

LESSON PLANS FOR APPRENTICESHIP AND THE SKILLED TRADES



Adapted from Apprenticeship Work Saskatchewan's Module 88 Lesson Plans http://www.saskapprenticeship.ca/siteimages/pdfs/module_88_lesson_plans_gr10_12.pdf Date Created: Monday September 24, 2007

Note: The lessons in this package are intended primarily for use by Ontario classroom teachers. Although intended for use in grade 10 Career Studies classes, these lessons can also be used by guidance, co-operative education, and technological studies teachers in a variety of classes and settings. Permission is granted for these materials to be duplicated for educational use.



Outline of Lesson Plans

Lesson 1. The Process and Benefits of Apprenticeship

- a) Work-Based Learning Process of Training and Certifying Workers
- b) Benefits
 - i. Lifestyle
 - ii. Satisfaction
 - iii. Demand/Opportunities
 - iv. Wages/Good Pay
 - v. Respect
- c) Red Seal Program

Lesson 2. Apprenticeship Terminology

- a) Apprentice
- b) Apprenticeship
- c) Skilled Trades
- d) Journeyperson
- e) Red Seal
- f) Pre-apprenticeship
- g) OYAP
- h) Certificate of Apprenticeship
- i) Certificate of Qualification
- j) MTCU
- k) Regulated Trade
- l) Non-regulated Trade

Lesson 3. Steps to an Apprenticeship

- a) Steps from High School to Apprenticeship
- b) Pathways for Trades
- c) Comparison/Contrast of University and Apprenticeship

Lesson 4. Transition Programs

- a) Apprenticeship Subject Pathways
- b) College Programs
- c) OYAP
- d) Pre-apprenticeship

Lesson 5. Apprenticeship Training: What's Involved?

- a) Years and Hours Required
- b) Location of Annual Training
- c) Employability
- d) Expected Wages

Lesson 6. Qualities of a Successful Apprentice

- a) Personal Characteristics and Qualities
- b) Employability Skills
- c) Self Assessment



Lesson 1: The Process and Benefits of Apprenticeship

Objectives:

To understand and describe the process and benefits of apprenticeship

Assessment:

Record sheet of participation

Resources:

MTCU website for background information:

http://www.edu.gov.on.ca/eng/tcu/apprentices/

apprenticesearch.com for further background information:

http://www.apprenticesearch.com/fpResources/default.asp

http://www.apprenticesearch.com/fpTrades/trades.asp

Red Seal website: http://www.red-seal.ca/Site/index_e.htm

Teaching Strategies:

1. **Define apprenticeship**: a process of training and certifying workers in specific trades.

Apprenticeship involves a formal agreement between an individual who wants to learn a skill and an employer who needs a skilled worker. The Ontario Ministry of Training, Colleges, and Universities oversees this agreement. The employer arranges to have the apprentice develop his/her skills under the direction of a more experienced, fully-qualified tradesperson. Apprentices spend approximately 80-90% of their time working on the job and 10-20% in formal classroom training.

- 2. **Conduct a "Circle of Knowledge" discussion:** of reasons individuals might choose apprenticeship in the skilled trades. Have the students as a group, come up with and discuss reasons which should include areas such as:
 - Lifestyle
 - Satisfaction
 - Demand
 - Wages/Good Pay
 - Respect
 - Opportunities
- 3. **Define Red Seal Program**: an inter-provincial initiative allowing a tradesperson to become certified to work in any province or territory across Canada.

A "Red Seal" is attached to a Certificate of Qualification upon successful completion of a formal apprenticeship program and a special challenge examination. Forty-nine trades currently offer Red Seals in Canada.

Adaptations: Individuals not able to participate orally may wish to build a concept web using the categories listed in 2.



Recor	d of Participation - Circle of Knowledge	
Name	:	
Date:		
Activi	ty:	-
	ective Communication Skills Comments: Eye contact Listens attentively Summarizes Clarifies Does not interrupt	
Additi	onal Comments:	
	ntribution Comments: Stays on topic * Positive contribution**	
	Contributes to information from others Own information is contributed	
Additi	onal Comments:	
	titude Comments: All opinions respected Disagrees in an agreeable way	
Additi	onal Comments:	



^{*}The criterion of relevance is intended to record quality not quantity of response.

^{**}The intent is to record evidence of positive student comments as opposed to negative 'put downs' and 'one-liners'.

Lesson 2: Apprenticeship Terminology

Objective:

To understand and use the appropriate terminology related to apprenticeship

Assessment:

Students can hand in completed worksheet for marking

Resources:

Dictionaries for groups or individuals School to Career website resources:

http://www.schooltocareer.ca/oyap/resource2.shtml

apprenticesearch.com further resources:

http://www.apprenticesearch.com/what_is_apprenticeship.asp

MTCU pre-apprenticeship information:

http://www.edu.gov.on.ca/eng/tcu/apprentices/app_train.html

http://www.edu.gov.on.ca/eng/teachers/studentsuccess/oyap.html

http://www.edu.gov.on.ca/eng/tcu/apprentices/oyap.html

Teaching Strategies:

- 1. Share the list of terms with the class either with an overhead or individual copies. Discuss which terms may be defined sufficiently by using the dictionary and which may need some further research.
- 2. Assign terms to individuals or groups of students with access to different resources, i.e. dictionaries and web resources and allow time for finding the answers.
- 3. Bring class back together and have them report on their answers.
- 4. Ensure all students have all terms accurately interpreted.

Adaptations:

- 1. Pair students who may have trouble with the research skills with more capable researchers.
- 2. Allow time for the groups to discuss answers to ensure all partners have the agreed upon information.
- 3. Provide the terms and accurate definitions as a matching assignment.



