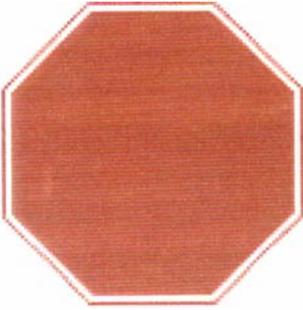
**Make sure you know what chemicals you are working with and how to work with them safely.**



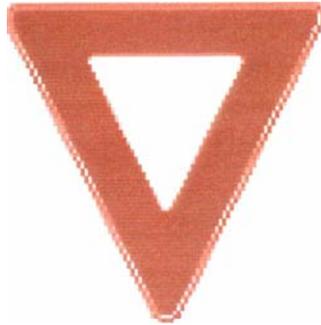
**DO NOT MIX CLEANERS.**



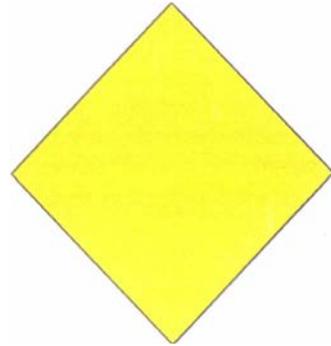
# Shapes of Symbols



Danger



Warning



Caution

What do the shapes and words mean?

• Which is most dangerous? \_\_\_\_\_

• Which is least dangerous? \_\_\_\_\_



## Wear It For Safety's Sake

Protective equipment is sometimes necessary when working with hazardous materials. The WHMIS label on the container will say what protective equipment should be worn.

Sometimes there is a workplace label or sign that uses pictures of the special equipment.

Match the picture with the words that mean the same thing.



Safety glasses



Gloves



Dust mask



Apron



Boots



Face Shield



# Know Your Body

Label the diagram with the following words:

Hands

Eyes

Mouth

Nose

Body

Feet





# This Is Dangerous

Match the symbol with the meaning:



Flammable

Explosive

Corrosive (WHMIS)

Toxic

Corrosive (Household)

Compressed Air

Poisonous



## It Could Hurt Me

Copy the name of the risk beside the danger it has.

**Compressed Gas, Corrosive, Explosive, Flammable, Poisonous, Toxic.**

Just a little can make you very sick or kill you right away.

---

The gas inside is under high pressure. The cylinder may explode or burst when heated, dropped or damaged.

---

The container or the products could explode if heated, compressed, or punctured.

---

This product can cause burns to eyes, skin or respiratory system.

---

May cause irritation. Many exposures may cause cancer, birth defects, or other permanent damage.

---

May catch fire when exposed to heat, spark or flame. May burst into flames.

---



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**DEMONSTRATION INSTRUCTOR PAGE**

---

## *Hazard Symbols*

---

**ESSENTIAL SKILLS**

- Document Use 1
- Oral Communication 2
- Thinking Skills
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory

---

**DEMO DESCRIPTION**

The student will be shown the WHMIS and household hazardous product symbols shown on various hazardous products and will have to identify the symbol and tell what it means. The student will tell what protective equipment might be needed if working with a product displaying each symbol. Scenarios will be given and the student must decide on a course of action for each. The student will assess his/her own performance and understanding.

---

**INSTRUCTOR NOTES**

- Make flash cards with symbols: poison, corrosive (2), flammable, explosive. (included in TASK 1)

**With student**

- Show each flash card to the student. Ask what it means. Ask what protective equipment might be needed if they were asked to use this product when cleaning.
- Read each scenario aloud to the student. Ask him / her to tell you what would be a good thing to do.
- Provide *what I Have Learned and Skills Practised* to help student link the demonstration tasks to the Essential Skills

---

**ACHIEVEMENT INDICATORS**

- Identified each symbol correctly
  - Explained the meaning of the symbol (eg: What does corrosive mean; what could this product do to harm the worker)
  - Knew the protective equipment needed for handling products displaying the given symbols
  - Knew what to do in various scenarios.
  - Assessed own performance
-



# ***Hazard Symbols***

## **TASK 1**

Read aloud to the student:

You have been hired by a company to do lawn and garden care. You have been trained to recognize hazard symbols on product labels. Before you begin your job, your supervisor needs to know that you can recognize the symbols and that you understand what they mean.

Look at each symbol given to you by your instructor.

Tell your instructor what it means.

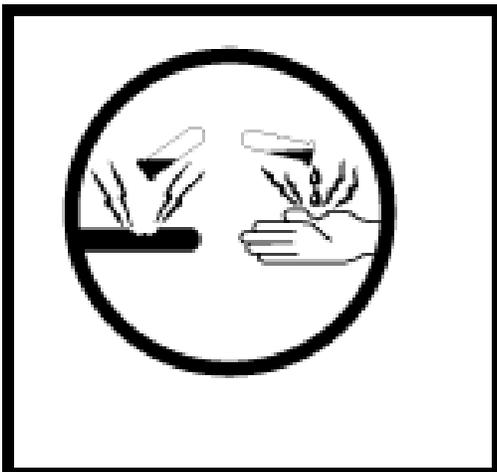
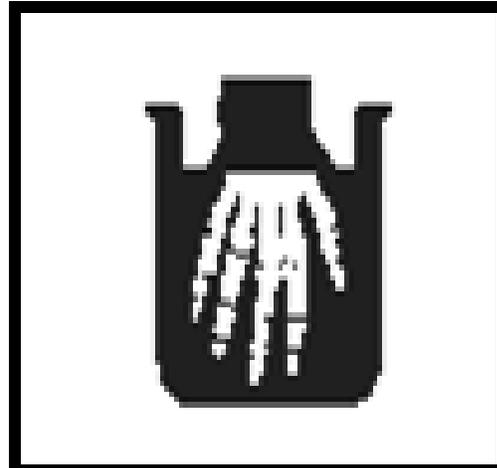
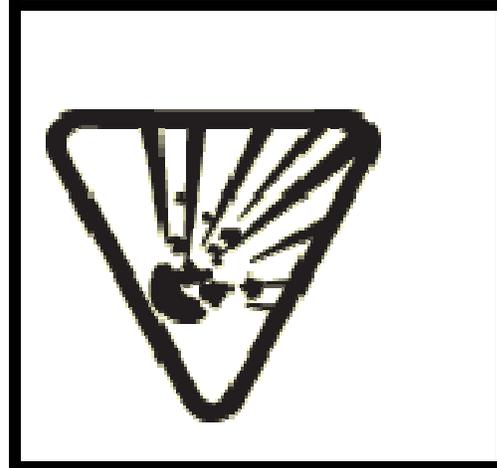
Tell your instructor how this product could hurt you.

Tell your instructor what you must do to keep yourself safe if you are using a product with this symbol on the label. (What equipment should you wear?)



# ***Hazard Symbols***

## **TASK 1 cont.**





## ***Hazard Symbols***

### **TASK 2**

Read each scenario aloud to the student.

1. You have been asked to use a pesticide you have not used before. There is no label on the pesticide. What should you do?
2. The label on the pavement cleaner shows the corrosive symbol. You do not have a pair of gloves to use while you are cleaning with it. What should you do?
3. There has been a spill of something on the floor of the garden shed where fertilizers and pesticides are stored. You do not know what the product is, but it is making you sneeze and your eyes are watering. You don't feel safe. What should you do?
4. A co-worker is smoking beside a sign which says "Flammable". What should you do?
5. There is a container with the "Poison" symbol on the label. The container is sitting on the table where you eat lunch. What should you do?



# ***Hazard Symbols***

## **TASK 3**

### **I Can**

<b>I CAN</b>	<b>DATE</b>
I know the symbols for <ul style="list-style-type: none"> <li>• Poisonous</li> <li>• Corrosive</li> <li>• Flammable</li> <li>• Explosive</li> </ul>	
I know the protective equipment symbols.	
I know when to use the protective equipment.	
I know how to ask for help when needed.	
I can read the safety signs in my workplace.	
I know what a WHMIS label looks like.	
I know what my employer should do to keep me safe.	



**DEMONSTRATION ASSESSMENT**

## *Hazard Symbols*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- **Document Use 1**
- **Oral Communication 2**
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory
- 

<b>ACHIEVEMENT INDICATORS</b>	<b>BEGINNING</b>	<b>DEVELOPING</b>	<b>ACCOMPLISHED</b>
• Identified each symbol correctly			
• Explained the meaning of the symbol (eg: What does corrosive mean; what could this product do to harm the worker)			
• Knew the protective equipment needed for handling products displaying the given symbols			
• Knew what to do in various scenarios.			
• Assessed own performance			

**ADDITIONAL COMMENTS**



# **Tools and Fasteners**



# Tools and Fasteners

This unit will help students to identify everyday maintenance tools and their appropriate fasteners. They will be given an opportunity to practise with each tool and fastener. They will measure nails, screws and bolts so that they can select or order the best one for the job at hand.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Understanding of concepts of clockwise and anti-clockwise (counter-clockwise)
- Understanding of units of measurement: inches and centimeters
- Ability to read and use a ruler
- Basic computer use (access Internet)
- Good hand/eye co-ordination
- Sounds of initial consonants
- Some sight vocabulary

## OBJECTIVES

Students will

- Identify tools
- Identify fasteners
- Use tools and fasteners
- Understand the need for tool care
- Understand the need for tool safety
- Identify the tool and fastener needed for a specific job

## MATERIALS

- Tool box
- Wood (to hammer and screw into)
- Tools: hammer, variety of screwdrivers (slot, Phillips, Robertson), wrenches (open-ended, socket, adjustable), awl, pliers, power drill, saws (hand saw, hack saw)
- Nails – variety of sizes
- Screws – variety of sizes and types
- Nuts, bolts, and washers
- Labels
- Chart paper & markers
- Access to computers and Internet

## VOCABULARY

- Bolt
- Brad
- Care
- Fastener
- Floor
- Hammer
- Label
- Length
- Maintenance
- Match
- Measure
- Nail
- Nut
- Phillips
- Pliers
- Power drill
- Repair
- Robertson
- Safety
- Saw
- Screwdriver
- Screw
- Slot
- Spike
- Thickness
- Tool box
- Tool
- Wall
- Width
- Wood
- Wrench

## RESOURCES

- A trip to your local hardware store could precede the unit. The store might donate some of the materials needed (variety of screws, nails, nuts & bolts). There is usually at least one person there who is very knowledgeable about the tools, their uses, safety, etc.
- Invite a building superintendant or other person responsible for routine maintenance and repairs to speak to the class and even demonstrate some of the skills.
- [www.homedepot.ca](http://www.homedepot.ca). Click on “Tool and Hardware”; select “hand tools” select category from menu.
- [www.nutsandbolts.com](http://www.nutsandbolts.com), [www.boltdepot.com](http://www.boltdepot.com), [www.nutty.com](http://www.nutty.com) are all excellent sites to view a wide range of fasteners, photos of real ones, and drawings to highlight differences
- [www.hometime.com](http://www.hometime.com) Click on “How To” and select “Safety and Tools”
- Use the Internet to search for tools and tool safety tips

Tools and Fasteners

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Maintenance experience									1				*				*
2.	Tools	1	1	1						2	1	1		*			2	*
3.	Fasteners	1	1							2	1	1		*				*
4.	Hammer and nails	1	1							2	1	1	1	*				*
5.	Measuring nails		1				1	1		2	1	1		*				*
6.	Screws and screwdrivers	1	1							2	1	1	1	*				*
7.	Length of screws		1				1	1		1	1	1		*	*			*
8.	Nuts, bolts and washers		1							2	1	1		*			2	*
9.	Wrenches	1	1							2	1	1	1	*				*
10.	Wrenches and pliers		1							2	1	1		*				*
11.	Saws	1	1							1	1	1	1	*				*
12.	Power tools	1	1							2	1	1		*			2	*
13.	Tool- fastener match	1	1							1	1	1		*		*		*
14.	What's in the toolbox	1	1	1		1	1	1		2	1	1		*		*		*
15.	On the job									2	1	1		*				*
16.	Looking after tools	1								2	1	1		*				*
17.	Tool safety	1	1							2	1	1		*			2	*
D	The right tool for the job	1	1			1					1	1		*				



## LEARNING ACTIVITIES

<p><b>1. MAINTENANCE EXPERIENCE</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Chart paper &amp; markers</li> </ul>
<p>Ask student what the word “maintenance” means. Write it on the board and teach as vocabulary.</p> <p>Discuss with students the kinds of maintenance or repair jobs any of them have done at home or in the community. (eg. Changing a light bulb, tightening a loose screw, hammering in a nail, fixing a leaky tap, etc.) Make a list on chart paper.</p> <p>Ask if any of them have worked with a carpenter or builder, and what they have learned.</p> <p>Ask what kind of store sells maintenance supplies. (hardware or lumber store)</p> <p>A field trip to visit a local hardware store could be done now or at the end of the unit (or both).</p>	

<p><b>2. TOOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Hammers, saws(hand saw &amp; hack saw)</li> <li>• Screwdrivers (slot, Phillips, Robertson)</li> <li>• Awl</li> <li>• Wrenches (open-ended, socket, adjustable)</li> <li>• Pliers with various noses</li> <li>• Power drill</li> <li>• Student Activity Sheet: <i>Tool Match</i></li> <li>• Computer with Internet access</li> </ul>
<p>Collect and display a selection of tools. Write the word “Tools” on the display table.</p> <p>Hold up one tool at a time.</p> <ul style="list-style-type: none"> <li>• Ask students if they can identify the tool.</li> <li>• Have they ever used it?</li> <li>• What did they use it for?</li> <li>• Print a label for the name of the tool and display it next to the tool on the tool table.</li> <li>• If students are unable to identify a tool, you must do so, saying what it is used for, and writing the label to place beside it on the table.</li> </ul> <p>Read and match the labels and tools several times, then collect the labels and ask the students to place each label beside the appropriate tool.</p> <p>Use Student Activity Sheet: <i>Tool Match</i> as a review.</p> <p>Have students go to the Internet, especially the Home Depot site and look at a variety of tools: <a href="http://www.homedepot.ca">www.homedepot.ca</a> . Click on “Tools and Hardware”; select “hand tools” then use menu on left to find different categories. This is a good way to see the wide range of tools available, especially if a visit to a local hardware store is not practical or possible.</p> <p>If it is impractical to keep a large number of tools on display, make cards with pictures on one side and the word on the other, or of pictures and words on separate cards, which can be used for display and for learning games / activities. The home depot site has lots of pictures!</p>	

<p><b>3. FASTENERS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Variety of fasteners: nails, screws, nuts and bolts</li> <li>• Hammer, screwdriver, wrench</li> <li>• Student Activity Sheet: <i>Tools and Fasteners</i></li> </ul>
<p>Explain that fasteners are what hold two things together. Show students the word “fastener” and point out that they may see this sign over the aisle in the hardware store.</p> <p>Have a display of fasteners, including screws, nails, and nuts and bolts. Look carefully at the differences. (screws have threads, pointed ends, and some kind of place to fit the screwdriver in the head; nails have points but no threads and no place to fit a screwdriver; bolts have straight shaft with no point, threads part way for the nut, and sometimes a place to fit a screwdriver and other times the head is shaped for a special wrench.)</p> <p>Explain that specific tools are used with specific fasteners. (hammer for nails; screwdriver for screws; screwdriver and/or wrench for nuts and bolts.)</p> <p>Ask students to choose the correct fastener as it is named. Ask what tool would be used with each.</p> <p>Use Student Activity Sheet: <i>Tools and Fasteners</i>.</p> <p>Again, the Internet is an excellent source for pictures of a wide variety of fasteners.</p>	

<p><b>4. HAMMER AND NAILS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Piece of wood for hammering into (2 x 4)</li> <li>• Hammer</li> <li>• Variety of nails</li> <li>• Spare small block of wood to use when removing nails</li> <li>• Teaching Aid: <i>Using a Hammer and Nails.</i></li> </ul>
<p>Point out that nails are probably the most common fasteners used. Ask students what kind of jobs hammers and nails would be used for. (building things out of wood, holding two pieces of wood together, trim where a fine nail is needed, hanging a picture on a wall, etc.)</p> <p>Discuss how to use a hammer. Use Teaching Aid: <i>Using a Hammer and Nails.</i></p> <ul style="list-style-type: none"> <li>• Demonstrate the safe hammering of a nail into a board.</li> <li>• Demonstrate how to safely remove the nail, using the claw end of the hammer.</li> <li>• Let students practise hammering a nail into a piece of wood, and then removing it.</li> </ul>	

<p><b>5. MEASURING NAILS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Data Analysis 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Small boxes</li> <li>• Boxes or packages that held nails (showing size and type)</li> <li>• Nails of various lengths and thicknesses (ask at local hardware store for samples if possible)</li> <li>• Ruler</li> </ul>
<p>Prepare boxes with nails of various lengths and thicknesses. (You only need a few nails in each box.)</p> <p>Point out that nails can be purchased in many different sizes and lengths. Explain that they would use different types for different jobs: there are nails for hammering into concrete, into wallboard, into wood.</p> <p>Give students practice measuring the lengths of different nails. Compare them to the sample packages. Tell them that very large nails are sometimes called “spikes” and that very small ones are called “brads”. Write those words on the board and teach as vocabulary.</p> <p>Ask students how they would decide how large a nail to use. (size and thickness of the wood; distance to go through to join the two securely, but not stick out; appearance)</p>	

<p><b>6. SCREWS AND SCREWDRIVERS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Slot, Phillips and Robertson screwdrivers in various sizes</li> <li>• Screws for each type and size of screwdriver</li> <li>• Piece of wood for practice</li> <li>• Awl or small nail and hammer</li> <li>• Teaching Aid: <i>Screws and Screwdrivers</i></li> <li>• Student Activity Sheet: <i>Which Screwdriver?</i></li> <li>• Teaching Aid: <i>Using a Screwdriver and Screws</i></li> </ul>
<p>Hold up a screw. Ask students to tell the difference between the screw and a nail. (screws have threads and an indentation on the head). Explain that screws have greater holding power because the threads twist right into the wood. Screws can be both put in and taken out with a screwdriver. There are screws for metal and others for wood. (Search the Internet.)</p> <p>Hold up several examples of screwdrivers. Explain that it is important to match the screwdriver to the slot in the screw. Show the three most common types of screwdriver, and label each one. (slot, Phillips (cross), and Robertson (square)). There are other types, but these are the most common. Use Teaching Aid: <i>Screws and Screwdrivers</i>. Display this along with real examples of each for future reference.</p> <p>Examine different types of screws and screwdrivers. Teach vocabulary.</p> <ul style="list-style-type: none"> <li>• Examine the tip of the slot screwdriver. This is the most common and is used with screws that have a single slot across the head of the screw. Show appropriate screws.</li> <li>• Now look at the Phillips. It has a cross or star shape tip. It is used with screws that have two slots at right angles to each other on the head of the screw. Show the appropriate screw and how the screwdriver fits into the cross.</li> <li>• Finally, look at the Robertson. This is a Canadian screwdriver. It has a square tip and is used for screws that have a square recess in the head of the screw. Show the appropriate screw and how the screwdriver fits into the square indentation.</li> </ul> <p>Explain that each type of screwdriver comes in various sizes and that the screw indentations will also come in various sizes. It is important to choose the right shape and size screwdriver for each screw. Give students an assortment of screws and ask them to find the correct screwdriver for each. Use Student Activity Sheet: <i>Which Screwdriver?</i> for follow-up.</p> <p>Demonstrate, using Teaching Aid: <i>Using a Screwdriver and Screws</i>. Read together</p> <ul style="list-style-type: none"> <li>• Use an awl (looks like a long screw or nail with a screwdriver handle) to make the small hole to begin the screw. Or you could use a small nail and hammer: only make a small hole large enough to start the screw. (An awl is a “punch” tool.)</li> <li>• Make sure students know clockwise and anti-clockwise (counter-clockwise).</li> <li>• Give students opportunity to practise.</li> </ul>	

<p><b>7. LENGTH OF SCREWS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Data Analysis 1</li> </ul> </li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Variety of screws and their original packages</li> <li>• Ruler</li> </ul>
<p>Explain that screws are measured by their length in inches. They are also given a number which indicates how thick the screw is: the larger the number, the thicker the screw.</p> <p>Look at a box or packet of screws. Ask students to find the length of the screw on the box. Then take one out and measure it to compare.</p> <p>Practise measuring a variety of screws. Ask how they will know which size to use. (size of wood being fastened to another; strength required (say for hanging a picture or holding a shelf, etc.)</p>	

<p><b>8. NUTS, BOLTS AND WASHERS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Screws</li> <li>• Nuts, bolts and washers</li> <li>• Chart paper &amp; markers</li> </ul>
<p>Show students a bolt. Explore the differences between bolts and screws. Make a comparison chart on chart paper or the board. (Use pictures and words)</p> <ul style="list-style-type: none"> <li>• Bolts are used in predrilled holes that are the same size or larger than the bolt, and they are held in place by nuts. Sometimes washers are used as well. Show examples of each. Teach vocabulary.</li> <li>• A screw tightens into a slightly smaller hole by digging into the wood with its threads.</li> <li>• Bolts are generally thicker than screws and are not tapered to a point.</li> <li>• Point out that nuts and bolts are often used to join pieces of metal.</li> <li>• Explain that washers may be placed on either side of two pieces of wood or plastic being joined; the washers are used to create a flat metal surface for the bolt and nut to press against. There is often a depression in the wood to receive the washer.</li> <li>• It is necessary to get to both sides of the two pieces being joined when using nuts and bolts, but not with screws.</li> <li>• Nuts and bolts loosen over time with wear and tear. Show an easel or something else that has been joined with a nut and bolt.</li> </ul> <p>Some screws look like bolts.(machine screws). Remember that a bolt needs a nut that is fastened from the back.</p> <p>Use the Internet sites to explore the wide variety of fasteners studied so far. (See Resources )</p>	

