

Connecting to Workplaces:

Building Curricula for Validated Demonstrations



Forestry Worker Curriculum

LBS Level 3

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**Meeting Employers' and Employees' Needs
...Now and in the Future**

Funding provided by Ministry of Training, Colleges and Universities

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Acknowledgment

Forestry Worker Curriculum

Forestry Worker Curriculum

Description of Curriculum Activity:

The *Forestry Worker Curriculum* is designed to prepare learners for the **Forestry Worker Demonstration**. It gives learners the opportunity to practice key **Essential Skills** for forestry workers. These include time management skills; math and problem solving skills; listening skills; working safely and being part of a team; reading and technology skills; and writing skills. After completing this curriculum, the learner should be well prepared to successfully complete the demonstration.

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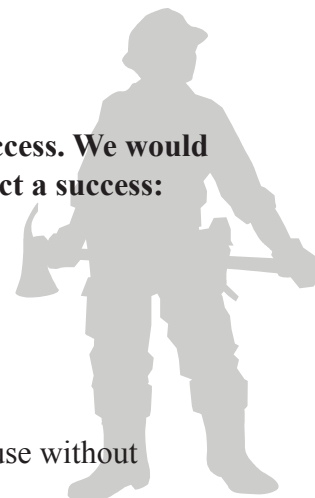
All curricula can be found on the following website:

www.nt.net/literacy

We would like to thank the employers that helped make this project a success. We would also like to acknowledge the following people that helped make this project a success:

- » Sheila Marshall
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- » Heather Robinet

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Preface

The development of this curriculum resource is in direct response to increasing demand in the field for training materials that target specific applications of work-related skills. It has particular authenticity and value because of the process that preceded it. In 2005, Literacy Network Northeast (LNN) published comprehensive exit assessment demonstrations for ten different entry-level jobs.

You can view these demonstrations on the NALD website at: <http://library.nald.ca/search?q=Connecting+to+Workplaces&collection=research&collection=learning>.

or on Demonstrations Ontario by AlphaPlus at: <http://demonstrations.alphaplus.ca/simplesearch.asp>.

or at LNN's website at www.nt.net/literacy.

These exit demonstrations are unique in that each one has been validated by a group of employers in that particular job field. Employers agreed that if they had a job applicant who had completed this demonstration successfully, they would most likely grant that person a job interview. This is a huge step forward in securing employer recognition of skills as opposed to the more common application criterion of a Grade 12 diploma.

Following this success, in 2006 the National Literacy Secretariat provided funding for the next step - support curriculum for five validated exit demonstrations. LBS curricula are now available for the entry-level positions of Cashier, Nanny, Taxi Driver, Chambermaid or Housekeeping Staff, and Florist Assistant. These too can be found on LNN's website. It is important to note that the curriculum for each position is written for the learner and at the LBS level required for success at each particular job (Cashier – L 3/4, Nanny – L 2/3, Taxi Driver – L 2/3, Chambermaid or Housekeeping Staff - L 2/3, and Florist Assistant - L 3). Tips and notes for the practitioner for each lesson along with an answer key for the learning activities are included.

Following the completion of the exit demonstrations, the Ministry of Training, Colleges and Universities provided funding to complete the last step – support curriculum for the last five validated exit demonstrations. LBS curricula are now available for the entry-level positions of Fishing/Hunting Guide, Forestry Worker, Laundromat Operator, Pet Groomer and Security Guard. It is again important to note that the curriculum for each position is written for the learner and at the LBS level required for success at each particular job (Fishing/Hunting Guide – L 2/3, Forestry Worker – L 3, Laundromat Operator – L 4, Pet Groomer – L 3/4 and Security Officer – L 2/3). Again, tips and notes for the practitioner for each lesson, along with an answer key for the learning activities, are included.

Following a true outcomes approach - working backwards from the desired outcome - each curriculum provides the training learners need in order to complete the job-specific demonstration successfully. Each curriculum has five chapters based on the five core skills that employers identified as essential to the job, with applications and learning activities for each skill. To see the skills required for a particular entry-level position, check the Forestry Worker Profile included in this resource.

It is interesting to see the degree of overlap in Essential Skills demanding the same level of complexity and competency. This overlap provides added value for practitioners and learners in two ways:

- 1) Practitioners can work with learners using different curriculum resources at the same time. For example, practitioners can teach core skills to everyone in a group and provide learning activities which are specific to individual interests.
- 2) Practitioners can use these resources as models for teaching core skills required in other entry-level jobs. Based on primary and secondary research for each position, the curriculum
 - builds on Service Canada's Essential Skills and Essential Skills Profiles
 - uses authentic workplace documents and real-to-life stories
 - illustrates the transferability of each skill
 - offers rigorous learning activities that are inventive and engaging
 - provides opportunities for learner self-reflection, self-assessment and discussion

To ensure consistency, the five writers and the project coordinator kept in close contact throughout the writing phase, reading each other's work and making suggestions. An additional team of five reviewers also read the manuscripts and offered feedback, and learners who piloted each resource gave their views on the value and usability and their enjoyment of the resources. Finally, a number of individual employers added their high approval rating to these materials. As a result, LNN is very proud to offer these quality resources to the field and is confident in highly recommending these materials to adult learners in Ontario.

Forestry Worker Profile

Participating employers ranked these Essential Skills in order of importance. This order may change according to each individual company or employer. The *Connecting To Workplaces Project* focused on the identified top five skills. Take note that what is of importance to employers may extend beyond the skills, abilities or knowledge LBS programs can provide and may require partnering with other programs.

	HRSDC Essential Skills	Most Important → Important				
Most Important ↓ Important	Time Management	Be on time	Take initiative	Work with minimal supervision	Follow policies, procedures	Be safety conscious
	Math Skills	Problem solve	Use measurement tools	Do calculations for piece work	Measure diameter, distance	Log and track numbers
	Additional Skills	Listen, understand information	Be alert, conscious at all times	Know First Aid, CPR, WHMIS	Read maps*	Be a team player
	Reading Skills	Read health and safety manuals	Read notes, messages, notices	Read/follow instructions, directions	Read policies, regulations	Read/locate information on a computer
	Writing Skills	Complete forms	Write safety incident reports	Work with technology	Log entries	Keep records

- Within LBS-mandated reading, writing and numeracy skills
- Within LBS-mandated speaking and listening skills
- Within LBS-mandated problem solving, teamwork, and critical thinking
- Outside of LBS mandate, but possible with partnership

* i.e., topical, GPS, aerial maps

“Forestry Worker Profile” continues on next page

“Forestry Worker Profile” begins on previous page

Forestry Worker Profile

More Workplace Information Collected from Participating Employers

Methods most often used to train employees: (In order of importance)

1. Job Shadowing
2. Video
3. Computer Based
4. Audio
5. Instructional Sessions

Requirements most employers look for:

1. Clean Driving Record
2. Grade 12
3. First Aid
4. WHMIS
5. AZ License
6. Experience

Courses employers most often provide to employees:

1. WHMIS
2. First Aid
3. CPR
4. Other-TDG-5100 Fire Fighting, Extinguishers, Spill Kits, Brush Saw, Chain Saw, general familiarization with machinery

Number of employers who stated they would hire applicants who do not have a grade 12 equivalent:

Yes – 6 employers No – 1 employer due to corporate policy

Number of employers who would consider applicants who could demonstrate or submit their demonstration results:

Yes – 6 employers No – 1 employer due to corporate policy

Employers also base their hiring decisions on:

Experience, drive, previous employment, personality traits, references

FORESTRY WORKER CURRICULUM



Introduction to Learners

Whether you are a newcomer or an experienced worker, this curriculum can help you to be successful in the forestry industry.

In order to be successful in the forestry industry, there are certain skills that you must have. We asked managers and supervisors in forestry what they look for when they hire and promote workers. Most of them agreed that while a Grade 12 diploma is not necessary, certain other skills are. These sought-after skills include:

- Time management and independent work skills
- Math, problem solving and teamwork skills
- Knowledge of WHMIS and safe work skills
- The ability to read and understand memos, policies and manuals
- The ability to complete forms and reports

In addition to a valid driver's licence and First Aid training, these are the skills that employers want, and the skills that we will be focusing on in this curriculum. These are also skills that can be used to make your day-to-day life more satisfying and successful.

Over the next five chapters you will learn and practise the skills that will help to make you a successful worker in forestry - one of Canada's most important and respected professions.

Introduction to Instructors

This curriculum is written at LBS Level 3. Learners at this level should have the skills to read more complex text, write longer sentences and solve simple math functions. This curriculum will assist learners in learning the Essential Skills that they will need in the forestry industry. It will also help them to understand how these essential workplace skills can be transferred to their private lives.

Answers to many activities are found at the end of each chapter; however, some activities are designed to encourage independent thought and problem solving. Answers to these activities will vary.

Instructors will be more effective if they take some time to learn about the forestry operations going on in their areas.

Chapter One

Time Management



Forestry Worker – Chapter One

Time Management

Welcome to the forestry industry! The forestry industry is one of the oldest industries in Canada, and forestry workers are a very important part of the Canadian economy.

When many people think about Canada, they think of trees. Almost one half of this country is covered by trees, and 90,000 men and women earn their living working in the forests. In many parts of the country, the forestry industry is the main employer and 330 communities depend on forestry for work.

Many employers do not think that it is important for a forestry worker to have a Grade 12 education, but they all agree that the men and women who work in forests need some special skills. These skills include:



(Green on the map shows areas where forestry is a major industry in Canada.)

- Time management skills
- Working without supervision
- Being in good physical condition
- Measuring and calculating skills
- Following directions and understanding rules and safety manuals
- Having a clean driving record, First Aid and WHMIS training

The skills that you learn in this course will also be important in other areas of your life. These **transferable skills** are not just important in almost every type of job; they can also help you to become more organized, accomplish more and understand the written material and math that you come across every day.

From small independent contractors to multi-national corporations, every forestry business has its own unique way of doing things. In this curriculum we have tried to include forestry professions and techniques from all across the country. In order to do this, it has sometimes been necessary to present an idealized view of forestry in Canada.

Time Management Skills

Most forestry companies agree that the most important skills for forestry workers are time management skills and the ability to work without supervision. **Time management** means going to work every day, arriving on time and **working without a lot of supervision**.

In Chapter One we will look at the types of jobs that are available in the forestry industry and the future of the forestry industry in Canada. We will practise ways to improve your time management and independent work skills.

In the forestry industry, many people work together to ensure that there is enough wood to keep the mills busy and that the forests will be there in the future.

There are many different types of jobs in forestry. These jobs are in:

- Tree planting
- Removing dead trees
- Forest nurseries
- Logging
- Sawmills
- Fighting forest fires

How many jobs do you know in the forestry industry?

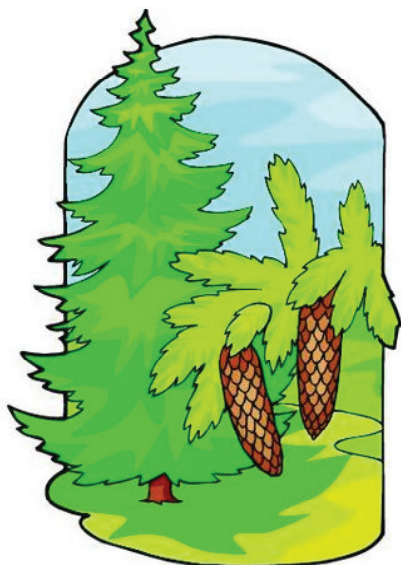
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____



Working Together to Get Logs to the Mill

In the forestry industry, workers with special skills work together to keep forests healthy and to cut and move logs. Each member of the crew is responsible for one job but everyone must work together to get the logs to the mill.

Forest conservationists keep forests healthy and make sure young trees, called seedlings, are planted to replace the trees that are cut down by workers in the logging industry.



In the logging industry, crews work together in a small area. Each member of the crew has his or her own job to do. Logging begins after a **timber cruiser** looks at a forest and decides that there are enough valuable trees to harvest and that the area is safe for workers and equipment.

Crews of four to eight loggers work together. First, the **faller** cuts down the trees. Next the **buster** trims off the limbs and branches and cuts the trees into logs. Once the trees are cut into lengths, a **skidder operator** drives a logging tractor close to the logs and the **choke setter** fastens wire rope or chain chokers around the logs. The skidder operator drags the logs to the landing or storage area where they are sorted by species or tree type and loaded onto trucks.

Log truck drivers drive the loaded trucks to the sawmill. These drivers must be very skillful to drive the fully loaded trucks along forest access roads and other bad roads.

At the sawmill, **log handling** equipment operators unload the trucks. **Log graders** and **scalers** sort the logs according to type and quality and measure the volume of the logs to find out how much lumber they contain. This information is entered into a computer. The logs are now ready to be processed into lumber, chips or pulp.

Before long, back in the forest, **planters** will be replacing the trees that were cut down. This way there will be healthy forests to be harvested in the future.

Activity 1-1

Many jobs in the forestry industry are advertised in local newspapers and industry magazines. Read the following help wanted ads and answer the questions



The Timber Gazette Help Wanted

Chain Saw Operator

Must be in good physical condition and able to work without supervision. Hours from Mon. – Fri. 6:30 am – 7:00 pm. Must have reliable transportation. Chain saw certificate required. Resumes to: Box 123, The Timber Gazette.

Timber Cruiser

Wanted immediately. Must have good math and map skills and be able to write accurate reports. Excellent tree identification skills also required. College diploma or five years experience. Call 705-555-3456 for an interview.

Choke Setter

Entry-level position. No experience necessary but must be willing to learn. Must have safety boots, ear protection, hard hat, gloves. Apply to Hunter Lumber in Wilberforce Mon. to Fri. 8:00 – 4:00.

Log Truck Driver

Two years experience. Must have clean driving abstract and DZ license. Local and long haul driving. Call Don at Henderson Trucking (705) 555-7890.

1. How many hours a week would the chain saw operator work?

2. Which position would be good for someone without experience?

3. Which position requires the applicant to have his or her own safety equipment?

4. Which position requires applicants to send a resume?

5. Which position requires applicants to be away from home?

6. Which position would best suit your skills, experience and lifestyle?

Time Management

Now let's look at time management skills: going to work every day, arriving on time and being able to work independently. These are the skills that employers look for when they hire or rehire workers.

Getting to Work on Time and Calling in Sick



Forestry companies say that being on time is one of the most important skills for a forestry worker. Forestry crews work as a team so it is very important for everyone on the team to be at the site and ready to work a few minutes before the shift starts.

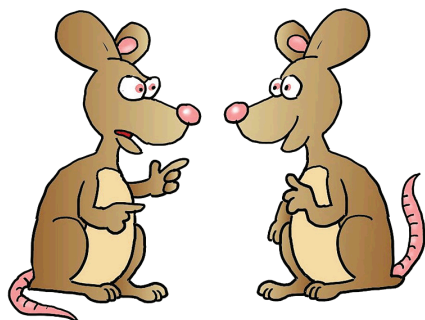


There are many reasons why people are late for work. Some people have a poor sense of time. Other people are late on purpose; some to prove that they don't have to follow rules. Still others are poor planners and get through each day "by the seat of their pants".

Your supervisor and other workers on your crew may not say anything when you are late, but someone always notices. If you are late often, or if you don't have a very good reason for being late, the people you work with start to think that you are not reliable and not doing your share of the work.

Activity 1–2

Think of reasons you have heard for people being late for work. Some of the reasons may be serious, some may be funny and some may be good reasons. List as many as you can.



Now work together in a group or with your instructor and discuss the reasons you have listed. Which reasons are the most common? Which reasons are the craziest?

Never Be Late Again

- Make work your #1 priority during work hours.
- If you can't wake up, buy a reliable alarm clock.
- Get enough sleep so you can be on time and ready to work safely.
- Know your schedule – if you have trouble remembering it, write it down.
- Have reliable transportation.
- Plan for emergencies.
- Get up early enough.

Activity 1–3

Not getting up early enough is one of the most common reasons for workers to get to work late. This activity will help you to plan your morning better and never be late for work again.

I get up at _____.

I have to be at work at _____.

This gives me _____ hours to get up, get ready and travel to work.

Every morning I have to do these things:

Activity	Time it Takes
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

I need _____ hours for these activities.

If I am going to allow a little time for emergencies, I should get up at _____.

Activity 1-4

Chris, Wade, Don, Luc and Jeff all have trouble being on time for work. Suggest ways that they can be on time every day.

Chris

Chris is a tree planter. Every morning the company van picks him up at home and takes him to the job site with the rest of his crew. Each member of the crew is paid 8.5 cents for every tree they plant. The crew likes to start on time because the planting season is very short.

Chris has always had trouble waking up in the morning. On weekends he sleeps until noon and when he was in school, his mother had to drag him out of bed. Now he lives alone and sleeps in almost every morning. Sometimes the van driver has to knock on his door to wake him up. This makes the whole crew late.

What should Chris do?



Wade

Wade works as a faller. He is the first person in the crew to start work in the morning. Most of Wade's crew drive to the job site together, but Wade likes to drive his 1989 Dodge pick-up. Some mornings in the winter Wade's truck won't start. He has to put it on a charger and wait until the battery is charged. Sometimes it still won't start and he has to wait until his girlfriend comes home from work to give him a ride. By the time Wade gets to work, the rest of the crew is cold and tired of waiting for him to arrive.

What should Wade do?



Don

Don works as a log truck driver. He covers a large area, picking up logs from several different landings. His schedule changes every week according to the crews that have logs ready for pick up. When he arrives at a site the loader operator is waiting for him. Don's supervisor gives him a schedule for the week, but Don can never remember it. Last week on Monday he was scheduled to go to Bruton landing at 7:30, to Clyde landing on Wednesday at 11:30 and to McClure landing on Friday at 2:30.

Don is a good log truck driver, but he has a terrible memory. Last week he went to Bruton landing on Wednesday at 11:30 and there was no loader available. At Clyde, the loader operator was sitting waiting for him to come. Someone is always waiting for Don.

What should Don do?

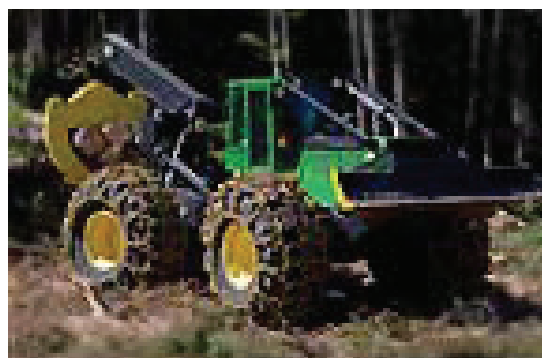
**Luc**

Luc has five kids and lives in an old house where something is always broken. His house is a crazy place in the morning. There is always something wrong. One morning he couldn't find his hard hat; one morning the dog went out for a run and Luc couldn't find him; another day one of the kids flushed a shoe down the toilet. Luc tries to be on time for work, but something always comes up and he leaves the house late.

What should Luc do?

Jeff

Jeff works as a skidder driver. He likes his job, but he also likes watching TV. Every night he stays up until 3:00 am watching old movies. In the morning he has trouble waking up. Jeff comes to work late two or three times a week. Some days he has trouble staying awake, and he usually sleeps in his car for a few minutes at lunchtime. One day last week he almost fell asleep driving the skidder.

What should Jeff do?

Skidder (Photo Courtesy of John Deere)



No one is perfect. If you are going to be late, you can show your supervisor and your other team members that you care about the job by following these steps:

- ▶ As soon as you know you are going to be late, phone your supervisor.
- ▶ Tell your supervisor why you are going to be late.
- ▶ Tell your supervisor what you are doing to get to work as soon as possible.
- ▶ Tell your supervisor what time you think you will be at work.
- ▶ Promise to make up the lost time.

Absenteeism – Not Going to Work

Being late causes problems for the entire crew, but absenteeism is an even bigger problem in the forest industry. Not going to work when scheduled is the most common reason for workers being fired.

Everyone is sick or runs into problems sometimes, but if you are absent too often or for reasons that are not important, you may risk losing your job. Attitude and planning are the keys to good attendance. Before taking a day off, stop to think about the effect your absence will have on the whole crew.

If you do need to be absent from work, notify your supervisor as soon as possible. Explain why you will be absent and tell him or her when you will be returning.

Complete the following chart using checkmarks to show whether you think the following

Activity 1-5

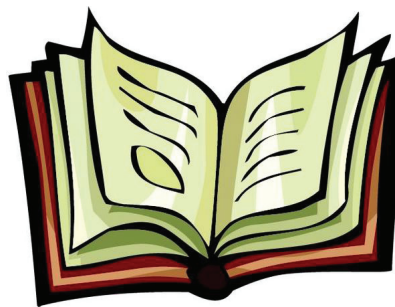
I Called in Sick When



Reason	Never	Sometimes	OK
I slept in.			
The thermometer outside said minus 30.			
I was waiting for an important phone call.			
I had a doctor's appointment.			
My basement flooded.			
I had an argument with a co-worker.			
I had a hangover.			
I wanted to go hunting.			
My brother was visiting for a week.			
My cousin died.			
The blackflies were bad.			
My car wouldn't start.			
I had a cold.			
I was waiting for the satellite TV installer.			
My baby was sick.			
It was raining hard.			
I had a fight with my partner.			

Reading Notices and Memos

Forestry workers are often required to read rules, policies and procedures. If workers do not understand what they read, they may cause expensive mistakes or cause an injury to themselves or other workers on the crew.



Sometimes memos and notices are written by office staff. They contain large words and are confusing. When someone gives you a notice to read, remember this:

- Notices contain important information; never ignore them.
- If you do not understand a notice, ask a co-worker or your foreman.
- If you are not sure if you understand a notice, try discussing it with others on your crew.

Activity 1-6

Answer the following questions about the notice on the next page.

1. What is the memo about?

2. What could happen if a worker doesn't follow the rules?

3. Why was the memo written?

4. One day, Wade forgot to wear his safety boots. What rule was he breaking?

5. Luc was cutting a limb above his head when it snapped off suddenly. What rule was he breaking?

6. Jim's saw kept backfiring and stalling, but he didn't want to waste time walking all the way back to the main landing to get another one. What rule was he breaking?

Highlands Forest Service

MEMO

To: All Staff

From: Doug Ranier, General Manager

Date: May 17, 2007

Subject: Policy Regarding Chain Saw Use

As the result of the recent increase in near misses among chain saw operators, I would like to reinforce the company's strict policy regarding their use. A failure to follow the following safety procedures may result in suspension or dismissal.

1. Protective equipment including hard hat, hearing protection, face shield, chain saw gloves, safety chaps and safety boots must be worn at all times when operating a chain saw.
2. Saws that are not in perfect working order must not be used.
3. Saws must be placed on the ground and secured before starting.
4. Saws must always be carried with the blade to the rear.
5. Operators must keep both hands on the saw and maintain a proper grip operating a saw.
6. Operators must not stand directly behind the saw while in operation.
7. Saws must never be raised above the waist.
8. All unsafe practices must be reported to the crew foreman immediately.

NEAR MISS REPORT

To be read and signed by all employees:

What happened?

A young, inexperienced chain saw operator started his first day of work in Bruton last Friday. Around 10:00 am he left the rest of the crew without notifying his foreman and decided to work in an area approximately ½ km distant in a heavily wooded, sloping area.

The operator proceeded to cut down several large trees. One very large, old tree was leaning over a stand of smaller trees and the worker attempted to cut it down. The tree was dead inside and snapped off, falling to the ground and pinning the worker.

He yelled for help but could not be heard over the noise from other equipment. The worker was not noticed missing until the end of the day. When he was finally located, he had suffered a concussion and a broken leg.

How did this happen?

Prevention

Signatures of all forestry staff:

Working Without Supervision

Even though forestry workers are part of a team, they often have to work alone and without supervision. Representatives from the industry say that being able to work safely and productively without supervision is one of the important skills that they look for when hiring or rehiring workers.

There are lots of opportunities to slack off when you are working in the bush and the key to being able to work well alone is **attitude**. Good forestry workers take responsibility for their time and believe that they should be working every minute they are paid. They also make a good effort and do what they say they will even if the work is difficult or boring.

Working without supervision means being able to **manage time** well and estimate how long jobs will take to complete. Independent workers can **think for themselves**, but they also know when to **ask for help**. Good forestry workers take **pride** in their work and **learn** all they can about the job.

When working alone, forestry workers should always use the buddy system. Someone should always know where you are, what you are doing and when you will be back.

Activity 1–7

Near Miss Report

A Near Miss report is written every time a worker is in a situation where an accident happens or could happen. Most forestry companies post Near Miss reports and require all workers to read and sign them. By having workers sign the reports, company managers know that everyone on the crew has been made aware of the potentially dangerous situation.



Near Miss reports include information on **What Happened?**, **How Did This Happen?** and Prevention. Read the Near Miss Report on the previous page and complete the last two sections in your own words.

Job Futures – The Forestry Industry

Activity 1-8

In this activity we will practise reading documents. The Government of Canada Job Futures website holds information on most jobs in the country. It includes information about wages, work, education, training and the future of the job. Follow the instructions and answer the questions below.



