

THINK SKILLED TRADES.



► Technological Education: Pathways to Skilled Trades & STEM Careers

This resource provides a visual overview of curriculum pathways to skilled trades and technology careers, including the elementary curriculum (grade 4 to grade 8), through to secondary Technological Education curriculum (grade 9 to grade 12), into post-secondary programs and future careers.

Curriculum - Elementary Science and Technology (STEM, CPTS & Skilled Trades)

The following document connects each grade of the elementary curriculum to Creating Pathways to Success and career and skilled trades examples: https://docs.google.com/document/d/1A6F7xe5gAG8UYIAXd7CXj_h313GKcWe2dboFw5IUroY/edit?usp=sharing

PREPARING FOR GRADE 9

As students move from grade 8 to grade 9, we can highlight the many opportunities that pathways can lead to at course selection time. Working with the grade 8 Guidance, Student Success, Science & Technology teachers, one can highlight the opportunities that open up through taking Grade 9 Technology and the Skilled Trades (TAS10). This resource is meant to help with those discussions. Students can see the potential career paths and begin to envision their futures.

While students are in TAS10 - Guidance can work with the technology teachers to highlight the different Skilled Trades that can lead from each of the different broad-based technology courses students are being introduced to.

PREPARING FOR GRADE 10

Highlight the various Technological Education courses that are available at your school. Show the pathway from TAS10 to grade 10 opportunities, and how they can lead to specialized programs in senior classes. You may also wish to partner with the Careers teachers to create opportunities for reflection on the TAS10 they did in grade 9, and where they imagine being able to use those skills in the future.

TRADES AT A GLANCE: 4 SECTORS

- [OYAPPAJO.COM](https://oyappa.com): Explore the Trades and see the 140+ Skilled Trades in Ontario

There are 4 different Sectors in the Trades:

- **CONSTRUCTION**
- **MOTIVE POWER**
- **INDUSTRIAL**
- **SERVICE**

The charts in the following pages feature each broad-based technology course, emphasis courses available, related post-secondary programming and career examples in skilled trades and technology.

Communications Technology

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post-Secondary Examples	Career Examples
TAS10 OR TAS20	TGJ20 Comm. Tech	TGJ3M Comm Tech TGJ30 Broadcast & Print Production TGI3M Interfacing TGP3M Photography & Digital Imaging TGG3M Print & Graphic Comm. TGR3M Radio, Audio & Sound Production TGV3M TV, Video & Movie Production Experiences in Comm. Tech • Co-op • OYAP • SHSM	TGJ4M Comm. Tech TGJ40 Broadcast & Print Production TGI4M Interactive New Media & Animation TGP4M Photography & Digital Imaging TGG4M Print & Graphic Comm. TGR4M Radio, Audio & Sound Production TGV4M TV, Video & Movie Production Experiences in Comm. Tech • Co-op • OYAP	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • IT - Contact Centre Tech Support Agent • Network Cabling Specialist • Entertainment Industry Power Technician College Certificate, Diploma &/or Degree • Web Developer • Web Designer • Internet Application Programmer • Broadcasting • A/V • Journalism • Sound Engineer University Bachelor, Master's, Doctoral Degree • Journalism • Architect • Business Marketing Work Entering work straight from secondary school • Practical Experience on the job • Continuing with a co-op experience and building skills • Moving into an apprenticeship with a journeyperson/sponsor	Work in the areas of TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media, e.g.: • Hotel • Digital imaging • Interactive game development • Graphic arts • Web/interactive media design • Audio/video production • Director • Announcer • Videographer • Journalist • Graphic illustrator • Printer • Social Media



Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Communication styles • Drone systems • Generative AI applications • Media ethics • Multimedia production	To develop an understanding of communications technology is an important part of being both technology and media literate. Comm Tech courses are project-based and will provide students with opportunities to acquire the knowledge & skills required to design, use, and manage electronic, live, recorded, and graphic communications systems, specifically in the areas of TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media and animation.	• Animation techniques • Audio & video recording and editing • Media optimization • Social media marketing • Special effects