<p><b>9. WRENCHES</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Wrenches: socket, open-ended &amp; adjustable</li> <li>• Assorted nuts, bolts and washers</li> <li>• Piece of wood with predrilled holes for practice</li> <li>• Teaching Aid: <i>Wrenches, Nuts, Bolts &amp; Washers</i></li> <li>• Teaching Aid: <i>Using a Wrench with Nuts and Bolts</i></li> </ul>
<p>Explain that the tool used for nuts and bolts is called a wrench. There are three different types: the open-ended, socket and adjustable.</p> <ul style="list-style-type: none"> <li>• Show an example of each.</li> <li>• Demonstrate how each is used.</li> <li>• Explain that as with screws and screwdrivers, there is a correct size wrench to use with each size nut.</li> <li>• The adjustable wrench has the advantage of being changed to fit different sizes.</li> <li>• Display Teaching Aid: <i>Wrenches, Nuts, Bolts &amp; Washers</i></li> </ul> <p>Practise matching wrenches with bolts.</p> <p>Read with students the Teaching Aid: <i>Using a Wrench with Nuts and Bolts</i>. Point out that the direction to turn the nut is the same as for a screw: to the right to tighten, to the left to loosen. Use the memory aid: “Rightie – Tightie; Leftie – Loosie.</p> <p>Practise tightening and loosening nuts and bolts. Use washers.</p>	

<p><b>10. WRENCHES AND PLIERS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Wrench</li> <li>• Variety of pliers</li> <li>• Teaching Aid: <i>Pliers</i></li> </ul>
<p>Show a wrench and show a pair of pliers. Ask students to describe the difference.</p> <ul style="list-style-type: none"> <li>• A wrench has a single handle and pliers have two handles and two pincers or jaws.</li> <li>• A wrench has an opening that is fixed in size, or which can be adjusted in size.</li> <li>• The pincers of pliers come together to various sizes as the handles are moved.</li> </ul> <p>Demonstrate how to hold and use pliers. Allow students time to practise.</p> <p>Look at the different “noses” on the pliers. Ask why they think they are designed that way (to grab different size fasteners). Explain that pliers are a holding tool. Some have shaped (bent) noses to reach into awkward places. Show examples. Display Teaching Aid: <i>Pliers</i>.</p>	

<p><b>11. SAWS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Hand saw and hack saw</li> <li>• Piece of wood to saw (4' length of 2X4)</li> <li>• Teaching Aid: <i>Saws</i></li> <li>• Teaching Aid: <i>Using a Hand Saw</i></li> </ul>
<p>Explain that they may sometimes have to use a small saw, such as for trimming branches broken by snow, vandals, or accident.</p> <p>Show a variety of small saws: hack saw, hand saw. Display Teaching Aid: <i>Saws</i>.</p> <ul style="list-style-type: none"> <li>• Explain that a hack saw is used for cutting metal, including bolts.</li> <li>• Explain that different saws have different types of teeth: fine and course, big and small, wide and narrow, each for a different type of cutting job.</li> </ul> <p>Demonstrate safe use of saw, using Teaching Aid: <i>Using a Hand Saw</i>. If appropriate, give students opportunity to saw a small piece of wood that is placed between two desks.</p>	

<p><b>12. POWER TOOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Small power drill</li> <li>• Teaching Aid: <i>Using Power Tools</i></li> <li>• Computer with Internet access</li> </ul>
<p>Explain that many maintenance or repair jobs are done using a small power tool such as a power drill.</p> <p>Show a small power drill. Go to the Internet to see the wide range of power tools available. Use the Home Depot website: <a href="http://www.homedepot.ca">www.homedepot.ca</a> . Select “Tools and Hardware”; click on “Power Tools”.</p> <p>Discuss general safety around power tools: 3-prong plug, no frayed cord, stay away from water, BE TRAINED!!</p> <p>Use Teaching Aid: <i>Using Power Tools</i> to focus on safety issues. There are good Internet sites students could visit: <a href="http://www.osha.gov/Publications/osha3080.pdf">www.osha.gov/Publications/osha3080.pdf</a> has an excellent downloadable booklet. <a href="http://www.nsc.org/library/facts/agritool.htm">www.nsc.org/library/facts/agritool.htm</a> is another good site.</p> <p>Explain that they would receive training on the job, rather than in this classroom, although if you have someone who could come as a skilled visitor to demonstrate use, that would be ideal.</p>	

<p><b>13. TOOL – FASTENER MATCH</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Working With Others</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Empty tool box</li> <li>• Display table with full range of tools and fasteners studied</li> </ul>
<p>Explain to the students that they have to fill a toolbox with certain tools and fasteners.</p> <p>Have an empty tool box available. Have tools on the table plus assorted fasteners.</p> <p>Ask for a specific tool and fastener. Students take turns to collect the appropriate tool and the required fasteners. For example,</p> <ul style="list-style-type: none"> <li>• Phillips screwdriver and 3 screws</li> <li>• A hammer and 6 – 1” nails</li> <li>• A small saw</li> <li>• Etc.</li> </ul> <p>Continue until you have used all the tools and fasteners from the display table.</p>	

<p><b>14. WHAT IS IN THE TOOL BOX?</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Scheduling or Budgeting &amp; Accounting 1</li> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Data Analysis 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Working With Others</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Tool box filled with tools and fasteners studied in this unit</li> <li>• Table with labels for tools and fasteners, or small labeled bins for each</li> <li>• Student Activity Sheet: <i>Tool Checklist</i></li> <li>• Teaching Aid: <i>Using a Tally Sheet</i></li> <li>• Student Activity Sheet: <i>Fastener Tally</i></li> </ul>
<p>Give students a tool box full of tools and fasteners.</p> <p>Ask students to remove the tools and fasteners and to place them beside the appropriate labels on the display table.</p> <p>Have students use a checklist of what is in the toolbox. Explain that this would be a good way to check that their box was properly stocked before heading out on a job. In fact, using a tool checklist for noting condition of tools is a job expectation. Use Student Activity Sheet: <i>Tool Checklist</i>.</p> <p>You could make this more complicated, by giving the student a box full of assorted screws, nails, nuts and bolts which also have to be sorted and tallied</p> <ul style="list-style-type: none"> <li>• By type</li> <li>• By size.</li> </ul> <p>Use Teaching Aid: <i>Using a Tally Sheet</i> to demonstrate how a tally is organized, how to locate information on a tally, and how to enter information onto the tally sheet.</p> <p>Then use Student Activity Sheet: <i>Fastener Tally</i> to give them practice as they sort through the assorted fasteners. Students may wish to do this together, as they sort, measure and classify the fasteners.</p>	

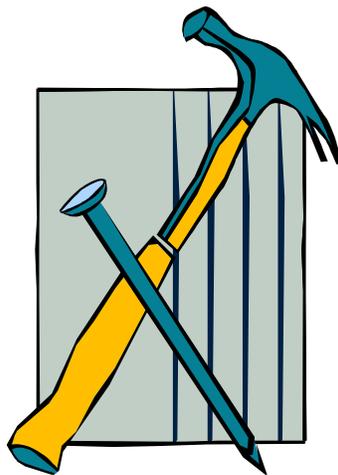
<p><b>15. ON THE JOB</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b> None</p>
<p>Explain to the students that when they are out on a maintenance job, they may be asked to get a certain tool and fastener to fix something.</p> <p>Give some possible job scenarios and ask students to suggest the appropriate tool and/or fastener for the job.</p> <ul style="list-style-type: none"> <li>• Attach a large sign on a wooden wall.</li> <li>• Re-attach a number to the front of a building.</li> <li>• There is a loose board on a porch.</li> <li>• The bolt on the lawnmower has come loose.</li> <li>• A branch on a tree is partly broken and must be removed.</li> <li>• Etc.</li> </ul>	

<p><b>16. LOOKING AFTER TOOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Caring for Tools</i></li> </ul>
<p>Explain that tools are expensive and they must be taken care of.</p> <p>Use Teaching Aid: <i>Caring for Tools</i>. Read and discuss each point with students. Ask students what would be the reason for each point.</p> <p>Power tools will need special care. Training will be required.</p>	

<p><b>17. TOOL SAFETY</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Use Tools Safely</i></li> <li>• Computer with Internet access</li> </ul>
<p>Remind students that using any type of tool means following safe handling procedures.</p> <p>Ask:</p> <ul style="list-style-type: none"> <li>• What might happen if they look away while hammering in a nail?</li> <li>• What might happen if they put their finger in the wrong place in a wrench?</li> <li>• What could happen if nails are left sticking out of a piece of wood, or sticking up from a floorboard?</li> </ul> <p>Discuss tool safety and the importance of cleaning up and putting tools and fasteners away in their storage places.</p> <p>Discuss what protective equipment they might need to use in a variety of situations: safety glasses, leather gloves, leather apron, steel-toed boots.</p> <p>Read and display Teaching Aid: <i>Use Tools Safely</i>. The Internet has good safety sites: <a href="http://www.hometime.com">www.hometime.com</a> is one: Click on “How To” and select “Safety and Tools”.</p>	



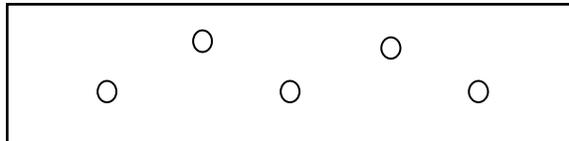
# Hammers and Nails





## Using a Hammer and Nails

1. Choose as small a nail as possible to do the job.
2. Hold hammer near the end of the handle.
3. Do not nail close to the end or edge of the board. Do not nail through knots in the wood.
4. Hold the nail near the head (top) of the nail with your thumb and first finger. If you do miss and hit your fingers, you won't pinch your fingers against the wood.
5. Come straight down on the nail with the hammer.
6. Start with a small tap, and then hit the nail a little harder.
7. Once the nail is started, you do not need to hold it.
8. If nailing along a board, stagger the nails to avoid splitting the wood.



To remove a nail:

1. Use a small block of wood under the hammer for leverage.
2. Grip the head and body of the nail with the claw of the hammer.
3. Pry up the nail.



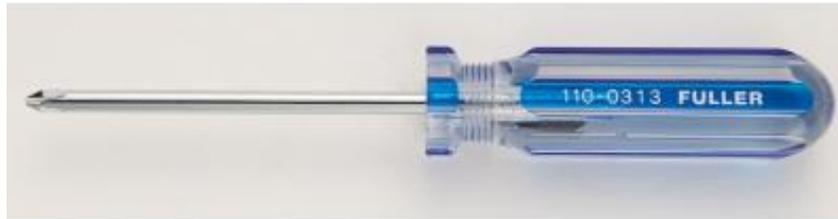
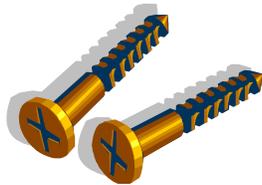
# Screws and Screwdrivers



**SLOT**



**ROBERTSON**



**PHILLIPS**



## Using a Screwdriver and Screws

1. Make a small hole with an awl, a drill, or hammer and nail for the screw to go into.
2. Match the screwdriver to the screws (type and size).
3. For extra power, use a long-handled screwdriver.
4. Hold the screwdriver in the palm of the hand and grip it with your thumb and first finger.
5. To tighten a screw, turn the screwdriver to the right, clockwise.
6. To loosen or remove a screw, turn the screwdriver to the left, anti-clockwise.
7. Put extra pressure if needed.

### SCREW HEADS:

Slot



Phillips



Robertson



AWLS:





# Wrenches, Nuts, Bolts and Washers



ADJUSTABLE WRENCH



COMBINATION  
SOCKET AND OPEN-ENDED WRENCHES



FLARE NUT WRENCHES



NUTS, BOLTS AND WASHERS



# Using a Wrench With Nuts, Bolts and Washers

1. Keep wrenches clean so they don't slip.
2. Always pull on a wrench; don't push.
3. Often you need to hold the bolt with one wrench, or with a screwdriver if it has a screw-head, while turning the nut with another wrench.
4. Select the wrench or wrenches that fit the bolt and nut.
5. Put one washer on bolt before inserting into hole; then put on second washer before putting on the nut.
6. Hand tighten as far as possible before using wrenches.
7. To tighten nuts, turn them to the right, clockwise.
8. To loosen nuts, turn them to the left, anti-clockwise.





# Pliers



LOCKING PLIERS



LONG NOSED PLIERS



DUAL JAW PLIERS



SIDE CUTTING PLIERS



# Saws



## HACKSAW



## HAND SAW



## Using a Hand Saw

1. Measure carefully and mark a line with a pencil where you will be cutting.
2. Support both sides of the work on a bench or sawhorse.
3. Get comfortable before you start sawing.
4. Make sure that the teeth of your saw are sharp. Dull teeth make more work and a less precise cut.
5. Line up your wrist, elbow and shoulder with the saw blade.
6. Cut on the outside of the line. You will lose about  $\frac{1}{8}$ " wood in the actual cut.
7. Apply slight pressure on the push strokes and relax on the pulls.
8. Saw with a steady, easy rhythm.



# Using Power Tools

Power tools need extra care. You should receive training before operating any power tool.

1. Use the right tool for the job.
2. Check the tool before using. Do not use damaged tools.
3. Use according to the manufacturer's instructions. Make sure you receive training. (If no training is given you should ask for it.)
4. Wear personal protective equipment that is required.
5. Use only tools with a 3-prong plug. (grounded)
6. Never carry the tool by the cord.
7. Never yank the cord from the outlet.
8. Disconnect tool when not in use, before cleaning, changing blades, etc.
9. Keep all guards and shields in place.
10. Unplug, clean, and put tool away after use.



## Using a Tally Sheet

A tally sheet is a list. Inventories are tally sheets.

- Each item is named
- Each item is counted.

In the workplace, you may need to count tools or other job-related items.

Here is a sample tally used by someone whose job it is to replace light bulbs. He must always have lots of replacement bulbs in his truck.

TYPE	NUMBER
25 Watt	12
40 Watt	5
60 Watt	7
100 Watt	22

The worker knows he will need 15 of each bulb for a certain job.

Which one does he have enough of?

Which one will he need to get more of?

How many are needed of each type?

You can make your own tally sheet:

- Sort items into groups of identical things
- List each different item; for example, 1" nails, 2" nails, Robertson screws, bolts, etc.
- Count how many you have of each.



# Caring for Tools

1. Keep tools sharp.
2. Keep tools in good working order.
3. Keep tools clean and dry. Remove any rust with steel wool and oil.
4. Put tools away after use. Don't leave them outside to get wet.
5. If tools are damaged, replace or repair them right away.



# Use Tools Safely

1. Use the right tool for the job.
2. Do not use damaged tools. Damaged tools may slip or break and cause an injury.
3. KNOW HOW to use each tool properly. Ask for training.
4. Wear personal protective equipment as directed: safety glasses, gloves, steel-toed boots, dust mask, etc.
5. Do not rush.
6. Pay attention to the job.
7. Keep work space clean and tidy.
8. Put tools away after finishing.



# Tool Match

Write the name of the tool with its picture.

hammer, combination wrenches, power drill,  
 Robertson screwdriver, long nosed pliers, saw,  
 adjustable wrench, slot screwdriver



# Tools and Fasteners

- Match each tool to the fastener it is used with. Some tools can be used with more than one fastener.

Wrench

Screws

Hammer

Nuts

Screwdriver

Nails

Pliers

Bolts

- Draw a line from the fastener to its box.





# Which Screwdriver?

Your boss asks for a screwdriver by name. You must know which is which. You must know which type to use with each type of screw.

Copy the name of the screwdriver you should use beside the picture of each screw.

**Slot**

**Phillips**

**Robertson**




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# Tool Checklist

Write the name of each type of tool that is in your box. Put a checkmark if it is in good condition. Put an X if it is damaged.

TOOL	OK?



## Fastener Tally

Make a tally sheet to help you sort and count the fasteners.

You will need to measure the nails, screws and bolts to be able to label them correctly: for instance, 1" nails, 2" nails, ¾" screws, ...

FASTENER	#	FASTENER	#
NAILS		SCREWS	
BOLTS		WASHERS	



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**DEMONSTRATION INSTRUCTOR PAGE**

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***The Right Tool for the Job***

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**ESSENTIAL SKILLS**

- **Reading Text 1**
- **Document Use 1**
- **Numeracy**
  - Measurement & Calculation 1
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory

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**DEMO DESCRIPTION**

The student will identify the tool and specific fasteners for a specific job. The student will sort a toolbox, putting fasteners which are alike together, and will place similar tools together in separate sections. The student will use a checklist to make sure their tool box is complete, and will note what needs to be added.

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**INSTRUCTOR NOTES**

- Provide a tool box with divided sections for tools, and some small containers (baggies) for fasteners.
- Provide a variety of fasteners: screws, nails, nuts and bolts, of various sizes
- Provide tools: hammer, screwdrivers, wrenches, pliers. (Omit one or two items from the checklist in Task 3, so that student can note its absence.)

**With student**

- Read aloud scenarios if necessary
- Do not identify tools or fasteners by name.

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**ACHIEVEMENT INDICATORS**

- Sorted tools according to type
  - Sorted fasteners according to type, length, and thickness
  - Identified requested tools and fasteners specific to a given job description
  - Compared content of toolbox to a checklist and noted what was missing
  - Assessed own performance
-



# ***The Right Tool for the Job***

## **TASK 1**

You are working with a repair company doing some outdoor repairs.

Your supervisor has sent you to the truck to collect the tool and fastener for the following jobs.

Tell your instructor which tool you will use and which fastener, and get them from the display table or toolbox and show them to your instructor.

- A hinge has come loose on the garage door. The fastener must have fallen and is lost. What do you need?
- The bolt is loose on the lawnmower handle but the pieces are all there. What do you need?
- You must hang a hose on a frame against the shed wall. You want it to be firmly attached. What do you need?
- A nail has jammed between two pieces of wood. It is hard to grab. What do you need?
- You have to nail a rose trellis to the wooden wall on the deck. What do you need?



## ***The Right Tool for the Job***

### **TASK 2**

The tool box has been left in a mess! Your boss asks you to sort it out.

You must put similar tools together in separate sections.

You must put all the same type of fasteners in separate baggies (nails, screws, nuts, bolts, and washers).

- Sort the tools.
- Sort the fasteners according to type, length and thickness.



# ***The Right Tool for the Job***

## **TASK 3**

You must check the contents of the toolbox to make sure everything is there and in good condition.

Use the checklist below. Highlight anything that is missing.

Tell the instructor what is missing and get it from the display table.

Hammer		Small needle-nose pliers	
Large slot screwdriver		4 socket wrenches (varying sizes)	
Small slot screwdriver		3 open-ended wrenches (varying sizes)	
3 Robertson screwdrivers (different sizes)		Nails: 2", 1" (12 of each)	
2 Phillips screwdrivers (different sizes)		Screws: assorted sizes and types	
Adjustable wrench		Nuts, bolts & washers of different sizes	
Large needle-nose pliers			



# *The Right Tool For the Job*

## **TASK 4**

### **I CAN**

<b>I CAN</b>	<b>YES / DATE</b>
I can identify tools.	
I can identify different fasteners.	
I can match screwdrivers to screws.	
I know what each tool is for. <ul style="list-style-type: none"> <li>• Hammer</li> <li>• Screwdriver</li> <li>• Wrench</li> <li>• Pliers</li> <li>• Saw</li> <li>• Awl</li> </ul>	
I can use each tool properly.	
I can choose the right fastener for the job.	
I can keep tools clean and in good condition.	
I can use tools safely.	
I can sort fasteners by type and size.	
I can use a tally sheet.	
I can use a checklist.	