1. **Go to** the Job Futures website at www.jobfutures.ca
2. **Click on** the “I want to be....”
3. **Click on** the word “Alphabet” under I want to be....
4. **Click on** “C” on the alphabet across the top of the screen.
5. **Click on** “Chain saw and Skidder Operators 8421.”
6. What is the average hourly wage for this profession?

7. **Click on** the “At Work” tab at the bottom of the page.
8. What percentage of chain saw and skidder operators work in forestry?

9. What provinces have the most chain saw and skidder operators?

10. **Click on** the “Education, Training, and Experience” tab at the top of the page.
11. What are three types of training recommended for this career?

12. **Click on** the “Work Prospects” tab at the top of the page.

13. Will there be more or fewer opportunities in this job between now and 2009?

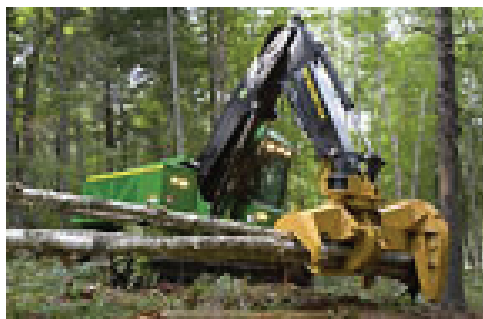
14. **Click on** the “Important Facts” tab at the top of the page and answer the following questions:

15. What is the average hourly wage for a 50-year-old chain saw operator?

16. What is the unemployment rate in this profession?

17. How many people were working in this profession in 2004?

18. What percentage of these workers were women?



(Photo courtesy of John Deere)

You will find more information on the forestry industry at these websites:

Canadian Institute of Forestry

<http://www.cif-ifc.org>

National Forestry Data, Canadian Council of Forest Miners

<http://nfpd.ccfm.org>

State of Canada's Forests, Natural Resources Canada

<http://www.nrcan.gc.ca/cfs-scf/national>

Activity 1–9

What Have We Learned in this Chapter?



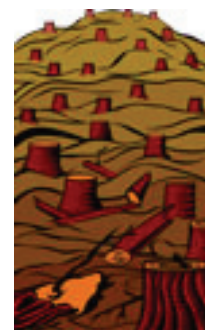
In this chapter we have learned about the jobs available in the forestry industry, the type of work done and the importance of time management skills. Read the following scenarios and offer advice to help these workers:

Jeff

Jeff works by himself most of the time. He walks through the forest and decides on the areas where logging should take place.

What is Jeff's job?

One day, Jeff forgot his map at home. He thought he knew the area, but after a couple of hours he realized that he was lost. When Jeff didn't return home that night, his wife called the company office, but it was closed. No one started looking for Jeff until the next day and when they found him he was tired, cold, and covered with fly bites.



What mistake did Jeff make?

Larry

Larry works in the bush. He operates a chain saw, cutting limbs off trees and then cutting them into 12-foot logs.

What is Larry's job? _____

Once he starts working, Larry's doesn't like to stop for anything. One day, Larry's chain saw started backfiring. He kept working anyway and didn't notice that a spark had fallen into the dry leaves on the ground. Late that night, after everyone had gone home, the spark smoldered and then started a forest fire. The fire burned over 1000 acres of forest.

What mistake did Larry make?

Mike

Mike works in a sawmill. When log trucks come in, he unloads them.



What is Mike's job? _____

One night Mike came home from a party very late. The next morning he slept in and when he went outside to start the truck, he discovered that it was almost out of gas. All of his co-workers had already left for work and he lived too far from town for a taxi.

What should Mike have done?

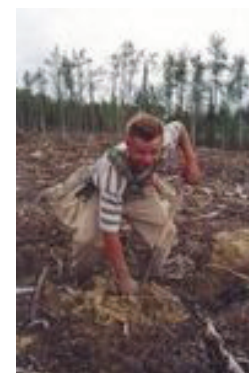
Chris

Chris works in areas that have been logged recently. He plants seedlings.

What is Chris's job? _____

One day, his supervisor was busy talking when Chris went to the tent to pick up his trees for the day. The crew planted several different species of trees, but Chris was almost certain that they would be planting Spruce, the same type of seedlings as they had the day before. Four hours and 600 trees later, he came across a co-worker who told him that he should be planting White Pines, not Spruce.

What mistake did Chris make?



Chapter One Review

Time Management Skills



1. Be there

Poor attendance is the number one reason for being fired. Don't miss work unless you have a very good reason. If you do, phone your lead before your shift starts.

2. Be ready to start on time

Not only do you have to be at work on time, you need to be ready to start working. Get to the job site a few minutes early every day.

3. Don't be idle – take initiative

Even if things are really quiet, don't leave early. You are being paid for the whole shift. If your work is finished, or if you are waiting for someone to bring you more work, learn what you can do to fill the time. Leaning against a stump smoking a cigarette doesn't make good use of company time. Look around for something else you can do, or ask your supervisor or co-workers if there is any way you can help.

4. Always give 100%

Even if you are tired or have other things on your mind, give 100% when you are working. Your lack of energy, poor attention or mood is more obvious than you think.

5. Ask questions

Make sure you know exactly what you should be doing. Don't be afraid to ask questions. It shows that you are interested in doing the job well.

6. Be a team player

A good employee is part of a team. Get along with people. If you are having trouble getting along with your boss or co-workers, practise your conflict resolution skills.

7. Keep learning

After you have the job, keep learning more about it. Read books or magazines and take any courses that will help you be better at the job.

8. Read notices and memos carefully

Notices, memos and safety manuals contain important information that will help you to understand how to do your job and work safely. Always read them carefully and ask for help if there is something you don't understand.

Skill Check – Chapter One



Even the best worker can always find room for improvement. If you have never had a job, think of other situations in your life such as school or family activities. Do you have good Time Management skills? How can you improve?

Skill	OK	Could be improved
I go to work every day I am scheduled.		
I always get to work on time.		
I work safely and productively without supervision.		
I always give 100% during work hours.		
I ask questions when I am not sure about something.		
I feel like part of a team.		
I try to learn all I can about my job.		
I read all company memos, notices and reports and ask questions if I am not sure what to do.		

My Action Plan

I will improve my Time Management skills at work by:

1. _____
2. _____
3. _____

I would be able to work more productively without supervision if I:

1. _____
2. _____
3. _____

I would like to learn more about how to improve the following skills:

1. _____
2. _____
3. _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by:

Skill _____

I can use this skill to improve my life by:

Skill _____

I can use this skill to improve my life by:



Instructor's Notes – Chapter One

This curriculum has been written at an LBS Level 3. Learners at this level are expanding their basic skills in reading, writing, and numeracy. Reading involves longer, more specialized text that may include several sub-sections and writing skills include longer pieces of text such as memos that will require learners to inform, request or explain topics. Level 3 math includes multi-step operations and job-specific measuring and calculations.

Answer Key

Chapter One – Time Management

Page 2 – How many jobs do you know in the forestry industry?

Learners will have a variety of answers to this question. In some cases, positions have different local titles. This is a good opportunity to initiate discussion and establish the level of forestry industry knowledge in the class.

Jobs in the Forestry Industry

bucker	grapple skidder operator
bucker - logging	hardwood faller and buckler
cable skidder operator	landing buckler - logging
chain saw operator	landingman/woman
chain saw operator - logging	landingman/woman - logging
chaser - logging	log cutter
cordwood cutter	logger
cutter - logging	logging tractor operator
cutter, cordwood	lumberjack
cutter, logs	operator, cable skidder
cutter, poles	operator, chain saw - logging
cutter, posts	operator, grapple skidder
cutter, pulpwood	operator, logging tractor
cutter, wood - logging	operator, skidder - logging
faller	piecworker - logging
faller - logging	pole cutter
faller and buckler - logging	post cutter
faller and buckler, hardwood	pulpwood cutter
feller	skidder operator
feller - logging	skidder operator - logging
forest worker - logging	wood cutter - logging

Activity 1–1

1. 62.5 hours
2. Choke setter
3. Choke setter
4. Chain saw operator
5. Log truck driver
6. Answers will vary

Activity 1–2

Learners' answers will vary. Discussion point as introduction to Activity 1–3. May include discussion of the consequences of being late.

Activity 1–3

Instructor should review adding minutes to make hours. For example: Forty minutes plus forty minutes equals one hour and twenty minutes.

Activity 1–4

Answers may vary; instructor should allow time for discussion of each possible answer. Some possible answers include:

1. Chris should buy an alarm clock and set it every night.
He should calculate the amount of time that he needs to get ready to leave for work.
2. Wade should arrange for reliable transportation and have a good backup plan.
3. Luc should plan his time in the morning, get up earlier and have a backup plan.
4. Jeff should go to bed earlier. He should also change his attitude and make work his number one priority.

Prevention

- Know your limits of expertise.
- Always inform the crew of your whereabouts. Tell them where you will be working, what you will be doing and when you will be back.
- Ask questions if you are not sure about what you are doing.

Discussion Question:

Why should all workers read and sign the report?

1. To be sure all workers know about the situation and the consequences.
2. To protect the employer. In the case of a lawsuit, workers will not be able to say that they were unaware of dangers.

Activity 1-8



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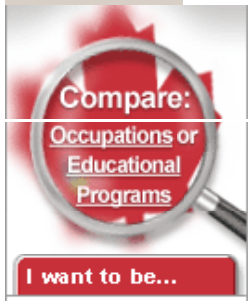
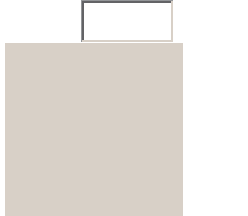
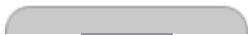
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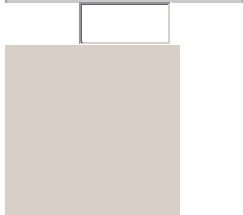
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Chain Saw and Skidder Operators

At Work	Education, Training, and Experience	Work Prospects	Important Facts
----------------	-------------------------------------	----------------	-----------------

[What They Do](#) | [Where They Find Work](#) | [Related Occupation\(s\)](#) | [Something to Think About](#)

What They Do

Chain saw and skidder operators perform some or all of the following duties:

- > Operate chain saw to fell, delimb and buck trees at the logging site and loading area
- > Operate cable, or grapple skidder to move or yard the felled trees from the logging site to the landing area for processing and transportation
- > Assess site, terrain and weather conditions before felling and yarding trees
- > May work as member of a team rotating between chain saw operation and skidder operation
- > May maintain and perform minor repairs on skidders, chain saws and other

Where They Find Work — Top Occupational Areas

Forestry and logging **81.0%**



The unionization rate (26%) is close to the average (32%) for all occupations.

The highest concentrations (per 10,000 people) of are found in Alberta and Prince Edward Island while the lowest concentrations are in New Brunswick and Newfoundland.

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equipment.



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> Chain Saw and Skidder Operators

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> What You Need

- > Completion of secondary school may be required.
- > Completion of a college program for forest workers may be required.
- > Formal training in chain saw operation and maintenance and several months of on-the-job training are usually provided.
- > Previous experience as a logging and forestry labourer or logging machine operator may be required. Experience requirements vary depending on the type and location of woodlands operations.
- > Provincial certification or a forest worker program certificate is required in some provinces.
- > Trade certification for fallers is available, but voluntary in

Required/Related Educational Programs*

- > [Transportation Engineering Technologies \(T390\)- T390](#)
- > [Forestry Technologies \(C641\)- C641](#)
- > [Heavy Equipment Mechanic \(T314\)- T314](#)
- > [Agricultural Technologies \(T610\)- T610](#)

* These educational programs are listed in the order in which they are most likely to supply graduates to this occupation.

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Quebec.
Workplace hazardous materials information system (WHIMS) and St. John's first aid certificates may be required.
Most recent entrants have a trade/vocational certificate.



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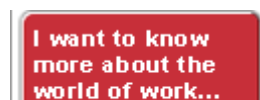
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Activity 1–8 Continued

Questions

- 6. \$17.36 per hour
- 8. 81%
- 9. Alberta, P.E.I.
- 11. Chain saw certificate, St. John Ambulance, WHMIS Training, trade certificate
- 13. About the same
- 15. \$17.92
- 16. 17%
- 17. 13,800
- 18. 1%

Activity 1–9

Jeff

Timber Cruiser

He did not inform his supervisor as to where he would be working.

Larry

Bucker

He continued to use a saw that was not working properly.

Mike

Log Handling Equipment Operator

He did not allow enough time to get ready in the morning; he did not have a backup plan for emergencies.

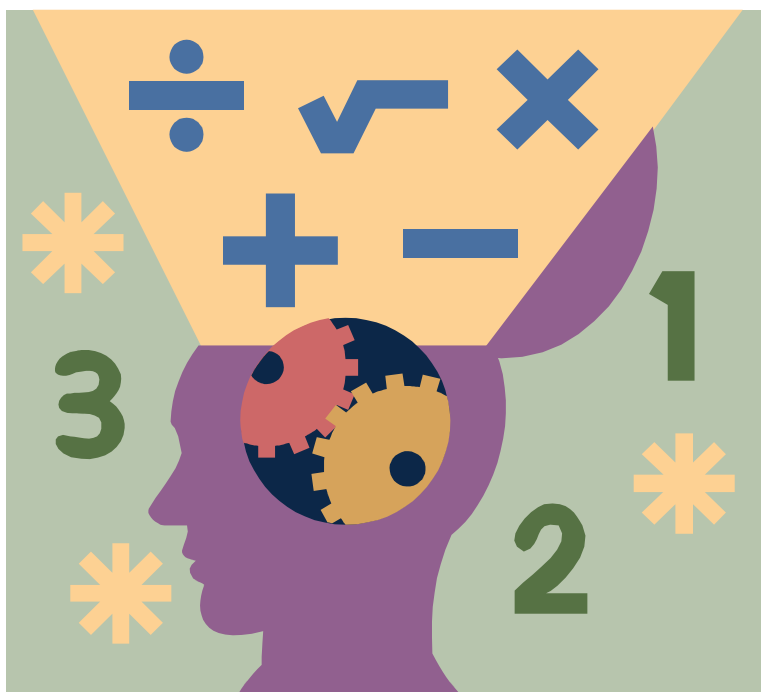
Chris

Planter

He did not ask questions when he was not certain of what he should do.

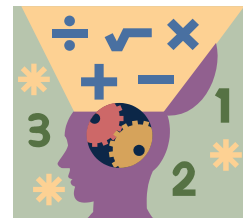
Chapter Two

Mathematics Skills



Chapter Two

Math and Problem-Solving Skills



Managers in the forestry industry say that it is important for workers to have good basic math skills and the ability to solve problems or “think on their feet”. You will need these skills to be successful in the forestry industry, but they are also skills that you will be able to transfer to other areas of your life including banking, home renovations, shopping and personal problems.

The transferable skills that will be covered in this chapter include:

- Using measuring tools
- Imperial and metric conversions
- Measuring length, area and diameter
- Doing calculations for piecework
- Problem solving
- Recording numbers and document use

Math Skills

Metric and Imperial – Two Ways to Measure

Being able to measure accurately and record measurements is an important skill in the forestry industry. Measurements must be taken for many tasks, including:

- Measuring logs
- Repairing equipment
- Planting trees
- Calculating areas and amounts of materials needed



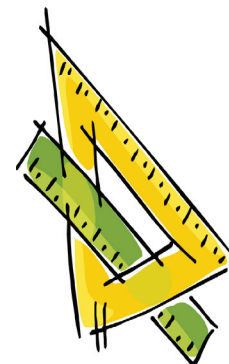
Even though the metric system of measurement has been used in Canada since 1975, some industries, including the forestry industry, still use the old imperial system of inches, feet, yards, board feet and acres. Most younger workers will have learned the metric system in school, but when working in the forestry industry they will need to be comfortable with both systems.

A review of imperial units:

12 inches = 1 foot

36 inches = 1 yard

3 feet = 1 yard

62,500 square feet
(250 ft. X 250 ft.) = 1 acre**A review of metric units:**

100 centimetres = 1 metre

1000 metres = 1 kilometre

1000 metres X 1000 metres = 1 hectare

Abbreviations:**Imperial**

inch in. ”

foot/feet ft. ’

yard yd.

Metric

centimetre cm

metre m



Metric/Imperial Conversion

To convert numbers from metric to imperial or from imperial to metric, simply multiply:

To convert imperial to metric multiply				
Imperial	Times		Converts to	Metric
Inches	X	2.54	➤	Centimetres
Feet	X	30.48	➤	Centimetres
Feet	X	0.3048	➤	Metres
Yards	X	0.9144	➤	Metres
Acres	X	0.4047	➤	Hectares

To convert metric to imperial multiply				
Metric	Times		Converts to	Imperial
Centimetres	X	0.3937	➤	Inches
Centimetres	X	0.0328	➤	Feet
Metres	X	3.281	➤	Feet
Metres	X	1.094	➤	Yards
Hectares	X	2.471	➤	Acres

Activity 2-1

Complete the following conversions:

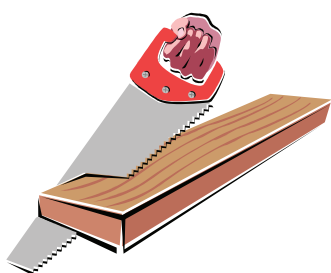
- A. 5 inches = _____ centimetres
- B. 12 feet = _____ metres
- C. 3.5 yards = _____ metres
- D. 227 acres = _____ hectares
- E. 7 yards = _____ metres
- F. 37 inches = _____ centimetres
- G. 1157 acres = _____ hectares
- H. 539 feet = _____ metres
- I. 6 inches = _____ centimetres
- J. 1 foot = _____ centimetres
- K. 29 centimetres = _____ feet
- L. 39 hectares = _____ acres
- M. 79 metres = _____ feet
- N. 5 metres = _____ yards
- O. 274 metres = _____ feet
- P. 2 hectares = _____ acres
- Q. 14 centimetres = _____ inches
- R. 4 metres = _____ feet
- S. 5 centimetres = _____ inches
- T. 96 hectares = _____ acres



A Review of Equivalent Fractions

Fractions are used when working with parts of whole units. A fraction tells us what part of the whole number we are thinking of, or working with.

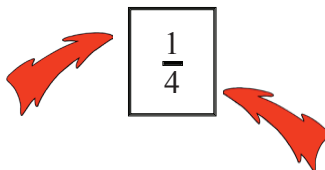
Daryl's foreman asked him to cut off one quarter of the length of a board to repair a storage shed on a landing. The board was 8 feet long.



How much should Daryl cut off?

Numerator (the top number)

The 1 shows that we are thinking about 1 part of the whole board



Denominator (the bottom number)

The 4 shows that the board has been divided into 4 parts.

One quarter ($\frac{1}{4}$) means one out of every four units. One out of four is equivalent to two out of eight since four divides into 8 two times.



Daryl should cut off 2 feet of the board. He will now have two pieces. One will be 2 feet long, or $\frac{1}{4}$ of the original length, the other will be 6 feet long, or $\frac{3}{4}$ of the original length.

The following chart of equivalent fractions shows the relationship between sixteenths, eighths, quarters, halves and one whole. Fractions should always be expressed with the smallest denominator.

Equivalent Fractions				
1	1/2	1/4	1/8	1/16
				1/16
			1/8	1/16
				1/16
		1/4	1/8	1/16
				1/16
			1/8	1/16
				1/16
	1/2	1/4	1/8	1/16
				1/16
			1/8	1/16
				1/16
		1/4	1/8	1/16
				1/16
			1/8	1/16
				1/16

Activity 2–2

Complete the following equivalent fractions. You can check your answers on the Equivalent Fractions Chart on page 48. A and B are done for you.

- A. Divide the first denominator (16) by 4. You get 4. Now, divide the first numerator (4) by 4. You get 1.

$$4/16 = 1/4$$

- B. When the denominator that you know is smaller, divide it into the second denominator (8 / 2 is 4). Next, multiply the first numerator by your answer. (4 X 1=4).

$$1/2 = 4/8$$

C. $1 = \quad /16$

D. $3/4 = \quad /8$

E. $12/16 = \quad /4$

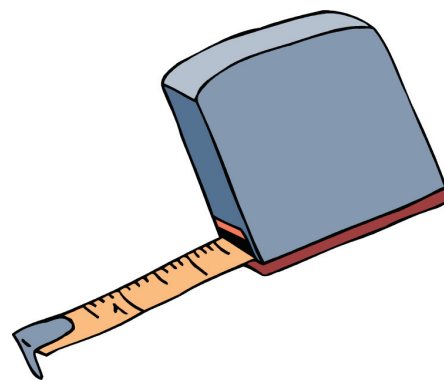
F. $2/4 = \quad /2$

G. $5/8 = \quad /16$

H. $8/16 = \quad /2$

I. $1/4 = \quad /8$

J. $2/16 = \quad /8$



Rulers and Measuring Tapes

Fractions are used frequently in the forestry industry. Fractions are used when making a variety of calculations including:

- Measuring the diameter of logs to calculate the amount of lumber
- Changing settings on equipment
- Making repairs
- Constructing small buildings around landings

Most imperial rulers and measuring tapes are divided into inches and fractions of inches.

The ruler below is divided into inches, $\frac{1}{2}$ inches, $\frac{1}{4}$ inches, $\frac{1}{8}$ inches and $\frac{1}{16}$ inches. The most accurate measurement will be in sixteenths of an inch. When measurements must be very accurate, use sixteenths of an inch, but remember your equivalent fractions:

$$\frac{2}{16} = \frac{1}{8} \qquad \frac{10}{16} = \frac{5}{8}$$

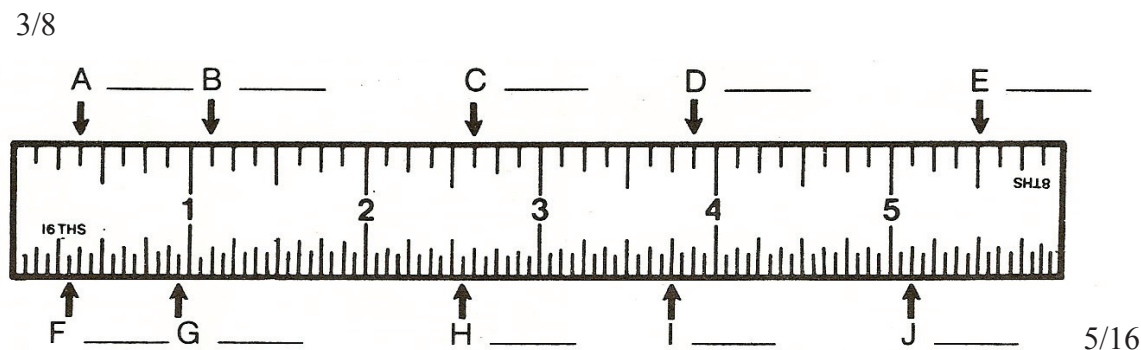
$$\frac{4}{16} = \frac{1}{4} \qquad \frac{12}{16} = \frac{3}{4}$$

$$\frac{6}{16} = \frac{3}{8} \qquad \frac{14}{16} = \frac{7}{8}$$

$$\frac{8}{16} = \frac{1}{2}$$

Activity 2-3

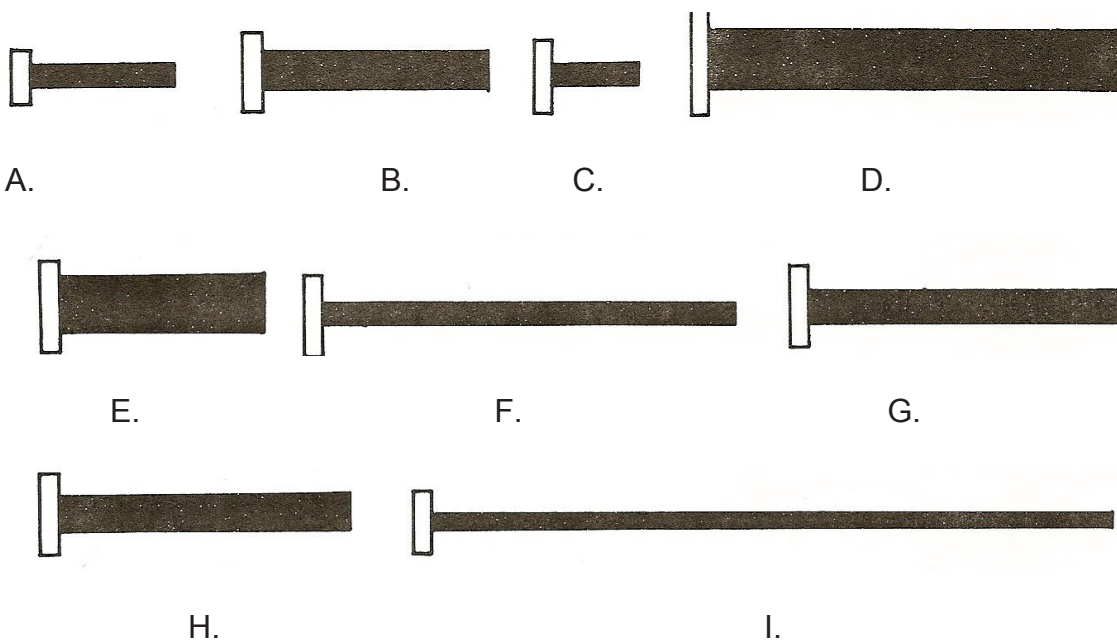
On the ruler below, point A shows $\frac{3}{8}$ of an inch and point F shows $\frac{5}{16}$ of an inch. What are the measurements at points B to E and G to J on the ruler? Express each fraction with the lowest possible denominator.