Apprenticeship Terminology

*	Apprentice:
*	Apprenticeship:
*	Skilled Trades:
*	Journeyperson:
*	Red Seal:
*	Pre-apprenticeship:
*	Ontario Youth Apprenticeship Program (OYAP):
*	Ministry of Training, Colleges and Universities (MTCU):
*	Regulated Trade:
*	Non-regulated Trade:

Apprenticeship Terminology Answer Page

Apprentice:

Person acquiring on-the-job training under the supervision of a licensed journey-person. http://www.schooltocareer.ca/oyap/resource2.shtml

Apprenticeship:

Hands-on training program for people who want to work in skilled trades occupations. http://www.schooltocareer.ca/oyap/resource2.shtml

Skilled Trades:

Occupation which requires special expertise and training to design, build, make, construct, repair and/or service.

http://www.schooltocareer.ca/oyap/resource2.shtml

Journeyperson:

Tradesperson who has successfully met trade specific competencies and has passed the provincial examination. http://www.schooltocareer.ca/oyap/resource2.shtml

Red Seal:

Recognition that an apprentice has scored 70 percent or higher on the inter-provincial standards examinations. This allows tradespeople to work throughout Canada if province participates in program.

http://www.schooltocareer.ca/oyap/resource2.shtml

Pre-apprenticeship:

The Pre-Apprenticeship Training Program helps potential entrants to the apprenticeship system develop their job skills and trade readiness so that they will be prepared to find work as apprentices. Programs can run up to 40 weeks in duration and may include the Level 1 apprenticeship in-school training, relevant safety training and a minimum 8-week work placement. Programs may also include trade readiness, employment preparation and academic upgrading. http://www.edu.gov.on.ca/eng/tcu/apprentices/pre_apprent.html

Ontario Youth Apprenticeship Program (OYAP):

An OYAP student is a student who is receiving Cooperative Education credits for work experience in an apprenticeship occupation. The Ontario Youth Apprenticeship Program (OYAP) opens the door to apprenticeship in a wide range of exciting careers. If a student is entering Grade 11 and is at least 16 years old, he/she can sign a formal apprenticeship agreement and work towards a career in a skilled trade as a registered apprentice while completing an Ontario Secondary School Diploma.

http://www.edu.gov.on.ca/eng/teachers/studentsuccess/oyap.html

http://www.edu.gov.on.ca/eng/tcu/apprentices/oyap.html



Ministry of Training, Colleges and Universities (MTCU):

The Ministry of Training, Colleges and Universities is the Ontario government division which oversees post-secondary education and training, including apprenticeship.

http://www.edu.gov.on.ca/eng/tcu/about/

Compulsory/Restricted Trade:

The Province of Ontario has established guidelines surrounding the certification and apprenticeship process of the skilled trades. The Trades Qualification and Apprenticeship Act (TQAA) and the Apprenticeship and Certification Act (ACA) determine which trades contain skill sets that require registration as an apprentice with the MTCU. Examples of regulated trades are electrician and automotive service technician. http://www.apprenticesearch.com/what_is_apprenticeship.asp

Non-Compulsory/Unrestricted Trade:

The province of Ontario has worked to establish schedules of training for trades that are non-compulsory or unrestricted. These are usually employer-established trade areas that have demonstrated a need for a formalized training program through apprenticeship. Quite often, those trades that become compulsory or restricted began as employer based training programs. Examples of non-compulsory or unrestricted trades include: Early Childhood Educator, Gemsetter/Goldsmith, and Heavy Equipment Operator. http://www.apprenticesearch.com/what_is_apprenticeship.asp



Lesson 3: Steps in Apprenticeship

Objective:

To determine the steps involved in becoming an apprentice

Assessment:

Record of Group Discussion Chart for evaluation submitted by students

Resources:

Steps to an Apprenticeship from apprenticesearch.com http://www.apprenticesearch.com/fpResources/Job%20Seeker/Steps.asp
Apprenticeship Subject Pathways from MTCU http://www.edu.gov.on.ca/eng/training/apprenticeship/skills/pathwaye.pdf

Teaching Strategies:

- 1. Brainstorm what steps the students believe are necessary for a high school student to obtain a Certificate of Apprenticeship and a Certificate of Qualification.
- 2. Use either the listed material or other relevant resources to identify the correct steps for the students.
- 3. Assign each student a different trade (from the 4 sectors) and have him or her present to the class the pathway through high school to apprenticeship using the Apprenticeship Subject Pathways.
- 4. Compare and contrast university training with apprenticeship training by placing the following factors in a quadrant chart such as the example provided. Factors:
 - Earn while you learn
 - Contract signed
 - Specific job-related
 - Find your own job first
 - Job found after training
 - 4-9 weeks of classes per year
 - 8 months of classes per year
 - Tuition fees paid by individual
 - Must attend in Ontario
 - Must have paid job in the field
 - Training lasts from 2-4 years
 - 4 month summer holiday
 - Generally provides training without experience
 - Provides on-the-job training
 - Tuition in thousands of dollars per year
 - Tuition in hundreds of dollars per year

Teachers can add more examples to total 16-20 factors



Comparison of University and Apprenticeship Training

Add statements provided by your teacher to the chart below under the appropriate heading. Some statements may fit under both categories. Be prepared to explain the reasons for your choices.

University	Apprenticeship



Sample Education and Training Factors

- Earn while you learn
- Contract signed
- Specific job-related training/ skills
- Find your own job first
- Job found after training
- 4-9 weeks of classes per year
- 8 months of classes per year
- Tuition fees paid by individual
- Must attend in Ontario
- Must have a paid job in the field
- Training lasts from 2-4 years
- 4 month summer holiday
- Generally provides training without experience
- Provides on-the-job training
- Tuition in thousands of dollars per year
- Tuition in hundreds of dollars per year



Record for Classroom and Group Discussions	
Student Name:	_ Date(s):
1. Effective Communication Skills: a) Eye Contact	
b) Listens attentively	
c) Summarizes ideas	
d) Clarifies statements	
e) Does not interrupt	
Teacher's Comments:	
2. Contributions: a) Stays on topic	
b) Positive contributions	
c) Information of others is contributed	
d) Own information is contributed	
Teacher's Comments:	
3. Attitude: a) Respects others' opinions	
b) Disagrees in an agreeable manner	
Teacher's Comments:	



Lesson 4: Transition Programs

Objective:

To develop an understanding of the programs available to help make the transition from secondary school to apprenticeship

Assessment:

Cooperative Learning Skills Checklist

Resources:

Copies of the case studies provided MTCU list of colleges for skilled trades:

http://www.ontariocolleges.ca/portal/page/portal/ONTCOL/Home

Apprenticeship Subject Pathways from MTCU:

http://www.edu.gov.on.ca/eng/training/apprenticeship/skills/pathwaye.pdf

Teaching Strategies:

- 1. Distribute a case study to each student or pair of students and allow time for reading and formulation of response.
- 2. Provide information about apprenticeship subject pathways, as well as access to a computer to access various college programs.
- 3. A discussion regarding the benefits for the Ontario Youth Apprenticeship Program (OYAP) could be included here (http://www.edu.gov.on.ca/eng/tcu/apprentices/oyap.html from MTCU)
- 4. Students should also be familiar with pre-apprenticeship programs offered by surrounding colleges.