**DEMONSTRATION ASSESSMENT**

## *The Right Tool for the Job*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

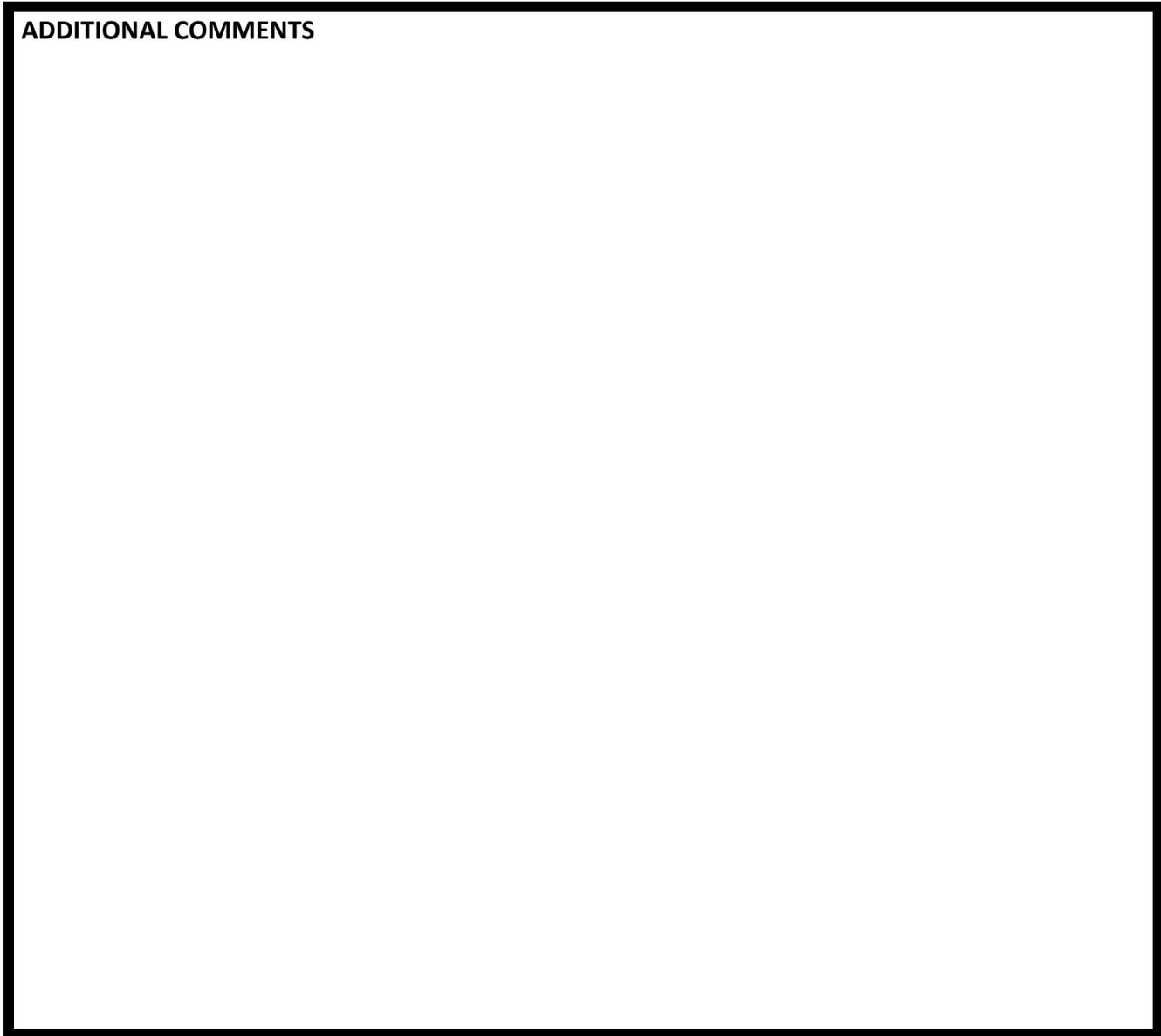
**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- **Reading Text 1**
- **Document Use 1**
- **Numeracy**
  - Measurement & Calculation 1
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory

<b>ACHIEVEMENT INDICATORS</b>	<b>BEGINNING</b>	<b>DEVELOPING</b>	<b>ACCOMPLISHED</b>
• Sorted tools according to type			
• Sorted fasteners according to type, length, and thickness			
• Identified requested tools and fasteners specific to a given job description			
• Compared content of toolbox to a checklist and noted what was missing			
• Assessed own performance			

**ADDITIONAL COMMENTS**



# **Lawns and Gardens: Tasks and Tools**



# Lawns and Gardens: Tasks and Tools

This unit will expose students to the wide range of tasks performed by workers who maintain parks and public spaces, and who work for landscaping companies. They may be working in large areas, or they may be hired to maintain a private lawn and garden. The students will learn about the proper use of a variety of gardening tools, and *ideally* should have the opportunity to practise the skills by looking after some garden or lawn area.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Some experience – lawns, gardens, parks, tools, maintenance
- Understanding of the concept of risks
- General oral vocabulary related to gardening
- Measurement - units, measuring tools, how to measure

## OBJECTIVES

Students will

- Identify by name a variety of lawn and garden tools
- Know what each tool is for
- Know how to dig, rake, wheelbarrow safely
- Understand the range of jobs done year round to maintain grounds
- Decide placement of garbage containers in a park
- Practise using tools to look after a garden or lawn area, if possible
- Visit a hardware store or garden centre to see tools

## MATERIALS

- Variety of lawn and garden tools, if possible (shovels, rakes, wheelbarrows, etc.)
- Computer with Internet access
- Catalogs and flyers with lawn and garden tools
- Chart paper, markers, scissors, glue, etc.
- Prepared vocabulary cards as needed
- Prepared Teaching Aids: laminated or mounted on card stock for multiple use and display
- Household products (samples of cleaners and bug pesticides)
- **Janitorial** manual

**VOCABULARY** (There is a lot of vocabulary in this unit which may be new to the learner: not all needs to be learned in print format)

- Apartment (Apt.)
- Branches
- Bulb planter
- Chainsaw
- Cleaner
- Condominium (condo)
- Control
- CSA
- Cultivator
- Dethatching
- Dig
- Fork
- Funnel
- Garbage can
- Gas
- Gasoline
- Graffiti
- Grass
- Grounds
- Hoe
- Landscape
- Lawn care
- Lawnmower
- Leaf / leaves
- Leaf blower
- Lifting hardware
- Litter
- Lopper
- Maintenance
- Mow
- Mulch
- Park
- Pest
- Pesticide
- Pickaxe
- Post hole digger
- Prune / pruning
- Rake
- Re-fuel
- Repairs
- Scrub / scrub brush
- Shears
- Shovel
- Snow
- Snow blower
- Soil
- Spade
- Stones
- Tools
- Trash
- Trowel
- Twigs
- Vandalism
- Weed garden
- Weed trimmer
- Wheelbarrow
- Wood chips

## RESOURCES

- [www.homegarden.about.com](http://www.homegarden.about.com) This site has a variety of short instructional videos such as how to use a shovel, post hole, digger, etc. You enter the topic in the search box.
- Do Internet searches for tips on uses certain tools.
- Local garden contractors may provide tips, brochures, or even a guest speaker!
- Local hardware and garden supply stores: take students to see the wide variety of tools. This may be easier than trying to bring the tools into the classroom.
- Your own site may have a garden or lawn area that you could ask to use for practice: raking, weeding, digging, etc.
- [www.ccohs.ca/oshanswers/occup\\_workplace/landscapers.html](http://www.ccohs.ca/oshanswers/occup_workplace/landscapers.html) This site discusses risks to people in this sector.

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Maintenance		1							2	2	1		*				*
2.	Tools		1							1	2	1		*				*
3.	Digging	1	1	1						2	1	1	1	*			2	*
4.	Raking	1	1	1						2	1	1	1	*			2	*
5.	Using a wheelbarrow	1	1	1						2	1	1	1	*			2	*
6.	All year round		1	1						2	2	1		*		*		*
7.	Pest control	1	1							2				*				*
8.	Power equipment	1	1							1	1	1		*				*
9.	Removal of graffiti		1							2	1	1		*				*
10.	Garbage containers	1	1							2	2	1		*				*
11.	Litter									2	2	1		*				*
12.	Repairs		1							1	1	1		*				*
D.	Keeping up appearances	1								2	1	1	1	*				

## LEARNING ACTIVITIES

<p><b>1. MAINTENANCE</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Chart paper, markers</li> </ul>
<p>Ask students what they think of when they hear the word “maintenance”. Discuss that it means keeping something in a certain condition. Ask what sorts of things are maintained. (health, weight, house, garden, etc.) Ask what condition they usually want something to be maintained in. (good, best, working, sustainable, etc.)</p> <p>Write “Grounds Maintenance” on the board. Ask what jobs need to be done to keep the areas outside homes and buildings, or in parks, in good condition. Make a list.</p> <ul style="list-style-type: none"> <li>• Pick up trash</li> <li>• Empty garbage cans</li> <li>• Mow grass</li> <li>• Shovel snow</li> <li>• Weed gardens</li> <li>• Remove graffiti from walls, benches, etc.</li> </ul> <p>Explain that cities employ people to look after public spaces like parks. Apartments and condominiums have common (shared) spaces that must be cared for. There are companies that offer this kind of service to homeowners as well as to businesses. Ask what these companies are called. (Landscape companies, Lawn Care companies, Grounds or Outdoor Maintenance companies)</p> <p>Ask what the risks might be for these workers. (See <i>Safety</i> unit in this manual for how to work safely.)</p> <ul style="list-style-type: none"> <li>• Sun /wind/cold exposure – extreme temperatures and weathers</li> <li>• Insect bites,</li> <li>• Hazardous waste – animal droppings, needles, etc.</li> <li>• Lifting heavy loads – back injury especially</li> <li>• Using tools – if not used properly, worker can be injured</li> </ul>	

<p><b>2. TOOLS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: Lawn and Garden Tools</li> <li>• Student Activity Sheet: <i>Lawn and Garden Tools</i> (make several photocopies of this chart for each student)</li> <li>• Glue, scissors, etc.</li> <li>• Hardware catalogs and flyers with garden tools</li> <li>• Samples of tools, or visit to hardware store</li> </ul>
<p>Explain that people doing yard / garden maintenance use a wide range of tools. Ask students which tools they can think of. Make a list on the board or chart paper.</p> <p>Show samples of the various tools named. A visit to a hardware store or any other store with a garden tools section would be helpful here.</p> <p>Post the Teaching Aid: <i>Lawn and Garden Tools</i> for in-class reference. Teach the vocabulary, especially focusing on oral recognition, perhaps by asking the student to “get” or point to a specific tool. They would have to be able to do this in a work situation.</p> <p>Discuss briefly what each is used for. Begin the chart on Student Activity Sheet: <i>Lawn and Garden Tools</i>. The student could cut pictures from catalogs or flyers, or you could photocopy the pictures from the Teaching Aid for this. Have the student copy the name of a tool, and then glue the correct picture next to the name. The various tools will be discussed more fully in the next few activities and they will fill in the uses of the tools as they learn.</p>	

<p><b>3. DIGGING</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Computer with Internet access</li> <li>• <a href="http://www.homegarden.about.com">www.homegarden.about.com</a> (How to Use a Shovel, Post Hole Digger, snow shoveling, etc.)</li> <li>• Teaching Aid: Lawn and Garden Tools</li> <li>• Student Activity Sheet: <i>Lawn and Garden Tools</i></li> <li>• Teaching Aid: <i>Lift It Safely</i></li> </ul>
<p>Ask students to explain what digging means to them. Have they ever been asked to dig a hole for something? If so, what? Have they ever been asked to dig a small hole in a garden for a plant? If so, when and where, and for what?</p> <p>Explain that there are many different digging tools and each has a specific job. Use the information to add to the Student Worksheet: <i>Lawn and Garden Tools</i>. Print the information on the board and have students copy.</p> <ul style="list-style-type: none"> <li>• Shovel – digging a hole or moving earth, mulch etc.</li> <li>• Spade – edging a garden or plot, digging a straight line, cutting under sod, etc.</li> <li>• Hoe – breaking up large clumps of soil</li> <li>• Garden fork – digging a hole, turning over earth, etc.</li> <li>• Trowel – digging a small hole</li> <li>• Small garden fork – digging and breaking up small patches</li> <li>• Post hole digger</li> <li>• Snow shovel</li> <li>• Etc.</li> </ul> <p>Remind students that when they are digging a large hole, there are safety issues for back, shoulders, arms, etc. They should be shown on-the-job how to dig and refill a hole safely. Use the website references for ideas. More advanced students could check this website, for safety tips, on their own. (There are several short videos that explain how to use special tools. You will have to do some searching.) Enter “shovel back” to get a list of sites.</p> <p>If possible, give students the opportunity to dig in a garden using a variety of tools. You may be able to invite someone who is skilled and experienced to assist with this.</p> <p>Refer to Teaching Aid: <i>Lift It Safely</i>. Practise safe lifting before having students do a lot of digging of earth.</p>	

<p><b>4. RAKING</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: Lawn and Garden Tools</li> <li>• Student Activity Sheet: <i>Lawn and Garden Tools</i></li> <li>• Computer with Internet access</li> <li>• Garden and leaf rakes</li> <li>• Teaching Aid: <i>Raking</i></li> </ul>
<p>Ask students if they have ever raked leaves. Ask what that rake was like. Ask if they have ever used another kind of rake. If so, when and what for. Ask them to describe it. Show them leaf and garden rakes, or look at the pictures of the different types of rake on the Teaching Aid: <i>Lawn and Garden Tools</i>, or remind them of the rakes they saw at the hardware store. Write use of each type of rake on the Student Activity Sheet: <i>Lawn and Garden Tools</i>.</p> <p>Discuss the different types of raking tasks:</p> <ul style="list-style-type: none"> <li>• Leaves or debris</li> <li>• Dethatching a lawn in spring (Thatch is the layer of dead turf grass between the green vegetation and the surface of the soil. This must be removed – dethatched – to maintain lawn health. It may be done when raking the leaves in fall, or in the spring after the snow has melted and the ground dried.)</li> <li>• Load of soil or other material that has been dumped to be spread evenly over an area</li> <li>• Gardens – light raking to keep them tidy and to lightly break up the soil</li> </ul> <p>Discuss different ways of raking. Use Teaching Aid: <i>Raking</i>.</p> <p>Remind students again of safety issues for their back, arms, neck and shoulders. Remind them of appropriate clothing: boots, gloves. (See the Internet sites mentioned before for safe gardening practices.)</p> <p>Use a rake to demonstrate proper raking techniques. Give students the opportunity to practise.</p>	

<p><b>5. USING A WHEELBARROW</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: Lawn and Garden Tools</li> <li>• Student Activity Sheet: <i>Lawn and Garden Tools</i></li> <li>• Computer with Internet access</li> <li>• Wheelbarrow</li> <li>• Teaching Aid: <i>I Don't Understand</i></li> <li>• Teaching Aid: <i>Lift It Safely</i></li> </ul>
<p>Ask students if they have ever used a wheelbarrow. If yes, ask them to describe the wheelbarrow they used, and what they used it for. Use the Teaching Aid: <i>Lawn and Garden Tools</i> or look on the Internet for pictures of wheelbarrows. Remind them of wheelbarrows they saw at the hardware store; you might have access to a real wheelbarrow at your site for them to examine. Explain that a wheelbarrow is used to move things from one place to another. (soil, stones, mulch, branches, twigs, leaves, etc.) Enter into Student Activity Sheet as before.</p> <p>View the safe way to use a wheelbarrow: <a href="http://www.homegarden.about.com">www.homegarden.about.com</a>. Enter "Use a wheelbarrow safely" in the search box. Scroll down to find site. Refer again to Teaching Aid: <i>Lift It Safely</i>.</p> <p>Demonstrate how to push a wheelbarrow. Ask students to try this too.</p> <ul style="list-style-type: none"> <li>• Use safe lifting techniques, bending knees not back, keeping back and arms straight, etc.</li> <li>• Remind students that the wheelbarrow may be heavy when full.</li> <li>• They may not want to fill it full with very heavy stones: they should use their discretion as to how heavy is too heavy for them. Explain that overloading makes pushing harder, can cause hip strain, and could make them lose their balance with the wheelbarrow, its load and even themselves falling.</li> <li>• Show turning, making a wide turn not a sharp one.</li> <li>• Show how to dump the load.</li> </ul> <p>If possible, experiment with a wheelbarrow outside. Start with it empty, then add items to the wheelbarrow to add weight and volume. (Use materials that are easy to pick up if they spill.) Wheelbarrow use should be included if students are maintaining a garden on-site.</p> <p>Explain that there are many ways to empty the wheelbarrow. They could dump the load, or they could dig it out, or even rake it out. Demonstrate or mime each method. Ask if they can think of when each might be best. Give students opportunity to practise the skill.</p> <p>Tell the students that they should receive clear instructions (training) at the job site. If they are unsure about what to do or how to do it safely, what should they do? (Ask for training or clarification.) Practise asking, using Teaching Aid: <i>I Don't Understand</i>.</p>	

<p><b>6. ALL YEAR ROUND</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Working With Others</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Chart paper, markers, scissors, glue</li> <li>• Pictures from catalogs, magazines etc.</li> </ul>				
<p>Ask students if they think maintenance is only done in one or two seasons or if it is an all year round. (all year)</p> <p>Write the words “Spring”, “Summer”, “Fall”, and “Winter” on the board. Ask what maintenance jobs in gardens, yards, and parks needs to be done in each season. List these. When you have completed the lists, ask students to make posters, one for each season. Include the list of tasks, some pictures – photos, drawn or cut out, and the tools needed.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>SPRING</b></p> <ul style="list-style-type: none"> <li>• Clean up</li> <li>• Dig over old gardens</li> <li>• Plant</li> <li>• Rake or aerate lawns</li> <li>• Fertilize</li> <li>• Mulch</li> <li>• Prune</li> <li>• Prepare new gardens</li> </ul> </td> <td style="width: 50%; vertical-align: top;"> <p><b>SUMMER</b></p> <ul style="list-style-type: none"> <li>• Water</li> <li>• Weed</li> <li>• Prune</li> <li>• Deadhead (cut off dead blooms)</li> <li>• Mow grass</li> <li>• Spray for pests</li> <li>• Edge garden / lawn</li> <li>• May change plants in flower beds (remove bulbs, add annuals)</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;"> <p><b>FALL</b></p> <ul style="list-style-type: none"> <li>• Rake leaves</li> <li>• Remove bedding plants</li> <li>• Plant spring bulbs</li> <li>• Cover some plants in preparation for winter</li> <li>• Cut back shrubs, roses and some bushes</li> </ul> </td> <td style="vertical-align: top;"> <p><b>WINTER</b></p> <ul style="list-style-type: none"> <li>• Remove snow</li> <li>• Remove ice</li> <li>• Salt or sand walkways, driveways, etc.</li> </ul> </td> </tr> </table> <p>Tell students there are some special safety precautions they must use when working outside year round. Ask what these might be? (Protection from sun, cold, rough ground, insects, some plants to which they might be sensitive, etc. ) What do they think they should they do to be safe? (Use sunscreen; cover exposed flesh in extreme cold; always wear work boots, work gloves, hat, etc.)</p>		<p><b>SPRING</b></p> <ul style="list-style-type: none"> <li>• Clean up</li> <li>• Dig over old gardens</li> <li>• Plant</li> <li>• Rake or aerate lawns</li> <li>• Fertilize</li> <li>• Mulch</li> <li>• Prune</li> <li>• Prepare new gardens</li> </ul>	<p><b>SUMMER</b></p> <ul style="list-style-type: none"> <li>• Water</li> <li>• Weed</li> <li>• Prune</li> <li>• Deadhead (cut off dead blooms)</li> <li>• Mow grass</li> <li>• Spray for pests</li> <li>• Edge garden / lawn</li> <li>• May change plants in flower beds (remove bulbs, add annuals)</li> </ul>	<p><b>FALL</b></p> <ul style="list-style-type: none"> <li>• Rake leaves</li> <li>• Remove bedding plants</li> <li>• Plant spring bulbs</li> <li>• Cover some plants in preparation for winter</li> <li>• Cut back shrubs, roses and some bushes</li> </ul>	<p><b>WINTER</b></p> <ul style="list-style-type: none"> <li>• Remove snow</li> <li>• Remove ice</li> <li>• Salt or sand walkways, driveways, etc.</li> </ul>
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<p><b>7. PEST CONTROL</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• <i>Hazardous Product Labels</i> unit: “Poison” and “Toxic” activities; Personal Protective Equipment</li> <li>• Household products for controlling garden pests</li> </ul>
<p>Explain that some companies specialize in controlling pests by using chemicals. Special training is needed for this procedure.</p> <p>Remind students of the hazardous symbols for poison and toxic materials. Remind them of the protective equipment that should be worn when handling these materials. See <i>Understanding Hazardous Product Labels</i> in this manual.</p> <p>You could look at household products used for controlling garden pests. Read together the directions for use and the safety precautions. Explain that each product will have instructions such as this. It is their responsibility to make sure they know how to use the products properly and safely before they do use them. Ask what they should do if they do not know, or can't understand the directions. (Ask for help.)</p>	

<p><b>8. POWER EQUIPMENT</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: Power Equipment</li> <li>• Teaching Aid: Gasoline Safety</li> </ul>
<p>Explain that sometimes power equipment is used to perform some of the maintenance tasks.</p> <p>Ask if they can think of what these might be. Use Teaching Aid: <i>Power Equipment</i> to discuss some of these tools (when used, how used):</p> <ul style="list-style-type: none"> <li>• Lawnmowers</li> <li>• Riding lawnmowers</li> <li>• Weed trimmers</li> <li>• Leaf blowers</li> <li>• Snow blowers</li> <li>• Chainsaws</li> <li>• Etc.</li> </ul> <p>These tools may have to be filled with gasoline. Remind students of safety issues with handling gasoline. Use Teaching Aid: <i>Gasoline Safety</i>. Post the Teaching Aid, and give each student a copy.</p> <p>They <b>MUST</b> be given training on safe use of the power tool, how to fill it, etc. before they do use it. If training is not given, they should ask for it.</p> <p>Explain that because of the noise of these tools, they should wear ear protectors; safety goggles, work gloves and work boots will also be worn.</p>	

<p><b>9. REMOVAL OF GRAFFITI</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Understanding Hazardous Product Labels in this manual</li> <li>• <i>Mopping</i> in the <b>Janitorial</b> manual</li> <li>• scrub brushes, cloths, bucket, household cleaner (such as Mr.Clean), and rubber gloves</li> </ul>
<p>Ask students if they have ever seen words or pictures painted or written on walls of buildings, benches, or other public places. These are unwanted “decorations”. This is vandalism. Discuss the meaning of “vandalism” and “graffiti”. Teach vocabulary.</p> <p>Explain that one job performed by outdoor maintenance people is the removal of graffiti. Ask if the students know how this is done. (cleaning products)</p> <p>Safety procedures must be followed when using these cleaning products. Refer to <i>Understanding Hazardous Product Labels</i> in this manual. Pay special attention to the personal protective equipment that should be worn. Again, before they use a hazardous cleaning product, they should be given clear instructions / training.</p> <p>Assemble scrub brushes, cloths, bucket, household cleaner (such as Mr.Clean), and rubber gloves. Fill the bucket about two-thirds full of cold water and add several squirts of cleaner. Demonstrate how to use the cloth or scrub brush to clean a wall. (Check with your custodian for a suitable place to do this.) Have students practise. For full and detailed instructions for mixing cleaning solutions and the safety steps involved, refer to the <b>Janitorial</b> manual, the unit on <i>Mopping</i>.</p> <p>It is important that they dispose of the cleaning cloths, scrubbers, etc. in the appropriate manner. (They should ask their supervisor or foreman.)</p> <p>Ask what they think they could do if the graffiti will not come off. (Sometimes it is painted over.)</p>	

<p><b>10. GARBAGE CONTAINERS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• <b>Janitorial</b> manual: <i>Garbage</i> unit</li> <li>• Student Activity Sheet: <i>Place the Garbage Cans</i></li> <li>• Teaching Aid: <i>Lift It Safely</i></li> </ul>
<p>Ask students if they have seen garbage containers around parks or public areas. Why are they there? Who will use them?</p> <p>Tell them that one job of outdoor maintenance is the emptying of these garbage containers and the replacing of clean bags in the containers.</p> <p>Remind students of safety issues involved with this job: safe lifting, gloves for handling the waste, proper tying and disposal of full bags. Refer to Teaching Aid: <i>Lift It Safely</i>.</p> <p>Refer to the <b>Janitorial</b> manual for full discussion of garbage handling; in this job, they will mostly be using large green/black bags.</p> <p>Use Student Activity Sheet: <i>Place the Garbage Cans</i>.</p> <ul style="list-style-type: none"> <li>• Explain that they have 4 garbage cans to place in this small neighbourhood park.</li> <li>• There are some benches beside a pathway, a playground area and a picnic table.</li> <li>• Ask students to mark where they would place the barrels and to explain why.</li> <li>• Consider too how the full bags will be collected. Explain that sometimes small trucks can drive along park paths. Ask if that means that ALL cans must be right beside the path. (No.) Why not? (Want to encourage use of garbage cans, so they should be placed where most people will be.)</li> <li>• Discuss how close or far to put the can from an eating area or from a children's playground. (Not too close; not too far. They will need to use their judgement.)</li> </ul>	

<p><b>11. LITTER</b></p> <ul style="list-style-type: none"> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: Patterns in <i>Lawnmowers</i> unit in this manual</li> </ul>
<p>Ask students if they have ever seen litter left lying around in public places, even if there are garbage containers nearby. Roadsides often have litter that may need to be picked up. Explain that sometimes paid workers do this; other times volunteers do it. Special care must be taken when working so close to traffic. (safety vests, road warning signs)</p> <p>Explain that it is somebody's job to pick up this garbage. The person must walk around and pick it up either by hand or with a stick with a point on the end. The litter is then placed in a bag that the worker carries. Discuss how to be sure that the whole area is covered. Refer to Teaching Aid: Patterns, found in the Lawnmower unit of this manual.</p> <p>Ask what protective safety equipment they think this person should use. (gloves, closed shoes)</p> <p>Ask what they should do if they find needles or other sharp or dangerous items on the ground. (Pick it up very carefully and dispose of so that it does not poke out the bag.)</p>	

<p><b>12. REPAIRS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Chart paper, markers, etc. (posters)</li> </ul>
<p>Explain that there are minor repairs to be made such as replacing lights, fixing broken benches and picnic tables, replacing locks on outdoor shed, fixing broken downspouts, fixing broken or wobbly railings on staircases, etc.</p> <p>Together, come up with a list (poster using words and pictures) of small repair jobs they can think of that a maintenance person might need to do.</p> <p>Tell them that they might have to use a variety of tools. The unit <i>Tools and Fasteners</i> will help them.</p> <p>Tell them that they would be shown or told exactly what to do in a job situation.</p>	



## Lawn and Garden Tools

 <p><b>Cultivator</b></p>	 <p><b>Fork</b></p>
 <p><b>Loppers</b></p>	 <p><b>Pruning shears</b></p>
 <p><b>Trowel</b></p>	 <p><b>Hoe</b></p>
 <p><b>Leaf rake</b></p>	 <p><b>Pickaxe</b></p>



## Lawn and Garden Tools, cont.

 <p><b>Post hole digger</b></p>	 <p><b>Rake</b></p>
 <p><b>Shovel</b></p>	 <p><b>Shovel</b></p>
 <p><b>Spade</b></p>	 <p><b>Wheelbarrow</b></p>



## Lawn and Garden Tools, cont.

 <p><b>Wheel- barrow</b></p>	 <p><b>Snow shovel</b></p>
 <p><b>Cultivator</b></p>	 <p><b>Hand fork</b></p>
 <p><b>Bulb planter</b></p>	



## Lift It Safely

1. Stand close to the load with your feet shoulder width apart.
2. Tighten your abdominal muscles.
3. Keep your back straight. Bend your knees. Squat down to the ground.
4. Get a good grasp on the load with both hands.
5. Keeping the load close to your body, use your leg muscles to stand up, lifting the load off the ground.
6. Use your legs to lift, not your back. Keep back straight.
7. Do not twist your body when moving the load. Instead take small steps with your feet turning until you are in the correct position.
8. Again bend at the knees, using only your leg muscles, and place the load in the appropriate spot.