Measuring Length, Area and Diameter

Activity 2-4

Measure the length of the following bolts including the head. A and F are done for you.



To the nearest 1 / 8 inch:

- A. 5/8 inches or ”
B.
C.
D.
E.

To the nearest 1/16 inch:

- F. 2 3/16 inches or ”
G.
H.
I.

Measuring Area

Measuring area is a skill that is commonly used in the forestry industry for a number of tasks including:

- Calculating the number of trees in a given area
- Clearing landings and parking areas
- Calculating the number of seedlings to be planted

Measuring area is a transferable skill that can also be used in other areas of your life including:

- Home renovations
- Equipment repairs
- Gardening

To measure the area of a given rectangle, multiply the length times the width. Area is usually expressed in “square units”, which is shown by using a superscript 2 following the area. For example, the area of a garden that is 50 ft long and 25 ft wide is $50 \times 25 = 1250 \text{ ft}^2$ or 1250 square feet. Areas can be measured in either imperial or metric units.

Areas can also be expressed in acres (250,000 ft^2) or hectares (1000 m^2).

width 2.5 metres



length 7 metres

The area of the parking area is: $7 \times 2.5 = 17.5 \text{ m}^2$ (square metres)

width 1.5 yards



length 12 yards

You would need $1.5 \times 12 = 18 \text{ yds}^2$ (square yards) of carpeting

Radius, Diameter and Area of a Circle

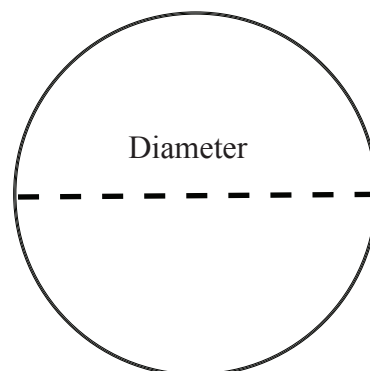
Activity 2–5

Calculating the diameter and area of a circle is used in several ways in the forestry industry. Calculations using circles are used to figure out the amount of lumber in a log and to estimate the number of seedlings which must be planted in a given area.



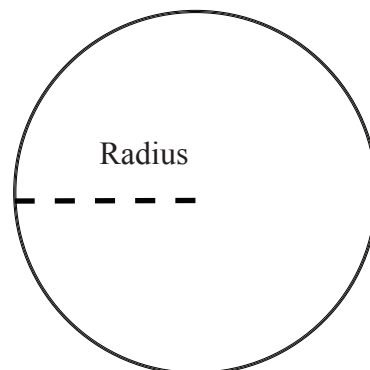
The maximum length across a circle is the **diameter**.

The diameter of this circle is _____”.



One half of the diameter is the **radius**.

The radius of this circle is _____”.



When working with circles, a special number called **Pi** is used. This number is 3.14. Pi is represented by the symbol π .

To find the area of a circle, calculate πr^2 That is 3.14 X (radius X radius).

If the radius of a circle is 6 feet, the diameter is **3.14 X (6x6)**

$$= 3.14 \times 36$$

$$= 113.04 \text{ ft}^2$$

Activity 2-6

Practising Math Skills:

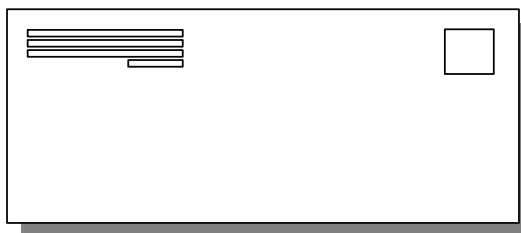
When working on these questions, remember to follow the problem-solving skills that you learned earlier in this chapter:

1. Calculate the areas of the following figures in inches. Don't forget to use units.²

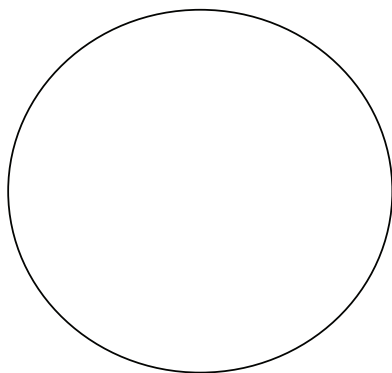
A.



B.

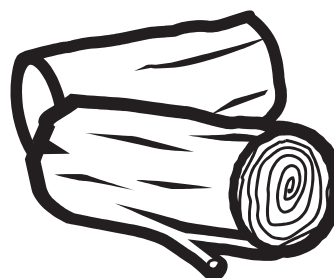


C.



.

D.



(Diameter of the log)

Diameter = _____ Diameter = _____

Radius = _____ Radius = _____

Area = _____

²a number X itself = the number²

Math Problem Solving

Industry specialists say that solving problems is one of the most important skills for a forestry worker. Since forestry workers often work alone, companies can save time and money, and prevent dangerous errors, if workers have the ability to solve day-to-day math problems without help.

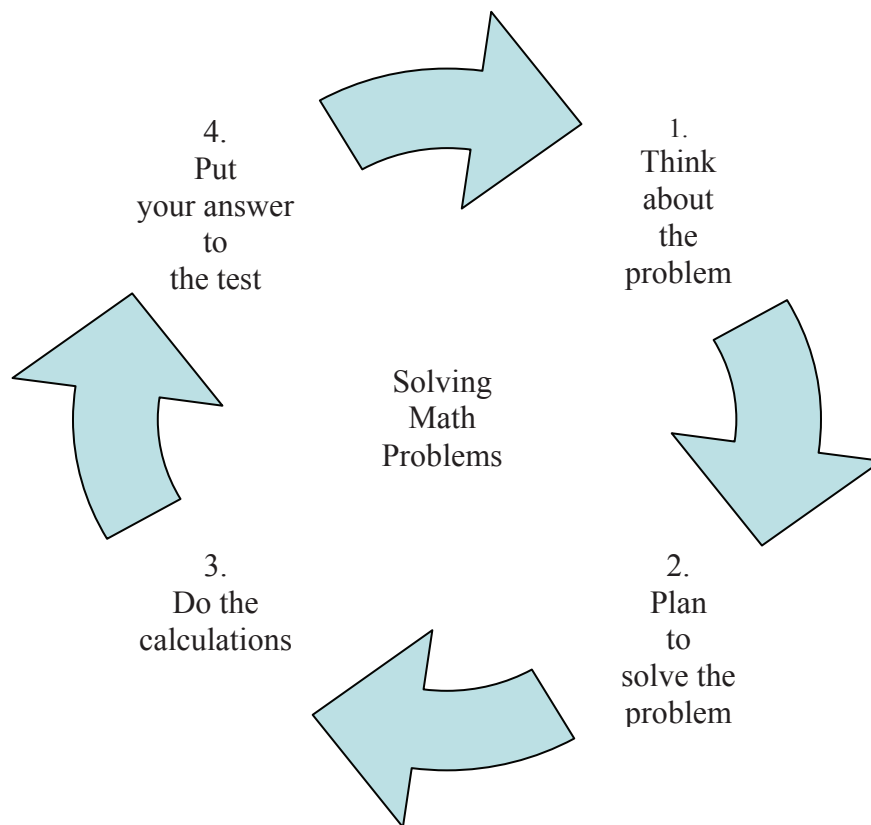


Forestry workers may come across simple math problems involving measurement and calculations almost every day. By following the simple steps below, workers can solve most of the problems they encounter.

There is no one formula that can help you solve every problem but there are some guidelines that will help, including the following:

- **Think** about the problem. If you realize that you do not have the math skills or the necessary information to solve the problem, ask for help.
- **Read** any information that you have that will help to solve the problem. This may include reading labels and looking at sketches.
- **Identify** the information that you have and the information that you will need to solve the problem.
- Sometimes it helps to **draw a sketch** or make a list of the information that you have.

Solving math problems includes skills such as thinking, planning, estimating, and calculating. The steps used to solve math problems are shown in the chart on the following page.



1. Think about the problem

- Decide exactly what the problem is.
- Read any information you have; look at maps and sketches.
- Identify the information you are given.
- Decide if you need any further information to solve the problem.

2. Plan to solve the problem

- Organize the information that you have.
- Choose the math operations that you will use (addition, subtraction, multiplication, division, the use of formulae).
- Estimate the answer that you should find. Your estimations may be based on experience or rough calculations done in your head.

3. Do the calculations

- Perform the calculations and check your answer against your estimate. Does the answer seem reasonable? If so, go on to step 4. If not, double-check your calculations.

4. Put your answer to the test

- Once you are confident with your answer, put the results into action. Cut the log, order the supplies, and start cutting or planting in your area. It may take some time to develop enough confidence to put your calculations into action without checking with someone who is more experienced, but remember that practice makes perfect!

Example Problem

Mike's crew foreman has asked him to go to town and buy enough oil to change the oil in 5 skidders. The oil is sold in 20 litre pails.

Step One – Think about the problem**What is Mike's math problem?**

Mike knows that he needs to buy enough oil for 5 oil changes. He also knows that the oil comes in 20 litre pails.

What information does Mike have?

What additional information does he need?

Step Two – Plan the solution

Mike asks his foreman, who tells him that each skidder requires about 25 litres of oil. Now Mike has all the information that he needs to solve the problem.

Mike estimates, in his head, that since each pail holds 20 litres, he will need more than 5 pails.

What calculations will Mike need to do?

3. Solve the problem

$$5 \times 25 = 125$$

He will need 125 litres of oil in total.

Each pail holds 20 litres of oil.

$$125 \div 20 = 6.25$$

Mike will need to buy 7 pails of oil and there will be $\frac{3}{4}$ of a pail left over.

When he checks the answer against his estimate, it seems reasonable.

4. Put your answer to the test

Mike is confident with his estimate and his calculation and proceeds to buy the 7 pails of oil.

Activity 2–7

Solve the following word problems using the Think, Plan, Solve, Act steps.

- A. Wade needs to clear an area for a new landing. The crew foreman asked him to clear an area 50 feet x 100 feet. What will the area of the new landing be?**
-

- B. The blade on Luc's chain saw is 26 inches long. He needs to cut through a log that is 54 inches in diameter. He can make two cuts, one from each side. Will his saw be long enough?**
-

- C. When Chris is planting trees, he needs to plant 6 seedlings per 100 square feet. This morning, he will be planting in an area 100 ft. X 200 ft. If his bag holds 100 seedlings, how many bags will he need?
-

- D. Mike's wife wants him to make a skating rink for the kids. If the rink is 25 feet X 30 feet, what is the area?
-



- E. Justin works as a tree planter in British Columbia. Last week he planted 7,500 seedlings. If he makes \$0.12 per tree, how much did he earn?
-
- F. Justin pays \$30.00 per day for food and lodging 7 days a week. He also needed to buy new boots last week. The boots cost \$134.00 including tax. How much money did Justin have left after paying for his food, lodging and new boots based on Answer E?
-
- G. Mark owns a cedar bush and makes his living by cutting cedar fence posts off of his property. Last week, Mark received an order from a farmer who wanted to build a fence that is 312 feet long. How many posts will Mark need to fill the order if the posts are 12 ft. apart?
-

H. Mark has a pile of cedar logs behind his house but he hasn't cut them into post lengths yet. Each post needs to be 8 feet long. He has the following lengths in the pile:

12 posts @ 10 feet long

8 posts @ 18 feet long

14 posts @ 22 feet long

Does he have enough logs to fill the order, or does he need to cut more? After cutting, how many 8 foot posts does he have in the pile?

I. If it takes Mark 20 minutes to cut each log and remove the bark, how long will it take him to prepare the order?



Solving Other Kinds of Problems

Not all problems in the forestry industry involve only math. Many problems involve other skills including decision making and improvisation – using the materials available to solve a problem.

Whether the problem is big or small, at work or at home, problem solving is a skill that you can learn. The skill is a lot like riding a bike: once you learn how, you never forget. The technique for solving other kinds of problems is much like the technique that is used for solving math problems.

Do you already have good problem-solving skills? To find out, complete the following quiz and then discuss your answers with your instructor or classmates.

Activity 2–8 Rating Your Problem-Solving Skills



Rate your problem-solving skills. Circle either T (true) or F (false) for each of the following statements:

- | | | |
|---|---|--|
| T | F | 1. The ability to solve problems is a skill you are born with. You cannot learn how to solve problems. |
| T | F | 2. Every problem has only one solution. |
| T | F | 3. When I solve a problem, I usually try the first solution that I think of. |
| T | F | 4. It is more difficult to solve a problem when you don't fully understand what the problem is. |
| T | F | 5. It is usually a good idea to solve a problem as quickly as possible. |
| T | F | 6. Sometimes solving a problem involves a lot of trial and error. |
| T | F | 7. When I solve a problem, I think of several possible solutions before trying one. |
| T | F | 8. When I have a problem, I usually solve it myself without discussing it with other people. |

- | | | | |
|---|---|-----|---|
| T | F | 9. | When I come up with one solution, I consider the problem to be solved. |
| T | F | 10. | Before solving a problem, I think of several possible solutions. |
| T | F | 11. | When I solve a problem, I always try to think of a solution that suits my goals. |
| T | F | 12. | I always try to find as much information as possible about the problem before I try to solve it. |
| T | F | 13. | When I have a problem, I always try to keep an open mind and can admit to myself that I might be part of the problem. |
| T | F | 14. | I believe that every problem is just a solution waiting to be found. |

Well, how did you do? Do you already have good problem-solving skills, or do you need a little practice?

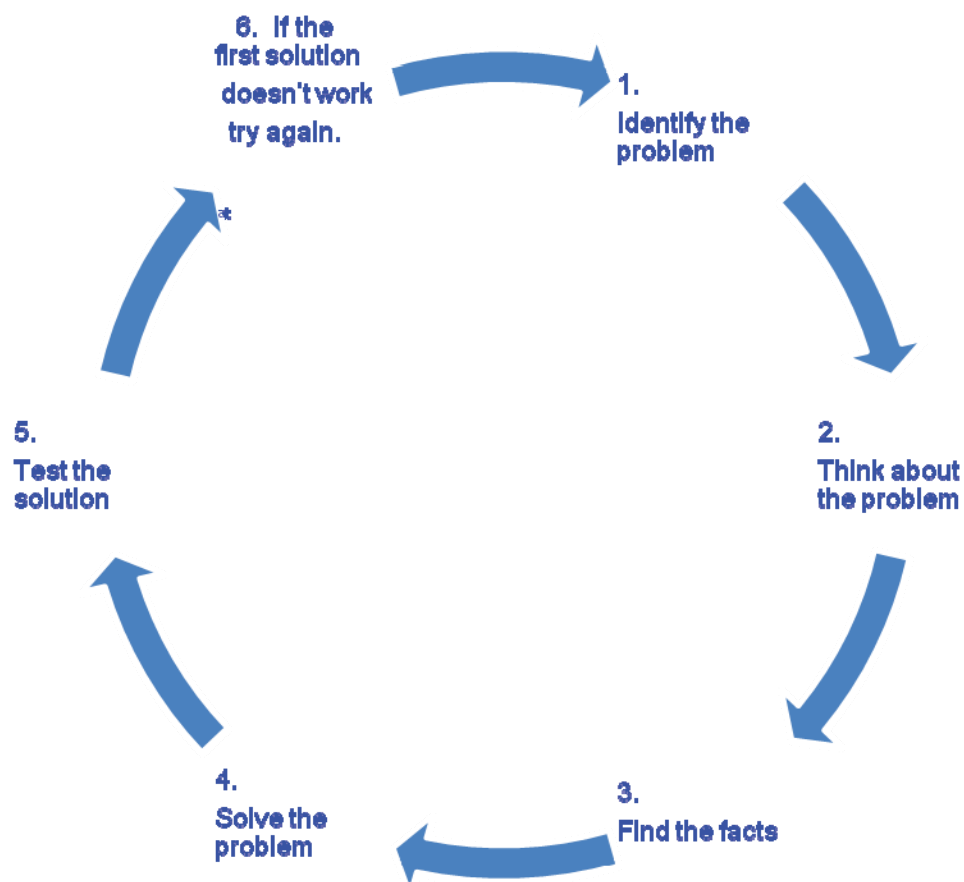


We may not always be able to solve life's big problems, but we can learn to solve most of the problems we encounter.

The problem-solving process has six steps that should be taken one at a time. The problem-solving process is shown as a circle, since we don't always find the right solution the first time we try.

The diagram on the following page shows the **six steps** involved in solving problems that include more than just math. Look at the diagram. How is it similar to the math problem-solving diagram? How is it different? Discuss your answers with your classmate or instructor.





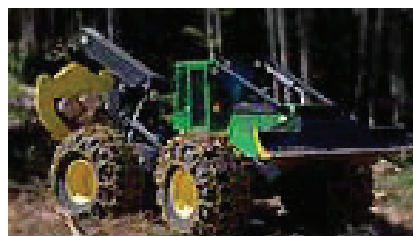
1. Identify the Problem

The first step in solving a problem is to identify the problem.

Activity 2–9

Mike works as a buckner during the week. He also owns a small piece of property and would like to make a little extra money growing Christmas trees on his own time. Mike's supervisor has told him that he had ordered too many pine seedlings and he has offered them to Mike free of charge. They would make ideal Christmas trees. Mike would like to get the ground prepared for planting the trees but he doesn't know how big an area he should clear.

What is Mike's problem?



Jeff is a skidder operator. He works for a small logging operation where the foreman keeps track of hours worked. For the past couple of weeks, Jeff's pay has been less than he expected. Jeff has a lot of expenses and is becoming very stressed about the situation.

What is Jeff's problem?

2. Think About the Problem

The next step in problem solving is to take some time to think the situation over before acting. You should think about problems in different ways by asking these questions:

Think about the problems Mike and Jeff are having.

1. What information do they need to solve their problems?

Mike _____

Jeff _____

2. Can you think of someone who has had a similar problem to

Mike? _____

Jeff? _____

3. How did they deal with the problems?

Mike _____

Jeff _____

4. Who could Mike and Jeff ask for help with their problems?

Mike _____

Jeff _____

3. Find the Facts

Once you have identified your problem, it is time to gather all the information you need to solve the problem. There are several kinds of information that may be necessary to solve a problem including:

- ▶ Techniques for repairing equipment
- ▶ Mathematical formulae for doing calculations
- ▶ Numbers to complete calculations
- ▶ Information needed to make decisions
- ▶ Facts about the actions of others

What information do Mike and Jeff need before they can find solutions? Where can they find this information?

Mike

Jeff



4. Solve the Problem

Solving a problem requires thought and calculation. This is the time to apply the facts that you found in the last step. Sometimes, this step must be done quickly. If, for example, you are dealing with an emergency, time can be very precious. Sometimes it is better not to act quickly. If you can take the time to think about the situation, you will be more effective in finding a solution.

Can you think of one or more solutions to Mike's problem and Jeff's problem?

5. Test the Solution

Once you have thought of all possible solutions to the problem, choose the one that you think is best. If the solution doesn't work, don't give up. Don't become frustrated or angry. Spend some more time thinking about the problem, gathering more facts, and asking more questions.

"If at first you don't succeed, try, try again". This old saying is especially true when solving problems. If the first solution doesn't work, continue to go back through the five steps until you find a suitable solution.

1. Identify the problem
2. Think about the problem
3. Find the facts
4. Solve the problem
5. Test the solution

Those of you who remember the TV show McGyver would probably agree he was the ultimate problem solver. He never lost his cool, he used the information and tools at hand and most of all, he never gave up!

Recording Numbers and Document Use

The ability to record numbers and work with documents is very important in the forestry industry. This skill is used when forestry workers count sizes and species of trees in a given area, record seedlings planted, record logs cut and shipped, and track hours worked.

Failing to record numbers accurately can result in a number of serious problems for workers and the company. These problems can include:

- errors in orders or shipments
- errors in the number of trees cut or planted
- failure for workers to receive the correct pay for hours worked
- failure for workers to receive employment insurance and accident benefits

A variety of forms are used for recording numbers in forestry. The following form is used to order seedlings for tree planting. Several kinds of information are required on this form including:

- Shipping information
- Contact information
- Species of trees
- Number of seedlings ordered
- Prices
- Shipping charges
- Shipping information

Activity 2–10

Read the form on the following page and answer the questions that follow.

Telephone: (877) 984-2948
 Fax: (613) 984-2872
 E Mail: www.nation.on.ca

**SOUTH NATION CONSERVATION
 PRIVATE LAND TREE PLANTING PROGRAM**

Name: _____

Mailing Address: _____

Lot: _____ Conc.: _____ Township: _____

Telephone H: () _____ W: () _____

SPECIES	NUMBER	SPECIES	NUMBER	SPECIES	NUMBER
Deciduous Seedlings					
Butternut		Red Oak		High Bush Cranberry	
Sugar Maple		Bur Oak		Nannyberry	
Silver Maple		Green Ash		Red Osier Dogwood	
Black Walnut		Hybrid Poplar		Sumac	
				Black Elderberry	
Conifer Seedlings					
White Pine					
Red Pine					
White Spruce					
Conifer Transplants					
Cedar					
Larch					

2004 Price List (Tax Included)

Conifer Bare Root	100-1,000 seedlings	\$0.40 / seedling
Conifer Bare Root	Over 1,000 seedlings	\$0.35 / seedling
Transplanted Stock	100-1,000 seedlings	\$0.48 / seedling
Transplanted Stock	Over 1,000 seedlings	\$0.45 / seedling
Hardwoods Bare Root		\$0.65 / seedling

Minimum Orders of 100 Seedlings Only (50 per species)

Administration Fees— Inside Watershed \$20.00, Outside watershed \$30.00, Planting Site Visits \$40.00

Order must be paid in full before receipt of trees.

Availability subject to change depending on nursery inventory and seedling performance.

Do not send payment with order. An invoice will be sent when availability is determined.

Congratulations! You have just been promoted. After three summers working as a tree planter, you are now responsible for ordering seedlings. Your foreman has given you the following information and asked you to submit an order to South Nation Conservation. Complete the form, and answer the following questions.

Your company name is Forever Green Reforestation.

The company mailing address is Box 3459, Irondale, ON, K0M 2E0.

The seedlings will be shipped to Lot 9, Concession 3, Dysart Township.

The office telephone number is (813) 456-7890.

Conifer Bare Root Seedlings:

10,000 White Pine

25,000 Red Pine

10,000 Black Spruce

Conifer Transplants:

30,000 Cedar

Deciduous Bare Root Seedlings:

3,000 Sugar Maple

500 Black Walnut

50 Bur Oak

A. How many seedlings does your foreman want you to order?

B. Are all of the species available? If not, which are unavailable?

C. Do all of the species meet minimum order requirements? If not, which ones do not?

D. What is the total cost of the seedlings in your order?

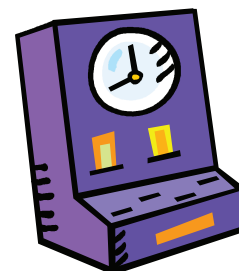
E. What is the Administration Fee for the order (outside watershed)?

F. Should you ask the foreman for a cheque to send with the order?

Time Cards

Most companies in the forestry industry require employees to keep time cards. A time card records the time that you start work, finish work, and take unpaid breaks.

It is very important to be accurate when completing time cards; otherwise you may not receive all of the wages and benefits that you have earned. In large sawmills, a time punch clock may automatically record employees' hours but in smaller companies or when working in the bush, employees usually have to keep track of their own hours.



Read the time card on the following page and answer these questions:

Activity 2-11

A. What is the employee's name? _____

B. How long is the pay period? _____

C. How long was Mark's lunch break on May 10? _____

D. How many days was he off sick? _____

E. What time did he start work on May 17? _____

F. Does Mark have unpaid coffee breaks? _____

Highlands Forest Service Time Card					
Employee Name: <u>Mark Davis</u>					
Employee Number <u>6029</u>					
Pay Period: <u>May 7/07</u> to <u>May 20/07</u>					
Date	A.M. Start	A.M. Finish	P.M. Start	P.M. Finish	Total Hours
7	8:00	12:00	12:30	5:30	9
8	7:30	12:30	1:00	5:00	9
9	8:00	12:00	12:30	6:00	9.5
10	8:00	12:30	1:00	5:00	8.5
11	7:30	12:30	1:00	6:00	10
Weekly Total Hours					46
14	OFF		SICK		0
15	OFF		SICK		0
16	7:30	12:30	1:00	6:00	10
17	7:30	12:30	1:00	6:00	10
18	8:00	12:00	1:00	6:00	9
Weekly Total Hours					29
Total Hours for Pay Period					75
Employee's Signature <u>Mark Davis</u>					
Supervisor's Signature <u>[Signature]</u>					

Activity 2–12

Use your own name and the following information to complete the time card on the following page.