Adaptations:

Pair up stronger readers with those who could use support. Do the same if students will be searching the internet.



Name:	 _ Date:	

Case Study: Nikki Kaczman

"The more I was discouraged by my friends, the more I wanted to prove that I could do it!" says Nikki. Clearly loving what she does and not putting up with any obstacles, Nikki took Transportation Technology in grade 10 in high school. She even likes to spend time on the weekends fixing her boyfriend's car and her cousin's motorbike. "When I was younger, in the back of my mind, I always wanted to be a mechanic working on cars," says the grubby young lady in the shop. "My dad let me watch him work on the machinery around the farm and I learned a lot from living in rural Southern Ontario without any brothers." Nikki's mom really wants her to go into nursing, but Nikki prefers the chances she's been given at the local Gas Station and Garage even if it's mostly pumping gas on weekends and during school holidays when the regular staff want time off. What does Nikki's boyfriend think of her career choice? "Well, the guys on the hockey team give me some grief over her knowing more about cars than I do, but she's saved me a few hundred bucks in labour. She's smart enough to do whatever she wants so I guess it's okay with me," says Blair C. Nikki's experience has obviously taught her a lot, but she will soon have to make some career decisions.

What programs and classes could Nikki access to help her live her dream of becoming a professional mechanic?



Name:	Date:

Case Study: Karen Smyth

"Having a lively personality is a bonus for me," says Karen as she talks about why she's considering a career in the entertainment industry as a hairstylist. "I would love to move to Toronto or Vancouver and work in large stage productions or even in television or on movies." Right now living in a Niagara community with a thriving drama club at school allows her to gain experience working with a local professional. The two of them make a great team with Karen learning the basics even though she is not allowed to cut anyone's hair just yet. The dinner theatre group in Karen's community have asked her to help out with their play in the spring, which has a lot of characters needing extensive hairstyling.

As Karen dreams of a life working with the stars, what kinds of programs and classes can she take to start her along her career?



Name:	Date:
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Case Study: Lucas Carriere

"I like to stand back when a project is all done and think about how it started off with a pile of wood and ended up being something people really want to own," says Lucas with a big grin on his face. Standing beside the newly painted garden shed, he and his two classmates just finished for a neighbor, Lucas talks about how every aspect of the plan had challenges. From negotiating with the customer about siding and colour to getting the best price for materials and coordinating the tasks to complete the project all the angles had to be worked out. "Now I am looking for another bigger challenge. My uncle is talking about putting up a new garage in his backyard in the summer, but he's worried about getting good work done for a reasonable cost. I think he'll give me the work, but I'm not sure he's crazy about letting a 17 year old be the boss."

What classes and programs can Lucas take part in to build the kind of experience his uncle will be looking for?



Name: _	Date:	

Case Study: Matthew McKay

A lot of 16 year olds might not look forward to helping their father rewire the basement during renovation of their house on a Saturday morning, but Matthew sees the experience as part of his plan to become an electrician. "I've always been fascinated by electricity," he says, "Even back when I learned how a flashlight worked with batteries. Being an electrician would be a great job choice because of the variety of places I could work," explains Matthew. A lot of local home builders are looking for electricians as are several industries around his hometown. "A friend of my teacher's started out as an apprentice way back in the 80's," says Matthew, "And now he owns his own company with a bunch of guys working for him. That would be sweet!"

What kinds of programs and classes could Matthew become involved in to change his dream into a reality?



Cooperative Learning Skills Checklist

Scale: 1 = rarely

2 = some of the time 3 = most of the time 4 = all of the time

NAMES	ENCOURAGES OTHERS	LISTENS ATTENTIVELY	DISAGREES AGREEABLY	SUMMARIZES FOR UNDERSTANDING	AVOIDS PUTDOWNS



Lesson 5: Apprenticeship Training

Objective:

To determine the length of apprenticeship and the in-class component of training required in a particular trade

Assessment:

Self- evaluation checklist

Resources:

apprenticesearch.com 'About Trades' section http://www.apprenticesearch.com/fpTrades/trades.asp MTCU list of colleges for skilled trades www.ontariocolleges.ca

Teaching Strategies:

- 1. Have students choose a trade and investigate:
 - a) The years and hours required
 - b) Locations offering in-class training
 - c) Employment prospects
 - d) Expected wages
- 2. Have a classroom discussion regarding the differences and similarities of the training programs, including such factors as benefits of multiple training sites, chances of employability in the local economy or the reason for large salary ranges.

Adaptations:

- 1. Provide print copies for students who may have trouble with web-based reading.
- 2. Invite a representative from apprenticesearch.com or MTCU to provide information on apprenticeship training in Ontario.
- 3. Have individual students interview an apprentice about the relative benefits or drawbacks to their chosen occupation.



Self-Evaluation Checklist

Circle the number you feel best describes your performance generally in class.