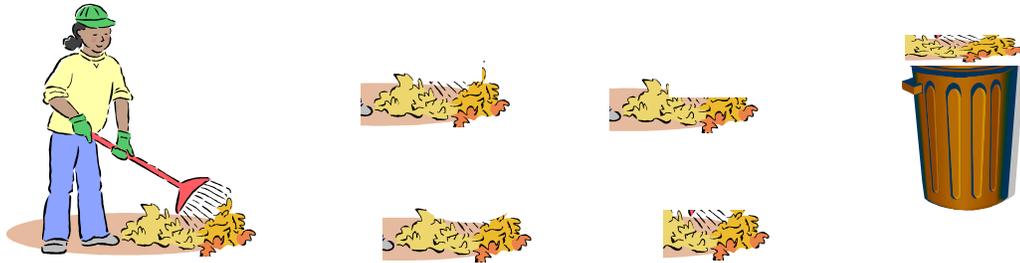




# Raking

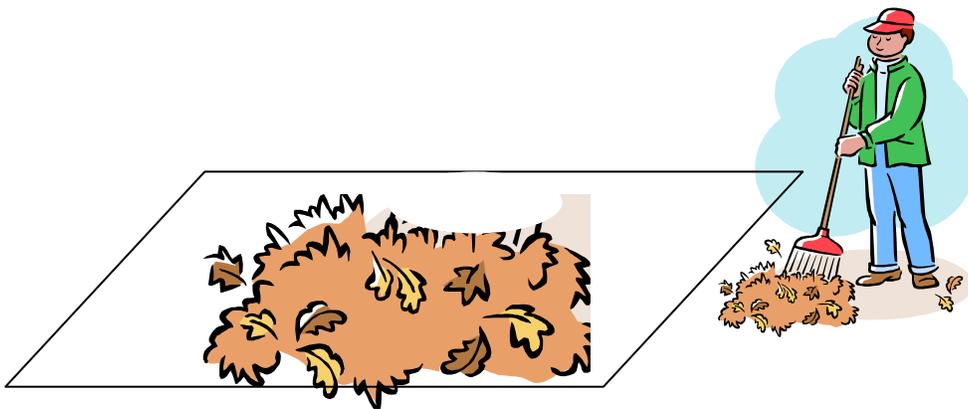
There are several ways to rake leaves or refuse. Here are three common methods.

1.



- Rake material into small piles.
- Lift each pile using the rake and your hands, into a bucket or yard waste bag.
- Carry the buckets or bags to a truck or the roadside for disposal.

2.

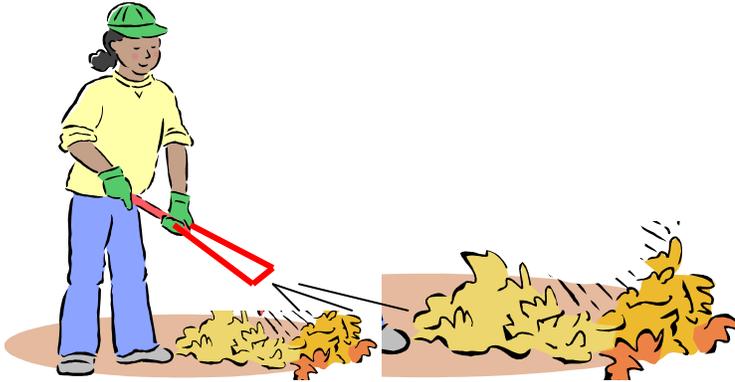


- Rake material into one large pile onto a sheet of plastic (tarpaulin).
- Pull the [plastic with the material to the roadside or truck for disposal. It may be easier for 2 people to pull the bundle.



## Raking, cont.

3.



- Use a leaf blower.
- Blow into a small pile and put in buckets or bags.
- OR blow into a large pile on a tarpaulin.
- OR blow to the roadside or near to the truck.
- Dispose of leaves.



# I Don't Understand

Below are a variety of scenarios. Describe each scenario and then have students practise telling their foreman that they need help or instructions.

- You have been told to dig up the sod so that a new garden can be planted. You are not quite sure where the homeowner wants the garden to start or finish, nor how wide it should be.
- As you dig up the sod, you don't know where to put it.
- The crew leader said you should "deadhead" the rose bushes. You do not know what that means.
- You have to move a load of gravel from a large pile at the entrance to the park onto to the paths that go through the park. You do not know how full to fill the wheelbarrow or how to tip it so that you do not injure yourself.
- You are given a "cultivator" to use in the flower gardens. You have never seen a tool like this and do not know how to use it properly. You really don't know what it means to "cultivate" the garden.

Make up more of your own situations till the student is comfortable expressing concerns or confusion, and is able to ask for help.



## Power Equipment



**Lawnmower**



**Leaf blower**



**Weed trimmer**



**Snow blower**



**Chainsaw**



**Riding lawnmower**



## Gasoline Safety

1. Gasoline must always be stored in approved containers. Look for the CSA label on the can.
2. Wear gloves when pouring gasoline into the gas tank of the tool.
3. Turn off the machine or tool, and let it cool down a bit before re-fueling.
4. Use a funnel.
5. Open the air intake as well as the pouring spout. This lets air come back into the can as you pour the gas out, and prevents splashing.
6. Do not refill indoors. Do it outside, on the ground, where there is plenty of ventilation, away from all sources of flame or spark.
7. DO NOT SMOKE.
8. Do not breathe the fumes.
9. Close gas can and gas tank on equipment tightly. Put gas can away.
10. Wash hands after re-filling.



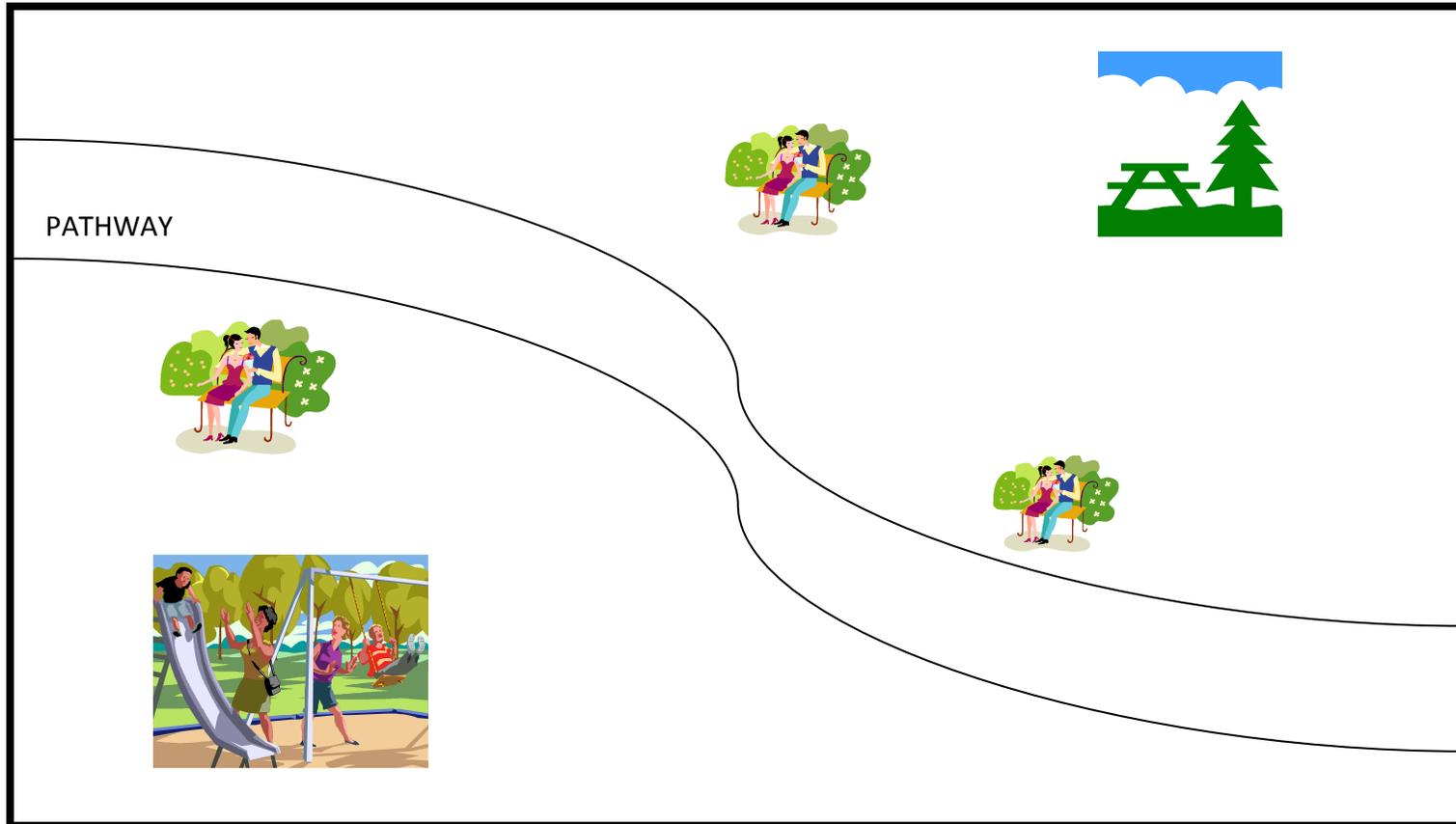
# Lawn and Garden Tools

NAME	PICTURE	USED FOR



# Place the Garbage Cans

You must decide where to put 4 garbage cans in this park. Explain to your instructor why you chose the locations you did.





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**DEMONSTRATION INSTRUCTOR PAGE**

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***Keeping Up Appearances***

---

**ESSENTIAL SKILLS**

- Reading Text 1
  - Oral Communication 2
  - Thinking Skills
    - Problem Solving 1
    - Decision Making 1
    - Job Task Planning & Organization 1
    - Significant Use of Memory
- 

**DEMO DESCRIPTION**

The student will select the right tools for specified jobs and will explain what part of the job each was chosen for. The student will select the appropriate safety equipment, including sunscreen, for the jobs. Ideally, the student will demonstrate the skills acquired of using the tools properly in a real garden setting, but if that is not possible, then will demonstrate (mime) the process.

The student will collect litter around the site and will look for any graffiti that he/she could clean. Again, if possible, the cleaning will be done outside; if not, it will be mimed.

---

**INSTRUCTOR NOTES**

- Provide a place to demonstrate the skills: a small garden area or yard area.
- Provide tools, including shovels, rakes, and wheelbarrow.
- Provide some mulch to be spread, and some gravel (or substitute) to be moved from one location to another, using shovel and wheelbarrow.
- Provide work gloves.
- Provide green garbage bag.
- Provide bucket, cleaner and scrub brush, and access to water.
- Provide *What I Have Learned and Skills Practised* to link demonstration tasks to the Essential Skills.

**With student**

- Read Tasks if necessary.
  - Remind student that safety – personal and tool – is important.
  - Explain to student that he / she must think out what the job is from start to finish before selecting the tools. Do not prompt student re tool selection.
-

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**ACHIEVEMENT INDICATORS**

- Selected appropriate tools: shovel, rake, wheelbarrow.
  - Selected / knew the safety equipment needed: hat, boots, sunscreen, work gloves.
  - Demonstrated how to dig and rake properly, and how to use a wheelbarrow.
  - Picked up litter thoroughly and safely.
  - Cleaned an area of wall.
  - Assessed own performance
-

## ***Keeping Up Appearances***

### **TASK 1**

You are working for a lawn and garden maintenance company, looking after people's yards.

Today, you will be digging a new flower bed, raking gravel along some paths, spreading mulch that has been dumped at the end of the driveway in the flower garden at the back of the house. It is going to be hot and sunny today.

What tools will you need to make sure are in the truck? Show your instructor the tools you need; name them and say which job you will use them for.

What safety equipment will you need? How will you dress for the job? Tell your instructor.

Demonstrate for your instructor how to safely use each tool that you are bringing to the job. If possible, you can do this outside with real tools and a real garden area. If not, you must act it out. Make sure to say or show what you will do to be safe.



# Keeping Up Appearances

## TASK 2

Get a green garbage bag and go around your classroom area, and outside the building, looking for litter. Pick it up safely and dispose of the bag.

Are there any places that need special cleaning? (Graffiti?) Use the cleaning tools your instructor will give you to clean it. OR tell your instructor what you would do to clean this up. You should act out how to mix the cleaning solution, and how to clean the area.



# *Keeping Up Appearances*

## **TASK 3**

### **I Can Look After Lawns and Gardens**

<b>I CAN</b>	<b>YES / DATE</b>
I know what needs to be done in the spring.	
I know what needs to be done in the summer.	
I know what needs to be done in the fall.	
I know what needs to be done in the winter.	
I know the names of lawn and garden tools.	
I know what each tool is used for.	
I can dig safely with shovels, forks, and other digging tools.	
I can rake both dirt and leaves safely.	
I can use a wheelbarrow safely.	
I can pick up litter and empty the garbage cans.	
I can ask for help if I need it.	
I can be safe on the job.	
I can clean graffiti off walls, etc.	



**DEMONSTRATION ASSESSMENT**

## *Keep Up Appearances*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?**     Yes     No  
**Details:** \_\_\_\_\_

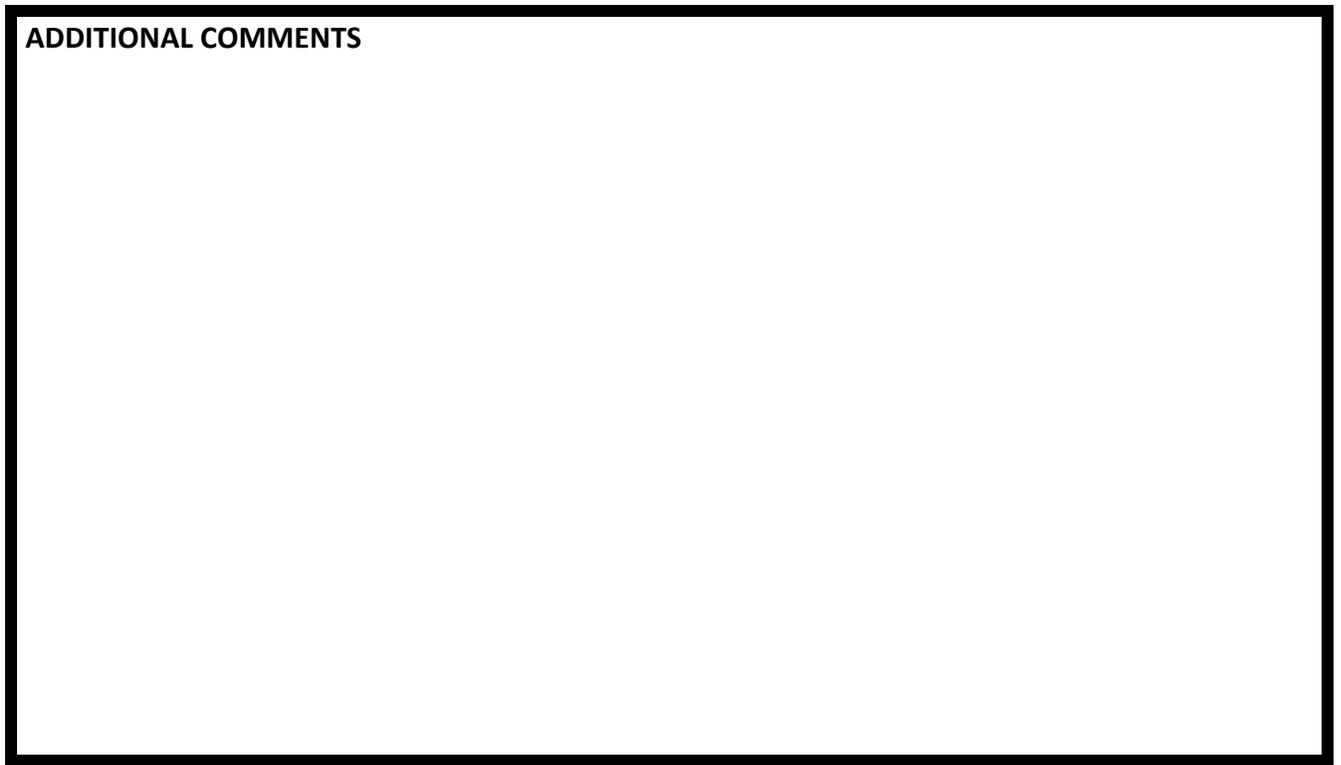
**Accommodations?:**     Yes     No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- **Reading Text 1**
- **Document Use 1**
- **Oral Communication 2**
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Job Task Planning & Organization 1
  - Significant Use of Memory

<b>ACHIEVEMENT INDICATORS</b>	<b>BEGINNING</b>	<b>DEVELOPING</b>	<b>ACCOMPLISHED</b>
• Selected appropriate tools: shovel, rake, wheelbarrow.			
• Selected / knew the safety equipment needed: hat, boots, sunscreen, work gloves.			
• Demonstrated how to dig and rake properly, and how to use a wheelbarrow.			
• Picked up litter thoroughly and safely.			
• Cleaned an area of wall.			
• Assessed own performance.			