Computer Technology

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post-Secondary Examples	Career Examples
TAS10 OR TAS20	TEJ20 Computer Technology	TEJ3E Computer Technology(CT) TEJ3M Computer Engineering Technology (CET) TEI3M CET: Interfacing TEL3M CET: Electronics TEN3M CET: Networking TER3M CET: Robotics & Control Systems TEC3E CT: Comp. Repair TER3M CET: Robotics & Control Systems TEC3E CT: Comp. Repair TET3E CT: IT Support TEW3E CT: Network Support Experiences in Comp. Tech • Co-op • OYAP • SHSM	TEJ4E Computer Technology (CT) TEJ4M Computer Engineering Technology (CET) TEI4M CET: Interfacing TEL4M CET: Electronics TEN4M CET: Networking TER4M CET: Robotics & Control Systems TEC4E CT: Comp. Repair TER4M CET: Robotics & Control Systems TEC4E CT: Comp. Repair TET4E CT: IT Support TEW4E CT: Network Support Experiences in Comp. Tech • Co-op • OYAP • SHSM	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • CNC (Computer Numerical Control) Programmer • Automotive Electronic Accessory Technician • Relay & Instrumentation Technician College Certificate, Diploma &/or Degree • Electronics Engineering • Technician (2 yr) • Technologist (3 yr) • IT hardware technician • IT network technician • Electronic service technician University Bachelor, Master's, Doctoral Degree • Electrical Engineer • Computer Engineer Work Entering work straight from secondary school • Practical Experience on the job • Continuing with a co-op experience and building skills • Moving into an apprenticeship with a journeyperson/sponsor	Career opportunities related to computer technology and electronics. • Computer engineering technician • Computer engineering technologist • Electrical engineer • Programmer • Systems analyst • Artificial Intelligence Systems • Computer sales, retail salesperson • Electronic service technician • IT hardware technician • Network technician • Robotics engineer

Computer Technology

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Examples of Concepts & Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Artificial intelligence systems • Cloud computing • Data and network security • Electrical devices • Hardware vs software • Network systems • Smart devices	To develop knowledge and skills related to computer hardware, networks, operating systems, and other software. Students will use utility and application software, and learn proper procedures for installing, maintaining, and troubleshooting computer systems and networks.	• Analyzing circuits • Building & testing computer systems • Designing and wiring electronic circuits • Programming microcontrollers



Construction Technology

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post-Secondary Examples	Career Examples
TAS10 OR TAS20	TCJ20 Construction Technology	TCJ3C /TCJ3E Const.Engineering Tech (CTE) TCJ3E Construction Tech (CT) TCC3E CT: Carpentry TCE3E CT: Electrical/Network Cabling TCH3E CT: Heating & Cooling TCM3E CT: Masonry TCP3E CT: Plumbing TCS3C CET: Construction Management & Science TCY3C CET: Civil Engineering TWJ3E Custom Woodworking • OYAP (Carpenter) • OYAP (Electrical) • Construction SHSM (carpentry) • Electrical (Energy) SHSM	TCJ4C Construction Engineering Tech TCJ4E Construction Tech TCC4E: CT: Carpentry TCE4E CT: Electrical/Network Cabling TCH4E CT: Heating & Cooling TCM4E CT: Masonry TCP4E CT: Plumbing TCS4C CET: Construction Management & Science TCY4C CET: Civil Engineering TWJ4E Custom Woodworking • OYAP (Carpenter) • OYAP (Electrical) • Construction SHSM (carpentry) • Electrical (Energy) SHSM	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/ journeyperson • Cabinet Maker • General Carpenter • Roofer • Architectural Glass & Metal Technician • Ironworker • Native Residential Construction Worker • Powerline Technician • Floor Covering Installer College Certificate, Diploma &/or Degree • Arc. Technician (2yrs) • Arc. Technologist (3yrs) • Drafting & Design • Mech Eng Drafting & Design University Bachelor, Master's, Doctoral Degree • Engineering (Civil, Electrical, Mechanical, Integrated Systems) • Architecture • Science (Materials Science, Physics) Work Entering work straight from secondary school • Practical Experience on the job • Continuing with a co-op experience and building skills • Moving into an apprenticeship with a journeyperson/sponsor	Graduates will be trained to perform a number of tasks, including cabinet design, manufacturing and installation, furniture and antique restoration, home finishing and more. • Cabinetmaker • Shop Supervisor • Millwork Assembler • Woodworking Technician • Building inspector • Carpenter • Civil Engineer • Heating, Refrigeration, and Air Conditioning • Home building and renovation manager