Rating Scale 1 = Hardly ever 2 = Some of the time	3 = Most of the time 4 = All of the time				
1. I make it a point to listen	as much as I talk	1	2	3	4
2. I make appropriate eye co	ontact when I speak	1	2	3	4
3. I do not interrupt when o	thers are speaking	1	2	3	4
4. I encourage others to par	ticipate in the discussion	1	2	3	4
5. I do my share when worki	ng in a group	1	2	3	4
6. I respect others' feelings	even when we disagree	1	2	3	4
7. I try not to act aggressive	ly to get my way	1	2	3	4
8. I praise others when appr	opriate	1	2	3	4
9. I share my ideas with the	group	1	2	3	4
10. I cooperate more than I d	compete with others	1	2	3	4

Complete the following unfinished sentences as completely as possible:

1.	I believe	two of m	y strength	s in worl	king with	others	are
a)							

b)

2. I think two skills that I could improve on from the above list are

a)

b)



Lesson 6: Qualities of a Successful Apprentice

Objective:

To explore the qualities of a successful apprentice

Assessment:

Checklist for role playing

Resources:

Essential Skills (Government of Canada)

http://www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

Ontario Skills Passport (Government of Ontario)

http://skills.edu.gov.on.ca/OSPWeb/jsp/en/login.jsp

Employability Skills 2000+ (Conference Board of Canada)

http://www.conferenceboard.ca/education/learning-tools/pdfs/esp2000.pdf

Teaching Strategies:

- 1. Provide students with copies of the list of *Essential Skills* published by Service Canada. Encourage students to search the Service Canada website for the Essential Skills Profile for a particular skilled trade of interest.
- 2. Have the students create interview questions potential employers might ask to check to see if a job seeker possesses the appropriate skills to be successful.
- 3. Discuss the questions with the class and then allow time for individuals to construct personal answers they could give to the questions.
- 4. Role play interviews with some students portraying employers and some potential employees.



Checklist for Role Playing

Organizational Features	Yes	No	Comments
Student understood the objectives of the assignment			
Student understood the specific personal role they were to play			
Student understood the timeline and due date for the assignment			
Student had time to discuss the assignment and have input on its direction			
The student's behaviour matched the objectives stated			
Consultation has occurred with the student regarding aspects for future improvement			



Additional Resources

The following pages consist of a few additional resources that can be incorporated into the apprenticeship and skilled trades lesson plans.



Matching Exercise - Construction Sector

Review the descriptions of the skilled trades in the **construction sector** in 'About Trades' on apprenticesearch.com.

Then test your knowledge retention with this matching exercise!

Below are the words you have to choose from.

Hint: there are more words than there are job descriptions. Choose carefully!

- Construction Craft Workers
- Hoisting Engineers
- o Restoration Masons
- Welders
- Drywall Finish & Plasterers
- Construction Millwrights
- Reinforcing Rodworkers
- Bricklayers
- Sheet Metal Workers
- Construction Electricians
- Lathers
- Terrazzo, Tile & Marble Setters
- Carpenters
- Cement (Concrete) Finishers

- Drywall Acoustic & Lathing Applicators
- Heavy Equipment Operators
- Refrigeration & Air Conditioning Mechanics
- Pre-cast Concrete Erectors
- Steamfitter-Pipefitters
- Ironworkers
- Cement Masons
- Plumbers
- Glaziers
- Roofers
- Blacksmiths

	ermanently join pieces of metal with metal filler, join parts being manufactured, build structures and
repair broken or cracked parts acc	cording to specifications.
machinery, mechanical equipmen	nstall, maintain and troubleshoot industrial t and other automated and robotic systems. They th people in other trades, such as instrument icians.
other masonry units to construct, patios, arches, driveways, fireplac	repare and lay bricks, concrete blocks, stone and erect and repair structures such as walls, partitions, ces, smokestacks and chimneys. Their work also ck and other refractory materials used in s, retorts and boilers.
	re involved in the set-up and operation of electricerator) or Mobile cranes with booms that are (Mobile Crane Operator).
sort, cut, bend, rig, place, burn, v	einforce concrete. To do this, they fabricate, handle, weld and tie all materials used to reinforce the en install the steel and accessories in the building of



highways.
6 work mainly with wood, wood-substitutes, or other material such as drywall, plaster, steel, copper or tiles. They may construct, erect, install, maintain or repair various structures and be responsible for framing and forming or finishing cabinets, doors, stairs and other major wooden structures.
7 install and repair pipes, fixtures and other plumbing equipment used for water distribution and waste water disposal in residential, commercial and industrial buildings.
8 does similar work to a cement mason or a bricklayer. However, their work is done on structures years after the original work was performed. When specialized, this tradesperson could repair and restore heritage buildings and monuments. Some structures that this tradesperson works with include chimneys, smokestacks, foundations, furnaces, kilns and forges.
9 (also known as Interior Systems Mechanics) assemble and install the framework for gypsum materials in buildings.
10 erect exterior structural steel studs and sheeting, shaft wall systems, and install and finish lath and drywall, partition walls and furring, ceiling systems and access flooring types as well as applying thermal and sound insulation.
11 cut, fit and install various types of glass in metal an wooden frames, and sometimes work with glass substitutes such as plastic.
12 forge and repair metal parts, create striking and cutting tools, make, sharpen or harden drills, chisel, and perform custom work including ornamental railings, gates, grilles, and furniture.
13 lay out, assemble, fabricate, maintain and repair piping systems carrying water, steam, chemicals and fuel in heating, cooling, lubricating and other process piping systems.
14 prepare, excavate, backfill, compact and clean up a work site. They also handle materials as well as ship and receive parts.