**ADDITIONAL COMMENTS**



# Lawnmowers



# Lawnmowers

In this unit, students will identify parts of a lawnmower and will know the purpose of each part. They will review Safety Precautions and will start a lawnmower. A standard gas lawnmower will be used because most students would not be using electric mowers, nor would they be using riding mowers. If a riding mower was to be used, special training would be required. The parts of the mower and general safety would still apply.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Some sight vocabulary
- Some exposure to lawnmowers
- Confidence around machines

## OBJECTIVES

Students will

- Look at various lawnmower models
- Label parts of a lawnmower
- Know the function of each part
- Learn safety precautions needed before starting up a lawnmower
- Start a lawnmower
- Cut a patch of grass if possible

## MATERIALS

- Lawnmower (gas)
- Area of grass
- Catalogs and flyers with lawnmowers pictured
- Paper, crayons, markers, coloured pencils, scissors, glue
- Laminated or posted Teaching Aids
- Prepared vocabulary cards

## VOCABULARY

- Blades
- Choke
- Cut
- Fast
- Fuel
- Fuel valve
- Grass
- Lawnmower
- Manual
- Operation
- Start cord
- Throttle
- Patterns
- Precaution
- Primer
- Push mower
- Rabbit
- Riding mower
- Safety
- Safety bar
- Slow
- Speedometer
- Turtle
- Valve

## RESOURCES

- [www.homedepot.ca](http://www.homedepot.ca)
- Lawnmower manuals
- Local hardware store / garden centre / department store that sells lawnmowers

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Lawnmowers		1							1	1	1		*				*
2.	Safety first	1	1							2	1	1		*				*
3.	Choke		1							2	1	1		*				*
4.	Primer		1							2	1	1		*				*
5.	Throttle and fuel valve		1							2	1	1		*				*
6.	Safety bar and starting cord		1							2	1	1		*				*
7.	Gas tank		1							2	1	1		*				*
8.	Blades and height levers		1							2	1	1		*				*
9.	Speedometer	1	1							2	1	1		*				*
10.	Starting the lawnmower	1	1							2	1	1	1	*				*
11.	Cutting the lawn in patterns		1							1	1	1	1	*				*
D.	Cutting it up!	1	1	1/2						2	1	1	1	*				



## LEARNING ACTIVITIES

<p><b>1. LAWNMOWERS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Hardware catalogs and flyers showing lawnmowers</li> <li>• Paper, markers, scissors and glue to make collage</li> <li>• Vocabulary cards</li> <li>• Teaching Aid: <i>Lawnmower Models</i></li> </ul>
<p>Talk with students about their experiences with lawnmower.</p> <ul style="list-style-type: none"> <li>• Ensure that everyone knows the purpose of lawnmowers.</li> <li>• Have they ever used a lawnmower?</li> <li>• Have they ever seen any accidents with lawnmowers?</li> </ul> <p>Stress that safety is most important when using lawnmowers. Ask students why lawnmowers are dangerous. (They have sharp blades, contain gas which is highly flammable).</p> <p>Look at a hardware catalog. Cut out pictures of various types of lawnmowers. Display in a collage. Teach vocabulary word, lawnmower, and use as a title for the collage.</p> <p>Use Teaching Aid: <i>Lawnmower Models</i>.</p>	

<p><b>2. SAFETY FIRST</b></p> <ul style="list-style-type: none"><li>• <b>Reading Text 1</b></li><li>• <b>Document Use 1</b></li><li>• <b>Oral Communication 2</b></li><li>• <b>Thinking Skills</b><ul style="list-style-type: none"><li>◦ Problem Solving 1</li><li>◦ Decision Making 1</li><li>◦ Significant Use of Memory</li></ul></li><li>• <b>Continuous Learning</b></li></ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"><li>• Teaching Aid: <i>Safety First</i></li><li>• Student Activity Sheet: <i>Lawnmower Safety</i></li></ul>
<p>Explain that although lawnmowers come in various designs and sizes, the safety issues are common to them all.</p> <p>Use Teaching Aid: <i>Safety First</i>. Read over, point by point, and discuss each scenario.</p> <p>After discussion, use Student Activity Sheet: <i>Lawnmower Safety</i> Read aloud, if necessary, and ask students to circle the correct responses.</p>	

<p><b>3. CHOKE</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Parts of a Lawnmower</i> – Make an overhead, and a copy for each student</li> <li>• Vocabulary cards for parts of a lawnmower</li> </ul>
<p>Explain that most of the parts of a push lawnmower will be found on each model. The parts may not be in exactly the same position, but they will be somewhere on each machine.</p> <p>Explain the parts of a lawnmower. Use Teaching Aid: <i>Parts of a Lawnmower</i>.</p> <ul style="list-style-type: none"> <li>• Each part will be named, located, and the purpose discussed.</li> <li>• Write the parts on the overhead as you teach them and have students copy the part name on their own sheets.</li> <li>• It would be ideal if you could bring a push lawnmower into the classroom, or visit a garden centre or hardware store to see the lawnmowers on display. <ul style="list-style-type: none"> <li>◦ You could conduct this part of the lesson at the store, or perhaps invite someone from the store to come to the classroom with a lawnmower.</li> </ul> </li> </ul> <p><b>CHOKE:</b></p> <ul style="list-style-type: none"> <li>• Ask what happens when a person is choking. (They cannot get enough air, or there is something in the throat or windpipe which is stopping the air getting into the lungs.</li> <li>• The choke on the lawnmower performs a similar function. It cuts down the amount of air, allowing extra gasoline to go to the motor. Cutting off the air supply helps the engine warm up and makes the mower easier to start.</li> <li>• The choke may be found on or near the handle of the lawnmower.</li> <li>• Point to the choke on the machine you have, or on the diagram on the Teaching Aid.(same place as throttle)</li> <li>• Label the part. (use a vocabulary card)</li> <li>• Some machines have an automatic choke.</li> </ul>	

<p><b>4. PRIMER</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas) Teaching Aid: <i>Parts of a Lawnmower</i></li> <li>• Vocabulary cards for parts of a lawnmower</li> </ul>
<p>Explain that the primer is usually a round, black, soft button on the main part of the mower.</p> <p>Let the students locate the primer on the machine you have or on the Teaching Aid: <i>Parts of a Lawnmower</i>.</p> <p>Explain that the primer needs to be pushed several times to get the gas flowing into the engine. It helps the lawnmower to start. Label this part on your machine or on the Teaching Aid.</p>	

<p><b>5. THROTTLE AND FUEL VALVE</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Parts of a Lawnmower</i></li> <li>• Vocabulary cards for parts of a lawnmower</li> </ul>
<p>Ask students what happens when someone steps on the gas pedal in a car. (It goes faster.) Explain that the same thing happens when they use the throttle on the lawnmower.</p> <p>Explain that the fuel valve is an opening with a movable flap that allows either more, or less, gas to flow to the engine while they are mowing the lawn. They will not be able to see this valve. It is controlled by the throttle, a small lever sticking out which will move forward or back to adjust the flow of gas. It is usually found on the handle.</p> <p>Ask students to locate the throttle on the lawnmower or on the Teaching Aid. Label it.</p>	

<p><b>6. SAFETY BAR AND STARTING CORD</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Parts of a Lawnmower</i></li> <li>• Vocabulary cards for parts of a lawnmower</li> </ul>
<p>Show students the safety bar on the lawnmower.</p> <ul style="list-style-type: none"> <li>• Explain that it is usually up high, close to the handle.</li> <li>• It must be held tight to the handle in order to start the mower and for it to run.</li> <li>• It is a safety precaution: when it is let go, the mower stops.</li> </ul> <p>Tell students that many gas mowers are started with a pull cord.</p> <ul style="list-style-type: none"> <li>• It usually has a black handle and there is a rope attached.</li> <li>• The handle needs to be pulled quickly, and all the way, in order for the mower to start.</li> <li>• Sometimes it is found on the handle and sometimes it is found on the body of the mower.</li> <li>• Locate it on the machine you have.</li> </ul> <p>Explain that some gas mowers have electronic ignition. They will not have to pull a cord, but will have to turn a switch, press a button or use a key.</p>	

<p><b>7. GAS TANK</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Parts of a Lawnmower</i></li> <li>• Vocabulary cards for parts of a lawnmower</li> <li>• Teaching Aid: <i>Gas Up Safely</i></li> <li>• Poster-making supplies</li> </ul>
<p>Ask students what makes the motor of the lawnmower run. (gas) Ask if they can find the place on the mower (or the Teaching Aid) that the gasoline would be put in.</p> <p>They might have to fill the tank when they are out for a day mowing grass. Explain that safety is the main issue here.</p> <ul style="list-style-type: none"> <li>• Review the hazardous products symbols for poison and explosive.</li> <li>• Ask what safety precautions they should take when filling the gas tank. Use Teaching Aid: <i>Gas Up Safely</i>.</li> <li>• Discuss each point and make a poster to display as reference.</li> </ul>	

<p><b>8. BLADES AND HEIGHT LEVERS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Parts of a Lawnmower</i></li> <li>• Vocabulary cards for parts of a lawnmower</li> </ul>
<p>The lawnmower blades are below the mower and are not visible when using the mower. They are covered by the large metal guard.</p> <ul style="list-style-type: none"> <li>• Ask why the guard is there. (To protect the person from the blades and from any small debris or stones that might be thrown up.)</li> </ul> <p>Turn the mower upside down and show the blades.</p> <p>Explain that these must be kept sharp. There will be someone whose job it is to maintain the equipment, and this person will replace broken blades, sharpen them, etc.</p> <p>Ask them what they would do if something seemed to have jammed the blades. (Like tall wet grass, or a small stick.)</p> <ul style="list-style-type: none"> <li>• Remind them that they <b>MUST ALWAYS</b> turn off the lawnmower before going near the blades.</li> <li>• They should wear heavy gloves to prevent accidentally cutting themselves.</li> <li>• They might have to clear the grass from the blades before restarting the mower.</li> </ul> <p>Many lawnmowers have levers on the wheels to raise or lower the blade height.</p> <ul style="list-style-type: none"> <li>• Find these on the lawnmower you have if they are there, or on the Teaching Aid: <i>Parts of a Lawnmower</i>. (You may need to show where the parts are on the Teaching Aid since it may not look like ones they have seen. This is a “generic” lawnmower!)</li> <li>• This allows them to mow the grass close to the ground, or leave it a little longer.</li> <li>• They will be given instructions from the foreman about this.</li> <li>• Explain that leaving grass a little longer in the heat of the summer prevents it from drying up, burning and dying.</li> </ul> <p>Discuss with students the importance of visually scanning the area to be mowed for dangers, such as stones, sticks, small toys, wires, etc.</p> <ul style="list-style-type: none"> <li>• If any of these are present, they should remove them before going over the area with the mower.</li> <li>• They should turn off the mower if they need to remove things, as the mower should not be left unattended.</li> </ul>	

<p><b>9. SPEEDOMETER</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Teaching Aid: <i>Slow - Fast</i></li> </ul>
<p>Ask students if they know what the speedometer in a car measures (speed – how fast the car is going.)</p> <ul style="list-style-type: none"> <li>• Explain that lawnmowers have speedometers too.</li> </ul> <p>Ask what might happen if they went too fast over the grass they were cutting.</p> <ul style="list-style-type: none"> <li>• They might lose control; they might not cut the grass evenly.</li> </ul> <p>Ask what might happen if they went too slowly over the grass.</p> <ul style="list-style-type: none"> <li>• The lawnmower might cut out and stop; they might not cut the grass evenly.</li> </ul> <p>Show the speedometer on the lawnmower that you have or on the Teaching Aid.</p> <ul style="list-style-type: none"> <li>• Explain that some lawnmowers have short and long lines, or thick and thin lines to tell the speed.</li> <li>• Ask what speed line they think would mean going slowly. (The short or thin line).</li> <li>• What speed line do they think would mean going quickly. (The long or thick line)</li> <li>• Other lawnmowers use pictures to represent slow and fast, and others may use words or numbers.</li> </ul> <p>Use Teaching Aid: <i>Slow – Fast</i> to show examples of these speed lines and pictures.</p> <ul style="list-style-type: none"> <li>• Ask why they think the hare is chosen for the fast speed and the turtle for the slow speed.</li> </ul>	

<p><b>10. STARTING THE LAWNMOWER</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 2</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Lawnmower (gas)</li> <li>• Area of grass</li> <li>• Teaching Aid: <i>Starting a Lawnmower</i></li> <li>• Teaching Aid: <i>Safety First</i></li> </ul>
<p>Tell students that now they know the parts of the lawnmower and what they do, they can practise starting the lawnmower.</p> <p>If you have a lawnmower available, take it outside to a grassy area and show them how to start the machine. Talk through the steps as you demonstrate starting the lawnmower. If you have no access to a real lawnmower, or to grass (if it is winter!), use Teaching Aid: <i>Starting a Lawnmower</i>.</p> <ul style="list-style-type: none"> <li>• Read over these instructions one by one,</li> <li>• Locate the part being described,</li> <li>• Perform, or mime, the operation being outlined.</li> </ul> <p>Ask students to practise starting the lawnmower if one is available.</p> <p>Remind students of safety rules (refer to Teaching Aid: <i>Safety First</i>), and ensure that the area they will mow is free of debris that could be caught by the blades.</p> <p>In a job situation, training should be given before the student uses a machine.</p>	

<p><b>11. CUTTING THE LAWN IN PATTERNS</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 1</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Patterns</i></li> <li>• Area, inside or outside, to walk out the patterns</li> </ul>
<p>Explain to the students that lawns can be cut in different patterns.</p> <ul style="list-style-type: none"> <li>• It is a good idea to cut the grass in a different pattern from time to time.</li> <li>• Why? (This allows the grass to grow evenly in a healthy way.)</li> </ul> <p>For some ideas of patterns that can be used when cutting grass, use Teaching Aid: <i>Patterns</i>.</p> <ul style="list-style-type: none"> <li>• Even if they do not have a lawnmower to use, you could walk out the patterns, either outside or in a large empty room.</li> </ul>	



# Lawnmower Models





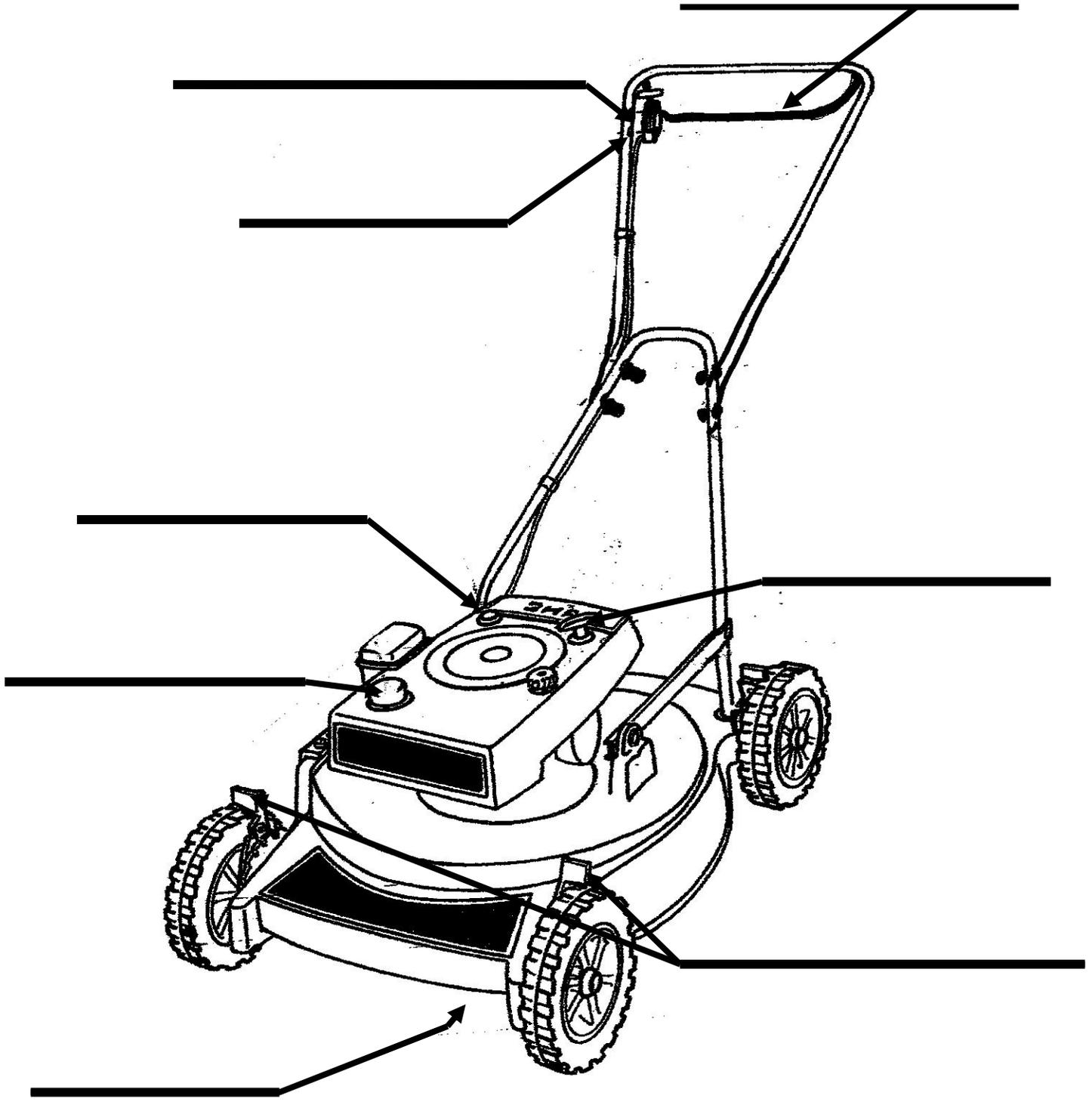
# Safety First

When using a push lawnmower, there are some safety precautions to remember:

- Always follow the directions when starting and stopping a mower.
- Never put your hand near the blades underneath while it is running.
- Set the wheel height before starting the mower, or turn it off to change the wheel height.
- Never put your feet near the bottom of the mower when it is running.
- Turn off the mower to remove something that gets stuck or tangled in the blades.
- Always wear close-toed shoes, or steel-toed boots, when operating a lawnmower.
- Never light a match or smoke when operating a lawnmower.
- Check the grass you are cutting before you start for sticks or rocks. They can hurt someone if they are run over, or they can damage the machine.
- Turn off the mower before moving to another location.
- Mow only when grass is dry.
- Never mow where there are children playing or people nearby. They could be hit by something thrown out by the mower.



# Parts of a Lawnmower





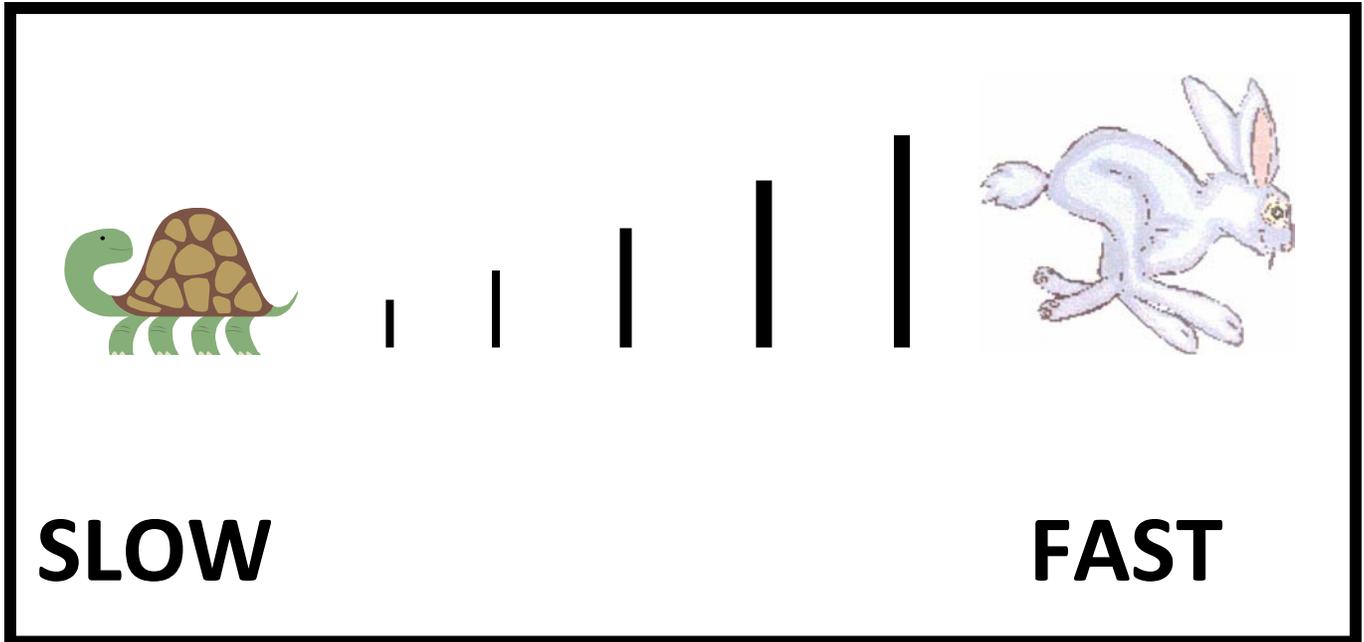
## Fill Up Safely

1. No smoking.
2. Make sure there are no sources of sparks or flames that could ignite the gasoline vapours.
3. Turn off the lawnmower.
4. Always fill tank outside, in area with good ventilation.
5. Fill tank when machine is sitting on the ground (not in the truck).
6. Wear protective equipment (gloves, glasses).
7. Store and use gas only in approved containers.
8. Open air intake as well as pouring spout on gas can.
9. Use a funnel.
10. Do not overfill.
11. Tighten cap after filling.
12. Move the lawnmower away from the filling site before starting. (Avoid possible fumes or spills that could ignite.)



# Slow – Fast

Something like this may be found on lawnmowers.





## Starting a Lawnmower

- Most gas lawnmowers start the same basic way.
  - Always read the instruction manual to be sure.
  - Always ask for training before using a lawnmower.
1. Press primer button. (Usually 2 or 3 times, or until it is hard to push.)
  2. Squeeze the safety bar to the handle.
  3. Pull start cord. (Did it start? If No, then pull again.)
  4. Select the speed.
  5. Move forward.

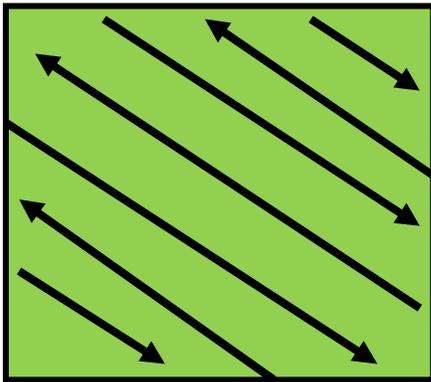
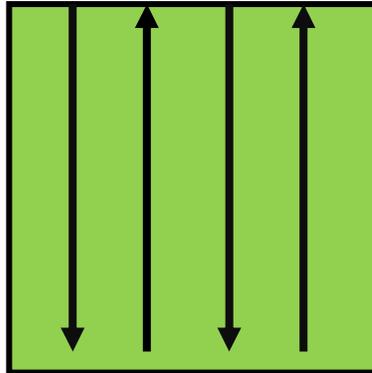
### TROUBLESHOOTING: NOT STARTING

- Prime a bit more.
- Use the choke.
- Ask for help.



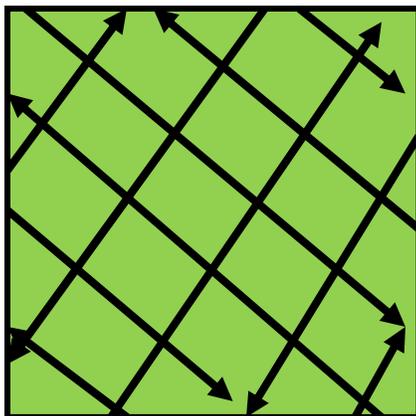
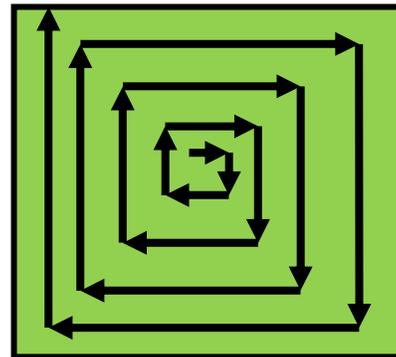
# Patterns

UP AND DOWN:



DIAGONAL

SQUARES  
(Start in middle)



DIAMONDS  
(diagonals in all directions)



# Lawnmower Safety

Circle the correct answer.