Construction Technology

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Examples of Concepts & Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Advanced building automation • Building science • Construction management • Heavy & light construction systems • Legal & regulatory processes • Material science • Resource sustainability	To learn about designing, constructing, and maintaining a variety of buildings and structures, and will gain experience with the tools, equipment, and processes commonly used in the field. Students will also learn about health and safety standards in the construction industry, building codes and regulations and employment opportunities and careers in the various sectors of the industry, including electricity, carpentry, masonry, heating and cooling, and plumbing. Initial focus is on residential and light construction systems related to residential buildings and structures, and progress to advanced residential & light commercial construction. Woodworking courses allow students to concentrate on furniture or cabinet making.	• Building & fabrication techniques • Estimating materials & resources • Finishing techniques • Layout & measurement techniques



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Green Industries

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post-Secondary Examples	Career Examples
TAS10 OR TAS20	THJ20 Green Industries	THJ3E Green Industries THJ3M Green Industries THA3M Agribusiness THD3M Landscaping Architecture THF3E Floristry THG3E Agriculture THH3E Horticulture THL3E • Landscaping Construction & Maintenance THO3M/THO3E Forestry THS3M Horticulture Management & Science Experiences in GI • Co-op • OYAP • SHSM	THJ4E Green Industries THJ4M Green Industries THA4M Agribusiness THD4M Landscaping Architecture THF4E Floristry THG4E Agriculture THH4E Horticulture THL4E • Landscaping Construction & Maintenance THO4M/THO4E Forestry THS4M Horticulture Management & Science Experiences in GI • Co-op • OYAP • SHSM	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • Horticultural Technician • Utility Arborist • Terrazzo, Tile, & Marble Setter • Concrete finisher • Brick & Stone Mason • Agricultural - Dairy, Fruit, Swine • Horse Groom • Blacksmith College Certificate, Diploma &/or Degree • Agriculture • Horticulture/Landscaping • Animal Care • Vet Tech • Equine Handler • Wine/Cannabis Production University Bachelor, Master's, Doctoral Degree • Engineering • Veterinarian • Entomology • Doctor • Geography Work • Practical Experience on the job • Continuing with a coop experience and building skills • Moving into an apprenticeship with a journeyperson/sponsor	• Arborist • Forestry professional • Greenhouse worker • Landscaper • Lighting systems • Water features • Irrigation systems • GIS analysis • Robotics • Automation • Entomology • Pathology • Tissue culture • Agronomy • Marketing • Environmental management • Farm management • Landscaping • City works • Farming

Green Industries

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Examples of Concepts & Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Agricultural automation • Animal welfare • Climate & weather • Harvesting systems • Production & growing techniques • Resource sustainability	To investigate how to care for and sustainably manage our natural and living resources. Students will explore a variety of areas within green industries, including agriculture, floristry, forestry, horticulture, and/or landscaping. Students will gain practical skills and knowledge by completing a variety of authentic, industry-relevant activities and projects, such as plant propagation & greenhouse maintenance activities; landscape design & planning exercises; assignments that include farm or forestry management plans; and various construction projects. In addition, students will be introduced to concepts pertaining to biodiversity, environmental sustainability, and natural vs artificial products. Students will also investigate the numerous and varied ways in which green industries and society are interdependent.	• Agricultural planning & organization • Agricultural practices • Landscape maintenance • Resource management