This was a two-week pay period from June 4 to June 18, 2007. You are paid for 2 fifteen-minute coffee breaks each day, but you are not paid for a lunch break.

First Week:

Monday: Started work at 8:00 am; took a one-hour lunch at noon; finished work at 5:30 pm.

Tuesday: Car wouldn't start; arrived at work at 11:00 am; no lunch break; finished at 5:30 pm.

Wednesday: Started work at 7:30 am; took a ½ hour lunch starting at noon; finished work at 6:00 pm.

Thursday: Started work at 8:00 am; left for a doctor's appointment at 2:00 pm; didn't come back to work.

Friday: Started work at 7:30 am; took a one-hour lunch break; finished work at 6:00 pm.

Second Week:

Monday: Started work at 7:30 am; took a one-hour lunch break at 12:00; finished work at 6:30 pm.

Tuesday: Started work at 8:00 am; took a ½ hour lunch break at 11:30 am; finished work at 6:00 pm.

Wednesday: Off sick

Thursday: Doctor's appointment in the morning; arrived at work at 12:30 pm; finished work at 6:00 pm.

Friday: Started work at 7:30 am; took a ½ hour lunch break at 12:30 pm; finished work at 4:30 pm.

- A. How many hours did you work during the first week? _____
- B. How many hours did you work during the second week? _____
- C. If you make \$17.50 per hour, how much would you earn before deductions in this pay period? _____

Highlands Forest Service Time Card					
Employee Name: _____					
Employee Number _____					
Pay Period: _____ to _____					
Date	A.M. Start	A.M. Finish	P.M. Start	P.M. Finish	Total Hours
Weekly Total Hours					
Weekly Total Hours					
Total Hours for Pay Period					
Employee's Signature _____					
Supervisor's Signature _____					

Skill Check – Chapter Two

In this chapter, you have practised your math and problem-solving skills. Think back over the skills that you worked on in the chapter. Which skills still need more practice?



Skill	OK	Could be improved
I have learned how to solve problems effectively.		
I am comfortable using both metric and imperial systems of measurement.		
I understand how to convert fractions into equivalent fractions with the lowest denominator possible.		
I can convert metric and imperial measurements.		
I understand how to calculate area.		
I understand the idea of Pi and I can calculate the area of a circle when the formula is provided.		
I can understand and solve word problems involving math.		
I can do calculations involving money.		
I am comfortable entering numbers and information on forms.		

My Action Plan

I will improve my problem solving and math skills by:

1. _____

2. _____

3. _____

I would like to learn more about how to improve the following skills:

1. _____

2. _____

3. _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by:

Skill _____

I can use this skill to improve my life by:

Skill _____

I can use this skill to improve my life by:

Instructor's Notes – Chapter Two

This chapter is written at LBS numeracy Level 3. Learners at this level should be comfortable with all basic math operations and simple word problems. The concepts of area and diameter do not normally fall into this level; however, industry advisors recommended them as Essential Skills. Instructors may need to spend extra time instructing these skills. Fractions are an important part of the measurement Essential Skill and may also need some reinforcement.

The section on Solving Other Kinds of Problems should encourage learners to use their individual problem-solving skills and answers in the section will vary.

Answer Key

Activity 2–1 Metric/Imperial Conversion

All answers are rounded to the nearest hundredth. If students are not familiar with the concept of rounding numbers, some extra time may be required.

- A. 12.7 centimetres
- B. 3.66 metres
- C. 3.2 metres
- D. 91.87 hectares
- E. .4 metres
- F. 93.98 centimetres
- G. 468 hectares
- H. 164.29 metres
- I. 15.25 centimetres
- J. 30.48 centimetres
- K. .95 feet
- L. 96.37 acres
- M. 259.2 feet
- N. 5.47 yards
- O. 98.99 feet

- P. 4.94 acres
Q. 5.51 inches
R. 13.12 feet
S. 1.97 inches
T. 237.22 acres

Activity 2–2 Equivalent Fractions

- A. $\frac{4}{16} = \frac{1}{4}$
B. $\frac{1}{2} = \frac{4}{8}$
C. $1 = \frac{16}{16}$
D. $\frac{3}{4} = \frac{6}{8}$
E. $\frac{12}{16} = \frac{3}{4}$
F. $\frac{2}{4} = \frac{1}{2}$
G. $\frac{5}{8} = \frac{10}{16}$
H. $\frac{8}{16} = \frac{1}{2}$
I. $\frac{1}{4} = \frac{2}{8}$
J. $\frac{2}{16} = \frac{1}{8}$

Activity 2-3 Expressing fractions with lowest denominator

- Point B 1 $\frac{1}{8}$ "
Point C 2 $\frac{5}{8}$ "
Point D 3 $\frac{7}{8}$ "
Point E 5 $\frac{1}{2}$ "
Point F
Point G $\frac{15}{16}$ "
Point H 2 $\frac{9}{16}$ "
Point I 3 $\frac{12}{16}$ " or 3 $\frac{3}{4}$ "
Point J 5 $\frac{2}{16}$ " or 5 $\frac{1}{8}$ "

Activity 2–4 Measuring Length, Area and Diameter

- B. $1 \frac{3}{8}$ "
- C. $\frac{7}{8}$ "
- D. $2 \frac{2}{8}$ " = $2 \frac{1}{4}$ "
- E. $1 \frac{1}{8}$ "
- G. $2 \frac{3}{16}$ "
- H. $1 \frac{8}{16}$ " = $1 \frac{1}{2}$ "
- I. $3 \frac{9}{16}$ "

Activity 2–5 Measuring Radius, Diameter and Area of Circles

Diameter = $2 \frac{1}{4}$ "

Radius = $1 \frac{1}{8}$ "

Activity 2–6 Practicing Math Skills

This activity may require a review of the conversion of fractions into decimals as well as a review of exponents (a number X itself = the number²)

- A. $1.25 \times 1 = 1.25 \text{ in}^2$
- B. $3 \times 1.25 = 3.75 \text{ in}^2$
- C. Diameter = 2.25" Radius = 1.125" Area = 3.97 in^2
- D. Diameter = .625" Radius = .31" Area = $.3 \text{ in}^2$

Activity 2–7 Math Problem Solving

- A. $5,000 \text{ ft}^2$
- B. No, the blade will not be long enough. It will only reach 52" into the log.
- C. 12 bags
- D. 750 ft^2
- E. \$900.00
- F. \$556.00
- G. 26 or 27 if a post is placed at the end
- H. 56 8' posts
- I. 8 hours and 40 minutes (26 posts), 9 hours (27 posts)

Activity 2-8 Rating Your Problem-Solving Skills

Answers may vary but after reading the materials on previous pages, the learner should come up with the proper True and False responses. Review the learner's responses and provide feedback.

Activity 2-9 Identify the Problem

Answers may vary. Practitioners should review the learner's response to determine if he/she has followed the "problem-solving diagram".

Activity 2–10 Recording Numbers and Document Use

- A. 78,550 seedlings
- B. No, Black Spruce are not available.
- C. No, there is a minimum order of 100 per species and only 50 Bur Oak were ordered.
- D. \$32,457.00, including the Bur Oak, \$32,424.50 excluding the Bur Oak.
- E. \$30.00
- F. No, an invoice will be sent by South Nation conservation.

Activity 2–11 Time Cards

- A. Mark Davis
- B. 2 weeks
- C. One-half hour
- D. 2
- E. 7:30
- F. No, coffee breaks are paid.

Activity 2 – 12 Completing a Time Card

- A. 40.5
- B. 33.5
- C. \$1,295.00

Chapter Three

Listening Skills and Working Safely



Forestry Worker - Chapter Three

Listening Skills, Working Safely and Being Part of a Team

In this chapter you will work to improve three other very important skills that you will need to be successful in the forestry industry: listening skills, working safely and being a good team player.

Listening Skills

Good listening is the basis of communication between forestry workers. In the forestry industry, good listening skills are necessary since most day-to-day communication between workers is not written down, but given orally. This communication can include the following:

- Instructions on where and how to work and what to do
- Warnings about unsafe areas and trees
- Instructions on the number and density of trees to be cut or planted
- Instructions on when to start work and take breaks
- Advice from other workers and crew foremen



Hearing and listening are both words that describe something that we do with our ears, but there is a world of difference in meaning between the two words. Hearing describes the action of sound entering our ears while listening includes much more. When you listen, not only do you hear sounds, but you also process the sounds. You separate the words from the other sounds, store and remember the words and understand their meaning. This sounds like a very complicated procedure, but it is actually something we do every time we listen to a conversation.

Effective listening requires much more than just standing there while someone speaks. Some people have excellent listening skills, while others have trouble remembering what they hear or following oral instructions.

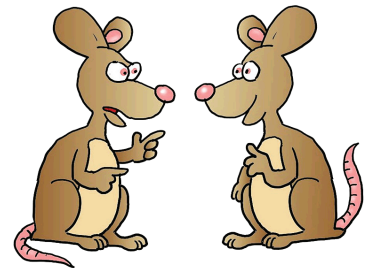
Workers who have good listening skills have a real advantage over workers who hear, but don't listen. Good listening skills can help you in the following ways:

- You will be able to solve problems more easily by following the advice of more experienced workers.
- You will get along better with co-workers and supervisors.
- You will be a better “team player”.
- You will be able to avoid unsafe working conditions and respond more effectively in an emergency.
- You will be able to answer other workers' questions and be able to share your knowledge and information.
- You will be able to avoid mistakes at work and be a more valued member of the team.

Activity 3–1

Many of us can go day after day without really having to listen carefully in conversations. Simple instructions such as “Please pass the salt” or questions like “What time will you be home?” do not require good listening skills.

Your instructor or a classmate will ask you several questions based on the information that you have learned in the last two chapters. Try and focus on your listening skills and those of the speaker when you answer. Try and identify any of the following common barriers to effective listening.



- Poor understanding of the subject
- Background noise or distractions
- Poor attention span or lack of attention
- Worry, fear or frustration
- Hearing difficulties or a strong accent

The following tips will help you to become a more effective listener.

- Know your subject or job
- Listen for “key” words
- Number the stages in instructions
- Repeat information and ask questions
- Make a list or sketch
- Pay attention and respect the speaker

1. Know your subject or job

Brains process information from the “inside out”. When you are familiar with the words and ideas in a conversation, it is much easier to understand and remember. If you are a chain saw operator, you will know most of the words used in a conversation about saws. It will be much easier for you to follow and remember the conversation than it would be for someone who has never used a chain saw.

If you do not understand the words used in a conversation, it is like trying to follow a conversation in a foreign language. Anyone who has ever been in a business meeting with a lawyer should understand how difficult it is to follow a conversation with words and concepts that they do not understand. This is one more reason why it is important to learn all you can about the forestry industry by listening to conversations; reading books, magazines and websites; and asking questions.

2. Listen for “key” words

Most conversations include a lot of information that is not necessary. It is an important listening skill to be able to pick out the most important points in a conversation rather than to try and remember everything.

Pick out key words, and do not try to remember every word in conversations. Always give the speaker your full attention. If there is just too much important information to remember, ask the speaker to repeat the difficult parts and jot them down.

Activity 3–2

Listen carefully to the paragraph read by your instructor and then pick out the important, **key** words.

Key words:

_____	_____	_____
_____	_____	_____

Compare key words with your classmates or instructor.

3. Number the stages in instructions

When you are given a complex list of instructions, try and number the stages. When you have the stages memorized, run through the whole sequence a couple of times.



There is a lot of information in this short conversation. If Wade forgets part of it, the whole crew could be affected and he could miss an important Health and Safety meeting. Wade could organize the information in the following way.

1. Saw
2. Hard Maple
3. Yellow Birch
4. Safety meeting

4. Repeat the most important information and ask questions

Once the speaker is finished, repeat the most important points and ask questions. This will help you to remember the stages, and if you misunderstood any points you can clarify the information.

Wade can organize the most important points in his head. By asking a couple of questions such as, “How many maple was that?” or “What time is the meeting?”, he will remember the details. If the instructions are very long or complicated, what should a worker do?

Activity 3–3

Now it's your turn. Listen carefully as your instructor reads a scenario. After he or she is finished, organize the instructions into stages. Don't forget to ask questions for clarification.

1. _____
2. _____
3. _____
4. _____
5. _____

What problems could you cause by not understanding or remembering these instructions?

5. If the information is complex, make a list, take notes or draw a sketch

Sometimes the information is very complex. A good listener will make a list, take notes or draw a sketch to help him or her remember the information. Conversations often outline problems that need to be solved alone or in a group.

Activity 3–4

Early one morning, five forestry workers met for a coffee at their local Tim Hortons. Each worker had a different job, each worked at a different location, each used a different kind of equipment and each drove a different kind of truck to and from work each day.

This activity will sharpen your listening and problem-solving skills. Listen carefully to the information given by your instructor. Listen for the key words and make notes. Ask questions for clarification. Once you have all the information, fill in the chart. Don't worry if you miss the information the first time; your instructor will repeat the information.

Once you have completed all of the information that you can, try working with the other students in your class or with your instructor. You may find that it is much easier to complete the task working as a team.

Facts:

[illegible]

Now, organize the information into the appropriate boxes, based on the facts that have been given by your instructor.

Worker's Name	Type of Job	Job Site	Equipment Used	Vehicle

6. Pay attention and respect the speaker

Every speaker has information to communicate. Always give the speaker the courtesy of your full attention. Maintain eye contact and nod frequently. Never yawn, fidget or look around. Stay on topic and ask related questions.

If background noise is making it difficult to understand what is being said, ask to move to a quieter location.

Working Safely

Forestry has one of the highest accident and injury rates of all industries. In fact, 90 percent of tree planting summer crews may report injuries. Potentially dangerous equipment, severe weather conditions and the often repetitive nature of the work all contribute to the high rate of injury.



For this reason First Aid training and safety awareness are very important to employers in the industry. The forestry industry recommends First Aid training for all workers.



St. John Ambulance is responsible for most First Aid training in Canada. They regularly offer a variety of courses across the country. Many companies will pay for employees to take First Aid training, or will run courses on the job site.

Activity 3–5

Searching for information on the Internet

Use your computer to find information on St. John Ambulance courses being offered in your area. Follow the instructions below. You will be sending an email directly to St. John Ambulance in your area and they will reply to your request within two business days.

1. **Enter** www.google.ca
2. **Enter** St. John Ambulance Canada in the subject line.
3. **Click on** St. John Ambulance Canada.
4. **Click on** Select a Region.
5. **Click on** your province.
6. **Click on** Courses and Training.
7. **Click on** Customer Care Service.
8. **Scroll down** to the Contact Customer Care Services.
9. **Fill in** the necessary information including your name, phone number and email address.
10. **Key in** the following message:



“Please send information and a schedule of courses in the (name of your nearest city) area. Thank you.”

10. **Click on** the “Yes” box beside the privacy policy.
11. **Click on** Submit.

Once you have received your information from St. John Ambulance, share it with the other learners in your class.

If you do not have access to the Internet, St. John Ambulance should be listed in your local phone book. Phone the nearest office and ask to have information on courses sent by mail.

Taking training in First Aid should be a top priority for anyone who wants to work in forestry. Until you can complete this training, there are two very important things to keep in mind.

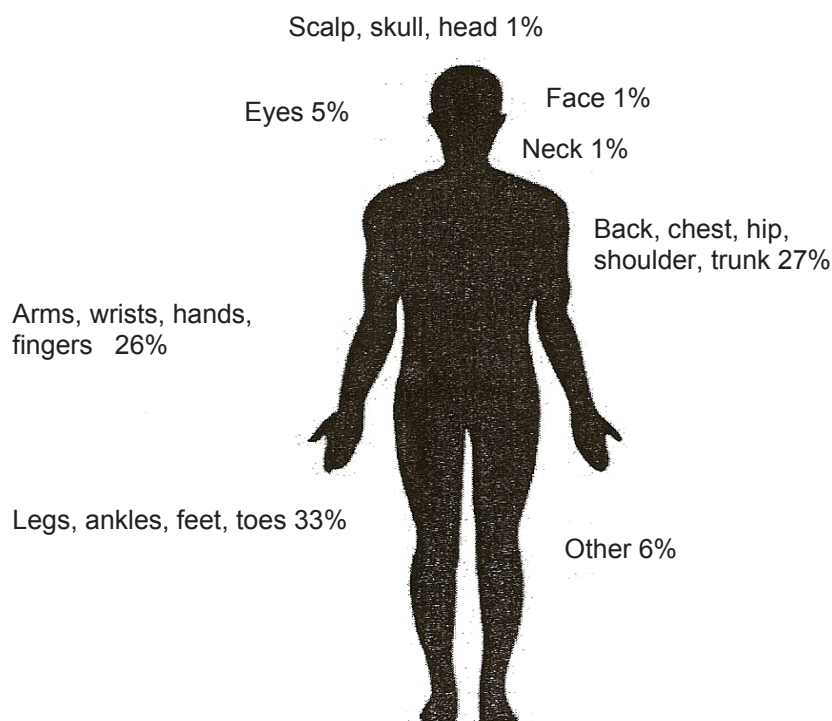
The motto of a good First Aider is “**Do no harm**”. This means that you should never do anything that could make an injury worse. Many people with good intentions have made injuries worse by treating them improperly. Applying grease to burns, rubbing snow on frostbite and giving prescription medication to other people are all good examples of what not to do. Never give advice or treat an injured person unless you have proper First Aid training.

Always use a “buddy system”. If your employer does not have a formal system in place, start a system with your co-workers. In case you become lost or injured, someone should always know where you are, what you are doing, and when you should be back.

Most injuries are preventable. In this chapter, we will look at the most common injuries in the forestry industry and the ways to avoid them.

The diagram below shows the parts of the body most often injured. The chart shows the time of day when most injuries occur.

Body parts most often injured



Time of Day Injuries Occur by Percentage of Total Injuries

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Time	%	%	%	%	%	%	%	%
5:45 – 7:44	5.9	4.6	1.9	3.3	5.8	4.1	3.1	4.1
7:45 – 9:44	15.2	14.9	16.4	14.5	14.4	14.6	14.2	14.9
9:45 – 11:44	27.5	28.3	23.4	25.4	27.4	28.2	25.7	26.5
11:45 – 13:44	15.8	15.4	17.6	17.0	13.0	14.4	16.5	15.7
13:45 – 15:44	17.6	17.7	20.8	20.8	23.2	18.8	17.7	19.5
15:45 – 17:44	11.2	12.4	13.9	13.9	12.3	14.0	15.7	13.1
17:45 – 19:44	4.8	3.7	3.5	3.5	1.6	3.7	6.0	3.9
19:45 – 5:44	1.9	3.0	2.6	2.6	2.2	2.2	1.7	2.3

Activity 3–6

1. What areas of the body are injured most often?

2. What area is injured the least often?

3. What PPE (Personal Protective Equipment) may help to prevent head injuries?

4. On Tuesdays, what percent of accidents occur between 7:45 and 9:44?

5. What is the “safest time of the day to work”? Why?

6. What is the most “dangerous” time? Why?

7. Are the safe times and dangerous times the same each day?

8. Have you heard about any accidents in the forestry industry? If so, discuss them with your classmates or instructor.

Stay Safe – Stay Alert

Most accidents occur in the middle of the day, between 9:45 and 2:45 even though long lunch breaks are taken during this time. Health and safety experts say that this is the time of the day when workers are the least alert.

Poor nutrition, lack of sleep and boredom from repetitive work all affect a worker's ability to stay alert. The following tips will help you to stay alert and stay safe:



- Take the time to eat a proper breakfast. A complete breakfast consisting of protein, carbohydrates and limited sugar will help you to stay awake and alert all day. Starting your day with a lot of sugar will rev you up for a couple of hours and then, when the sugar wears off, leave you drowsy. Avoid having a large coffee and two-donut breakfast.
- Eat a light lunch. Heavy lunches cause drowsiness in the early afternoon. Avoid sweet snacks. They may pick you up for a few minutes, but will leave you tired long before the end of the day.
- If your job is very repetitive, take short breaks at least once an hour.
- Get plenty of sleep. Aim for seven to ten hours of uninterrupted sleep before work days.
- Always follow directions for prescription medications and ask your doctor if they may cause drowsiness. Avoid over-the-counter medications during work hours. Pain relievers, allergy pills, cough medications and other medications can make you dangerously drowsy.
- Never drink alcohol or take drugs before or during work hours.



The most common injuries in the forestry industry include the following:

- Fractures, sprains, and cuts from falls
- Being struck by a falling object
- Overexertion and strain
- The body's reaction to dehydration or too much heat or sun
- Ear damage from noisy equipment
- Insect bites



The following tips will help you to avoid becoming injured on the job.

Injuries from falls

- Always wear proper footwear and other recommended PPE (Personal Protective Equipment).
- Do not run in the bush.
- Fellers should always ensure that there is a cleared escape route before felling a tree.
- Skidder operators should be sure that the area where choke setters are working is cleared and free of brush or debris that may cause a fall.
- Equipment operators should be certain that the area below is free of debris before climbing out of the equipment and down to the ground.
- Landings should be kept clear of brush.

Struck by a falling object

- Always wear proper head and eye protection.
- Always be aware of what is going on in the trees above you.
- Beware of snags or danger trees,¹ sometimes known as “widow makers”.

¹Trees that are deteriorated and pose a safety hazard of falling when unexpected.
<http://forestry.about.com/blforgls.htm>

Overexertion and strain

- Be sure you are in good shape before the work season starts. Take it easy for the first few days and slowly work your way up to full production. Experienced forestry workers may not be working at peak capacity until the third or fourth week of the season.
- Do stretching exercises before beginning work in the morning.
- RSIs (Repetitive Strain Injuries) are very common in the forestry industry. They are caused by repeating the same activity, such as planting or felling trees, over and over again. Sore, achy muscles are a common complaint in the forestry industry, but if the pain becomes severe you should see a doctor.

Your body's reaction to too little water, or too much sun

- Learn to recognize the symptoms of heat stroke and heat exhaustion.
- Allow yourself time to get used to hot weather in the spring and slow down a bit.
- Wear clothing that will protect your skin from the sun.
- Try and schedule work that requires heavy PPE for cooler times of the day.
- Take frequent short rest breaks in the shade.
- Be sure to drink plenty of water: up to a litre per hour in hot weather.



Ear damage from noise

Ear damage from noisy equipment is a major hazard in the forestry industry. Often workers will not realize that they have suffered permanent hearing damage until many years later.

- Always wear ear protectors if working near noisy equipment.

Insect stings

Insects such as blackflies, mosquitoes, deer flies and ‘no-see-ums’ are just part of working in the bush. While they are an annoyance, they don’t normally cause serious problems. Wasp and bee stings, on the other hand, can be fatal. If you know that you are allergic to bees or wasps, always carry a sting kit with you and inform your co-workers and supervisor.



Accident reports

Most companies require that employees fill out a formal accident report in case of any injury. The information on these forms is very important if medical care is necessary or if the employee misses work and must receive benefits.

On the following page you will find a sample accident report form.

Highlands Forestry Service Accident Report

Form must be returned to safety officer within 24 hours of incident

Date of Incident: _____ Time of Incident: _____ AM/PM

Name of Injured Person: _____

Employee Number: _____

Address: _____

Phone Number: _____ Date of Birth: _____

Site where incident occurred: _____

Other Workers Present:

Description of Injury:

Did the injury require medical attention? ____ yes ____ no

If yes, describe attention given:

Signature of injured worker: _____ Date: _____

Signature of supervisor: _____ Date: _____

Activity 3–7

Read the following scenario and then print out and fill in the accident report on the previous page.

Your name is Wade Smith. You live at 1234 County Road 27, Gooderham. Your employee number is 6754. You were born on March 12, 1985.

On Friday, May 25, at 9:30 in the morning, you were felling a tree with a chain saw close to Bruton landing. You did not notice a snag in the tree above you. The snag fell and hit you on the shoulder knocking you to the ground. You were working close to Mark Metzler and Jim Creemore. When they saw you fall, they ran over immediately.

You received a serious cut to your arm and you thought that your shoulder might be broken. Both Mark and Jim were experienced in First Aid. After stabilizing your injury, they transported you to Gooderham General Hospital, where Dr. Watts gave you 10 stitches and x-rayed your arm. Fortunately, it was not broken. The doctor recommended that you should take one week off work.

How could this accident have been avoided?

WHMIS

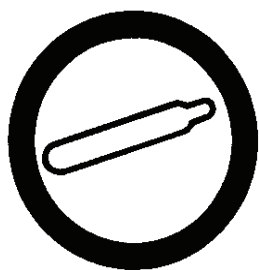
Forestry workers often find themselves working with various types of chemicals. Herbicides such as **Roundup**, used to kill underbrush, and fluids and lubricants for equipment are just some examples. Without proper information, these chemicals can be dangerous to the workers and to the environment.

WHMIS is the abbreviation for the Workplace Hazardous Materials Information System. This is a national system to help identify chemicals and to inform workers of how to use them safely. Managers in the forestry industry want their workers to be familiar with the WHMIS system to help avoid injuries and damage to the forest environment.

Workers should always read the labels on products that they work with and be aware of the dangers that these chemicals may cause.