Matching Exercise Answers - Construction Sector

- 1. **Welders** permanently join pieces of metal with metal filler, using heat and/or pressure. Welders join parts being manufactured; they build structures and repair broken or cracked parts, according to specifications.
- 2. **Construction Millwrights** install, maintain and troubleshoot industrial machinery, mechanical equipment and other automated and robotic systems. They often work in close association with people in other trades, such as instrument mechanics, pipefitters and electricians.
- 3. **Bricklayers** prepare and lay bricks, concrete blocks, stone and other masonry units to construct, erect and repair structures such as walls, partitions, patios, arches, driveways, fireplaces, smokestacks and chimneys. Their work also encompasses the laying of fire brick and other refractory materials used in construction of industrial furnaces, retorts and boilers
- 4. **Hoisting Engineers** are involved in the set-up and operation of electric-powered cranes (Tower Crane Operator) or Mobile cranes with booms that are mounted on crawlers and wheels (Mobile Crane Operator).
- 5. **Reinforcing Rodworkers** reinforce concrete. To do this, they fabricate, handle, sort, cut, bend, rig, place, burn, weld and tie all materials used to reinforce the concrete, including steel. They then install the steel and accessories in the building of all types of concrete structures including bridges, reservoirs, buildings, sewers and highways.
- 6. **Carpenters** work mainly with wood, wood-substitutes, or other material such as drywall, plaster, steel, copper or tiles. They may construct, erect, install, maintain or repair various structures and be responsible for framing and forming or finishing cabinets, doors, stairs and other major wooden structures.
- 7. **Plumbers** install and repair pipes, fixtures and other plumbing equipment used for water distribution and waste water disposal in residential, commercial and industrial buildings.
- 8. **Restoration Masons** do similar work to a cement mason or a bricklayer. However, their work is done on structures years after the original work was performed. When specialized, this tradesperson could repair and restore heritage buildings and monuments. Some structures that this tradesperson works with include chimneys, smokestacks, foundations, furnaces, kilns and forges.
- 9. Lathers (also known as Interior Systems Mechanics) assemble and install the framework for gypsum materials in buildings.



- 10. **Drywall, Acoustic and Lathing Applicators** erect exterior structural steel studs and sheeting, shaft wall systems, and install and finish lath and drywall, partition walls and furring, ceiling systems and access flooring types as well as applying thermal and sound insulation.
- 11. **Glaziers** cut, fit and install various types of glass in metal and wooden frames, and sometimes work with glass substitutes such as plastic.
- 12. **Blacksmiths** forge and repair metal parts, make striking and cutting tools, make, sharpen or harden drills, chisel, and perform custom work including ornamental railings, gates, grilles, and furniture.
- 13. **Steamfitter-pipe fitters** lay out, assemble, fabricate, maintain and repair piping systems carrying water, steam, chemicals and fuel in heating, cooling, lubricating and other process piping systems.
- 14. **Construction Craft Workers** prepare, excavate, backfill, compact and clean up a work site. They also handle materials as well as ship and receive parts.



Matching Exercise - Industrial Sector

Review the descriptions of the skilled trades in the **industrial sector** in 'About Trades' on apprenticesearch.com.

Test your knowledge retention with this matching exercise!

Below are the words you have to choose from.

Hint: there are more words than there are job descriptions. Choose carefully!

- Industrial Mechanic/Millwrights
- Tool and Gauge Inspectors
- Machinists
- Surface Mount Assemblers
- Mould Makers
- Tool and Die Makers
- Precision Metal Fabricators
- Fitters (Structural / Platework)
- Patternmakers
- Electrical Control (Machine)
 Builders
- Machine-Tool Builders and Integrators

- Composite Structures
 Technicians
- Water Well Drillers
- Tool Makers
- Mould or Die Finishers
- Industrial Mechanics
- Motive Power Machinists
- Tool and Cutter Grinders
 - Fitter-Assemblers (Motor Assembly)
 - o Roll Grinders/Turner

damaged aircraft co	mponents according to approved engineering data and process and and power tools, as well as specialized equipment and
precision metal cutt	are skilled craftspeople who set up and operate ing and grinding machines such as lathes, milling machines, drills, and grinders. This tradesperson repairs machine tools and other use.
precision metal cutt shapers, boring mills to manufacture, inst engines, suspensions	are skilled craftspeople who set up and operate ing and grinding machines such as lathes, milling machines, drills, and grinders. This tradesperson may use a variety of equipment call, operate, disassemble, re-condition, adjust, repair or replace flywheels, brake components, blocks, cylinder heads, ting rods and other parts commonly used in automotive vehicles.
industry to mass-pro hand-molding techni	design, make and repair moulds and models used in duce plastic or metal components and products. They may use iques for small quantities of items but will often use computer and y to produce large numbers of identical items.



cutting tools, gauges, jigs, fixtur for testing parts and produces co	lesign, modify and repair specialized equipment, es, prototypes and mechanical devices that are used mponents for the building of machines and tooling
or polystyrene to produce casting	nake models in wood, plastic, metal, plaster of paris, s. These are then used by a mould maker to form a ten metal is poured to form a casting. This trade is
production companies. Customers the metal to be a specific size an through machines which flatten to	generally work in steel manufacturing and metal s, such as automotive manufacturers, often require d thickness. The metal is heated and then rolled hem to half the previous size. This tradespersonnen it comes off the rollers and repeats the process ckness.
small motors, generators and dyn but also take apart and reassemb	orepare, assemble, maintain and install large and amometers. They not only assemble the products, le them in order to repair or provide maintenance. g automated assembly equipment, including robotics
industrial measuring and controlli	epair, maintain, calibrate, adjust and installing instrumentation. This instrumentation makes sure afe and running correctly. They may regulate the the air quality in a mine.
and systems on both stand-alone machine tool systems. These auto	build, assemble and integrate parts, components, and machine-tools on multi-station automated omated machine-tool systems are used in all sectors y, processing, and fabricating systems.
custom made, prototype or specia	are skilled craftspeople who make, repair and modify al tools, dies, jigs, fixtures and gauges to very The work involves the operation of lathes, grinders,