1. Should you put your hands near the blades of a lawnmower when it is running?

Yes

No

2. If something gets tangled in the blades, should you turn off the mower before you try to fix it?

Yes

No

3. Should you wear sandals when operating a lawnmower?

Yes

No

4. Should you light a match or smoke when operating a lawnmower?

Yes

No

5. Should you read the directions before operating a lawnmower you are not used to?

Yes

No

6. Should you check the grass before you start mowing to ensure there are no sticks or rocks in the grass?

Yes

No



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**DEMONSTRATION INSTRUCTOR PAGE**

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## *Cutting It Up!*

**ESSENTIAL SKILLS**

- **Reading Text 1**
- **Document Use 1**
- **Writing 1/2**
- **Oral Communication 2**
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 2
  - Job Task Planning & Organization 1
  - Significant Use of Memory

---

**DEMO DESCRIPTION**

The students will label a picture showing the parts of the lawnmower and list the safety precautions to be followed before starting the machine. The student will demonstrate how to start the lawnmower and, if possible, cut a small patch of grass.

\*\* Copying the vocabulary words (in Task 1) is Level 1 Writing; use of the provided vocabulary cards omits Writing from the task. If the student writes the safety rules, this is Level 2 Writing. If the student draws pictures and uses oral language only for the safety rules, then there is no Writing in that task.

---

**INSTRUCTOR NOTES**

- Provide a gas lawnmower and vocabulary cards of the parts of the mower. (or use a picture with lines and arrows to indicate the parts to be identified.
- Provide (if possible) a small area of grass to cut.
- Provide paper, markers, coloured pencils.
- Provide a picture of a lawnmower with parts clear and visible for labeling, or provide a lawnmower and the vocabulary cards for the parts that are to be labeled.

**With student**

- Read aloud Task sheets if necessary.

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**ACHIEVEMENT INDICATORS**

- Labeled the parts of a lawnmower
  - Listed safety procedures to be followed when working with a lawnmower.
  - Started a lawnmower.
  - Cut a patch of grass (if possible).
  - Assessed own performance.
-



## ***Cutting It Up!***

### **TASK 1**

Your instructor will give you a lawnmower, or a picture of one, to label.

Print the part names on the picture (on the lines provided), or tape the cards with the names on the lawnmower.



# ***Cutting It Up!***

## **TASK 2**

Make a list of 8 safety rules you need to know before starting a lawnmower.

You may write them, or draw a picture for each. Explain the rule to your instructor. Use this chart, or other pieces of paper.




## ***Cutting It Up!***

### **TASK 3**

Use the lawnmower brought in by your instructor to cut a piece of grass.

Take any safety precautions you need before starting, including wearing personal protective equipment.



# ***Cutting It Up!***

## **TASK 4**

### **I CAN USE A LAWNMOWER**

<b>I CAN</b>	<b>YES / DATE</b>
I can find the throttle, primer, choke, safety bar, gas tank, blades, start cord (or button), and wheel height levers on a lawnmower.	
I know what protective equipment to wear.	
I know how to use a lawnmower safely.	
I know how to handle gasoline safely.	
I can start the lawnmower.	
I can plan a pattern to cut the grass completely and evenly.	
I know how to adjust the speed of a lawnmower.	



**DEMONSTRATION ASSESSMENT**

## *Cutting It Up!*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

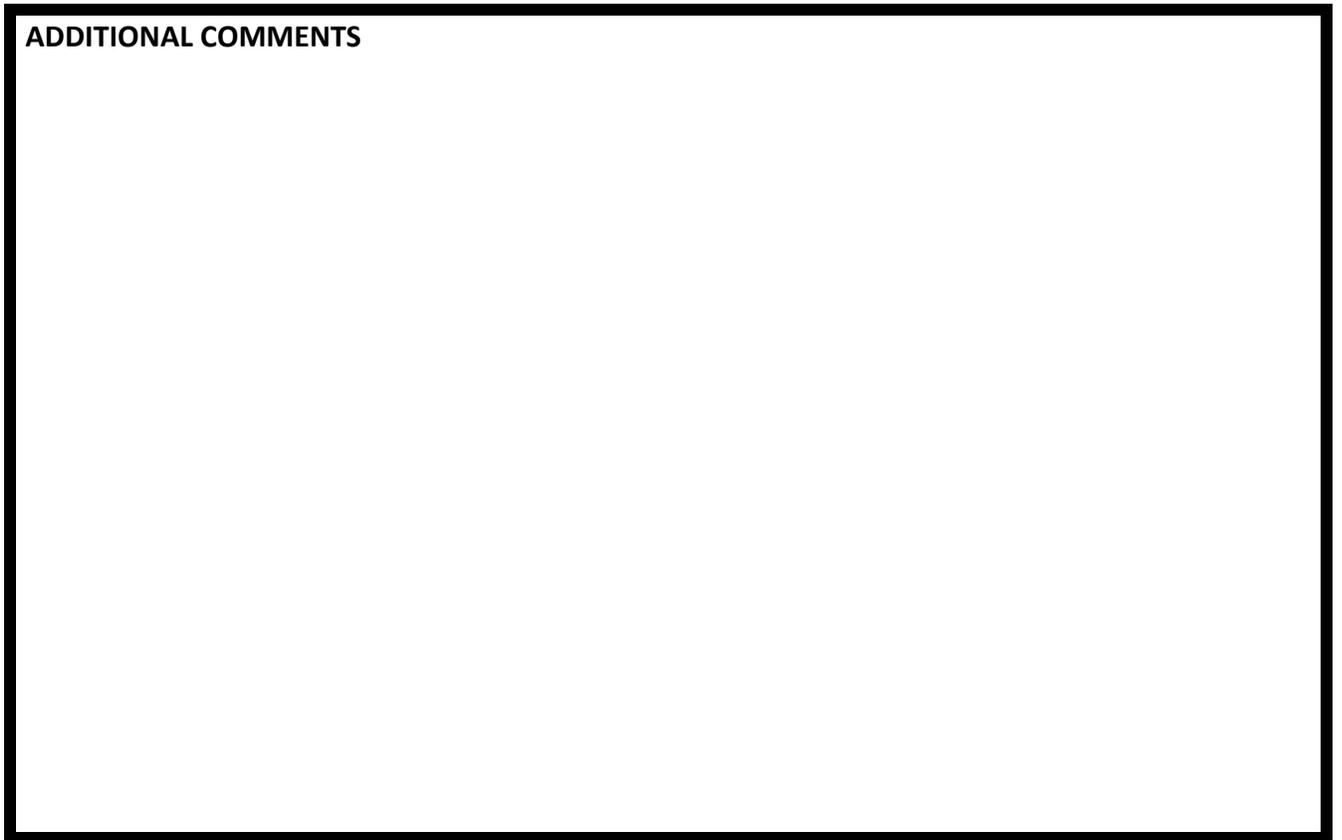
**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- Reading Text 1
- Document Use 1
- Writing 1/2
- Oral Communication 2
- Thinking Skills
  - Problem Solving 1
  - Decision Making 2
  - Job Task Planning & Organization 1
  - Significant Use of Memory

ACHIEVEMENT INDICATORS	BEGINNING	DEVELOPING	ACCOMPLISHED
• Labeled the parts of a lawnmower			
• Listed safety procedures to be followed when working with a lawnmower.			
• Started a lawnmower.			
• Cut a patch of grass (if possible).			
• Assessed own performance.			

**ADDITIONAL COMMENTS**



# Flower Gardens



# Flower Gardens

In this unit, the student will learn the basics of planting and caring for flower gardens. Municipal workers prepare public garden beds in parks, along streets, etc. They plant flowers, often more than once in the year, to keep the town looking attractive. They regularly water and weed the gardens. In the fall, they may remove old plants and plant bulbs for the spring.

Workers for garden care companies perform similar services for homeowners, preparing, planting, fertilizing, weeding and mulching.

As a final demonstration of their skills, students may plant a garden at their worksite or perhaps for a retirement home or as some sort of volunteer contribution to their community. You need to arrange this in advance. If that is impossible (mid-winter), they could plant a planter box or pot, using African violets or other readily available small indoor plants.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Some garden experience & vocabulary
- Knowledge of garden tools
- Physical ability – strength, flexibility, balance, endurance, fine motor control
- Measurement – depth, length, volume

## OBJECTIVES

Students will

- Plant a small garden using bedding plants or indoor tropical plants – in a planter box or outside in a garden bed
- Mix and use fertilizer
- Prepare ground for planting flowers
- Know how to care for garden through growing season
- Understand the different basic types of flowering plants: shrubs, annuals, perennials

## MATERIALS

- Garden – outdoors, or planter box with soil
- Large plastic tub with soil or sand for digging practice
- Tools: trowel, shovel, fork, rake, watering can, hose, bulb trowel
- Bedding plants or tropical plants – in small pots
- Bulbs and their packaging (instructions)
- Household cleaner and equipment for mixing: scrub brush, rubber gloves, bucket
- Garden gloves, sunscreen, hats, insect repellent
- Garden pesticide (for inspection only)
- Computer with Internet access
- Samples of topsoil, mulch, compost etc.

## VOCABULARY

- Annual
- Apart
- Bloom
- Bulb
- Centimetre (cm)
- Clump
- Compost
- Crocus
- Daffodil
- Daisy
- Deadhead
- Depth
- Dig
- Earth
- Estimate
- Fertilize
- Fertilizer
- Flower
- Food
- Gallon
- Garden
- Hoe
- Hole
- Hose
- Inch (in. “)
- Light
- Manure
- Marigold
- ml (L)
- Mulch
- Nozzle
- Peat / peat moss
- perennial
- Pests
- Petunia
- Plant
- Prepare
- Rake
- Remove
- Seed
- Shrub
- Soil
- Space
- Spray
- Tablespoon (tbsp)
- Topsoil
- Trowel
- Tulip
- Water
- Watering can
- Weed
- Wilt

## RESOURCES

- [www.belgian-nursery.com](http://www.belgian-nursery.com) : many useful pages here
- Local garden centres or nurseries – get samples of planting instructions that come with different plants; collect or examine variety of seed packets to learn varieties of flowers
- Gardening books and catalogs will have lots of pictures of different flowers
- Internet – general search for garden sites. There are many sites that show and talk about different types of plants, how to garden, etc.
- [www.homegarden.about.com](http://www.homegarden.about.com): search for how to plant, etc.

Flower Gardens

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Garden and planting experience		1							2	2	1		*				*
2.	Preparing the garden bed	1	1							2	1	1	2	*				*
3.	Planting	1	1							2	2	1	1	*			2	*
4.	Spacing the plants	1	1				1		1	2	2	1		*				*
5.	Bulbs	1	1							2	2	1		*			2	*
6.	Planting bulbs	1	1				1		1	2	2	1	1	*			2	*
7.	Watering	1								2	2	1		*				*
8.	Mixing and applying fertilizer	1	1				1		1	2	1	1	1	*				*
9.	Deadheading, weeding, mulching		1							2	1	1		*				*
10.	Shrubs, perennials, annuals	1	1						1	2				*	1			*
D	Everything's coming up roses, petunias, and daisies	1	1						1		1	1	1					



## LEARNING ACTIVITIES

<p><b>1. GARDEN AND PLANTING EXPERIENCE</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Prepared vocabulary cards</li> <li>• Sunscreen, insect repellent, hat, work boots, garden gloves of various types: heavy duty for digging, lighter for planting</li> <li>• Teaching Aid: <i>What A Garden Needs</i></li> </ul>
<p>Ask students what they know about looking after flower gardens. For instance, what do flowers need in order to grow well? (sunlight, good earth, water, food.) Ask if they have ever looked after or helped to look after a garden. Ask if they have ever planted in a garden. Ask how they did it. Get students to describe their experiences, what they liked or didn't like, their successes, their challenges. Explore the different types of gardens they know about: large beds in parks, small front gardens, naturalized gardens, hanging basket, etc.</p> <p>Use Teaching Aid: <i>What A Garden Needs</i>.</p> <p>Explain that part of grounds maintenance work includes flower gardening. They may have to prepare a bed for planting, dig the holes, plant the small plants, water and fertilize them and much more.</p> <p>Ensure that students know this vocabulary: sight words and meaning. They may find these words on a daily work order.</p> <p>Discuss what safety precautions they should take when working in a flower garden: wear hat, sunscreen, gloves and boots. Show these. Demonstrate and discuss application of sunscreen: how much, where, how often, why. Add that in the springtime, they may need protection against insects. Discuss what products they might use: DEET is the recommended ingredients. Remind them that sunscreen and insect repellent are chemicals and they should use safety precautions: not get hands near mouth, handle food, etc. Remind students that after working the soil, they should wash thoroughly. Ask why. (animal droppings, various bacteria in soil)</p>	

<p><b>2. PREPARING THE GARDEN BED</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 2</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Area outside if possible</li> <li>• Tools: shovel, hoe, rake, fork, trowel</li> <li>• Bag of compost or topsoil to improve the existing soil</li> <li>• Garden gloves</li> <li>• Teaching Aid: <i>Lift it Safely in Lawns and Gardens</i> unit of this manual</li> <li>• Teaching Aid: <i>Preparing the Garden Bed</i></li> </ul>
<p>Explain that before they plant new plants in a garden, they will have to prepare the soil. Tell them there may be one or several of these jobs to do:</p> <ul style="list-style-type: none"> <li>• Remove dead or old plants</li> <li>• Remove any stones, sticks etc.</li> <li>• Remove any weeds</li> <li>• Add compost, peat, or topsoil</li> <li>• Break up large clumps</li> <li>• Rake the area smooth</li> </ul> <p>Use the Teaching Aid: <i>Preparing the Garden Bed</i>. Discuss the order in which to do the jobs. For example, don't rake before the clumps are broken up. However, other jobs may be done in both orders: for example, remove weeds, break up clumps.</p> <p>Discuss each task, explaining the vocabulary and purpose of each task. If possible, go outside and let students prepare an area in a garden for planting. Examine the area to be prepared. Ask which of the jobs will need to be done. Plan the order of jobs then carry out the plan.</p> <p>Tell students that there are different types of soil: sandy, clay, loam, etc. They may have to add some material to improve the garden soil. Topsoil containing compost and manure is rich in nutrients that promote plant growth. Sandy soil often needs this added. Heavy clay soil may need compost and even some sand added to lighten it. Planters tend to dry out quickly, so peat moss, compost and vermiculite are often added to help the soil hold moisture, promote strong root growth, and provide good drainage. They will be told which product to add, and should be told or shown how much to add. This will require some estimation as the quantities will not be exactly measured. Explain that they may have a wheelbarrow full of compost to dig into a certain area. Discuss ways to spreading it evenly throughout the bed. (eg. Put shovelfuls of material more or less evenly spaced over the garden before beginning to dig it in.)</p> <p>Remind them of safe lifting techniques if they are lifting heavy bags of compost or soil, and safe digging techniques. Refer to the <i>Lawns and Gardens</i> unit in this manual for Teaching Aids and Internet links. Practise lifting such bags to ensure the skill is in place.</p>	

<p><b>3. PLANTING</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Outside prepared garden if possible</li> <li>• Large plastic tub with sand or soil</li> <li>• Trowel</li> <li>• Small plants in pots</li> <li>• Watering can &amp; water</li> <li>• Teaching Aid: <i>Planting</i></li> <li>• Student Activity Sheet: <i>Planting</i></li> <li>• Computer with Internet access</li> </ul>
<p>Fill a large plastic tub with soil, or go outside to a garden that you can work in. Tell students that once the garden bed is prepared, they are ready to plant. Ask them to think what tools or equipment they might need.</p> <ul style="list-style-type: none"> <li>• Trowel</li> <li>• Watering can or hose</li> <li>• Plants</li> </ul> <p>Use Teaching Aid: <i>Planting</i></p> <ul style="list-style-type: none"> <li>• Explain that they will need to dig a hole just a little bit bigger than the pot that holds the plant. Ask how they could tell if what they have dug is the right size. (sit the pot in it. The level of the soil in the pot should be the same or a little lower than the soil around the hole.) Give students opportunities to dig holes of varying sizes to correspond to various pots you have for them.</li> <li>• Tell them that they will next add some water so that the plant will be put into well watered soil. Use a watering can to fill the hole and let the water drain down.</li> <li>• Show the students how to remove the plant from the pot safely, without damaging it. <ul style="list-style-type: none"> <li>◦ Hold the pot upside down, supporting the area of the soil with one hand, with fingers spread so as not to damage the stem of the plant.</li> <li>◦ Give a tap to the bottom of the pot to release the plant.</li> <li>◦ Now with the other hand on the bottom of the plant and earth, turn the plant right way up and set it gently into the hole.</li> <li>◦ Replace some of the soil by hand, firming it down with fingers, again being careful not to damage the plant.</li> <li>◦ Water again.</li> </ul> </li> </ul> <p>Give students opportunity to practise, perhaps using a planter box or large pot to plant several small plants. Give Student Activity Sheet: <i>Planting</i> to practise sequence of steps.</p> <p>Use Internet: <a href="http://www.gardening.about.com">www.gardening.about.com</a> Search "How to repot". This shows how to remove a plant from the pot. Explore other tips on this site.</p>	

<p><b>4. SPACING THE PLANTS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Numerical Estimation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Large tub of soil as before</li> <li>• Trowel</li> <li>• Rulers showing both inches and centimetres</li> <li>• Circles cut from card stock in various sizes (2" diameter, 3" diameter, etc) to represent small plants</li> <li>• Teaching Aid: <i>Spacing</i></li> </ul>
<p>Explain that when they have a large garden to plant, they will need to space the plants out. They will be told how far apart to place the plants, so what they need to be able to do is to estimate small distances since they won't be using a tape measure.</p> <p>Ask if they know what an inch is. Ask them to show you with their fingers. Ask if they know what a centimetre is. Ask them to show you that with their fingers. Tell them that the instructions they are given could be in either inches or centimetres, so they will need to know both.</p> <p>Show them a ruler and find the inch markings. Look at the centimetre markings too.</p> <p>Practise showing several different measurements, say drawing a line that is 2" long, 4" long, 6 cm long. Then have them compare what they drew to the ruler. Continue till they are comfortable with these measurements. Now have them estimate with their fingers, and with their hands.</p> <p>They may be asked to dig several holes at once, with a given spacing. Use your large plastic container of soil for this. (You may only get 2 or 3 holes within the given space.)</p> <p>Cut out a dozen circles of varying sizes to represent plants. Ask the students to place these on the floor at given spacings. This gives the opportunity to "dig" multiple holes spaced evenly. Focus on estimating.</p> <p>When they can do a single row with even spacing, ask them to make a second row, the same spacing away from the first row as is between the plants in the first row. They could try this in straight lines, or staggered. Use Teaching Aid: <i>Spacing</i> for some ways to space plants.</p>	

<p><b>5. BULBS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Plastic tub of soil as before</li> <li>• Assorted bulbs (different sizes)</li> <li>• Teaching Aid: <i>Bulbs</i></li> <li>• Gardening books with pictures of flowers from bulbs</li> <li>• Computer with Internet access: <ul style="list-style-type: none"> <li><a href="http://www.belgian-nursery.com">www.belgian-nursery.com</a> ;</li> <li><a href="http://www.homegarden.about.com">www.homegarden.about.com</a></li> </ul> </li> </ul>
<p>Use Teaching Id: <i>Bulbs</i>. You could also bring in gardening books with pictures of flowers from bulbs, or visit the Belgian Nursery website. The homegarden website also has good links for bulbs.</p> <p>Explain that not all flowers are planted as small plants from pots. Some come from bulbs. Ask if anyone knows what some of those flowers are. (tulips, daffodils, crocus, etc.) Ask if they have seen bulbs. Teach as many different bulbs, by name, as is appropriate for your students.</p> <ul style="list-style-type: none"> <li>• Show an assortment of bulbs.</li> <li>• Examine the bulbs together to see which end is the root end and which the stem.</li> <li>• Explain that when these are planted they must be planted with the root side down.</li> <li>• Have students lay bulbs on the soil in your large tub, the right way up.</li> <li>• Check to make sure that all are correct.</li> </ul>	

<p><b>6. PLANTING BULBS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Numerical Estimation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Plastic tub of soil as before</li> <li>• Trowel, bulb trowel is possible (with measurements marked on it)</li> <li>• Bulb planter if possible for examination</li> <li>• Assorted bulbs (different sizes)</li> <li>• Packaging for bulbs (instructions for depth and spacing)</li> </ul>
<p>Tell students that bulbs that flower in the spring are actually planted the fall before. Tell them that they may have this as a job.</p> <p>Tell them that there are two main ways to plant bulbs: one by one and in groups. If they are planting them one by one, they will dig holes in rows or some given pattern at a set spacing. They might do this with a trowel, or they might have a bulb planter. Check what this tool is like by examining one, or look on the Teaching Aid in the <i>Lawn and Garden Tools</i> unit in this manual.</p> <p>Explain that just like they had to dig a hole the correct depth for different size pots, so also they must plant different bulbs at different depths. They should be told what depth this is for each type of bulb, either by their foreman or by their reading it on the package of bulbs. A general rule of thumb is that bulbs are planted 3 times the depth that they are in diameter. Have the students estimate – with their fingers – the depth they would plant different size bulbs. Show them a bulb planting trowel, if possible, which has depth markings on it. Ask what else they could do to help them. (Have a piece of dowel with inch - or centimetre - markings drawn on it that they could carry in a pocket and stick in the hole to check; learn the length of fingers or of hand to use for estimating depth.)</p> <p>Show students a packet of bulbs. Find the planting information. Look for the depth, and the spacing. This may be in pictures with numbers, or it may also have wording. Help students read the information and then demonstrate in the tub of soil how they would dig and space holes for the bulbs.</p> <p>If bulbs are to be planted in a grouping, then they will need to dig a larger hole, the same depth as for single. The diameter of the hole depends on the number of bulbs to be planted in each group. A common method is to plant a ring of 5 bulbs with a 6<sup>th</sup> in the middle. Practise digging larger holes, and practise placing a given number of bulbs in a pattern in the hole.</p>	