The WHMIS system includes a series of standard warning symbols and Material Safety Data Sheets (MSDS). Suppliers must be sure that people purchasing chemical products are given these sheets. They contain information on using these dangerous chemicals and information on how to control spills and safely put out fires when these chemicals are involved. By law, MSDS must be kept on hand at any site where these chemicals are used or stored.

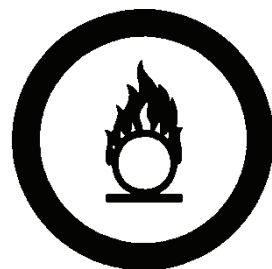
All products which may be dangerous must have the proper symbols on the label. The hazards are as follows, along with common examples of the types of products that carry these labels.



Compressed Gases: propane tanks, oxygen tanks in the First Aid tent



Flammable and Combustive Material: gasoline, diesel



Oxidizing Material: bleach, hydrogen peroxide, nitric acid (used in some fertilizers)



Poisonous and Infectious Material: some herbicides and pesticides



Corrosive Material: compounds for cleaning mechanical parts



Dangerously Reactive Material: explosives

Activity 3-8

Look in your cleaning cupboard and garage at home. See if you can find any products labelled with these symbols.

Product

Warning Label

Environmental Incident Reports

Provincial Ministries of the Environment require that any spills must be reported. If companies do not report spills, they may receive very large fines. Every worker should co-operate in reporting spills.



If a spill occurs, forestry workers must take the following steps:

- Stop any equipment that is causing a spill
- Stop the spill at the source (for example a leaking barrel)
- Contain the spill: prevent it from spreading
- Report the spill to the company emergency representative, and fill out an incident report

The following spill must be reported immediately:

- Any spill that runs into a waterbody (river, creek, lake, etc.)
- Any spill involving more than 5 litres of battery acid or cleaning solvent
- Any spill involving more than 50 litres of fuel, hydraulic fluid, antifreeze, grease and cleaning solvent

The following spills must be reported within 24 hours:

- Any spill involving less than 5 litres of battery acid or cleaning solvent
- Any spill involving more than 5 litres, but less than 50 litres of fuel, hydraulic fluid, antifreeze, grease and cleaning solvent

Activity 3–9

1. When Ken arrived at the landing in the morning, he discovered that his skidder had been leaking oil overnight. He estimated that he had lost about 10 litres of oil. How long does he have to report the leak?

2. When Jeff was unloading several barrels of hydraulic fluid from a pick-up onto the ground, he punctured one of the barrels with the fork on the loader. The entire barrel spilled onto the ground. How long does he have to report the spill?

3. Don was filling his chain saw beside a creek. He wasn't paying attention and he knocked the gas can over. A very small quantity of the gas ran into the creek. Does he have to report the spill? If so, how long does he have to report it?

Incident Reports

Activity 3–10

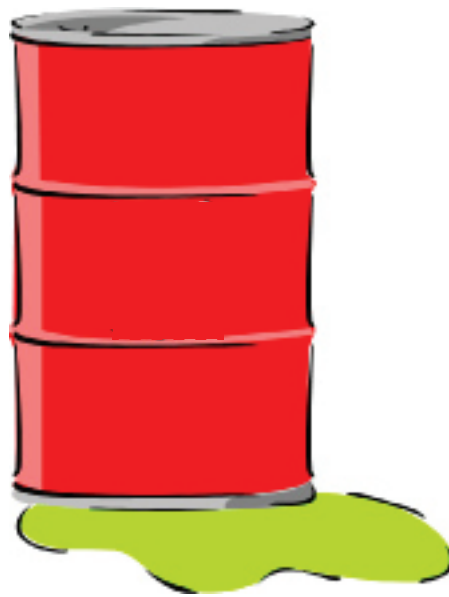
In most provinces, companies are required to fill out an “Environmental Incident Report for Spills”. On the pages following, you will find a sample “Environmental Incident Report”. Read the following scenario and fill out the report.

You will need to be familiar with the term **management unit** to fill out the report. A management unit is an area of forest that is being logged. A management unit is a forested area that includes similar types of trees and conditions that is being logged in the same way. Timber cruisers define management units by the type and size of trees that grow in the area.

Mike Smith was working in Management Unit Bruton 4 on Tuesday, May 25. He was using the herbicide Roundup to clear the underbrush for a new landing. Mike placed four 20 litre pails of the chemical on the ground in some brush and walked back to his truck for the sprayer.

While he was gone, Luc Thibeau arrived at the landing. He did not see the pails of roundup and, while he was parking the truck, he backed over two of them, putting holes in the pails. When Mike got back to the landing, he noticed that the chemical was running into a small creek at the edge of the landing.

After containing the spill to be sure no more chemical ran into the creek, Mike and Luc reported the spill to their supervisor. He advised them to fill out an **Environmental Incident Report**.



Highlands Forestry Service Environmental Incident Report

Management Unit:

Type of Incident:

Spill _____

Safety Issue _____

Public Concern _____

Quality Issue _____

Names of Employees Involved:

Date of Incident:

Description of Cause of Incident:

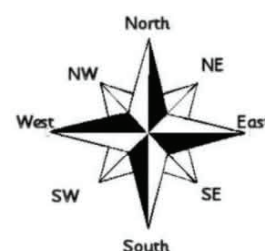
Map Skills

It is very important for forestry workers to be able to read maps accurately. Road maps are necessary for finding job sites and locating suppliers, while topographic maps can be an important tool that can prevent a worker from becoming lost in the forest.



Directions

There are four **cardinal** directions on any map: north, south, east and west. North is always located at the top of the map; south is at the bottom; east is to the right; and west is to the left. In between these cardinal points lie the other commonly used directions; northeast, southeast, southwest, and northwest. These eight points form what is known as the "compass rose". Even though these points are the same on any map, a small diagram showing the points of direction are included on most maps. It can sometimes be confusing to follow a map, and map experts suggest that you orient the map in the direction you are travelling. This means that you shouldn't always hold the map with north to the top. Instead, you hold the map in the direction that you are travelling.



A. If you are travelling south, from Dorset to Minden, you would hold your map this way, in the direction you are traveling.

B. If you are travelling north, from Minden to Dorset, you would hold your map this way, in the direction you are travelling.

This way, left turns are on your left and right turns are on your right. This will work in any direction of travel.



Scale

Since maps represent a larger area than the size of the map, a scale must tell you how a distance on the map relates to a distance on the ground. To use the scale on a map, measure the distance on the map with a ruler and multiply by the number in the scale. Two types of scales are commonly used on maps.

The first type is a numeric scale:

1/50,000

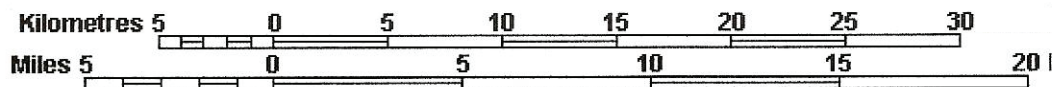
This means that one unit on the map represents 50,000 units on the ground. The units can be inches or centimetres. On a 1/50,000 scale map, 1 centimetre on the map equals .5 kilometre on the ground, since 50,000 centimetres equals .5 kilometres. If using an imperial ruler, 1 inch on the ground equals .8 miles on the ground (50,000 inches equals .8 miles).

Maps with a 1/50,000 scale are ideal for forestry workers, and for recreational use. These maps show hills, valleys, lakes, rivers, streams, rapids, portages, trails and wooded areas; major, secondary and side roads; and all man-made features such as buildings, power lines, dams and cut lines.

Numeric scales can also be **1/250,000**. This means that 1 centimetre on the map is 2.5 kilometres on the ground. This scale is five times as big as a 1/50,000 map, and one of these maps will show the entire province of Prince Edward Island. These maps can be used for travelling long distances on back roads.

It is very important to take note of the scale on the map you are using.

Bar scales are also found on topographic maps and road maps.



A bar scale shows you the relationship between distance on a map and distance on the ground. Most bar scales show metric and imperial measures.

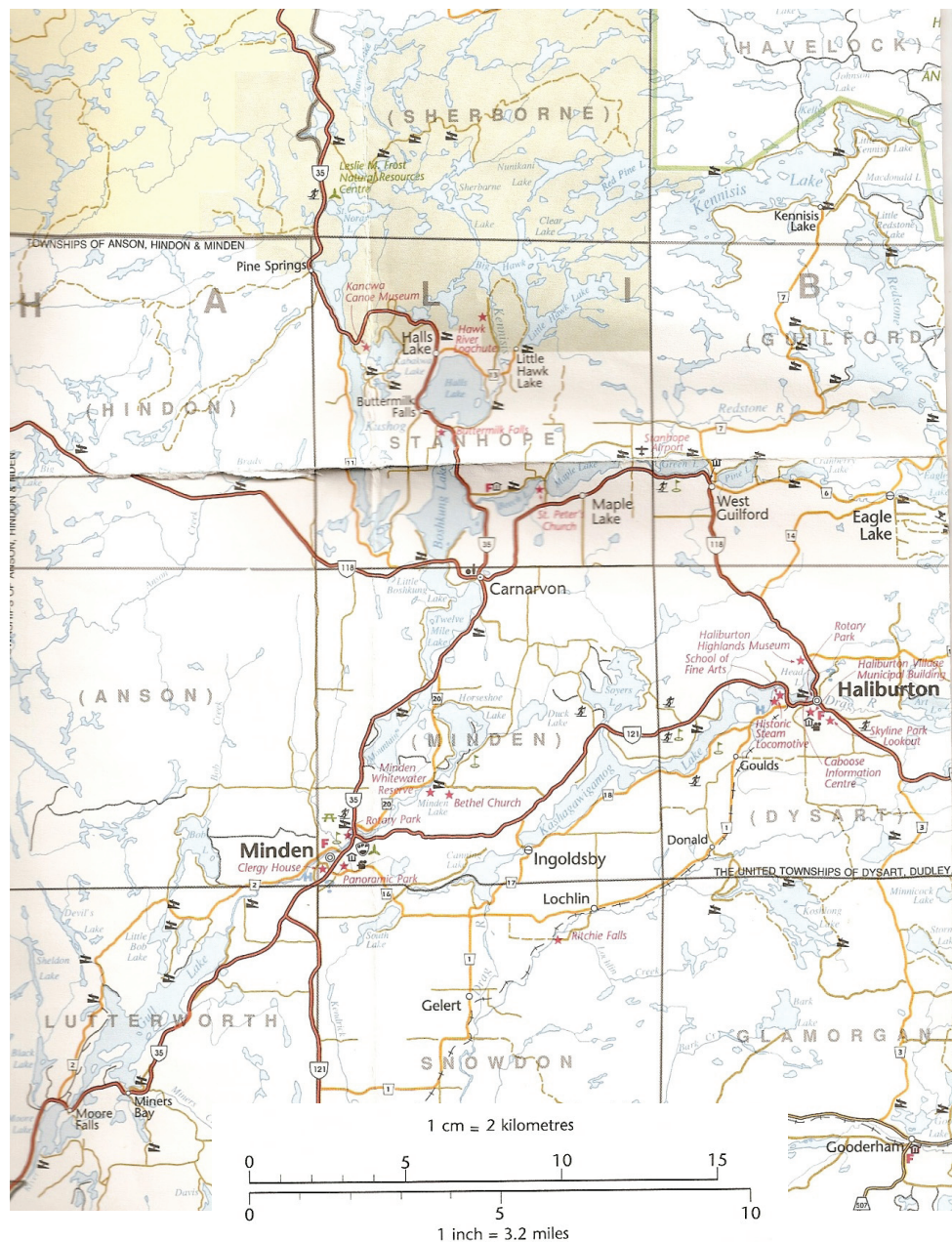
Legend

The legend on a map shows us what the symbols on the map represent. These symbols can include roads, buildings, points of interest, rivers and towns. Look at the following legend. What types of features are included?

Transportation	
	Multi-Lane Controlled Access Highway
	Multi-Lane Kings Highway
	Two Lane Kings Highway
	Secondary Highway
	County Road
	Township Road
	Seasonal Road (public or private)
	Private Road
Settlements	
	15,000 - 200,000
	5,000 - 15,000
	2,000 - 5,000
	1,000 - 2,000
	200 - 1,000
	100 - 200
	50 - 100
	Less Than 50
Selected Features	
	Cross-Country Skiing
	Down Hill Skiing
	Golf Course
	Boat Launch
	Hiking Trail
	Picnic Area
	Community Centre
	Ministry of Natural Resources
	Points of Interest
Other Symbols	
	Ontario Provincial Police
	Hospital
	Fire Station
	Airport
	Information Centre
	Theatre
	Bowling Alley
	Abandoned Railway
	Right-of-Way

Activity 3-11

Look at the map carefully and then answer the following questions.



1. By using the scale and measuring, approximately how far is it from Minden to Carnarvon?

2. What direction do you travel when going from Minden to Haliburton?

3. What direction do you travel when you travel from Halls Lake to Carnarvon?

4. What type of road is Hwy 118?

5. According to the legend on page 109, how many people live in Haliburton?

6. Orient your map to travel from West Guilford to Haliburton. Do your classmates have their maps oriented the same way?

Topographic Maps

Topographic maps are maps made by the Canadian government. These maps include all of the information found on road maps, but they also give detailed information about elevation, groundcover and bodies of water. Topographic maps are available for every area in Canada. Forestry workers who work in large unfamiliar areas or who work alone should always carry a topographic map of the area in case they become lost. These maps can be bought at larger stores that carry hunting and fishing supplies.

Contour Lines

Contour lines connect places that have the same elevation. They can show flat areas, hills, mountains, cliffs and depressions. When contour lines are close together, the elevation is changing quickly. When they are farther apart, the area is flatter.

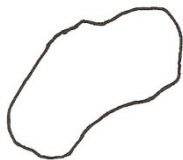
The elevation between the lines will be included in the map legend and the actual elevation will be marked on some lines.



Contour lines in this formation show a hill. The number 500 is the elevation at that line.



These lines are very close together. They show a steep hill or cliff.



This line shows a large, flat area.

The section of the topographic map on the following page is from Squamish, British Columbia. The map shows roads, towns, buildings and the mountainous area around Squamish. Notice how close together the contour lines are in some areas.

All topographic maps have the same colour scheme.

Blue lakes, rivers, ocean, swamps

Green forested areas

White areas with no plants, usually bare rock

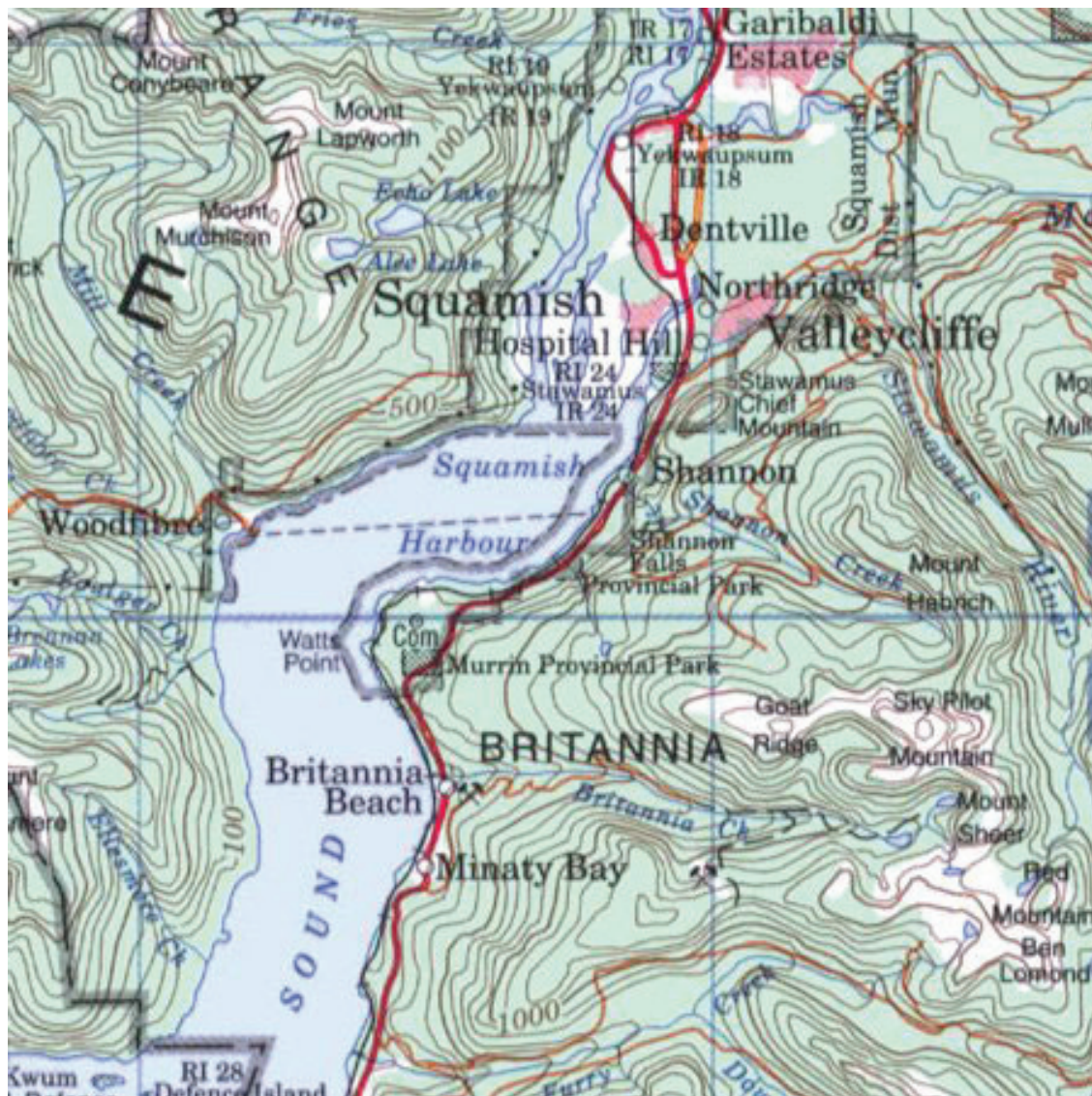
Pink towns and cities

For more information on topographic maps go to <http://maps.nrcan.gc.ca>. This website includes information on how to use topographic maps and how to order maps for your area.

The best way to learn how to use a topographic map is to buy the map for your area and spend time learning to recognize landforms. Being able to use a map correctly could save your life.

Topographic Map – Squamish B.C.

Section of Map NTS 926



Scale: 1:250,000

Being Part of a Team

The forestry industry is all about teamwork. It's about workers doing different jobs, but working together for a common goal: getting the logs to the mill as quickly and efficiently as possible.

One of the most important skills a forestry worker can have is the ability to work as a team member. The keys to being a good team member are believing in the goals of the company and getting along with co-workers.

Activity 3–12

Are you a team player? The following quiz will help you to rate your teamwork skills.

Teamwork Skill	Never	Sometimes	Always
1. I make an effort to get to know new co-workers.			
2. I keep promises and do what I say I will.			
3. I avoid gossip and stay out of other workers' disagreements.			
4. I return favours.			
5. I follow group routines.			
6. I am pleasant when I ask for help or advice and I always say "Thank you".			

7. I discriminate against people of different age, sex, race, religion or sexual orientation.			
8. I “live in the past” and frequently talk about how great things used to be.			
9. I think that young workers are faster, stronger, more efficient and know more than older workers.			
10. I believe in the company and always give 100% while I am working.			

The best team players will have the following answers:

1. **Always** New co-workers decide how they feel about a new team within the first few hours. Good team players always go out of their way to make new workers feel comfortable and fit in.
2. **Always** Co-workers rate you on how well you keep your word. Remember, “A promise made is a debt unpaid”.
3. **Always** Never take sides in disagreements. It only leads to bad feelings long after the disagreement is over. Don’t spread gossip. Gossip and rumours can have a very negative effect on team spirit.
4. **Always** Good team players remember favours and return them.
5. **Always** Try to follow group routines. If everyone takes their coffee break at 10:30, do the same. If the whole group goes out for pizza after work on Friday, try to join them at least once in a while.
6. **Always** Always be polite and use good manners in your dealings with co-workers.
7. **Never** There is no place for discrimination of any kind on a team.
8. **Never** While it is pleasant to have good memories of former jobs, co-workers or supervisors, your present team doesn’t want to hear you talk about how great things used to be.

9. **Never** Younger team members often show “attitude” to older workers. Always remember, what younger team members make up in stamina, strength and new ideas, older workers have in wealth of experience. At the same time, older workers should respect the efforts of younger team members.
10. **Always** The best way to be a good team member is to believe in the goals of your teammates and employer.

This chapter will end with the following story about four forestry workers.

- ▶ This is a story about four people: Everybody, Somebody, Anybody and Nobody.
- ▶ There was an important job to be done and Everybody was asked to do it.
- ▶ Everybody was sure that Somebody would do it.
- ▶ Anybody could have done it, but Nobody did.
- ▶ Somebody got angry (about that) because it was Everybody’s job.
- ▶ Everybody knew that Anybody could do it, but Nobody realized that Somebody wouldn’t do it.
- ▶ It ended up that Everybody blamed Somebody because Nobody did what Anybody could have done.

What does this story mean?



Skill Check – Chapter Three

In this chapter, you have developed your skills in listening, working safely, and being part of a team. Think back over the skills that you worked on in the chapter. Which skills still need more practice?



Skill	OK	Could be improved
I have learned how to listen effectively.		
I have found information about St. John Ambulance courses in my area.		
I know how to stay alert at work.		
I know how to avoid common injuries.		
I can fill out an accident report.		
I understand the WHMIS labeling system.		
I can fill out an environmental incident report.		
I understand directions, scale, and orientation of maps.		
I can read a topographical map.		

My Action Plan

I will improve my listening, First Aid and team-playing skills by:

1. _____
2. _____
3. _____

I would like to learn more about how to improve the following skills:

1. _____
2. _____
3. _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by: _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by: _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by: _____

Instructor's Notes – Chapter Three

Chapter Three covers listening skills, working safely, teamwork and map reading. All activities are at an LBS Level 3.

When doing the listening activities, the instructor should speak in a clear voice at a normal conversation speed. Passages can be reread if students miss information at the first reading.

Access to a computer and an email account will be necessary for Activity 3. If none of the students have email, a Yahoo or Hot Mail account can be set up as an additional activity.

For the map reading section, it is highly desirable that the instructor have on hand Ontario Road maps and a topographical map of the immediate area.

Answer Key

Activity 3–1 Listening Skills

This activity will serve as a review to Chapters One and Two. It is a good opportunity to reinforce areas in which the students have had difficulty. All questions should be open-ended. Some suggested questions follow:

1. What job does a forest conservationist do?
2. Why is it important to arrive at work on time when working in forestry?
3. What should you do if you are going to be late for work?
4. What is a Near Miss Report?
5. What are some examples of good time management?
6. How many 16ths are in an inch?
7. What is Pi?
8. What steps are involved in problem solving?

Activity 3–2 Listening for Key Words

Read the following to the learner so she/he can identify at least six key words.

As you all know, this area of bush is very thick and the landscape all looks the same. We have already lost two new workers in the past week. Fortunately, we found them none the worse for the wear.

Because of this, we're going to start using a "buddy system". Every morning everyone will be assigned a "buddy" for the day. You will be responsible for knowing at all times where your buddy is, what he or she is doing, and what time he or she will be back. If your buddy does not return on time, you will contact the camp cook who will contact me immediately.

Activity 3–3 Organizing Instructions in Stages

Read the following instructions to the learners. Be prepared to answer any questions they may have.

You normally work as a choke setter but your skidder is broken down. Rather than sending you home for the afternoon, your crew foreman has decided that you can run some errands for her.

"You can take the truck and run into town. Check the gas when you get there, I think it's pretty low. Go to Emerson's and see if the saw has been repaired yet. If it has, ask them to put it on our account. If it hasn't, ask them why not. After 12:00 you can pick up the part for the skidder at NAPA Auto Parts. Ask them to throw in three extra 2-inch, number 4 carriage bolts with washers. Oh, and on your way back drop by the office and pick up the pay cheques."

1. Go to town – check gas in truck.
2. If low, refill.
3. Go to Emerson's to pick up saw for repair if ready. If not ready, ask why not. Put on account.
4. After 12:00 pick up skidder part at NAPA and ask to throw in 3 extra 2-inch #4 carriage bolts with washers.
5. Pick up cheques at office on way back.

Activity 3–4

Sharpening Listening and Problem-solving Skills

Learners may say that this is a difficult, even impossible task. It is an excellent opportunity to use team skills. Read the facts several times. Give the learners an opportunity to complete the chart alone. If any learners are having difficulty, divide the class into pairs and let them work together.

Facts:

1. Wade drives a truck and works on logging roads.
2. The worker who drives a Dodge also drives a truck at work.
3. Jeff drives a Chevy truck and uses a chain saw.
4. The worker who uses a computer is not a choke setter.
5. Mike works on a landing.
6. The worker who drives a Toyota uses wire cables on the job.
7. Carol works in reforested areas and drives a Ford truck.
8. The worker who is a planter does not work in the mill office.
9. Josh, the scaler, drives a Honda.
10. The buckler works in the bush.
11. The planter uses a shovel.