Matching Exercise Answers - Industrial Sector

- 1. Composite Structures Technicians inspect and evaluate damage, repair and replace damaged aircraft components according to approved engineering data and process requirements using hand and power tools, as well as specialized equipment and materials.
- **2. Machinists** are skilled craftspeople who set up and operate precision metal cutting and grinding machines such as lathes, milling machines, drills, shapers, boring mills and grinders. This tradesperson repairs machine tools and other machines in common use.
- **3. Motive Power Machinists** are skilled craftspeople who set up and operate precision metal cutting and grinding machines such as lathes, milling machines, drills, shapers, boring mills and grinders. This tradesperson may use a variety of equipment to manufacture, install, operate, disassemble, re-condition, adjust, repair or replace engines, suspensions, flywheels, brake components, blocks, cylinder heads, crankshafts, connecting rods and other parts commonly used in automotive vehicles.
- **4. Mould Makers** design, make and repair moulds and models used in industry to mass-produce plastic or metal components and products. They may use hand-molding techniques for small quantities of items but will often use computer and industrial technology to produce large numbers of identical items. This tradesperson may also specialize in one of the following areas: as small casting, medium-size casting or large-size casting molders.
- **5.** Tool Makers design, modify and repair specialized equipment, cutting tools, gauges, jigs, fixtures, prototypes and mechanical devices that are used for testing parts and produces components for the building of machines and tooling that produce all kinds of industrial and consumer products.
- **6. Patternmakers** make models in wood, plastic, metal, plaster of paris, or polystyrene to produce castings. These are then used by a mould maker to form a cavity in the sand into which molten metal is poured to form a casting. This trade is divided into two branches, wood and metal.
- 7. Roll Grinders/Turners generally work in steel manufacturing and metal production companies. Customers, such as automotive manufacturers, often require the metal to be a specific size and thickness. The metal is heated and then rolled through machines which flatten them to half the previous size. This tradesperson measures and grinds the metal when it comes off the rollers and repeats the process until the steel is just the right thickness.
- **8. Fitter-Assemblers (Motor Assembly)** prepare, assemble, maintain and install large and small motors, generators and dynamometers. They not only assemble the products, but also take apart and reassemble them in order to repair or provide



maintenance. One aspect of this job is operating automated assembly equipment, including robotics and small cranes.

- **9. Industrial Instrument Mechanics** repair, maintain, calibrate, adjust and install industrial measuring and controlling instrumentation. This instrumentation makes sure that all machines in a plant are safe and running correctly. They may regulate the water flow in equipment or check the air quality in a mine. The operation and safety of the plant relies on these instruments so the industrial instrument mechanic is very important as they constantly monitor and calibrate these instruments.
- **10. Machine-Tool Builders and Integrators** build, assemble and integrate parts, components, and systems on both stand-alone and machine tools on multi-station automated machine tool systems. These automated machine tool systems are used in all sectors of manufacturing such as assembly, processing, and fabricating systems.
- 11. Tool and Die Makers are skilled craftspeople who make, repair and modify custom made, prototype or special tools, dies, jigs, fixtures and gauges to very specific and precise dimensions. The work involves the operation of lathes, grinders, milling and boring machines.



Matching Exercise - Motive Power Sector

Review the descriptions of the skilled trades in the **motive power sector** in 'About Trades' on apprenticesearch.com.

Test your knowledge retention with this matching exercise!

Below are the words you have to choose from.

Hint: there are more words than there are job descriptions. Choose carefully!

- Auto Body Collision and Damage Repairers
- Farm Equipment Mechanics
- Tractor-Trailer Commercial Drivers
- Motive Power Parts Person
- Powered Lift Technicians
- Small Engine Technicians
- Automotive Painters
- Tire, Wheel and Rim Mechanics
- Air-cooled and Marine Mechanics
- Marine Engine Mechanics

- Recreational Vehicle Mechanics
- Ski Lift Mechanics
- Turf Equipment Technicians
- Truck and Coach Technicians
- Motorcycle Mechanics
- Automotive Electronic Accessory Technicians
- Motor Vehicle Mechanics and Technicians
- Truck-Trailer Service
 Technicians
 - Avionics Technicians

	_ diagnose problems with, troubleshoot, tune up, fix d their component parts and systems.
They diagnose, repair and main	are responsible for lawn maintenance equipment. tain large and small tractors, golf carts, traction units quipment (leaf blowers) and tow-behind equipment
electrical and electronic system perform major repair and repla vehicles. This tradesperson may	inspect, diagnose, repair and service mechanical, ins and components for cars, buses and trucks. They also cement of mechanical units on newly assembled motor choose to specialize in engine and fuel systems, electrical and electronic systems or diagnostic services.
	_ diagnose faults in tires, wheels and rims, and make ecommendations to meet vehicle requirements.
	test, repair and service a variety of outdoor power owered, such as outboard boat motors, snowmobiles



6	_ repair and restore damaged motor vehicle body parts
	includes metal repairers who repair defective
automobile body parts and dar	nage to the bodies of newly assembled cars. People who
	netimes known as Auto Body Repairers, Automotive Body
	- Motor Vehicle Manufacturing.
7.	_ are licensed (hold a valid Ontario AZ license under the
	commercial tractor-trailer vehicle, in order to manage
	ds and materials on roads and highways, sometimes
	Illy into the United States and Mexico.
, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,
8.	_, sometimes known as Refinishing specialists, are
	o motor vehicles, surface preparation, minor damage
<u> </u>	ing, priming and mixing paint and top coating.
repair, masiling, colour materi	ns, priming and mixing paint and top coating.
9	_ test, diagnose, inspect, repair and maintain boat
engines and associated boat ha	andling and systems equipment to ensure their effective
use and safe operation.	and systems equipment to ensure their enrective
and and said specialism	
10.	install, repair, test, and troubleshoot electronic
	rating system of motor vehicles.
5,5105 Co	anny system or motor vernetor
11	repair, overhaul and maintain mobile heavy-duty
	n, forestry, mining, material handling, landscaping, land
clearing farming and similar a	