<p><b>7. WATERING</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 2</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Watering can</li> <li>• Hose with different nozzles</li> <li>• Teaching Aid: <i>Watering</i></li> </ul>
<p>Remind students that flower gardens and hanging baskets will need regular watering. They may use a watering can or a hose. At a person's home, the hose would be connected to a tap on the side of the house. If they are watering public places, they will probably have a hose connected to a water truck. Explain that some parks have automatic, built in watering systems; some homes do too. They may have to use a special tool to turn these on, or the watering systems may be on automatic or computer controlled timers.</p> <p>Show students a watering can. Fill the can with water and have students practise carrying it, and pouring safely from it, not splashing water everywhere.</p> <p>Show students a standard garden hose. Have them practise rewinding it into a coil that can be put away neatly after use.</p> <p>Show students a hose nozzle. Most nozzles nowadays have a variety of sprays. Explain that when watering flowers, they will want to use a fine spray so that they do not damage the flowers.</p> <p>Tell students that the goal is to water the roots of the plants more than the leaves and flowers. In fact, water on the leaves and flowers can damage them, causing spots, or burning them (the water droplets act like lenses that intensify the effect of the sun.) Tell them that the best time to water gardens is in the early morning or in the evening when the sun is not too strong. That will prevent damage and also limit evaporation, allowing the water to soak into the ground. Some plants, like geraniums and roses, should only be watered in the morning because if water is on them through the cool of the night, they may develop fungal disease. Holding the hose low to the ground, underneath the leaves of the plants is an excellent way to water. They must be very careful as they do this, especially making sure they do not break or bend plants as they pull the hose around the garden.</p> <p>Go outside, or into a large indoor space, and practise walking around a garden (set up an obstacle course if necessary), having them stop and move the hose rather than dragging it against plants, trees, shrubs or other obstacles.</p> <p>If possible, let students water an existing garden.</p> <p>Use Teaching Aid: <i>Watering</i> for reference.</p>	

<p><b>8. MIXING AND APPLYING FERTILIZER</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> <li>◦ Numerical Estimation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Job Task Planning &amp; Organization 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Fertilizer – various number combinations, eg. 15-15-15; 15-30-15.</li> <li>• Watering can or bucket</li> <li>• Access to water</li> <li>• Measuring spoon (or scoop may be included with fertilizer) &amp; measuring cup</li> </ul>
<p>Ask how plants will get extra food to help them grow and bloom well. (fertilizer) Ask if they know what kinds of things make good fertilizer. (Manure, compost, commercial products.) Explain that they may have to dig in manure or compost into the soil before planting the garden, but that commercial products are usually used once the garden is planted. Examine various boxes and bags of fertilizers. Note the 3 numbers. Explain that these represent the 3 main ingredients in the fertilizer. Some fertilizers are better for encouraging leaf and root growth; others encourage flower growth. Tell them that they will be told which one to use at any given time.</p> <p>Use a commercial product to practise reading the instructions for mixing and applying. Each is different. Refer to the <i>Measuring</i> unit in the <b>Kitchen Help</b> manual if students are unsure of ml, L, teaspoon and cup measuring. You may have to review how much is in a gallon. Ask they can tell how much water a watering can hold. (some are labeled; they could fill it with water, cup at a time and count.)</p> <p>Demonstrate measuring and mixing fertilizer. Emphasize that they should not use measuring equipment for fertilizer that they use for food. Often a scoop is included with the fertilizer.</p> <p>Read the instructions for application and discuss how they would do that.</p> <p>Practise if possible.</p>	

<p><b>9. WEEDING, DEADHEADING, MULCHING</b></p> <ul style="list-style-type: none"> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Garden to care for</li> <li>• Potted flowering plant (with some dead)</li> <li>• Samples of mulch</li> <li>• Teaching Aid: <i>Keeping It Beautiful</i></li> </ul>
<p>Explain that there are some routine garden maintenance jobs.</p> <p><b>Deadheading:</b></p> <ul style="list-style-type: none"> <li>• Blooms should be removed when they are wilted and dead. This is called deadheading.</li> <li>• Explain that this encourages new blooms. It prevents the plant using its energy making seeds (which is what the dead bloom will do).</li> <li>• Demonstrate the gentle pinching off of flowers with thumb and finger. This works for the tenderest of plants, like petunias. Emphasize that they should never pull on the plant as that will disturb the roots or break the stem. Use a potted plant that has some dead flowers, or a garden that you can care for.</li> <li>• If the stems are too stiff, or if they are sticky, they may use a pair of garden pruners. Show these and how to use them safely. (Real is best, or see Teaching Aid in <i>Lawn and Garden Tools</i> in this manual.)</li> <li>• Explain that the dead blooms should be removed, either to compost or to a garden waste bag. Leaving them on the garden is messy and can encourage pests or diseases.</li> </ul> <p><b>Weeding:</b></p> <ul style="list-style-type: none"> <li>• Ask what weeds are. (Plants growing where they are not wanted.)</li> <li>• Explain that the biggest problem with weeds is that they take the nutrition meant for the flowers, and the flowers cannot grow as well. They also can crowd out the flowers. They can make a garden look untidy and overgrown.</li> <li>• Explain that they may not know which plants are weeds and which are not. Ask what they should do if they are at all unsure. (Ask!) Practise asking for clarification.</li> <li>• Explain that they must be careful when removing weeds not to disturb the good plants. Sometimes all they can do is cut off the weed at ground level. That is why it is important to remove all weeds, roots and all, when preparing the garden in the first place. If possible, weed a garden at your workplace.</li> <li>• Explain that weeds must be removed from the garden area so that they do not spread. Special care needs to be taken if the weeds have “gone to seed.” Remind them of “dandelion clocks” and how easily those seeds blow away when disturbed.</li> </ul> <p>(next page)</p>	

**Mulching:**

- Explain that mulch is a covering that is put on gardens to perform several jobs:
  - It shades the roots, protecting them from heat and helps conserve water.
  - It helps prevent the growth of weeds.
  - As it breaks down it feeds the soil and plants (composting).
- Tell students that there are a variety of products used as mulch; a common one is red cedar. Show this if possible. Mulch is generally not heavy. Explain that they may have to open and spread bags of mulch on a garden, or it may be from a truck, or a large pile. They could use a garden fork, or a shovel, or even their hands for this.
- They will be told how deep to lay the mulch. Ask what they should do if they are not told. (Ask!)
- Practise mulching a garden at your worksite if possible.

<p><b>10. SHRUBS, PERENNIALS, ANNUALS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Computer with Internet access <a href="http://www.belgian-nursery.com">www.belgian-nursery.com</a>; <a href="http://www.homegarden.about.com">www.homegarden.about.com</a></li> <li>• Teaching Aid: <i>Shrubs, Perennials and Annuals</i></li> </ul>
<p>Tell students that shrubs, small bushes, etc. need pruning. They would use pruning shears for this and should receive training on the job as to how much to cut and when. Keeping the shrubs weed free around the base, and removing any dead pieces, keeps them healthy and looking good.</p> <p>Explain to students that there are two main groups of flowering plants that are used in gardens: perennials and annuals. Explain the difference: perennials come back each year, but annuals need to be replaced each year. Perennials usually bloom only at a certain time in the year, while annuals will bloom as long as the weather and garden conditions are good. Perennials usually cost more than annuals since they will last for years in the garden. (The customer doesn't have to come back each year to buy more!)</p> <p>Explain that in the fall, they may have to remove all the annuals from the garden, taking them to compost or putting them in garden waste bags. (This is often when bulbs are planted.) Perennials though are not removed. Sometimes they must be cut back, or mounded over with mulch for winter protection. They would be given clear instructions on which procedure to do with which plants. Remind them that if they do not know, they should ask. Why? (If they pull out perennials, the owner will be very unhappy. Perennials tend to be more expensive than annuals.)</p> <p>Use Teaching Aid: <i>Shrubs, Perennials and Annuals</i>. Refer to the <a href="http://www.homegarden.about.com">www.homegarden.about.com</a> website to view a video about pruning.</p>	



## What A Garden Needs



Gardens need sunlight, water, and good earth. You may have to feed the garden to help it grow.



## Preparing the Garden Bed

1. Dig over the area for the garden with a shovel or fork.



2. Remove grass, weeds, stones, and sticks.

Use a trowel



3. Break up clumps of soil with a hoe or cultivator.



4. Add compost, topsoil, peat, etc.

Dig it in well.



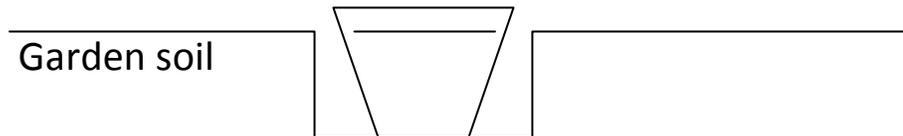
5. Rake the garden smooth.





# Planting

1. Dig a hole a little larger than the pot. The level of the soil in the pot should be the same as the level of the garden.



2. Fill the hole with water. Let it soak in.
3. Remove the plant from the pot.
  - Turn the pot upside down with your hand on the soil.
  - Be careful not to damage the stem of the plant.
  - Tap the base of the pot to loosen plant.
  - Remove the pot.
  - Turn plant right way up, supporting it with your hands.

4. Put plant in hole.



5. Gently fill in extra soil around plant. Be careful of the stem!

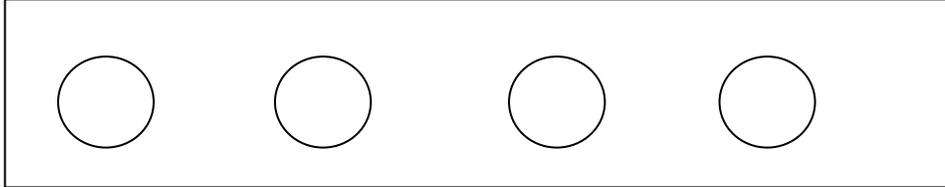
6. Water again.



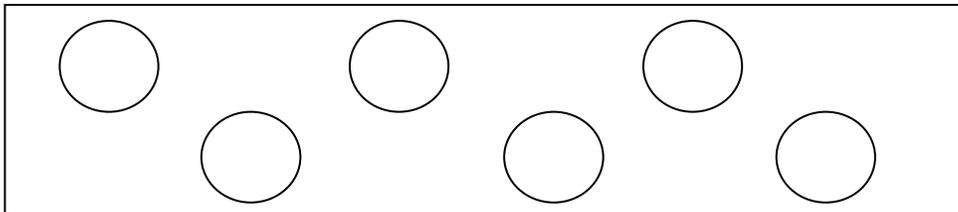


# Spacing

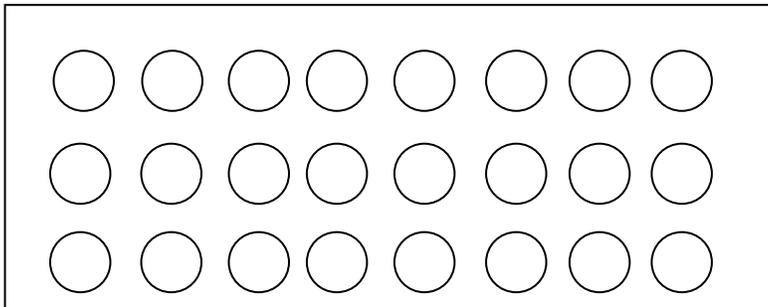
Spaced evenly in a row.



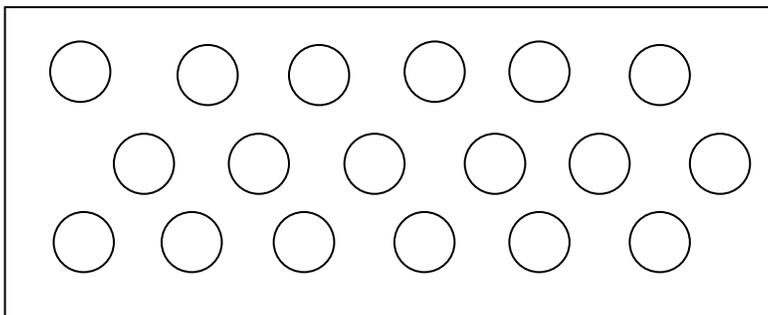
Spaced evenly in a zig-zag pattern.



Spaced evenly in rows and columns.



Spaced evenly in alternating rows.





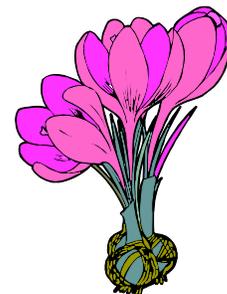
## Bulbs



## Tulips



## Daffodils



## Crocuses



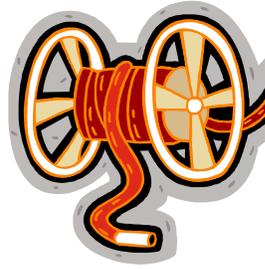
# Watering



Watering can



Garden hose



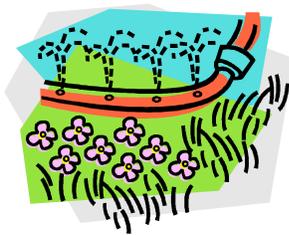
Hose on reel



Spray nozzle



Use a gentle spray.



A soaker hose will gently water a whole garden.

Aim hose at base of plants to get the water in the soil.





## Keeping It Beautiful

1. Deadhead regularly. Pinch off dead flowers with thumb and finger, or use garden shears.



2. Weed regularly. Gently pull out, dig up or cut off weeds. Be careful not to disturb the good plants.

3. Water regularly.

4. Fertilize occasionally, if needed.

5. Add mulch covering as needed. It shades the roots, keeps in moisture, and stops weeds.





## Shrubs, Perennials, and Annuals



Geraniums, petunias, and impatiens are annuals. New plants must be planted every year.



Perennials, like daisies, pansies, and bleeding hearts grow from the same root every year.



Flowering shrubs, like roses, may need pruning every year.



# Planting

Cut out the boxes and arrange them in the correct order. Draw a picture to show each step.

Tap the base of the pot to loosen plant.

Dig a hole a little larger than the pot. The level of the soil in the pot should be the same as the level of the garden.

Water again.

Put plant in hole.

Fill the hole with water. Let it soak in.

Gently fill in extra soil around plant. Be careful of the stem!

Turn plant right way up, supporting it with your hands.

Turn the pot upside down with your hand on the soil.

Be careful not to damage the stem of the plant.

Remove the pot.

Remove the plant from the pot.



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**DEMONSTRATION INSTRUCTOR PAGE**

---

***Everything's Coming Up Roses, Petunias,  
and Daisies***

---

**ESSENTIAL SKILLS**

- **Reading Text 1**
  - **Document Use 1**
  - **Oral Communication 1**
  - **Numeracy**
    - Numerical Estimation 1
  - **Thinking Skills**
    - Problem Solving 1
    - Decision Making 1
    - Job Task Planning & Organization 1
    - Significant Use of Memory
- 

**DEMO DESCRIPTION**

The student will plant a small garden. This may be an outdoor garden or a planter for either indoors or outdoors.

---

**INSTRUCTOR NOTES**

- Provide a suitable planting location. You may need to provide a planter and soil.
- Provide tools needed to prepare garden and to plant, depending on location choice.
- Provide plants: annual bedding plants for outside; tropical plants such as African violets for indoor planters.
- Provide *What I Have Learned and Skills Practised* to link demonstration tasks to Essential Skills.

**With student**

- Review steps in preparing garden and planting.
  - Discuss possible locations for the garden: this may be outside at a community setting, their own home, the home of a senior in the community, etc. Or it may be a planter box.
  - Read instructions aloud if necessary
- 

**ACHIEVEMENT INDICATORS**

- Prepared garden
  - Dug holes of correct depth and spacing
  - Followed steps in planting
  - Created an attractive small garden
  - Assessed own performance
-



# ***Everything's Coming Up Roses, Petunias and Daisies***

## **TASK 1**

You will plant a small garden. This may be outside or in a planter.

Maybe you could do this as a volunteer at a nursing home, or for a senior citizen in the community. Perhaps you could do it at your own home, in a garden or in a planter on your apartment balcony. Discuss the options with your instructor.

Your instructor will provide you with the plants and tools you will need. If it is to be in a planter, that will also be provided along with soil.

If you are going to an outdoor garden, you and your instructor will arrange that.

Remember all the steps to prepare the garden and to plant it. Discuss what you will do with your instructor before starting. You could make a list of the jobs you will do and what tools you will need. Don't forget how to be safe!



# ***Everything's Coming Up Roses, Petunias and Daisies***

## **TASK 2**

### **I Can Plant a Garden**

<b>I CAN</b>	<b>YES / DATE</b>
I can prepare a garden before planting. <ul style="list-style-type: none"> <li>• Dig over</li> <li>• Remove weeds, stones, twigs</li> <li>• Add compost or other topsoil</li> <li>• Break up clumps</li> <li>• Rake smooth</li> </ul>	
I can dig holes of correct size and depth	
I can space plants according to directions	
I can remove plants from pots	
I can plant flowers	
I can use a watering can or a hose.	
I can spread mulch.	
I can deadhead.	
I can weed.	
I know what annuals, perennials and shrubs are.	



**DEMONSTRATION ASSESSMENT**

## *Everything's Coming Up Roses, Petunias and Daisies*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

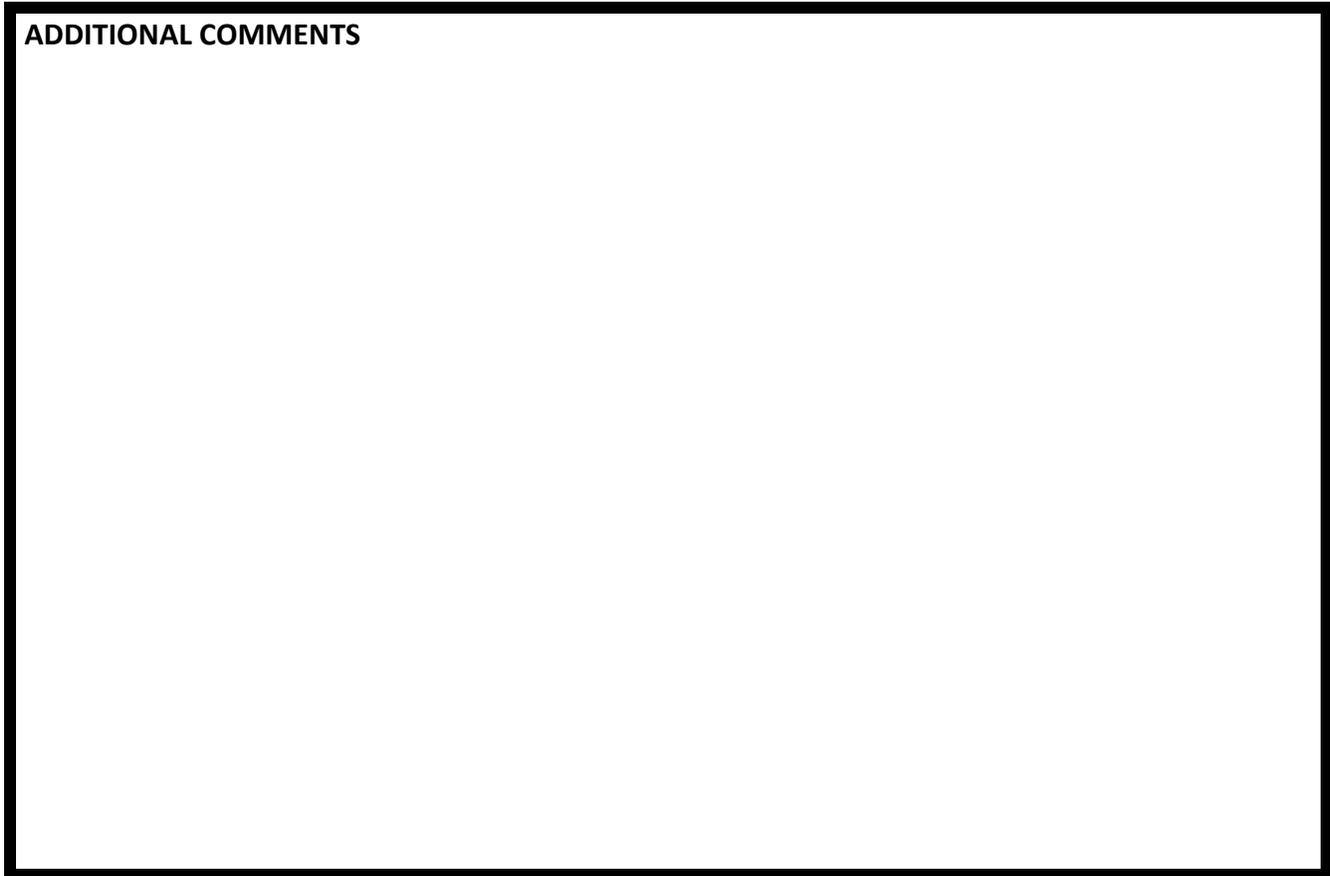
**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

- ESSENTIAL SKILLS:**
- **Reading Text 1**
  - **Document Use 1**
  - **Numeracy**
    - Numerical Estimation 1
  - **Oral Communication 1**
  - **Thinking Skills**
    - Problem Solving 1
    - Decision Making 1
    - Job Task Planning & Organization 2
    - Significant Use of Memory

<b>ACHIEVEMENT INDICATORS</b>	<b>BEGINNING</b>	<b>DEVELOPING</b>	<b>ACCOMPLISHED</b>
• Prepared garden			
• Dug holes of correct depth and spacing			
• Followed steps in planting			
• Created an attractive small garden			
• Assessed own performance			

**ADDITIONAL COMMENTS**



# **Communicating on the Job**



# Communicating on the Job

This unit will examine forms that a student might be asked to use at work. They will be asked to get information from the forms and to enter simple information. They will also practise “calling out” instructions to another worker who is, for example, backing up a truck; they will also listen to such instructions.