Activity 3-4 Answers to Facts:

Name of Worker	Job	Job Site	Equipment Used	Vehicle
Wade	log truck driver	logging roads	truck	Dodge
Jeff	bucker	bush	chain saw	Chevy
Mike	choke Setter	landing	wire cables	Toyota
Carol	planter	Reforested Areas	shovel	Ford
Josh	scaler	mill office	computer	Honda

Activity 3-5 Searching for Information on the Internet

Review answers with learners

Activity 3-6 Body Parts Most Injured

1. legs, ankles, feet, toes
2. head
3. hard hat/safety hat
4. 16.4%
5. end of the day/most of the work is finished
6. middle of the day/full activity and workers are less alert
7. yes
8. discuss responses with students

Activity 3–7 Accident Report

Review answers with learners

Activity 3-8 WHMIS Safety

Review answers with learners

Activity 3–9 Environmental Incident Reports

1. 24 hours
2. immediately
3. immediately

Activity 3–10 Completing Environmental Incident Report

Review completed Environmental Incident Report with Student.

Activity 3–11 Distances and Directions

1. approximately 12 km
2. northwest
3. south
4. two lane highway
5. 1000 – 2000 people
6. check learner’s map for correct orientation

Activity 3–12 Teamwork

Answers will vary

Review answers with learners

Chapter Four

Reading Skills and the Internet



Chapter Four – Reading Skills and the Internet

In Chapter Four, you will improve your reading skills and learn how to find information on the Internet.

Reading Skills

Some forestry workers think that good reading skills are not important for the job, but those workers who want to be good at their job and get ahead know that it is important to be able to read and understand a variety of materials including:

- Directions for operating and repairing equipment
- Health and safety manuals
- Company policies
- Forestry magazines
- Messages, notes and directions
- Finding information in books and on the Internet

Good reading skills are also important in your personal life. Whether you are reading books and magazines for pleasure, instructions for assembling purchases, or the business and government mail that you receive every day, you can make your life simpler by improving your reading skills.

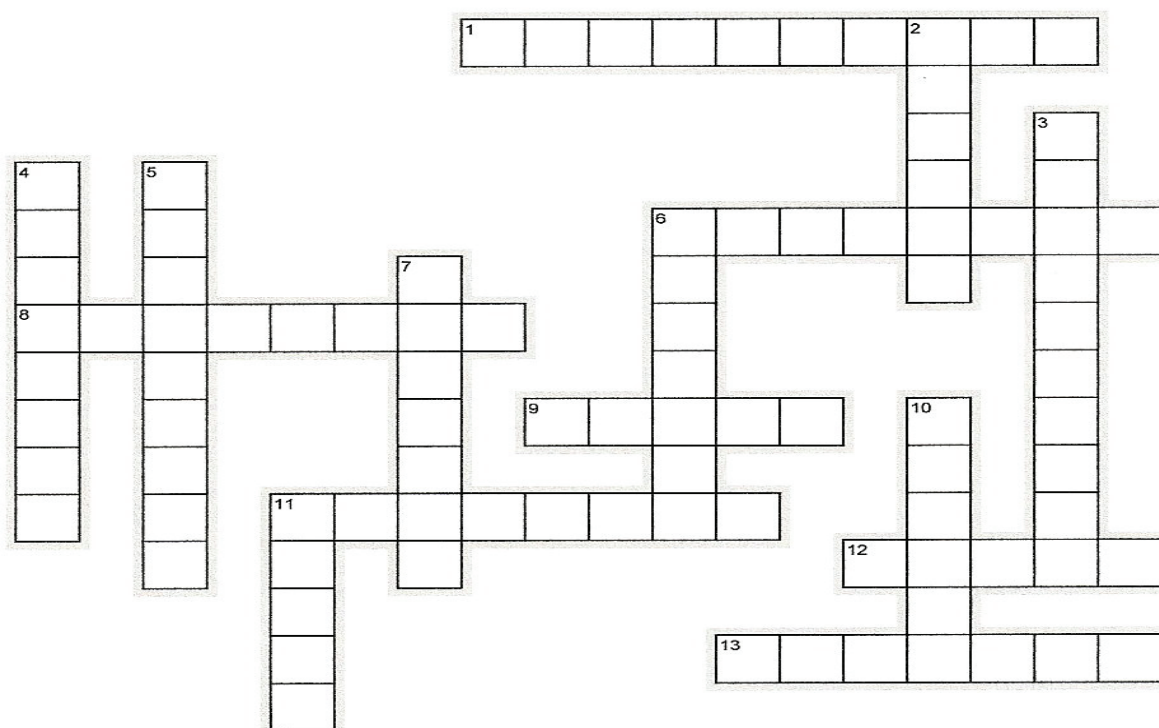
There are many books and courses that can help you to improve your reading skills; in this chapter we will look at some of the strategies that have been proven to work. We will practise with real materials that you may use when working in the forestry industry.

Know Your Subject

If you do not understand the words in a book, magazine, website or manual, it is very difficult to understand what you are reading. The first step in improving your reading skills is to learn all you can about the forestry industry by listening to conversations, asking questions and reading as much as you can.

Activity 4–1

On the following page, you will find a crossword puzzle using some of the words we have learned so far in this course. Complete the puzzle and see how many forestry words you have learned.



EclipseCrossword.com

Across

1. You should always tell your ----- if you are going to be late for work.
6. A very small tree for planting.
8. The distance across a circle.
9. A ---- system prevents workers from becoming lost.
11. There are many jobs in the ----- industry.
12. Safety ---- protect your feet.
13. ----- lines show hills on maps.

Down

2. Large oil ----- must be reported.
3. A ----- unit is an area being logged.
4. North, south, east and west are ----- points.
5. Forestry workers should eat a complete -----.
6. A tractor for pulling logs.
7. An area 100 metres X 100 metres.
10. A near miss ----- records accidents or near accidents.
11. St. John Amulance gives ----- aid training.

Reading Strategies

Even if you had trouble reading in school, you can still learn reading techniques that will help you to understand and remember what you read. With a little practice and a little confidence, you will be able to read material that will make your job and your life simpler and more satisfying.



Each time before you begin to read, ask yourself, “Why am I reading this?” Are you reading for a specific reason or for pleasure? Answering this question will help you to know if the material is suitable and which reading techniques you should use.

Activity 4–2

Why would you read the following types of material?

1. A forestry magazine

2. A local newspaper

3. A company policy on vacation time

4. An MSDS printout for an herbicide you will be using

5. Your company’s health and safety manual

6. A novel from the library

7. Instructions for assembling your daughter’s new bicycle

8. A Near Miss report posted at work

9. A list of winning lottery numbers

10. A web page about an infestation of pine beetles

Newspapers, manuals, instructions, magazines, novels, web pages and mail are just some of the things we read every day. The reading strategy that you use should depend on your purpose for reading. Are you looking for a specific fact? Are you looking for general information? Are you reading for pleasure? Do you want to understand the text completely?

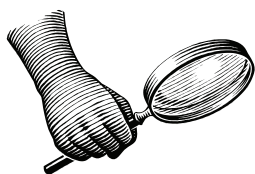
People with good reading skills use several different techniques, depending on what they are reading. Very often, they will use more than one technique. The following techniques will help you to understand and remember what you read.

Leisurely Reading

Leisurely reading is done purely for pleasure. When you read for pleasure, you choose the type of material and read it at whatever speed is comfortable for you. You may learn all kinds of things when you read for pleasure, but there is no pressure on you. Leisurely reading includes books, magazines, puzzles, and newspapers.



Scanning



Scanning is a reading technique that you use when looking up a number in the telephone book or searching for facts and numbers in written material. Most of the time, you know what you are looking for and you quickly scan the material to find the main words or ideas. This technique is valuable when you must find specific information in a document, list or chart.

When you are looking up John Smith's number in the telephone book, you don't start at the beginning and keep reading until you find the number you are looking for. Instead, you go to the section of the book. In rural phone books you would first go to the town, and then to the "S" section of the town where John lives. Then you would start looking down the list of Smiths.

Scanning for information in text is done in much the same way. First you go to the relevant section of the text or chart and then you very quickly scan over the text to find the information that you want. For example, when you need to check the gap on the spark plugs in your chain saw, you wouldn't read the entire service manual. You would look in the Table of Contents or Index, turn to the page with spark plug gaps and scan down the page for the measurement that you need.

Skimming



Skimming is a technique used to quickly find the main ideas and the most important information in written material. When you read the newspaper, you probably don't read it word-by-word; instead you quickly read over the text looking for the main ideas in the story. When you skim a document, your eyes move over the page at three to four times the speed as when you are reading carefully.

There are several different ways to skim text. You can read the first and last paragraphs of the text, read the first sentence of each paragraph or examine the chapters, headings or illustrations in the written material.

Sometimes skimming will help you to find all of the information that you want. If you are not sure if a book, magazine, manual or policy paper contains the information that you need, skimming will help you decide if you should move to the next level of reading - critical reading.

The News Release on the following page was recently posted in the lunchroom on the landing where you work. Your supervisor told the crew that they might find it interesting.

Skim over the News Release, paying particular attention to the headings, the first paragraph, the last paragraph and the first sentence of each additional paragraph. This will give you the main ideas and the most important information in the release. Then, it is up to you whether or not you go back and reread the entire release.

On the page following the "News Release", you will find a summary of the information found by skimming the News Release.

News Release Communiqué



Ministry of Labour

Ministère du Travail

05-133

For Immediate Release
November 24, 2005

ROSKO FORESTRY OPERATIONS LTD. AND SUPERVISOR FINED FOR HEALTH AND SAFETY VIOLATIONS

KIRKLAND LAKE, Ont. – Rosko Forestry Operations Ltd., a logging company based in Kirkland Lake, was fined \$70,000 and a supervisor was fined \$7,000 on November 22, 2005 for one violation each of the Occupational Health and Safety Act that resulted in serious injuries to a young employee.

On November 27, 2002, a worker was using a chain saw to cut large branches off trees when a second worker swung a mechanical “delimber” (a machine that removes and cuts branches from trees) towards the first worker. The delimber was in the process of being used to move a large poplar tree. The first worker was struck in the back by the tree and propelled forward into a pile of trees. The first worker suffered serious facial injuries. It was the injured worker’s first day on the job. The incident occurred at a logging camp south of Highway 101 on a road known as “Road 75” in Dokis Township in an area east of Matheson, Ont. near the Ontario-Quebec border.

Following a trial, Rosko Forestry Operations Ltd. was found guilty of failing to ensure the delimber operator and/or chain saw operator were adequately trained and/or supervised to maintain a safety zone around a delimber. This was contrary to Section 25(2)(h) of the act.

In addition, a supervisor was found guilty of failing to take the reasonable precaution of ensuring the injured worker was properly trained and/or supervised before starting to work in proximity to the delimber. This was contrary to Section 27(2)(c) of the act.

The fines were imposed by Justice of the Peace Patricia Tennant of the Ontario Court of Justice in Kirkland Lake. In addition to the fines, the court imposed a 25-per-cent victim fine surcharge, as required by the Provincial Offences Act. The surcharge is credited to a special provincial government fund to assist victims of crime.

-30-

Contacts:
Belinda Sutton
Ministry of Labour
416-326-7405

Dan Kleiman
Crown Counsel
Legal Services Branch
Ministry of Labour
416-326-7584

What information did you find from skimming the article?**Headings**

- From the Ministry of Labour
- Rosko Forestry fined for health and safety violation

First Paragraph

- Kirkland Lake
- Company fined \$70,000, supervisor fined \$7,000
- Young worker injured

Second Paragraph – First Sentence

- Worker using a chain saw struck by a mechanical de-limber

Third Paragraph - First Sentence

- Company fined – workers not properly trained

Fourth Paragraph - First Sentence

- Supervisor fined

Last Paragraph

- Fines imposed by courts in Kirkland Lake court

These are the main ideas in the News Release. If you want more information, you can go back and read the entire text more carefully.



Critical Reading – SQ3R

Critical reading techniques are used when you need to read long, complicated text. While forestry workers are not normally required to read textbooks, they are required to read health and safety manuals, company policies and operating manuals for equipment.

One of the most popular critical reading techniques is called SQ3R. It may sound like the name of a robot, but it is actually a technique that can help you to read, understand and remember long complicated pieces of text.

SQ3R means survey, question, read, recite, review. By following these steps, even the most hesitant reader will understand manuals and other longer printed materials.

Survey the Text

Get an idea of what the chapter is about. You do this by skimming the text very quickly. Read the first and last paragraph, titles, headings, captions, charts and graphs. This will give you an idea of what is included in the text. Once you have surveyed the material, you will have a good idea of what type of information is included.

Using a highlighter will help you to identify the main points in printed text. If you are surveying an article on the Internet, print off the text that you need. It is more difficult to effectively scan material on a computer screen than it is to scan from a printed page.



Question

As you skim the text, think of questions for each section. Write down who, what, when, where, why and how questions that you want answers to. This is the step that most people find most difficult. Why should you write questions before you have read the entire text? Writing down these questions will help you to pay more attention, understand the text and remember the information later on.

Read

Read each section carefully, looking for answers to your questions. Pay special attention to text in bold or italics. These points will be very important. If you come across a word that you don't understand, don't skip it. Ask a co-worker or look it up in a dictionary. It doesn't matter how slowly you read the text; just be sure that you read slowly enough to understand. Be sure to look at pictures, graphs and charts in the text. They will help you to understand the meaning.

Recite

At the end of each section, take a few minutes to repeat what you have read. Write down the important information. If you can't remember something, go back and read it again.

Review

When you have read the entire text, look over your notes. You should be able to remember the main points of the material.

Activity 4–3

Go back to the list of reading materials in activity 4–1. Which reading techniques would you use for each?

1. A forestry magazine

2. A local newspaper

3. A company policy on vacation time

4. An MSDS printout for an herbicide you will be using

5. Your company's health and safety manual

6. A novel from the library

7. Instructions for assembling your daughter's new bicycle

8. A Near Miss report posted at work

9. A list of winning lottery numbers

10. A web page about an infestation of pine beetles

Activity 4–4 Scanning

Your supervisor has given you the chart below. The chart outlines the species, preferred length and top diameter of logs that you will be shipping from your landing. Scan the chart and answer the questions that follow.

	Top Diameter INCHES	Preferred Length FEET
Fir High Grade	24" Top and over	44', 35', 29', 21'
Fir Premium	16" +	55', 48', 41', 34'-6", 27'-6", 21'
Fir/Pine Sawlog	12" +	55', 48', 41', 34'-6", 27'-6", 21'
Hemlock/Balsam High Grade	24" +	44', 35', 29', 21'
Hemlock/Balsam Saw Log	12" +	55', 48', 41', 34'-6", 27'-6", 21'
Fir/Hemlock/Balsam - Peeler/Sawlog	6" to 11" Tops	53', 44', 35'-6", 27'-6", 18'
Cedar High Grade	30" +	41', 34', 27', 21'
Cedar Sawlog/Shingle	15" +	49'-6", 41', 37', 33', 21'
Cedar Gang	6" to 14" Tops	49'-6", 41', 37', 33'
Cypress/Spruce	6" +	41', 38', 34', 27', 24', 21'
Boomsticks	Fir/Hemlock (14" +) Balsam (16" +) .. 70'	

Your Safety Comes First... Do It Right The First Time!

1. Will you be shipping Hemlock logs?

2. What is the minimum (smallest) top diameter for Cyprus and Spruce logs?

3. What is the maximum length for boomsticks?

4. Are the logs measured in metric or imperial units?

Activity 4–5 Skimming

Recently, you have noticed beetles on the pine trees in the bush where you are working. They are about 7 millimetres long, shiny and dark green. They have a soft shell and are tube-shaped. You are concerned that these beetles may be Western pine beetles which have caused very serious damage to the forests in western Canada. You would like to know exactly what Western pine beetles look like. If they have moved into your area, the forest industry could suffer; on the other hand, if they are not pine beetles, you don't want to alarm your co-workers.

The article on the following page appeared in the local newspaper. By scanning the title of the article, you know that it is about “bugs” infesting the forest. Before reading the entire article, you want to know if the “bugs” are Western pine beetles, and if there is information to help you identify the beetles in your area.

Read the article by **skimming**. Read the first and last paragraphs and the first sentence of each paragraph in the article. Using a highlighter may make it easier to identify these parts of the text.

Bugs infest Forest

No threat to city trees

By MATT BROADHURST

Staff writer

Coeur d'Alene Press, October 1998

COEUR D'ALENE – Nearly 75,000 acres of the Idaho Panhandle National Forest are infested with deadly beetles and another 200,000 acres could be, according to Forest Service officials.

However, the outbreak of Douglas fir bark beetles and Western pine beetles appear to be limited to the forest. Karen Hinson, Urban Forestry coordinator for Coeur d'Alene, said the insects find their way into the city, but don't stay because they are attracted to dead, dying and stressed trees that are not common in residential areas.

"That's the reason why we cleaned the (1996) Ice Storm debris off Tubbs Hill," Hinson said.

Still, she encouraged homeowners to keep an eye on their trees to catch any potential problems before it's too late.

Sandy Kegley, Forest Service entomologist, said the beetle attack is the largest recorded since the 1950s. A team of specialists from the USFS is currently assessing the severity of the outbreak and what actions should be taken.

Kegley said the winters of 1996 and 1997 brought a lot of damage to the forest. The beetles flocked to the dead and dying trees and began reproduction in healthy trees nearby. The firs sustained additional stress during the hot, dry summer, which made them even more susceptible, Kegley said.

The red-needled trees east of Hayden Lake, which look to be a part of the fall foliage, are actually part of a two- to four-year outbreak, she said.

"We are finding that for every red-needled tree that exists," Kegley said, "there are about 5

to 10 green trees that were attacked this year."

Recently attacked trees will have a small pile of sawdust at the trunk, which is caused by the beetles boring into the tree.

Art Zack, a forest ecologist, said the outbreak is a sign the ecosystem is out of balance.

What we are seeing is a result of there being almost twice the amount of Douglas fir trees in our forests than what was there historically," he said. "There used to be a better mix of other species like white pine, Ponderosa pine and larch; all species that are more resistant to many insects and diseases and a better match for the climate and growing conditions of north Idaho."

Zack attributes the population explosion of Douglas firs on the suppression of wildfires, white pine blister rust and past logging that removed resistant species. Information from the Interior Columbia Basin Scientific Assessment shows this problem is prevalent in many areas throughout the Columbia River Basin.

Dave Wright, forest supervisor for the IPNF, said his staff will develop recommendations by the end of the week. The team is giving emphasis to the implications involving adjacent private lands, the future effects on wildfires, the protection of recreation facilities and opportunities for ecosystem enhancement.

"If this were the old days, our recommendation would probably be to remove all the beetle-attacked trees we could reach," Wright said. "But these aren't the old days and we have a lot of other components of the ecosystem to consider before we do anything."

1. What information is found in the first paragraph?

2. What information is found in the last paragraph?

3. List five main points that are found in the rest of the text. (You will find these points by reading the first sentence of the paragraphs.)

- A.

- B.

- C.

- D.

- E.

4. Does the article include a description of the Western pine beetle?

5. Where might you find a description of the Western pine beetle?

6. Adult Western pine beetles are dark brown or black. They have a cylindrical body and a hard shell. These destructive beetles are 4 – 5 millimetres long. Are the beetles in your area Western pine beetles? Why or why not?

Activity 4–6 Critical Reading

You are an independent logger. You recently won your first contract to log on Crown Land. This contract is very important to you and you want to do things right. The land is very hilly and a river and several streams pass through it.

The local Ministry of Natural Resources Office has given you a copy of the following guidelines:

Code of Practice for Timber Management Operations In Riparian Areas

Use critical reading skills to help you to understand and remember the text.

Step One

Survey the text. Pay attention to the Table of Contents, Headings, captions under photographs, and the first and last paragraphs in each section.

Take your time; this is not a race. Remember to check the meaning of any new or unfamiliar words. For example, what does “riparian” mean?



The area where land and water meet is called the riparian zone. It is a transition zone, containing elements of both upland and aquatic ecosystems. Because of this, it is the most productive environment in the forest.

A. INTRODUCTION

A primary objective for forest management practices in the vicinity of water bodies is to minimize soil and site disturbance and that is the intent of this code. The careful choice and implementation of harvest and renewal practices, as part of day-to-day operations, will minimize the occurrence of erosion and the potential for eroded material to enter nearby lakes and streams (sedimentation). (see Endnote 1)

This code of practice was developed as a result of a need identified by MNR and MOE to expressly protect water quality. Therefore, the objective of this code is to protect water quality through describing good, on-the-ground forest management practices that are to be undertaken in riparian areas. This code is to be used in conjunction with the "Timber Management Guidelines for the Protection of Fish Habitat" and the Fisheries Branch Policy FI .3.03.01. Riparian areas are those areas surrounding the waters which are identified in the Fisheries Branch Policy (Figure 1).



Figure 1. The Code of Practice is to be used in conjunction with the "Timber Management Guidelines for the Protection of Fish Habitat", and applies to all headwater lakes, lakes greater than 10 ha or which possess significant fisheries values, permanent streams and intermittent streams which provide spawning habitat for fish.

The practices, which are described in this code, are to be applied to all planned and approved harvest and renewal activities in riparian areas. They set out, with respect to the protection of water quality, how operations are to be conducted. These practices are to be followed during the implementation of the activities. Therefore, the primary audiences for this code are the local forester, local forest technician, area supervisor and the machine operator.

Permanent Stream



Intermittent Stream



Factors such as slope, soil characteristics, vegetative cover, season of operation and equipment should all be considered when operational decisions are made. It is realized that since site conditions vary, some flexibility in using the code is necessary (Figure 2). The choice of the operational practice must also consider equipment availability, safety factors, economics, and environmental concerns not directly related to water quality.



Figure 2. Flexibility in using the Code is necessary. Slope, soil characteristics, vegetation cover, season of operation, equipment availability, safety factors, economics, and environmental concerns must all be considered when operational decisions are made.

Sensitive riparian areas are those sites adjacent to water bodies, which are steeply sloped and prone to soil erosion and soil compaction.

This code of practice is essentially based on "common sense" and the application of professional expertise which has been gained through practical experience. The practices are simply expressed so that clear, on-the-ground instructions can be given to equipment operators.

The objectives of the practices are to avoid areas of high erosion risk and to avoid excessive exposure of mineral soil and excessive soil compaction.

B. THE CODE

1. SLOPE

Harvest and renewal equipment must be used in such a way as to minimize the removal of residual vegetative cover and to avoid excessive exposure of mineral soil on steep slopes in order to prevent the establishment of erosion channels.

Discussion

As indicated in the Timber Management Guidelines for the Protection of Fish Habitat, the potential for soil erosion increases with increasing steepness of slope. Consequently, operations on steep slopes must be conducted with particular care.

Slopes over 40% are generally inoperable with conventional equipment. Slopes between 10% and 40% pose a relatively high potential for the entry of eroded material into a water body if the surface organic layers are removed.

When operating on these slopes, measures designed to reduce the risk of erosion should be taken (Figure 3), such as:

- using extra-long winch cables
- careful selection of skid trail location or locations
- skidding along the slope contours where safety allows
- avoiding repeated use of the same skid trail
- following slope contours when using heavy site preparation equipment.

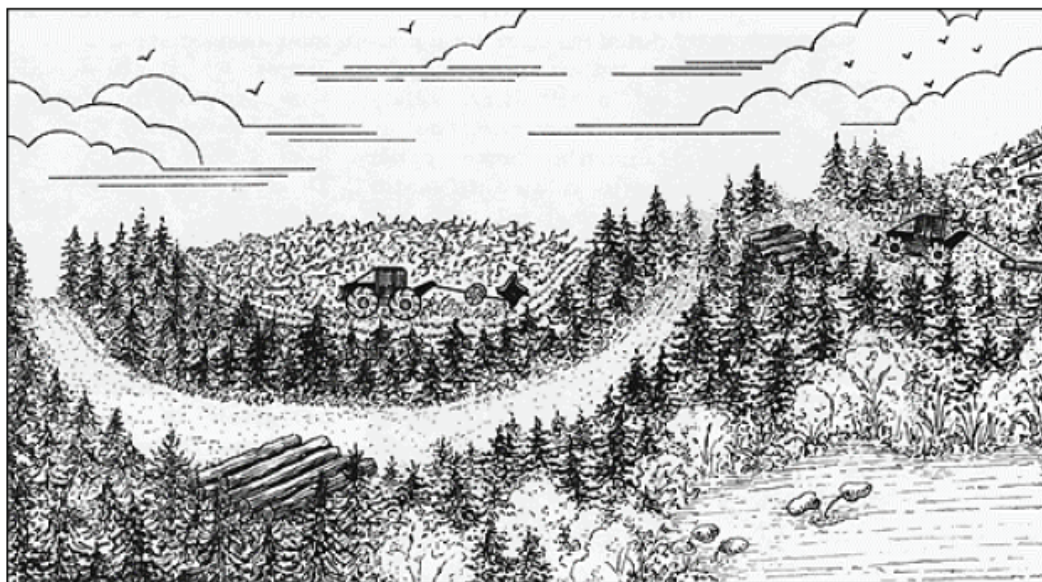


Figure 3. Soils on slopes between 10% and 40% are sensitive to erosion. Careful selection of skid trail location and operating equipment along slope contours reduces the impact of erosion and sedimentation. Slopes less than 10% pose less erosion potential. Nevertheless, operations on these slopes should also be carefully conducted so as to maintain the residual vegetative cover and surface organic layers.