Matching Exercise Answers - Motive Power Sector

- **1. Powered Lift Truck Technicians** diagnose problems with, troubleshoot, tune up, fix and repair lift truck engines and their component parts and systems.
- **2.** Turf Equipment Technicians are responsible for lawn maintenance equipment. They diagnose, repair and maintain large and small tractors, golf carts, traction units (powertrains), small powered equipment (leaf blowers) and tow-behind equipment (utility wagons, implements).
- **3. Motor Vehicle Mechanics and Technicians** inspect, diagnose, repair and service mechanical, electrical and electronic systems and components for cars, buses and trucks. They also perform major repair and replacement of mechanical units on newly assembled motor vehicles.
- **4. Tire, Wheel & Rim Mechanics** diagnose faults in tires, wheels and rims, and make repairs, replacements and/or recommendations to meet vehicle requirements.
- **5. Air-Cooled and Marine Mechanics** test, repair and service a variety of outdoor power equipment, gasoline or diesel-powered, such as outboard boat motors, snowmobiles and lawn mowers.
- **6.** Auto Body Collision & Damage Repairers repair and restore damaged motor vehicle body parts and interior finishing. This also includes metal repairers who repair defective automobile body parts and damage to the bodies of newly assembled cars.
- **7.** Tractor-Trailer Commercial Drivers are licensed (hold a valid Ontario AZ license under the Highway Traffic Act) to drive a commercial tractor-trailer vehicle, and manage the safe transportation of goods and materials, sometimes within Canada, or internationally into the United States and Mexico.
- **8.** Automotive Painters, sometimes known as Refinishing specialists, are involved in damage appraisal to motor vehicles, surface preparation, minor damage repair, masking, colour matching, priming and mixing paint and top coating.
- **9.** Marine Engine Mechanics test, diagnose, inspect, repair and maintain boat engines and associated boat handling and systems equipment to ensure their effective use and safe operation.
- **10. Automotive Electronic Accessory Technicians** install, repair, test, and troubleshoot, electronic systems connected to the operating system of motor vehicles.
- **11. Heavy Equipment Mechanics** repair, overhaul and maintain mobile heavy-duty equipment used in construction, forestry, mining, material handling, landscaping, land clearing, farming and similar activities.



Matching Exercise - Service Sector

Review the descriptions of the skilled trades in the **service sector** in 'About Trades' on apprenticesearch.com.

Test your knowledge retention with this matching exercise!

Below are the words you have to choose from.

Hint: there are more words than there are job descriptions. Choose carefully!

- Telecommunications Installation and Repair Workers
- Horticulturists
- Saddlers
- Horse Harness Makers
- Aboriginal Early Childhood Educators
- Patissiers
- Hairstylists
- Chefs
- Locksmiths
- Agriculture-Dairy Herdspersons
- Parts Technicians
- Network Cabling Specialists
- Child and Youth Workers
- Precision Lens and Prism Makers
- Customer Care Agents
- Electronics Service Technicians
- Appliance Service Technicians
- Bakers

- Developmental Services Workers
- o IT Hardware Technicians
- Arborists
- Microelectronics Manufacturer
- Educational Assistants
- Pool and Hot Tub/Spa Service Technician
- o Cooks
- Retail Meat Cutters
- IT Network Technicians
- o Agriculture-Swine Herdspersons
- Early Childhood Educators (Exceptionalities)
- Special Events/Conference/Meeting Coordinators
- Pool and Hot Tub/Spa Installers
- Fruit Growers
- Early Childhood Educators
- Gemsetter-Goldsmiths

1	prepare, cook and present a wide variety of foods, f	for
anywhere from five to events, to individual o with instructions from tradespeople who wor	five hundred people, at receptions, house parties and other shes in restaurants or institutions, sometimes in accordance a dietician or chef. There are even some of these skilled in test kitchens where they develop recipes for televised estyle and home-oriented magazines.	
າ	install test maintain and repair telephones	

2. ______ install, test, maintain and repair telephones, telephone switching equipment or other telecommunications equipment such as cellular telephones. At present, workers in this field tend to specialize in either telecommunications equipment (voice) or data communications.

3. ______ produces precision spherical and plane optics to specifications, corrects lens/prism surfaces, and fabricates optics for cameras, projectors, eye wear, microscopes, telescopes, domestic appliances and binoculars.



4	_ assists in the coordination and execution of events
including meetings, conference and trade shows. They may woı	es, conventions, weddings, fundraising events, festivals rk in a variety of situations, including government, quet and resort facilities, event management companies
sales of parts. Their duties also	performs ordering, warehousing, inventory control and include identifying parts and equipment, searching for arts, providing customer service and advice, and
educational goals of students, a	_, under the direction of the teacher, support the and work as a member of a multi-disciplinary team acher/team developed goals, instructions and activities
including restaurants, hotels, s responsible for what happens ir purchasing ingredients, to picki the restaurant. They have an a	work in a variety of food service establishments; pas and country clubs. This skilled tradesperson is the kitchen from developing the menu, hiring staff, ing out the dinnerware and assisting with the design of dvanced knowledge of food preparation and vledge of human resources, administrative procedures
hog farms and may also supervi maintain livestock performance	carries out feeding, health and breeding programs on ise general farm workers. In this career, you would records and perform all hog-producing work including feeding and medicating the animals.
activities ranging from sales to	_ provide customer service over the telephone for technical troubleshooting. They access the information their concerns, negotiate customer issues, and vice to customers.
rolls and other sweet goods, an cookies and cakes for sale in re	prepare dough for pies, different types of breads and ad prepare batters for different types of muffins, stail food establishments (e.g. grocery stores) or for establishments. They may also frost and decorate cakes
11technicians, maintain healthy t	, also called tree care specialists or tree service rees and treat or remove injured and diseased trees.
12 harnesses, saddles, saddle tree	manufactures, rebuilds and repairs a wide variety of s, and other associated tack for equestrian



13	repair, service and maintain all types of above-
	nd in-ground swimming pools, and hot tub/spa structures.
age children. They le intellectual, physical other skilled trades i educator screens chil	plan and organize activities for preschool and school ad children in activities to stimulate and develop their and emotional growth. Although this occupation is similar to two the service sector, this trade is different because this type of dren for exceptionalities and provides the extra programs, es to help these children.
15and gemstone work.	fabricate, repair and assemble all types of jewellery
They enhance their c	support people who have a developmental disability. apacity to function in all aspects of community living and support