## PREREQUISITE OR ADDITIONAL SKILLS NOT TAUGHT IN THIS UNIT

- Ability to read time
- Ability to work out hours from start time to stop time
- Ability to recognize and understand abbreviations a.m. and p.m.
- Understanding of hour and half-hour
- Recognition and understanding of  $\frac{1}{2}$
- Understanding of concept of left and right, forward and backward
- Simple multiplication

## OBJECTIVES

Students will

- Understand the terminology used on simple work orders and timesheets
- Calculate hours worked
- Fill in specific work order details
- Fill in a time sheet
- Call out directions
- Obey called out directions

## MATERIALS

- Sample worksheets from local companies to compare layout and terminology
- Pencils, pens
- Clock, if needed, to assist in calculating time

## VOCABULARY

- Accepted
- Address
- Attention
- Clock-in
- Clock-out
- Comments
- Completed
- Customer
- Description
- Fax number
- Finish
- Hours
- Job
- Name
- Phone number
- Price
- Quantity
- Start
- Time
- Timesheet
- Total

## RESOURCES

- **Ready for Work** manual: *Time and Form Filling* units
- Local lawn and garden care companies: ask for samples of timesheets and daily work orders to compare with the ones here: all are different, but the overall information is the same.

#	Activity Description	ESSENTIAL SKILLS																
		RT	DU	W	N					OC	TS					WWO	CU	CL
					MM	SBA	MC	DA	NE		PS	DM	JTPO	SUM	FI			
1.	Timesheets	1	1	1			1			2	1	1		*	1			*
2.	Crew timesheets	1	1	1	1	1	1			2	1	1		*	1			*
3.	Quotations	1	1	1			1			2	1	1		*	1			*
4.	Invoice – work order	1	1	1						2	1	1		*	1			*
5.	Back up	1	1	1						2	1	1		*		*	2	*
D	Time Is Money	1	1	1		1	1				1	1		*				



## LEARNING ACTIVITIES

<p><b>1. TIMESHEETS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Scheduling or Budgeting &amp; Accounting 1</li> <li>◦ Measurement &amp; Calculation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Timesheet</i></li> <li>• Student Activity Sheet: <i>Timesheet</i></li> </ul>
<p>Ask students if they have ever had to clock-in and clock-out at work. Explain why a company might need employees to do this. (To make sure employee showed up for work, to keep track of the number of people on a shift, etc.) Explain that some companies need to know that employees not working inside a building or store have done their jobs, and also how long those jobs took. Ask where these people might be working. (on the road making deliveries, working on a building site, working on landscaping jobs, etc.)</p> <p>Tell students that in order to check that these employees have completed their work and how long each job took, so that they may be paid properly and clients billed properly, an employer might ask them to fill in a timesheet.</p> <p>A timesheet tells where the job was done, when it was started, when it was finished, what was done, and if there was anything special that needed to be commented on. Show sample timesheets and locate where these pieces of information would be.</p> <p>Use Teaching Aid: <i>Timesheet</i>. Make photocopies for students or put on overhead transparency.</p> <ul style="list-style-type: none"> <li>• Read with students.</li> <li>• Point out, and read together, the Customer Name and Address.</li> <li>• Ask what time the job started and what time the job finished.</li> <li>• Ask what job was completed.</li> <li>• Ask if any comments were made.</li> <li>• Ask how many hours were worked in total.</li> </ul> <p>Use Student Activity Sheet: <i>Timesheet</i>.</p>	

<p><b>2. CREW TIMESHEETS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Money Math 1</li> <li>◦ Scheduling or Budgeting &amp; Accounting 1</li> <li>◦ Measurement &amp; Calculation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Crew Timesheet</i></li> <li>• Student Activity Sheet: <i>Crew Timesheet</i></li> </ul>
<p>Explain that sometimes the entire crew is put on a single timesheet. This lets the employers calculate the cost of the job more easily for billing the customer.</p> <p>Use Teaching Aid: <i>Crew Timesheet</i> and Student Activity Sheet: <i>Crew Timesheet</i>.</p> <ul style="list-style-type: none"> <li>• Read scenario to students.</li> <li>• Locate the different columns and ask students what they think the headings mean. Suggest that they examine each “word”. Does it look like a word they know, just missing a letter or two. (Problem solving)</li> <li>• Explain how to get a cost per hour for the whole crew if they know the number of people and the rate per person.</li> </ul>	

<p><b>3. QUOTATIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Numeracy</b> <ul style="list-style-type: none"> <li>◦ Measurement &amp; Calculation 1</li> </ul> </li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>R.M.Adams Trucking Ltd. Quotation &amp; Observation</i> (2 pages)</li> <li>• Student Activity Sheet: <i>Quotation</i></li> <li>• Copy of blank quotation form for each student</li> </ul>
<p>Tell students that lawn and garden care companies usually give a quotation to a customer before starting a job. Explain that a quotation is an approximate (rough) idea of what the job will cost. It is a numerical estimation. (Essential Skill)</p> <p>Ask why it would be a good idea for customers to get more than one quotation for a job. (So that they can compare prices and services, so that they will know how much the job will cost.)</p> <p>Explain to students that they will not be asked to give a quotation for a job; however, they may need to know what a quotation form looks like and what kind of information might be on it.</p> <p>Use Teaching Aid: <i>R.M.Adams Trucking Ltd. Quotation &amp; Observation</i> (2 pages)</p> <p>After going over the Teaching Aid, ask students to fill in their copy of the quotation form using the instructions on the Student Activity Sheet: <i>Quotation</i>. You may want to read the scenario aloud to some students; others may be able to complete it independently.</p> <p>Ask students why it would be important to make 2 or 3 copies of the quotation. (One for the customer, one for the person making the quotation, one for the office file.)</p>	

<p><b>4. INVOICE – WORK ORDER</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Writing 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> <li>◦ Finding Information 1</li> </ul> </li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Teaching Aid: <i>Invoice/Work Order</i> (copy for each student/ overhead transparency)</li> <li>• Student Activity Sheet: <i>Following the Work Order</i></li> </ul>
<p>Give students a copy of the work order from R.M.Adams Trucking Ltd. (Teaching Aid: <i>Invoice/Work Order</i>.) Explain that some companies call this type of document an invoice (bill), and others call it a work order (tells what is to be done.)</p> <p>Go over the form with the student. You may wish to make an overhead transparency for class use.</p> <p>Read each section and explain in detail:</p> <ul style="list-style-type: none"> <li>• What is GST?</li> <li>• Why do companies have GST numbers?</li> <li>• What is the invoice number?</li> <li>• What material is being delivered?</li> <li>• Etc.</li> </ul> <p>Ask students to complete Student Activity Sheet: <i>Following the Work Order</i>. Use this in conjunction with the Teaching Aid.</p>	

<p><b>5. BACK UP!</b></p> <ul style="list-style-type: none"> <li>• <b>Reading Text 1</b></li> <li>• <b>Document Use 1</b></li> <li>• <b>Oral Communication 2</b></li> <li>• <b>Thinking Skills</b> <ul style="list-style-type: none"> <li>◦ Problem Solving 1</li> <li>◦ Decision Making 1</li> <li>◦ Significant Use of Memory</li> </ul> </li> <li>• <b>Working With Others</b></li> <li>• <b>Computer Use 2</b></li> <li>• <b>Continuous Learning</b></li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Computer with Internet access.</li> <li>• Teaching Aid: <i>Back It Up</i></li> <li>• Student Activity Sheet: <i>Giving Directions</i></li> </ul>
<p>Explain to students that they might, at some time, have to direct the truck driver when he/she has to reverse into a driveway, for example. Tell students that this is a difficult, but necessary job. Why? (If they do not assist the driver, he might do damage to the customer's property, or might go in a ditch, etc.)</p> <p>Tell students that hand signals are sometimes used so that the driver can see them in the side and rear-view mirrors of the truck, and there might be too much noise to call out instructions. Occasionally, the students will have to call out instructions orally.</p> <p>Give students practice in this skill by asking them to participate in the scenario on Teaching Aid: <i>Back It Up</i>. First discuss what hand signals they will use. Refer to the website: <a href="http://www.cdc.gov/elcosh/docs/do400/d000413/d000413.html">www.cdc.gov/elcosh/docs/do400/d000413/d000413.html</a>, or just go to <a href="http://www.cdc.gov">www.cdc.gov</a>, click on "Workplace Safety and Health", Search "Hand signals" and choose "elcosh L Site Communications" and "elcosh Excavator Hand Signals". These two sites give some standard hand gestures. You may want to download and print these resources yourself rather than have students do this on the computer. Some students may be happy to search themselves.</p> <p>Remind students of the safety issues involved in helping a truck to back up.</p> <ul style="list-style-type: none"> <li>• Do not stand too close to the vehicle.</li> <li>• Make sure your path is clear of objects. You do not want to trip while the truck is backing up. Why not? (The truck could run over you.)</li> <li>• Give clear directions that the driver will understand.</li> </ul> <p>Tell students that trucks are usually fitted with a "beeping" device which comes on when the truck is in reverse gear. This is a safety warning to others.</p> <p>Use Student Activity Sheet: <i>Give Directions</i> to practise this skill.</p>	



# Timesheets

<b>Job 1</b>			
<b>Customer Name:</b> <u>Mr. John White</u>			
<b>Customer Address:</b> <u>16 Smith Road</u> <u>Jacktown</u>			
<b>Start time</b>	<b>Finish time</b>	<b>Job completed</b>	<b>Comments</b>
7:30 a.m.	12:00 p.m.	<ul style="list-style-type: none"> <li>• Spring cleanup</li> <li>• Fertilize lawn</li> <li>• Prune shrubs</li> </ul>	<ul style="list-style-type: none"> <li>• Some rabbit damage to shrubs</li> </ul>
<b>Total time</b>	4 ½ hours		
<b>Job 2</b>			
<b>Customer Name:</b> <u>Ann Huron</u>			
<b>Customer Address:</b> <u>24 Oak Way</u> <u>Prestwick</u>			
<b>Start time</b>	<b>Finish time</b>	<b>Job completed</b>	<b>Comments</b>
1:00 p.m.	4:00 p.m.	<ul style="list-style-type: none"> <li>• Mulched all gardens</li> <li>• Raked up twigs</li> </ul>	<ul style="list-style-type: none"> <li>• Rake handle came loose. Needs to be fixed.</li> </ul>
<b>Total time</b>	3 hours		



## Crew Timesheets

Bill is working with a landscaping company. He is on a crew with 2 other people.

Fill in the timesheet. Remember there are 3 people on the crew.

- The crew goes to Mr. Langlie's house on May 5, 2008.
- Their job is to cut the grass and plant 2 new shrubs.
- They started at 8:30 a.m. and finished at 11:00 a.m.
- They are paid \$10.00 per hour.
- The materials used were 2 shrubs and some topsoil.

\* NO/PERSNL means "number of people on the job"

\* TOTL LABR means "total labour cost".

\* RATE means \$ per hour. ( $\$/\text{hour} \times \text{number of people}$ )



# Quotation

QUOTATION & OBSERVATION

## R.M. ADAMS TRUCKING LTD.

483 BRIDGE STREET EAST  
KITCHENER, ONTARIO N2K 1K2  
PHONE 744-0151 FAX 744-6109

To: ..... Date: .....

..... Attention: .....

..... Phone: .....

NAME OF JOB:		
QUANTITY	DESCRIPTION	PRICE

Terms: 2% per month charged on overdue accounts, 24% per annum.

Accepted ..... **R.M. ADAMS TRUCKING LTD.**

Date .....

Quotations made subject to market changes in prices of materials and/or other reasons beyond our control.



## Quotation: Get the Facts

Give students a copy of the document or show on an overhead. Ask the following questions as you discuss the document.

- What is the name of the company?
- What is the address of the company?
- What is the company's telephone number?
- What is the company's fax number?
- What do you think will go beside
  - To (customer name and address)
  - Date (the date of the quotation)
  - Attention (the person who asked for the quotation)
  - Phone (the phone number of the person asking for the quotation)
  - Name of job (general, overall description, such as "new garden construction")
  - Quantity (how much material is needed)
  - Description (detailed description of what is to be done)
  - Price (how much will it cost)
  - Accepted (customer's signature)
  - Date (when it was accepted)



# Invoice / Work Order

**R.M. ADAMS TRUCKING LTD.**  
 483 BRIDGE STREET EAST  
 KITCHENER, ONTARIO N2K 1K2  
 PHONE 744-0151

395647

GST #R104559141

DATE 4th September 2006

CUSTOMER Mrs P Mulch

UNIT # 6 TYPE F150

JOB LOCATION 6 Mulberry Avenue  
Conesville

DESCRIPTION House - semi :  
mulch delivery

MATERIAL Red Cedar Mulch  
- deliver to end  
of driveway at  
the left hand  
side facing  
the house

	GROSS	
	TARE	
	AMOUNT	6cu yds
	RATE	\$37/cu.yd.
START TIME	FINISH TIME	MATERIAL
<u>10:30am</u>	<u>11:30am</u>	<u>222</u>
		DELIVERY
		<u>64</u>
TOTAL HOURS		PST
<u>1 hour</u>		
CUSTOMER SIGNATURE		GST
<u>[Signature]</u>		
		TOTAL

WE ARE NOT RESPONSIBLE FOR DAMAGE BEYOND THE CURB.



## Back It Up

- Ask one student to go out of the room to collect a cart or trolley (that you have placed in the hallway.)
- Tell that student to back into the room with the trolley.
- Ask another student to call out directions to the “driver” to help him/her bring the trolley into the room without hitting the doorway, and to a location inside the room.
- Put some obstacles in the path so that the “truck” needs to make some turns. For example,
  - Back up straight.
  - Go a little to your left.
  - Keep going.
  - Now turn right.
  - Keep going.
  - Stop.
- Reverse roles.
- Now do the same activity just using hand gestures.



## Timesheets

Roberto was working at Mrs. Smith's house. She lives at 14 Rue Street, Crosshill.

He trimmed her bushes and raked her leaves.

He started at 9:00 a.m.. He finished at 11:00 a.m..

There were no problems.

Fill in the timesheet.

<b>Customer Name:</b> _____			
<b>Customer Address:</b> _____			
_____			
<b>Start Time</b>	<b>Finish Time</b>	<b>Job Completed</b>	<b>Comments</b>
<b>Total time</b>			







## Quotation

You were working in one yard and a neighbor came over maybe wanting to hire your company.

Jack How at 416 Allen Street, Troon, R5T 3T6, has asked for a quotation.

His phone number is 643-2713.

The date is May 5, 2008.

The jobs he wants done are Spring Clean-up and Mulching.

Fill in the top part of the quotation form.

You will give this to your foreman later today.



## Following the Work Order

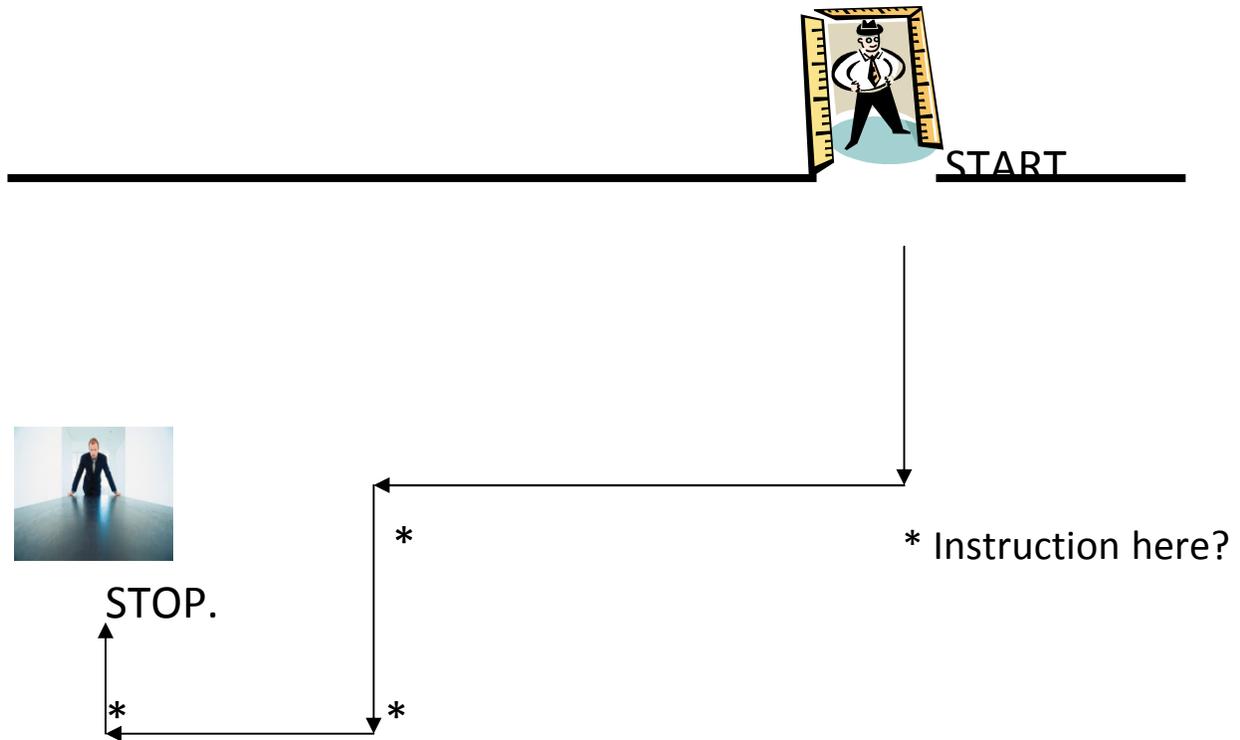
Luis is helping in the office of a trucking company that delivers soil for a landscaping company. He must learn about all the forms to be used.

Look at the work order form. Help Luis recognize different parts of the form.

- Highlight the **company name, address, and phone number** in yellow.
- Underline the **date**.
- Copy the **customer's name**: \_\_\_\_\_
- Highlight the **material** in red.
- What is the **amount** of material to be delivered? \_\_\_\_\_
- How much does **delivery** cost? \_\_\_\_\_
- What is the **start time**? \_\_\_\_\_
- What is the **finish time**? \_\_\_\_\_
- Print the **total hours**: \_\_\_\_\_



# Give Directions



Howie is standing in the doorway with a pile of books on a cart. He must take the books to the table where Jim is standing.

He must back up with the cart. He cannot see where he is going. There are things in the way, so he cannot go in a straight line.

Help Howie by calling out the instructions to him as he backs in. What will you say at each place there is an \*?



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**DEMONSTRATION INSTRUCTOR PAGE**

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## *Time Is Money*

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**ESSENTIAL SKILLS**

- **Reading Text 1**
- **Document Use 1**
- **Writing 1**
- **Numeracy**
  - Scheduling or Budgeting & Accounting 1
  - Measurement & Calculation 1
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory

---

**DEMO DESCRIPTION**

The student will have to fill in timesheets and work orders according to given scenarios and instructions.

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**INSTRUCTOR NOTES**

- Make photocopies of blank timesheets and work orders to accompany the Tasks.
- Provide *What I Have Learned and Skills Practised* to link tasks to Essential Skills.

**With student**

- Read aloud instructions if necessary.

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**ACHIEVEMENT INDICATORS**

- Filled in a timesheet.
  - Filled in a work order.
  - Assessed own performance.
-



# ***Time Is Money***

## **TASK 1**

You are working with a lawn care company. You must fill in a timesheet.

- Use a friend’s name and address as the customer.
- You started work at 10:00 a.m.
- You finished at noon.
- You cut the grass and raked up the clippings.
- You noticed some insect damage on the lawn near the tree.
- Fill in the total hours.
- Sign the timesheet.

<b>Customer Name:</b> _____			
<b>Customer Address:</b> _____			
<b>Start Time</b>	<b>Finish Time</b>	<b>Job Completed</b>	<b>Comments</b>
<b>Total time</b>			
<b>Signature:</b> _____			



## ***Time Is Money***

### **TASK 2**

Fiona Howie and her driver have to deliver topsoil to a customer. Fill in the work order: (Pretend you are Fiona.)

- Customer name is Allen Cup
- Customer address is 18 Blue Cr., Morriston.
- Customer phone number is 876-5431.
- The customer wants 5 cubic yards of topsoil delivered to the end of the driveway – but not blocking the mailbox.
- The job started at 1:00 p.m. and finished at 3:30 p.m.
- The work order must be signed by the customer.



# ***Time Is Money***

## **TASK 2, CONT.**

<p style="text-align: center;"><b>HOWIE'S GARDEN SUPPLIES</b> RR 3, Linwood 519-889-7765</p> <p><b>Customer:</b> _____</p> <p><b>Job Location:</b> _____ _____</p> <p><b>Telephone:</b> _____</p> <p><b>Date:</b> _____</p> <p><b>Description:</b></p>    <p><b>Special Instructions:</b></p>    <p><b>Start time:</b> _____</p> <p><b>Finish time:</b> _____</p> <p><b>Total hours:</b> _____</p>  <p><b>Customer Signature:</b> _____</p>
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# *Time Is Money*

## **TASK 3**

### **I Can Communicate**

<b>I CAN</b>	<b>YES / DATE</b>
I can fill in a timesheet.	
I can total hours that a job takes.	
I can find and fill in some information on quotations and work orders. <ul style="list-style-type: none"> <li>• Customer information</li> <li>• Materials</li> <li>• Special instructions</li> <li>• Employee signature</li> </ul>	
I can call out instructions to a driver.	
I can follow instructions that are called out to me.	
I can use hand signals to assist a driver.	



**DEMONSTRATION ASSESSMENT**

## *Time Is Money*

**Student:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Total Time for Demonstration:** \_\_\_\_\_

**Help Given?** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**Accommodations?:** \_\_\_\_ Yes \_\_\_\_ No  
**Details:** \_\_\_\_\_

**ESSENTIAL SKILLS:**

- **Reading Text 1**
- **Document Use 1**
- **Writing 1**
- **Numeracy**
  - Scheduling or Budgeting & Accounting 1
  - Measurement & Calculation 1
- **Thinking Skills**
  - Problem Solving 1
  - Decision Making 1
  - Significant Use of Memory

ACHIEVEMENT INDICATORS	BEGINNING	DEVELOPING	ACCOMPLISHED
• Filled in a time sheet			
• Filled in a work order			
• Assessed own performance			

**ADDITIONAL COMMENTS**