2. SOIL

Soil texture and moisture must be considered in carrying out operations. Activities that cause excessive exposure or compaction on erosion-prone soils or on soils that are prone to compaction, must be avoided.

Discussion

Fine-textured soils, and fine sands are prone to erosion if exposed to wind or water by the removal of surface organic layers. Excessive exposure of these soils must be avoided.

Soil moisture also influences the choice of operational method. Wet soils and fine-textured soils are more susceptible to disturbance (e.g. rutting) than dryer, medium or coarse soils.

Soil compaction is a function of soil texture and moisture as well as the type of equipment and amount of repetitive travel. Fine-textured soils are more prone to compaction than coarse textured soils. Therefore, care must be exercised during operations on fine soils. The greatest compaction occurs on skid trails and may result in concentration and channelization of run-off. Severely disturbed or compacted soil may interrupt soil moisture movement and thereby affect the success of renewal operations.

3. SEASON OF OPERATION

Equipment that is appropriate for the season must be used on sites that are susceptible to rutting and compaction.

Discussion

Season of operation is critical under certain combinations of soil and slope characteristics. On sites which are susceptible to rutting and compacting, summer logging requires use of high flotation equipment. Use of standard equipment on poorly drained sites, that may be susceptible to rutting and compaction, should be limited to dry periods or frozen ground. Operations during extremely wet periods of the year may also cause rutting on some fine-textured soils and must therefore, be avoided.

4. EQUIPMENT

Equipment type and function are necessary considerations when choosing the equipment which is to be used in riparian areas. Careful practice by machine operators to avoid site damage must be employed when operating in the vicinity of water bodies.

Discussion

Harvesting and renewal equipment and operating methods vary across the province. Careful practice by responsible machine operators is the key factor in preventing site damage in all operations in the vicinity of water bodies. Poor operating practices increase the potential for site damage especially on sensitive sites.

The selection of equipment and systems is based on local site conditions. If the appropriate machinery is not available at the stipulated time of year for the existing terrain conditions, or should operations become too costly, a decision not to permit operations or to postpone them should be taken. High flotation harvesting equipment should be used on unfrozen ground on sites where erosion, rutting and compacting potential is high (Figure 4). The use of normal, rubber-tired machinery on these sites should be limited to dry periods of the year or in winter after adequate freeze-up. Heavy equipment used for renewal should be used in acceptable patterns (e.g. following slope contours) and on sites not prone to erosion and compaction. Careful use of lightweight site preparation equipment may be acceptable on sensitive areas.



Figure 4. Fine textured soils, and deep, wet organic soils are more prone to soil disturbance than other soils. High flotation harvesting equipment should be used on sites where the potential for erosion, rutting, and compaction is high.

5. OTHER

The following specific practices are to be followed:

- a) Trees must not be felled into water bodies at any time of year. No debris of any description is to be deposited in water bodies (Figure 5).
- b) No logging debris is to be left on the banks of streams, rivers or lakes.
- c) Trapline trails and portage routes used for recreational purposes should be rehabilitated and cleared of logging debris following timber operations. [Amended consistent with Term and Condition 76 in the Decision of the Environmental Assessment Board for the Class Environmental Assessment by the Ontario Ministry of Natural Resources on Timber Management on Crown Lands in Ontario, released April 20, 1994.] (see Endnote 2)
- d) Equipment operating adjacent to water bodies shall not cause destruction or slumping of banks.
- e) Equipment is not to travel within streams or rivers during harvest or renewal operations so as to cause damage to banks or beds. Stream crossings are to be kept to an absolute minimum.
- f) Establishment of tertiary roads within riparian areas is only permitted in exceptional cases, where no reasonable alternative exists.



Figure 5. Fell trees away from water to avoid debris loading. The use of extra-long winch cables allows the surface vegetation to remain intact, an important consideration on sensitive soils.

- g) A narrow filter strip of approximately three metres of undisturbed forest floor or vegetation (not necessarily tree species) is to be left on the banks of water bodies except where necessary to cross a stream (Figure 6).
- h) Equipment is not to be refueled or lubricated in riparian areas. Gasoline and oil for such equipment are not to be stored in riparian areas (Figure 7).



Figure 6. Forest operations have left a minimum 3 metre filter strip of undisturbed vegetation along the shore to serve as a protective barrier and filter from upslope activities.



Figure 7. Equipment maintenance (refueling, lubricating, washing, etc.) should be undertaken on stable soil away from riparian areas. The greater the distance from the watercourse, the more opportunity harmful substances have to break down.

C. IMPLEMENTATION

The responsibility for implementing this code rests with the industry or Crown forestry staff. In the case of the Crown, it will be the local area forester. Some of the practices, where appropriate or where warranted, must appear in the Forest Management Plan, or as a special condition in the harvest approval document. The actual on-the-ground practice is in the hands of the equipment operator. The forester and the equipment operator must jointly carry out the operations in riparian areas so as to protect water quality. Training and communication of the objectives and good practices are the responsibility of company staff and the Crown forester. The MNR will undertake to conduct training sessions for staff, or joint sessions with company staff, on this topic and produce a booklet for educational purposes.

D. MONITORING AND ENFORCEMENT

Practices in riparian areas will be monitored regularly for compliance by the area inspector as part of the inspection of harvest and renewal operations. Should water quality be adversely affected, the normal enforcement process will occur through application of relevant legislation which includes: *the Lakes and Rivers Improvement Act, the Water Resources Act, the Crown Forest Sustainability Act, the Fisheries Act, and the Environmental Protection Act.*

E. SUMMARY

When operations are conducted in riparian areas, the factors of slope, soil characteristics, vegetation, season and equipment type must all be considered. They cannot be considered separately as all are interrelated. The results of the operations must be to minimize site damage.

Practical standards of conduct that are easily learned will prevent, in conjunction with the "Timber Management Guidelines for the Protection of Fish Habitat" and the Fisheries Branch Policy, erosion and sedimentation of waterbodies.

Endnotes

1. A Manual entitled "Environmental Guidelines for Access Roads and Water Crossings" provides comprehensive and specific direction with respect to practices during the construction and maintenance of access roads.
2. Term and Condition 76 (T & C 76) of the EA Board's Decision on the Class Environmental Assessment of Timber Management states:

"MNR shall provide in the Code of Practice for Timber Management in Riparian Areas, that operators ensure that trails used for accessing and working traplines and portage routes used for recreational purposes be rehabilitated and unobstructed following timber operations. MNR and operators shall consult with affected trappers and recreationists prior to operations in order to identify such trails and portages".

The recently approved Forest Management Planning Manual (FMPM) provides direction on public consultation, including consultation related to T & C 76, as part of the planning process (page A-148). Appendix II of the FMPM provides direction on identifying trapline areas and recreational trails such as portage trails on values map(s) for the management unit.

By using skill, knowledge, sound judgement, and common sense, these vital resources can be protected for their own benefit and the benefit of all those who use and enjoy a healthy forest resource.



Step Two – Questions

Now, take some time and think of one or two questions you might like to see answered in each main section. This is the part that some people find difficult. Go ahead, just think about what kind of information you think might be in the section.

The first two sections are done for you.

Introduction

- Who wrote the guidelines?
- Will the guidelines tell me how to protect the river and streams?

Slope

- Will the guidelines tell me how to work safely on steep slopes?
- Are there slopes that are too steep to log?

Soil

- _____?
- _____?

Seasons of Operation

- _____?
- _____?

Equipment

- _____?
- _____?

Other

- _____?
- _____?

Step Three - Read

Now, go back and read each section carefully. When you finish a section, take a few minutes to think about what you have read.

Step Four - Recite

After you have finished reading a section, repeat the main points out loud and then jot down a few notes including the main points and information in the text.

Main Points in the Guidelines:

Introduction

Slope

Soil

Seasons of Operation

Equipment

Other

If you do not remember what the section was about, go back and read it again, making sure that you understand all of the words used in the text.

Step Five - Review

When you have finished reading the entire article, look over the main points that you have written down covering each section.

Reading long, complex text may seem a little frightening at first, but, with a little practice, it will become much easier. Practise the SQ3R technique on your own. That way you will be more comfortable the next time you need to read, understand, and remember longer text.

The Internet holds a wealth of information, but many workers hesitate to use it because of their weak reading skills. Once you have mastered the skills of **scanning, skimming, and critical reading**, you will be ready to enter the world wide web of information.

Finding Information on the Internet

Some forestry workers believe that they may have one of the few jobs that do not require computers. A quiet landing in the forest may seem to be a world away from computers; in fact, most employers now believe that the most successful forestry workers are those who have basic computer skills.



Employers don't expect workers to be computer geniuses, but they do recommend that they be able to locate information on the Internet. The Internet can give you access to important information including:

- Information about the forestry industry
- Information about your particular job
- Health and safety information
- Directions for operating and repairing equipment
- Weather forecasts and maps
- Solutions to problems that you may have at work, or in your personal life

Finding information on the Internet does not require keyboarding (typing) skills, nor does it require you to understand computer technology. All you need to find information on the Internet are a few basic steps and a little practice. Even if you do not have a computer at home, thousands of public libraries, schools and community centres across Canada have computers available for public use thanks to the federal government's CAP (Community Access Program).

The biggest problem for anyone who hesitates to use a computer is fear of the unknown. Always remember: a computer is nothing more than a machine. It is much easier to operate than a chain saw or a skidder.

The World Wide Web

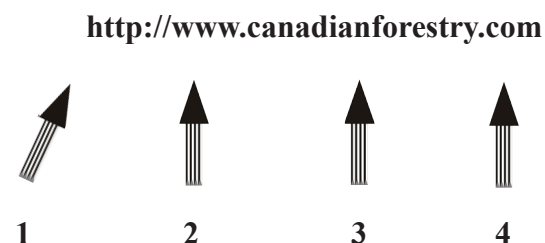
"The world wide web" and "surfing the net" are expressions that should be familiar to most people by now.

The "world wide web" is simply the network of information that can be found through the Internet, a connection that allows you to contact other computers, and stores of information from around the world. The world wide web is a library of information that you can access quickly and at no cost.

"Surfing the net" means using the Internet to find the information that you need.

Getting Started

Information on the Internet is stored in websites. A website is much like a book. It may be just one page, or it may have many pages. Just as a book has a title, a website has a name as well. The name of a website is called the URL (pronounced like the man's name Earl). The URL for the Canadian Forestry Association looks like this:



Every URL includes the following information:

1. **http://** This is the **prefix** of the URL. Most URLs begin this way.
2. **www.** This is also a standard part of a URL. This section is followed by a . (dot). When entering a URL, it is very important to spell the URL perfectly, and not leave out any dots.
3. **canadianforestry** This is the name given by the organization or company for the website. It is called the domain name. Domain names are generally all in lower case (small) letters and never have spaces between words.
4. **.com** is the **suffix** of the URL. This gives you some idea of the type of organization or business that is hosting the website. Common suffixes include:

.com	Commercial business
.ca	Canada
.edu	Educational institution sites
.gov	Government agency or ministry
.org	Not for profit organization

How Do You Find Information on the Internet?

There are two ways to access information on the Internet. The first way is by simply entering the URL of the website that you want to see into the browser on your computer. All computers with a connection to the Internet have a web browser that connects them to the web. The most common web browsers are Microsoft Internet Explorer and Netscape Navigator. Both browsers look very similar. When your computer is turned on, double click on the Internet Explorer or Netscape Navigator icon (picture) on your desktop.

You will see something like this:

File Edit View Favorites Help					
					
Back					
Address:					

Enter (type) the URL in the box beside Address and hit the large Enter key on the right side of the keyboard. The website should appear.

Activity 4–7

Using your computer at school, home or a CAP location, open your web browser and enter the following URL. Remember to enter the URL exactly as it appears below:

<http://cap.ic.gc.ca>

When the website appears, click on English.

1. What is the website? _____

Read the paragraph at the top of the page, and follow the instructions below.

[About CAP](#)

[Ontario](#)

Scroll down until you find your province and click on it.

Scroll down until you find your nearest town.

Where is the CAP location nearest your home?

2. _____



The second way to find information on the Internet is by doing a search. There are many different search engines available. Search engines help you find the information that you are looking for. The most popular search engine is Google, and we will practise doing searches using this engine.

You have just started a new job as a chain saw operator, and you would like to find information on the Internet on the safe use of chain saws.

Start by opening Google.

1. Open your web browser by **double clicking** on the **Internet Explorer or Netscape** icon on your desktop.
2. Enter ***http://www.google.ca*** in the address line.

3. A screen like the one below will appear. Enter the word “chain saw” in the box as shown below, and then **click** on “Google Search.”



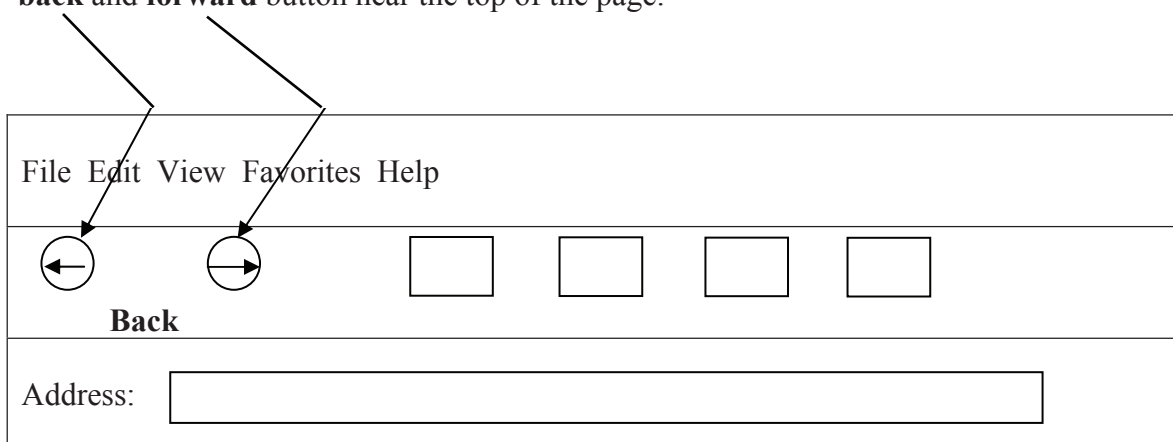
4. If you read the line that starts **WEB** near the top of the page you will see that you have found **Results 1 – 10 of about 7,810,000 for chain saw**. This means that there are almost 8 million websites available with information on chain saws. The sites include information on buying chain saws, operating chain saws, repairing chain saws and safety tips. You have just discovered the biggest problem with finding information on the Internet: there is too much information.
5. You need to **refine** your search. The search engine uses **key words** to find information. You can help the search engine by entering key words. Go back to the Google **home page** and enter the following.
- “chain saw safety tips”**
6. Now you have found the information that you want. The domain names of the websites are in blue and underlined. A small description of the site follows. Scroll down the page until you find a site that looks interesting.

7. **Click** on the blue title of the website that interests you. The site will open.
8. There may be many pages of websites with the information that you are looking for. At the bottom of the page you will see a line that looks like this:

Result Page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [Next](#)

To go to another page, **click** the number. Remember, the websites that match your key words most closely will be listed first.

9. You can go back and forth between the websites that you have seen by using the **back** and **forward** button near the top of the page.



Finding your way around websites

10. Once you have found a website that includes the information you are looking for, you can **navigate** through the site by clicking on different pages. For example, if you have entered the site **Chain Saw Safety: No Tricks**, you will see a list of pages, in red and underlined. On the Internet, underlining shows links to other pages or to other related websites. **Links** can also be **tabs** at the top, bottom or side of the page.

Activity 4–8

Use your web browser and a search engine to find information on a forestry subject that interests you.

1. What key words did you use?

2. How many results did you get? _____

3. Refine your search. What are your new key words?

4. How many results did you get this time? _____

5. Choose one of the websites. What is the website?

6. How do you navigate through the site? Tabs, underlined links, or both?

7. How many pages are on the site? _____

8. Did the site have useful information? Why or why not?

Skill Check – Chapter Four

In Chapter Four you have improved your reading skills and learned how to find information on the Internet. Think back over the skills that you worked on in the chapter. Which skills still need more practice?



Skill	OK	Could be improved
Reading Skills		
I understand the importance of a good vocabulary.		
I have learned how to scan printed material for facts.		
I have learned how to skim printed material for general information.		
I have learned how to use the SQ3R technique for critical reading.		
Internet Skills		
I understand the parts of an URL.		
I can enter an URL into my web browser.		
I can do a Google search for information.		
I understand how to refine Internet searches.		

My Action Plan

Better reading skills will improve my life in these ways:

1. _____

2. _____

3. _____

I would like to learn more about the following reading and Internet skills:

1. _____

2. _____

3. _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

1. Skill _____

I can use this skill to improve my life by:

2. Skill _____

I can use this skill to improve my life by:

3. Skill _____

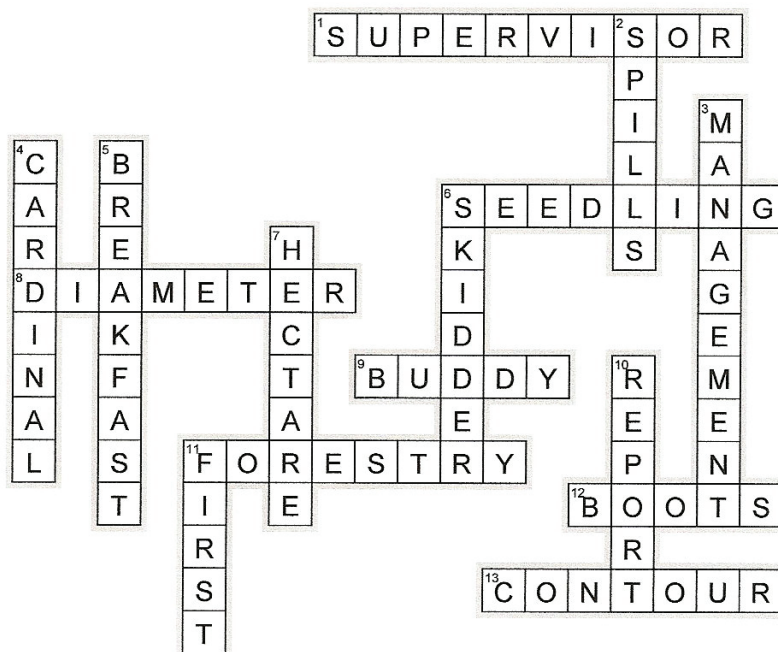
I can use this skill to improve my life by:

Instructor's Notes – Chapter Four

Answer Key

Activity 4–1 Reading Skills

Answers:



EclipseCrossword.com

Activity 4–2 Reading Strategies

Answers may vary, but may include:

1. A forestry magazine
 - learn more about the forestry industry
2. A local newspaper
 - news about your area
 - classified ads
3. A company policy on vacation time
 - see how many vacation days you have

4. An MSDS printout for an herbicide you will be using
 - in case of a spill
 - to learn how to use the chemical safely
5. Your company's health and safety manual
 - to learn what to do in case of an accident
 - to learn how to report an accident
 - to learn safety procedures
6. A novel from the library
 - for pleasure
7. Instructions for assembling your daughter's new bicycle
 - for directions on how to assemble the bike
8. A Near Miss report posted at work
 - to see what happened
 - to see who was involved
9. A list of winning lottery numbers
 - to see if you are a winner
10. A web page about an infestation of pine beetles
 - to learn what pine beetles are
 - to learn what kind of damage the beetles do
 - to see if the beetles are in your area

Activity 4–3 Reading Techniques

1. A forestry magazine – skimming/critical reading
2. A local newspaper – skimming/leisure
3. A company policy on vacation time – scanning/skimmming/critical reading
4. An MSDS printout for an herbicide you will be using – scanning/skimmming
5. Your company's health and safety manual – skimming/critical reading

6. A novel from the library – leisurely reading
7. Instructions for assembling your daughter’s new bicycle - scanning/skimmming
8. A Near Miss report posted at work – skimming/critical reading
9. A list of winning lottery numbers - scanning
10. A web page about an infestation of pine beetles – skimming/critical reading

Activity 4–4 Scanning

1. Will you be shipping Hemlock logs? - yes
2. What is the minimum (smallest) top diameter for Cyprus and Spruce logs? - six inches
3. What is the maximum length for boomsticks? – 70 feet
4. Are the logs measured in metric or imperial units? – imperial

Activity 4–5 Skimming

1. What information is found in the first paragraph?
 - 75,000 acres infested with beetles / 200,000 acres could be
 - National forests
2. What information is found in the last paragraph?
 - Ways to handle infestations have changed
3. List five main points that are found in the rest of the text. (You will find these points by reading the first sentence of the paragraphs.)
 - Infestation is caused by Western pine beetles
 - Infestation not in cities yet
 - Worst outbreak since the 1950s
 - More Douglas fir trees
 - Recommendations to be made
4. Does the article include a description of the Western pine beetle?
 - No

5. Where might you find a description of the Western pine beetle?
 - Library
 - Internet
6. Adult Western pine beetles are dark brown or black. They have a cylindrical body and a hard shell. These destructive beetles are 4 – 5 millimetres long. Are the beetles in your area Western pine beetles? Why or why not?
 - No, they are not. Your beetles are too big, a different colour, and have a soft body.

Activity 4–6 Critical Reading

Riparian: Relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater.

Step Two – Questions

Answers will vary. As students may believe different aspects of the text to be most important, instructor should check students' answers to be sure they are appropriate.

Activity 4–7 Finding Information on the Internet

1. Government of Canada – Community Access Program
2. Answers will vary

Activity 4–8 Locating Information on Their Own

Answers will vary but should indicate the following achievements:

- That the learner completed the questions successfully
- The answers were easy to read and understand
- The learner explained why the site was or wasn't useful

Chapter Five

Writing Skills



Chapter Five - Writing Skills



In the past, forestry workers were seldom required to use their writing skills, but paperwork is fast becoming an important part of the industry. To be successful in the industry today, workers may have to be nearly as comfortable working with a pen as they are with a chain saw. Forestry workers are required to use their writing skills in a variety of ways, including the following:

- Completing forms
- Maintaining logs
- Writing accident and incident reports

In this chapter you will learn how to fill out forms and maintain logs that are used in the forestry industry every day. You will also learn techniques that will help you to improve your writing skills at work and in your day-to-day life.

Improved writing skills will not only make you more successful in the forestry industry, they will also make your life away from work simpler and more satisfying. You will be able to fill out forms for yourself, family and friends, and write letters, emails and notes with more confidence. At first, workers may be a little hesitant to use their writing skills at work for a number of reasons:

“I’m embarrassed by my poor writing skills”

There is no reason to be embarrassed, because you’re not alone. A recent study found that 47% of Canadian adults have writing skills that negatively affect their performance at work. With a little practice, you can be the writer that the crew depends on.

“No one can read my writing”

Many workers are afraid to write, for fear that others will notice how “sloppy” their writing is, but the days when penmanship was taught in school are long gone.

Today, many professionals print rather than use handwriting. If you are concerned about your handwriting, print instead. Printing is just as quick and it has an added bonus: co-workers who have poor reading skills can read printing easier than cursive writing.

“I can’t spell”

Poor spelling skills are another barrier to writing. Many people believe that bad spelling is a dead giveaway that the writer is poorly educated. Spelling is a skill that can be learned like any other and the following tips will help you to spell like a pro:

Read, read, read. Reading is the best way to improve spelling skills. Read magazines, newspapers, and books and even repair manuals about the forestry industry and forestry equipment.



Make your own personal dictionary. Keep a list of words that relate to your job, and particularly those that you may be required to write.

Know the correct pronunciation of words. Knowing how a word is pronounced will help when it comes time to write it down. If a word is difficult, say it out loud before spelling.

Take the time to think carefully before you write a difficult word. Words are often spelled incorrectly simply because the writer doesn’t take this step. Think of a spelling bee: the best spellers always take the time to think before spelling.

Take the time to proofread everything you write. Read each word carefully and if possible, ask a co-worker to check your work as well.

Invest in a spelling workbook and brush up on the rules.

Forms

Entry forms are an important way for companies to gather, document and compare information. The information that you enter on these forms will help the company to provide a safe, efficient workplace.

Most forestry workers will need to complete forms on the job. They may also be asked to help other workers fill out forms. From the day that you enter the workforce until you retire, you will be required to fill out forms. Several different kinds of forms are used in the forestry industry including Social Insurance Number application forms and job application forms.

It is important to fill out all forms accurately and neatly. Illegible writing, errors and blank spaces can mean a failure to get a job, shortages in pay, and problems with the government. You can avoid these errors by taking the following steps:

1. Make a photocopy of the form before you fill it out or, if possible, ask for two copies of the form. This way you will have one copy for a rough copy and for your records and one to submit.
2. Fill out the form in black ink.
3. Take as much time as you need to fill out the form properly.
4. Follow all instructions on the form carefully.
5. Answer truthfully. Never lie or exaggerate the truth.
6. Be sure to sign and date the form, if required.
7. Always double-check the form before sending it in. If possible, ask someone to proofread it as well.