Matching Exercise Answers - Service Sector

- 1. Cooks prepare, cook and present a wide variety of foods, for anywhere from five to five hundred people, at receptions, house parties and other events, to individual dishes in restaurants or institutions, sometimes in accordance with instructions from a dietician or chef. There are even some of these skilled tradespeople who work in test kitchens where they develop recipes for televised cooking shows or for lifestyle and home-oriented magazines.
- **2.** Telecommunications Installation and Repair Workers install, test, maintain and repair telephones, telephone switching equipment or other telecommunications equipment such as cellular telephones. At present, workers in this field tend to specialize in either telecommunications equipment (voice) or data communications.
- **3. Precision Lens and Prism Makers** produce precision spherical and plane optics to specifications, corrects lens/prism surfaces, and fabricates optics for cameras, projectors, eye wear, microscopes, telescopes, domestic appliances and binoculars.
- **4. Special Events/Conference/Meeting Coordinators** assist in the coordination and execution of events including meetings, conferences, conventions, weddings, fundraising events, festivals and trade shows. They may work in a variety of situations, including government, corporations, cruise lines, banquet and resort facilities, event management companies and non-profit organizations.
- **5. Parts Technicians** perform ordering, warehousing, inventory control and sales of parts. Their duties also include identifying parts and equipment, searching for parts, shipping and receiving parts, providing customer service and advice, and maintaining records.
- **6. Educational Assistants**, under the direction of the teacher, support the educational goals of students, and work as a member of a multi-disciplinary team (including families) to support teacher/team developed goals, instructions and activities in a school setting.
- 7. Chefs work in a variety of food service establishments; including restaurants, hotels, spas and country clubs. This skilled tradesperson is responsible for what happens in the kitchen from developing the menu, hiring staff, purchasing ingredients, to picking out the dinnerware and assisting with the design of the restaurant. They have an advanced knowledge of food preparation and management, as well as a knowledge of human resources, administrative procedures and business management.
- **8.** An **Agriculture Swine Herdsperson** carries out feeding, health and breeding programs on hog farms and may also supervise general farm workers. In this career, you would maintain livestock performance records and perform all hog-producing work including selection, breeding, weaning, feeding and medicating the animals.



- **9. Customer Care Agents** provide customer service over the telephone for activities ranging from sales to technical troubleshooting. They access the information provided to aid customers with their concerns, negotiate customer issues, and generally provide adequate service to customers.
- **10.** Bakers prepare dough for pies, different types of bread and roll and other sweet goods, and prepare batters for different types of muffins, cookies and cakes for sale in retail food establishments (e.g. grocery stores) or for serving in restaurants or other establishments. They may also frost and decorate cakes or other baked goods.
- **11. Arborists**, also called tree care specialists or tree service technicians, maintain healthy trees and treat or remove injured and diseased trees.
- **12.** Horse Harness Makers manufacture, rebuild and repair a wide variety of harnesses, saddles, saddle trees, and other associated tack for equestrian disciplines.
- **13. Pool & Hot Tub/Spa Service Technicians** repair, service and maintain all types of above-ground, on-ground and in-ground swimming pools, and hot tub/spa structures.
- **14. Early Childhood Educator-Exceptionalities'** plan and organize activities for preschool and school age children. They lead children in activities to stimulate and develop their intellectual, physical and emotional growth. Although this occupation is similar to two other skilled trades in the service sector, this trade is different because this type of educator screens children for exceptionalities and provides the extra programs, supports and resources to help these children.
- **15. Gemsetters-Goldsmiths** fabricate, repair and assemble all types of jewellery and gemstone work.
- **16. Developmental Services Workers** support people who have a developmental disability. They enhance their capacity to function in all aspects of community living and support the full inclusion of Ontarians with disabilities in all aspects of society.



Red Seal Trades Designated in Ontario

Here are just a few of the Red Seal Trades Designated in Ontario.

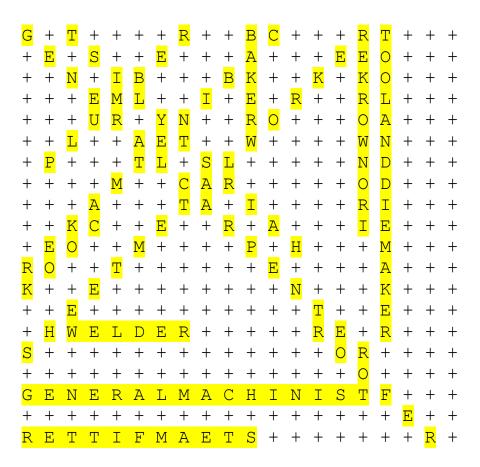
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Т	C	Z	Ε	М	L	Ε	Υ	I	٧	Ε	Z	R	٧	N	R	L	U	G	U
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Χ	K	L	Н	С	Α	Ε	Т	L	F	W	Т	Н	F	В	W	N	W	G	R
S	Р	Ε	Т	Z	Т	L	S	S	L	W	Υ	W	Т	0	N	D	L	Υ	J
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U	C	U	Α	L	K	٧	Т	Α	Υ	I	J	R	C	Н	R	I	Χ	G	S
I	I	K	С	W	W	Ε	K	Α	R	J	Α	٧	Н	Ε	I	Ε	Р	G	Α
J	Ε	0	Ε	Н	М	U	N	Q	J	Р	Н	Н	В	Υ	٧	М	F	0	Χ
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S	M	L	D	Q	G	C	R	Т	Т	F	٧	J	C	0	R	R	U	0	Р
D	٧	Н	Α	L	L	Α	L	R	N	٧	F	Ε	Α	Q	0	Α	Α	Т	U
G	Ε	N	Ε	R	Α	L	М	Α	C	Н	I	N	I	S	Т	F	0	Q	0
T	Α	R	L	С	D	F	K	٧	K	В	Α	Χ	Р	K	R	В	Ε	F	٧
R	Ε	Т	Т	I	F	М	Α	Ε	Т	S	W	0	Т	G	S	٧	S	R	М

Baker Welder Steamfitter Hairstylist General Carpenter Cabinetmaker Tool and Die Maker

Ironworker General Machinist Roofer Sheet Metal Worker Plumber Cook



Red Seal Trades Word Search Answer Sheet



Over, Down, Directions

BAKER(11, 1, S)

CABINETMAKER(12, 1, SW)

COOK(4, 10, SW)

GENERALCARPENTER(1, 1,SE)

GENERALMACHINIST(18, 1, E)

HAIRSTYLIST(3,1,NW)

IRONWORKER(16, 1, S)

PLUMBER(2, 7, NE)
ROOFER(14, 15, SE)
SHEETMETALWORKER(16, 1, NE)
STEAMFITTER(20,1, W)
TOOLANDDIEMAKER(17, 1, S)
WELDER(15, 3, E)



Notes



Notes