Before completing any form you should also take a few minutes to read the entire form over carefully and consider the following questions. Taking the time to think about these questions will help you to understand the form and the questions on it.

1. What is the purpose of the form? Collecting information? Documenting hours worked or tasks completed?
2. Do I understand all of the questions?
3. Do I have all of the information required?

Entry Forms

Entry forms are used to collect personal information. All of the information on the form is personal and comes from memory or personal history. Government forms and company personnel forms are two examples of entry forms. The first form that you may encounter when you enter the workforce is a Social Insurance Form from the federal government.

Activity 5–1 Completing an Entry Form

Follow the steps above and complete the following application for a Social Insurance Number. Read the instruction page and answer the questions that follow, before completing the rest of the form.



Government
of Canada

Gouvernement
du Canada

INSTRUCTION SHEET

- A -** Complete the application form.
- B -** You must provide an original primary document according to your status in Canada. Refer to leaflet "Documents you need to apply for a Social Insurance Number (SIN)" (IN-105).
- C -** If the name on your primary document is different from the name you are now using, you must also submit an original supporting document. Refer to leaflet "Documents you need to apply for a Social Insurance Number (SIN)" (IN-105).
- D -** If you are replacing your SIN card, you must pay a \$10.00 fee (subject to change). Make your personal cheque, bank draft or money order payable in Canadian funds to the RECEIVER GENERAL FOR CANADA. You may pay in cash at a Human Resource Centre of Canada. DO NOT MAIL CASH.
- E -** If you are a guardian, you must submit an original document showing proof of legal guardianship in order to sign an application form on behalf of the applicant.

The information contained in the vital statistics registers and the Citizenship and Immigration Canada records can be used to validate information that you provide with this application form when presenting a document originating from these sources.

If you are employed, it is important that the name and Social Insurance Number under which you are working are identical to the name and Social Insurance Number that appear on your card. This will ensure that your Canada Pension Plan and/or Quebec Pension Plan contributions are properly credited to you.

TO APPLY IN PERSON

We encourage you to take your application and original document(s) to the nearest Human Resource Centre of Canada. Your application will be certified and your document(s) will be returned to you immediately.

TO APPLY BY MAIL

If it is not convenient for you to apply in person, you may mail your application and original document(s) required, and fee if applicable, to the address below. Your document(s) will be returned with your card. **PLEASE NOTE THAT WE ARE NOT ACCOUNTABLE FOR DOCUMENTS LOST IN TRANSIT.**

Social Insurance Registration
P.O. Box 7000
BATHURST NB E2A 4T1

If your application is in order, you should receive your Social Insurance Number card in approximately three weeks. If you do not receive your SIN card within this period, please call 1 800 206-7218.

FOR MORE INFORMATION

Visit the Social Development Canada Web site at www.sdc.gc.ca or dial toll-free 1 800 206-7218. For general enquiries, you can also contact us by e-mail at sin-nas@sdsc-dsc.gc.ca.

DETACH HERE

DETACH HERE

DO NOT WRITE BELOW - FOR LOCAL OFFICE USE ONLY

PROTECTED WHEN COMPLETED - A



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of Canada

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du Canada

ACKNOWLEDGMENT OF APPLICATION FOR A SOCIAL INSURANCE NUMBER

The *Employment Insurance Act* requires a person to apply for a Social Insurance Number and to produce his/her Social Insurance Number card to his/her employer within three (3) days after having received it. However, the legislation does not prevent persons from working in insurable employment prior to being issued a Social Insurance Number and card.

Accordingly, this acknowledges that _____

☐ has applied for a first Social Insurance Number.

☐ has applied for a replacement card.

☐ has applied to change the expiry date.

Social Insurance Number _____

When the application is approved, the Social Insurance Number card will be sent to the address specified by the applicant at the time of application.

HRCC STAMP (DO NOT use SIN Certification Stamp)	
Initials	Date

NAS-2120-(05-04)

(Internet version)

Canada

1. How much does it cost to replace a lost SIN?

2. How can you submit your application (two ways)?

3. What toll-free number can you call if you need help with the form?

4. In point **B**, you are requested to forward an original primary document. Do an Internet search to find the primary documents.

Go to **Google** on your web browser. Enter **SIN (Documents you need)**.
What primary documents are acceptable for a SIN Application?

5. Are there any questions that you do not understand? If so, ask your instructor for help.

Read and complete the application form on the following page.

 Government of Canada / Gouvernement du Canada

SOCIAL INSURANCE NUMBER APPLICATION
APPLICATION FOR A

☐ FIRST SOCIAL INSURANCE NUMBER CARD
☐ REPLACEMENT CARD
☐ LEGAL CHANGE OF NAME(S)
☐ CHANGE OF STATUS
☐ UPDATE TO RECORD (no card will be issued)
☐ CHANGE TO THE EXPIRY DATE
☐ OTHER - SPECIFY _____

PROTECTED WHEN COMPLETED - A

FINDER NO	DATE
DO NOT WRITE IN THIS AREA	

INFORMATION CONCERNING THE APPLICANT **PRINT CLEARLY IN BLUE OR BLACK INK**

1	NAME TO BE SHOWN ON CARD	First Given Name	Other Given Names (to be printed on card)	Family Name
2	DATE OF BIRTH	Day	Month	Year
3	GENDER	☐ Male ☐ Female ☐ Check if you are a twin, triplet, etc.		
4	MOTHER'S NAME (at birth)	Given Name(s)	Family Name	
5	FATHER'S NAME	Given Name(s)	Family Name	
6	APPLICANT'S PLACE OF BIRTH	City, Town or Village		
		Province	Country	
7	APPLICANT'S FAMILY NAME AT BIRTH			
8	OTHER FAMILY NAME(S) PREVIOUSLY USED			
9	HAVE YOU EVER HAD A SOCIAL INSURANCE NUMBER? ☐ No ☐ Yes			
10	IF "YES", WRITE YOUR NUMBER HERE			
11	STATUS IN CANADA ☐ Canadian Citizen ☐ Registered Indian ☐ Permanent Resident ☐ Other Are you currently residing in Canada? ☐ Yes ☐ No			
12	Home Telephone Number () - () - () - () - () - () Daytime Telephone Number () - () - () - () - () - ()			
13	MAIL TO (Address where you want your card to be sent) In care of (if different than item 1) Number and Street City, Town or Village Province Apartment No. Postal Code			
14	If the applicant is under 12 years of age, the father, mother or legal guardian must sign and indicate his/her relationship. If you are a guardian, you must submit a document showing proof of legal guardianship. If "X" is used as a signature, have two witnesses sign here. APPLICANT'S SIGNATURE Date			

The name(s) formerly used will be maintained in the Social Insurance Number register. Information collected on this form is used for the purpose of issuing Social Insurance Numbers. Its collection is authorized by the Employment Insurance Act. For more details on the uses and rights concerning inspection and correction of the information, refer to the publication Info Source, Bank No. HRDC PPU 390, available in Human Resource Centres of Canada and major public libraries.

IT IS AN OFFENCE TO KNOWINGLY APPLY FOR MORE THAN ONE SOCIAL INSURANCE NUMBER AND TO GIVE OR LEND YOUR CARD TO ANYONE.

DO NOT WRITE BELOW - FOR LOCAL OFFICE USE ONLY

A	ALL NAMES AS SHOWN ON PRIMARY DOC.	Given Names	Family Name
B	DATE OF BIRTH AS SHOWN ON PRIMARY DOC.	Day	Month
C	PRIMARY DOCUMENT SEEN	Year	Abbreviation
D	NUMBER ON DOCUMENT		
E	SUPPORTING DOCUMENT SEEN	Abbreviation	
F	LOCAL OFFICE FAX NO.		
G	FEE PAID	Amount \$	Receipt No.
H	REMARKS / REASON FOR PRIORITY REQUEST		
Usercode			

NARS-2120-(05-04) (Internet version)



Job Application Forms

Whether you are just starting in the forestry industry or you are wishing to find a better position, a job application may be the most important form that you will fill out. First impressions are always important. A company forms their first impression of you based on how you complete your job application.

In addition to showing your education and experience, your job application will also tell those doing the hiring a lot more about you. Are you honest? Are you a careful worker, or are you sloppy? Do you do all that you are asked or do you leave things out? How are your reading comprehension skills? How do you spend your spare time?

When filling out a job application, you should always follow the steps previously listed under the section “Forms”. You should follow these important steps as well:

1. **Be prepared with the information you need.** Be sure to bring your resume, social insurance number, driver’s licence, etc. You probably will also need addresses and phone numbers of previous employers, as well as starting and ending salaries for each previous job. It’s always better to have too much information than not enough.
2. **Prepare all of the information** that you may need. Have your social insurance number, contact information and education and training dates available.
3. **Don’t leave any blanks on the application.** If you do not have information, get it before you complete the form.
4. **Tailor your answers to the job you are seeking.** Be sure to include all training and experience that relates to the job being offered.
5. **Be positive.** Don’t lie, but don’t include negative information on your application. If you were fired from a job, it might be better to leave it off your application.
6. **Do not put specific salary requirements.** If the application asks for salary expectations, put a range of amounts, from what you would expect to what you would like to have. Do your homework before completing an application and find out what a normal salary would be for the position.
7. **Keep your application consistent with your resume.** Make sure the dates, names and duties are the same on your resume and application form.
8. **Provide references.** Prepare a list of two or three references who will be supportive. Former employers, instructors or well-known people in your community make good references. Be sure to check with your references before using their names. While speaking to them, confirm their contact information.

9. **If asked, include Outside Interests.** This will show the person hiring that you are a well-rounded individual.
10. **Proofread your application carefully** to make sure there are no errors.

Activity 5–2 Completing a Job Application

Complete the job application on the following pages.

Highlands Forestry EMPLOYMENT APPLICATION

Position being applied for:		Date available to begin work:		F.T. ☐ P.T. ☐ Summer ☐	
Last name			Given name(s)		
Address		Street		Apt. No.	
City		Province		Postal Code	
Length of time at this address		Home Telephone		Business Telephone	
Address correspondence as ☐ As above ☐ Mr. ☐ Mrs. ☐ Miss ☐ Ms.					
Are you legally eligible to work in Canada?			Are you between 18 and 65 years of age?		
Will it be necessary to relocate in Ontario?			Preferred location		
Do you have a valid driver's license?			Class		
Have you ever been convicted of a criminal offence for which a pardon has not been granted?					
If yes explain: _____					
SECONDARY SCHOOL			BUSINESS, TRADE OR TECHNICAL SCHOOL		
Highest grade or level completed			Name of course		Length of course
Type of certificate or diploma received			License, certificate or diploma awarded?		
			☐ Yes ☐ No		
COMMUNITY COLLEGE			UNIVERSITY		
Name of Program		Length of Program		Length of course	
				Degree awarded	
				☐ Yes ☐ No	
Diplomas received? ☐ Yes ☐ No			Major subject		
Other courses, workshops, seminars			Licenses, Certificates, Degrees		
Describe any of your work related skills, experience, or training that relate to the position being applied for:					

Name and Address of present/last employer	Present/Last job title	
	Period of employment	Present/Last Salary
	From To	
	Name of supervisor	Telephone
Type of Business	Reason for leaving	
Duties/Responsibilities		

Name and Address of present/last employer	Present/Last job title	
	Period of employment	Final Salary
	From To	
	Name of supervisor	Telephone
Type of Business	Reason for leaving	
Duties/Responsibilities		

Name and Address of present/last employer	Present/Last job title	
	Period of employment	Final Salary
	From To	
	Name of supervisor	Telephone
Type of Business	Reason for leaving	
Duties/Responsibilities		

For employment references, may we approach: Your present/last employer? ☐ Yes ☐ No Your former employer(s) ☐ Yes ☐ No
List references if different than above on a separate sheet.

List activities, hobbies and interests outside work

I hereby declare that the foregoing information is true and complete to my knowledge. I understand that a false statement may disqualify me from employment or cause my dismissal. I authorize that credit and reference checks may be made.

Have you attached an additional sheet ☐ Yes ☐ No

Signature _____ Date _____

Logs

In the forestry industry, there are two kinds of logs. You are already familiar with the first kind - trees cut into lengths. The second kind of log is an ongoing report of work activities. A log may include daily reports on the condition of equipment, truck drivers' reports, and a worker's ongoing record of trees cut or planted.

It is very important to maintain logs regularly and accurately. The information from logs is used to keep equipment in safe working order, to order supplies, to track the work being done and to do regular maintenance. Using accurate numbers and complete narratives are the key to keeping proper logs.

Activity 5–3

Truck drivers are often required to keep a daily log in their vehicles. These logs are used to identify and record problems and to do regular maintenance.

Justin Hughes is a log truck driver for Highlands Forestry Products. Every day he drives to landings and picks up logs. He then delivers the logs to the mill, about 90 kilometres from the landings. Justin makes four to five trips a day. At the end of the day, he fills out a **Daily Driver's Log**. After the trucks have been returned, the mechanics check the drivers' logs. Based on the information in the log, they fix minor problems, do routine maintenance or pull the truck off the road for major repairs.

On Monday, May 5, Justin got into his truck, licence number ABC 123. He checked the odometer reading, which was 192,673 kms. As he pulled out of the mill, he noticed that the right turn signal was not working, so he used hand signals for the rest of the day. Justin made his first and second runs to the landing and back with no problems, other than the turn signal.

When he went to leave the landing for the third time, Justin found that the truck's battery was dead. He got a boost and continued on for the rest of the day.

At the end of the day, Justin returned to the mill. Before leaving the truck for the day, Justin noted that the odometer reading was 193,408 kms.

Complete Justin's Daily Driver's Log on the following page.

Highlands Forestry Products Daily Driver's Log

Date: _____

Vehicle Licence Plate

Driver's Name (Please Print)

Starting
Odometer

Ending
Odometer

Total
Km

Driver's Signature

Driver's Daily Vehicle Inspection Report Check any defective item and give details under Remarks									
	Battery		Heater		Headlights		Tires		Trailer:
	Body		Engine		Tail lights		Tire chains		
	Brakes		Emergency equipment		Turn signals		Tow devices		
	Brake light		Exhaust		Load covering		Transmission		
	Brake pad		5 th Wheel		Mirrors		Wheels		Other:
	Brake fluid		Fire extinguisher		Oil pressure		Rims		
	Emergency brake		Axle		Radiator		Windshield		
	Back-up alarm		Fuel System		Seat belt		Wipers		
	Clutch		Alternator		Steering				
	Defroster		Horn		Suspension				

No Defects/Problems Found ☐

Remarks:

Tree planters are paid for each tree they plant. The amount of the pay varies with the location: planters earn more in rough terrain. Because of this, they must keep accurate records of the location and number of trees that they plant each day. These numbers are recorded in a log at the end of each day.

Activity 5–4

Chris is a tree planter in northwestern Alberta. He is working in an area with some flat land with soft soil, Area Alpha, and in another area with steep slopes and rocky soil, Area Delta. He earns 10 cents per tree when working in Alpha and 14 cents a tree in Delta. Complete the chart following these pages and calculate Chris's pay for the week of Monday, May 12 to Saturday, May 17 based on his journal entries for the week.

Monday

Everything is going well here at Harcourt Camp. It was warm and sunny today, a big change from yesterday. The swelling in my left hand has gone down, so I'm almost back to normal. Worked in Alpha today, good planting. I planted 2150 trees (that's 40 more than Dave).

Tuesday

The weather wasn't as good as it was yesterday, cloudy and rain this afternoon. The van broke down, again, on the way to Delta so we didn't arrive until almost noon. Terrible terrain. I only planted 600.

Wednesday

Back to Delta without any problems. The land was a little better today, but Ryan slipped and hurt his ankle badly. He had to be transported out, and we had to wait until the van came back – at 7:00. It was really cold while we were waiting. I should have worn my jacket. 950 trees! My personal best at Delta.

Thursday

Snow on the ground this morning! Got an email from Justin – it was 24 degrees and sunny back home. Ryan's ankle was broken so he'll be going home for the season. Planted at Alpha today. Once it warmed up, I was really in the mood for getting those trees in the ground. 2700 by the end of the day!!

Friday

Woke up with a headache and a cold. I guess I caught it waiting for the van on Wednesday. Stayed in bed until 10:00 and then got up and hung around until 1:00. Jason was driving back up to Delta, so I caught a lift and planted 300 trees. Eight o'clock now and I'm going to sleep.

Saturday

Half day today at Delta. I'm feeling a bit better. The weather has warmed up a bit, and the sun is out. Planted 1135 trees before stopping at noon. In to town for laundry, shopping and a little R & R this afternoon.



Evergreen Reforestation

Weekly Log

Employee Name: _____ Camp: _____

Date	# Trees Planted Alpha	# Trees Planted Delta
Total # of Trees		
	@ 10 cents =	@ 14 cents =

Weekly Total: \$ _____

Employee's Signature _____

Supervisor's Signature _____

In the forestry industry, written logs are used to track and record the number of trees cut, as well as the number of trees that must be left standing in order to meet Ministry of Natural Resources guidelines. Leave trees, which are left standing, are very important as a wildlife refuge and to maintain the biological diversity of the forest.



Activity 5–5

Larry is an independent logging contractor. He has been given a contract to log 300 acres of crown land. The land is divided into three management units: Bruton, High Falls and Clyde. The Ministry of the Natural Resources forester has given Larry the following chart for logging the three units. She has specified the number of leave trees according to the number of large sized cavity trees and trees over 10 feet tall.

Management Unit	Bruton (100 acres)	High Falls (150 acres)	Clyde (50 acres)
All leave trees must be well spaced throughout the stand			
Number of large size cavity trees	14 trees per acre	8 trees per acre	15 trees per acre
Number of trees over 10 feet tall	45 trees per acre	none	38 trees per acre
Total number of leave trees	59 trees per acre	8 trees per acre	53 trees per acre

1. How many trees over 10 feet tall must be left standing in the Bruton management unit?

2. How many trees over 10 feet tall should be left standing in the Clyde management unit?

3. Larry's crew has logged 50 acres in Bruton. There are 4200 trees left standing. Have they left the correct number of leave trees? If not, how many trees should be standing?
-

4. There are 43 acres left to log in the High Falls management unit. How many large sized cavity trees should be left standing?
-

How many trees over 10 feet tall? _____



Reports

While most larger companies have standard accident or incident reports such as those you completed in Chapter Five, many smaller companies overlook these important forms. Even if activity reports are not available, it is still very important to document all accidents and incidents for the following reasons:

- Workers' Compensation claims
- Ministry of the Environment investigations
- Lawsuits over workers' injuries
- Insurance claims

These reports should be clear and accurate records of events. They should not include opinions or rumours. To write accident or incident reports that will be accurate records, include the following information:

1. **Write the report** as soon as possible. Time will blur your memory and make the report much less credible. Be sure to include the date on the report.
2. **What happened?** Include a clear description of the accident or incident, based on first hand observations only.
3. **Who was involved?** Include the names and contact information of those involved in the incident and any witnesses who were present.
4. **Where and when did the accident or incident happen?** Be as detailed as possible.
5. **Why did it happen?** Give any details that may have been directly related to the incident, including weather conditions, equipment failures, and type of terrain.

Activity 5-6 Writing an Accident Report

Read the following scenario and then write an accident report.

This morning at around 10:00 am, you and your partners, Jeff Townsend and Mike Roberts, were working falling trees about 500 feet northwest of Bruton landing.

The area where you were working was a steep slope. Jeff was working about 150 feet away from you, cutting down a large, old Yellow Birch. You had looked at the tree, but continued on, figuring that the tree might be rotten inside.

When you put your chain saw down, you looked around for Jeff. The birch tree had snapped off about 50 feet above the ground, but there was no sign of Jeff. You looked down the slope and saw him lying on the ground, with a large limb on top of him. He wasn't moving.

You ran down the slope, calling for Mike as you ran. You reached Jeff at the same time as Mike. Jeff was conscious, but in terrible pain. Mike had completed First Aid training, so you decided that you would go for help, leaving him with Jeff.

By the time you ran to the landing and waited for an ambulance Jeff had once again lost consciousness. After he had left for the hospital, your supervisor asked you to write an accident report.

On the next page, write a report about Jeff's accident.

[illegible]

Occasionally, forestry workers are required to write reports as a way of formally explaining themselves in case of an accident or environmental incident, or if they do something that results in broken equipment or lost company time.

These short, informal reports may be included in an employee's Human Resources file or passed on to upper management.

Activity 5-7

Consider the following scenario and then write an incident report on the following page.

Your supervisor has asked you to write a report on the following incident. Remembering that the document may be used as evidence in court, identify any actions which may be in violation of the company's policies or health and safety procedures.

You are the foreman of Gooderham Equipment Yard. One of your workers, Larry, is always late for work. He has more reasons than anyone for being late: his car won't start, his brother is visiting from Edmonton, he is looking after his neighbour's cattle.

Larry works as a mechanic on a landing for Highlands Forestry Products. It is his job to maintain the trucks, skidders and loaders in the Gooderham Yard. When he arrives for work on time, at 4:30 pm, he has 30 minutes to discuss any equipment problems with the operators before they leave for home. Aside from regular maintenance, Larry fixes any problems that may have developed with the equipment during the day.

On Wednesday, October 15, Larry is late for work again. This time, he slept in late and when he was rushing to make up lost time, he slid on a corner and went into a ditch. By the time Larry walked to a house and asked for a tow, he was very late arriving at work, arriving at 5:30. When Larry arrived at the landing, everyone was gone.

At 4:32 pm that same afternoon, Jeff was getting ready to park his skidder for the night. He was very excited and planned to leave work a little early as he was starting a week's holidays moose hunting the next day. As Jeff was driving across the landing, he put his foot on the brake and nothing happened. He rolled to a stop and continued to drive to his parking spot very slowly. Jeff expected to see Larry waiting, but he wasn't there. Jeff waited for 20 minutes, intending to tell him about the problem with the brakes, but he got tired of waiting and left at 5:15 pm without taking the time to write a note in the **Equipment Repair Log book**.

When Larry arrived at the yard, he checked the book, didn't see any notes and proceeded to complete the routine maintenance on all equipment.

Thursday morning, Jeff's replacement Mark, reported for work. He jumped on the skidder and drove across the yard. He put his foot on the brake before crossing the busy road in front of the landing and nothing happened. He rolled onto the road and was hit by a van. Two people in the van were killed and Mark was seriously injured.

Incident Report

[illegible]

Skill Check – Chapter Five

In this chapter, you have developed your writing skills. Think back over the skills that you worked on in the chapter. Which skills still need more practice?



Skill	OK	Could be improved
I can read and fill out government forms.		
I can fill out a job application form.		
I understand why it is important to keep logs.		
I know how to fill out and maintain logs.		
I can write an incident or accident report.		

My Action Plan

I will improve my writing skills by:

1. _____
2. _____
3. _____

I would like to learn more about how to improve the following skills:

1. _____
2. _____
3. _____

I can transfer the skills I have learned in this chapter to other areas of my life by:

Skill _____

I can use this skill to improve my life by:

Instructor's Notes – Chapter Five

Most of the answers in this chapter will be dependent upon the individual student. Instructors should check all completed forms to ensure that answers are reasonable.

Answer Key

Activity 5–1 Completing an Entry Form

If there are computers available for class use, these forms can also be found at www.sdc.gc.ca.

1. \$10.00
2. in person, by mail
3. 1-800-206-7218
4. birth certificate, citizenship card
5. learner may need guidance

Activity 5–2 Completing a Job Application

Review learners' completed forms.

Activity 5–3 Completing Logs

Review learners' completed logs. Learner should check "Turn Signal" Box and "Battery" box and explain under "Remarks" that right turn signal is not working and the battery required a boost to start.

Activity 5–4

(See following page)

Evergreen Reforestation

Weekly Log

Employee Name: _____ Camp: _____

Date	# Trees Planted Alpha	# Trees Planted Delta
May 12	2150	
May 13		600
May 14		950
May 15	2700	
May 16		300
May 17		1135
Total # of Trees	4850	2985
	@ 10 cents = \$485.00	@ 14 cents = \$417.90

Weekly Total: \$ 902.90

Employee's Signature _____

Supervisor's Signature _____

Activity 5–5 Reading Logs

1. 4500
2. 1900
3. No, another 1250 could have been cut
4. 344 large cavity, 0 trees over 10 feet tall

Activity 5–6 Writing an Accident Report

Review learners' accident reports.

Activity 5–7 Writing an Incident Report

Review learners' incident reports.

What's Next?

Congratulations!

Now that you have successfully completed the *Forestry Worker Curriculum*, you are ready for the Forestry Worker Demonstration. By completing the Forestry Worker Exit Demonstration successfully, you will have ability to demonstrate these skills through your resume and portfolio to employers in the field.

Good luck with the demonstration and your future employment search.



References

Writing at Work; Skillplan – B.C. Construction Industry Skills Improvement Council; 2003

Document Use at Work; Skillplan – B.C. Construction Industry Skills Improvement Council; 2003

Finding Your Way at Work: Beyond Reading and Writing; Ontario Literacy Coalition, 2006