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Hairstyling & Aesthetics

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TXJ20 Hairstyling and Aesthetics	TXA3E Aesthetics	TXA4E Aesthetics	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • Aesthetician • Barber/Hairstylist College Certificate, Diploma &/or Degree • Hairstyling • Barbering • Wellness • Business University Bachelor, Master's, Doctoral Degree • Chemistry • Business • Teacher Work Entering work straight from secondary school • Practical Experience on the job • Continuing with a co-op experience and building skills • Moving into an apprenticeship with a journeyperson/sponsor	• Tattooist • Salon industry • Spa industry • Make-up artist • Hairstylist • Barber • Hair colour specialist • Chemical technician • Nail technician • Retail specialist • Wig or extensions specialist • Aesthetician • Salon manager • Salon owner • Product educator • Cosmetic chemist • Medi-spa technician • Teacher • Hair washing • Managing the salon • Managing the business
		TXH3E Hairstyling	TXH4E Hairstyling		
		TXJ3E Hairstyling and Aesthetics	TXJ4E Hairstyling and Aesthetics		
		Experiences in Hairstyling & Aesthetics • Co-op • OYAP • SHSM (H & A: Health & Wellness) • SHSM (H & A: Arts and Culture)	Experiences in Hairstyling & Aesthetics • Co-op • OYAP • SHSM (H & A: Health & Wellness) • SHSM (H & A: Arts and Culture)		

Hairstyling & Aesthetics

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Examples of Concepts & Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Colour theory • Customer service and retention • Infections prevention • Light and laser applications • Skin, nail, and hair physiology	To develop knowledge and skills in Hairstyling and Aesthetics and offers a variety of applications that will equip students to provide services for a diverse clientele. Students will identify trends in the hairstyling and aesthetics industry, learn about related health & safety laws, expand their communication & interpersonal skills through interactions with peers & clients. Students will also consider environmental & societal issues related to the industry, and will acquire a more detailed knowledge of apprenticeships & direct-entry work positions.	• Colouring techniques • Manicure techniques • Natural and thermal styling techniques • Salon operation • Sanitization techniques



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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TPJ20 Healthcare	TPJ3C Healthcare TPJ3M Healthcare TPD3M HC: Dental Services TPL3M HC: Laboratory Services TPM3M HC: Nursing/Medical Services TPP3M HC: Pharmacy Services TPT3M HC: Therapy Services Experiences in Healthcare • Co-op • OYAP • SHSM	TPJ4C Healthcare TPJ4M Healthcare TPJ4E HC: Support Services TOJ4C Child Development & Gerontology (CD&G) TOC4C: CD&G: Child Development TOG4C: CD&G: Gerontology TPD4M HC: Dental Services TPL4M HC: Laboratory Services TPM4M HC: Nursing/Med. Services TPT4M HC: Therapy Services TPP4M HC: Pharmacy Services Experiences in Healthcare • Co-op • OYAP • SHSM	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • Aboriginal Child Development Practitioner • Optics Technician (Lens & Prism Maker) • Developmental Services Worker • Child and Youth Worker • Child Development Practitioner College Certificate, Diploma &/or Degree • Nursing • Paramedics • Pharmaceutical Programs • Medical lab technologist University Bachelor, Master's, Doctoral Degree • Science • Healthcare • Occupational Therapy • Physiotherapy Work • Practical Experience on the job • Pharma Factory • Moving into an apprenticeship with a journeyperson/sponsor	• Aboriginal Child Development Practitioner • Optics Technician (Lens & Prism Maker) • Developmental Services Worker • Child and Youth Worker • Child Development Practitioner • Biological research • Epidemiological research • Drug research & trials • Nursing • Naturopath • Alternative Therapies • Doctor • Dentistry/Orthodontics • Optometrist • Community service worker • Medical lab technologist • Nurse aide • Pharmacist • Social worker • Podiatrist • Psychologist • Psychiatrist • PSW • Massage therapist



Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Human anatomy, physiology, & developmental stages • Mental health awareness • Nutrition • Patient confidentiality • Problematic substance use • Social interdependence	To develop understanding of basic healthcare procedures, including the safe use of appropriate instruments, equipment, and materials. Students will focus on healthcare fundamentals, including the anatomical features & physiology of the major body systems & the factors that affect homeostasis in the human body. Students will develop an awareness of H & S issues in the healthcare field, analyze environmental and societal issues related to healthcare, & learn about professional practice standards.	• Behaviour management • Lifestyle management • Observation and record keeping • Verbal questioning and active listening



Hospitality and Tourism

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TFJ20 Hospitality and Tourism	TFJ3C Hospitality and Tourism	TFJ4C Hospitality and Tourism	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journey person • Baker, Baker - Patisserie • Chef • Assistant Cook, Cook, Institutional Cook • Special Events Coordinator College Certificate, Diploma &/or Degree • Chef • Hotel & Restaurant Operations Management • Hotel Resort & Restaurant Management, • Hospitality Skills • Event Management • Hotel & Restaurant • Hotel & Resort Services Management • Travel & Tourism University Bachelor, Master's, Doctoral Degree • Tourism Studies • Food Safety • Dietician • Event Planning • Commerce - Sport & Event Management Commerce • Hospitality & Tourism Management • Outdoor Recreation, Parks & Tourism • Recreation & Leisure Studies, Recreation & Sport Business, Therapeutic Recreation • Sport Management • Sport Media Work • Practical Experience on the job • Moving into an apprenticeship with a journey person/sponsor	• Baker • Baker - Patisserie • Chef • Assistant Cook • Cook • Institutional Cook • Special Events Coordinator • Hotel Manager • Chef • Event Planner • Travel Consultant • Food Critic • Foodie Influencer • Nutritionist • Travel Agent • Restaurateur • Dietician • Resort Manager
		TFJ3E Hospitality and Tourism	TFJ4E Hospitality and Tourism		
		TFN3C Applied Nutrition	TFN4C Applied Nutrition		
		TFR3C Culinary Arts & Management	TFR4C Culinary Arts & Management		
		TFT3C Tourism & Travel Planning	TFT4C Tourism & Travel Planning		
		TFB3E Baking	TFB4E Baking		
		TFC3E Cooking	TFC4E Cooking		
		TFE3E Event Planning	TFE4E Event Planning		
		Experiences in H & T • Co-op • OYAP • SHSM	Experiences in H & T • Co-op • OYAP • SHSM		

Hospitality and Tourism

THINK SKILLED
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Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Advanced food processing systems • Cultural awareness • Customer service & retention • Dietary requirement & restrictions • Food classification • Food safety • Food sustainability • Product or experience development	To acquire knowledge & skills related to the food & beverage services sector of the tourism industry. Students will learn how to prepare, present, & serve food using a variety of tools & equipment, & will develop an understanding of the fundamentals of providing high-quality service to ensure customer satisfaction & the components of running a successful event or activity. Students will develop an awareness of health & safety practices, environmental & societal issues, & career opportunities in the food & beverage services sector.	• Culinary techniques • Estimating and budgeting • Events planning • Food preservation • Marketing • Plating techniques • Safe food handling



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Manufacturing Technology

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TMJ20 Manufacturing Technology	TMJ3C Manufacturing Technology TMJ3E Manufacturing Technology TMJ3M Manufacturing Technology TMM3M Mechanical Engineering TMR3M Robotics & Control Systems TMC3C Computer aided Manufacturing TMi3C Industrial Maintenance TMP3C Precision Machining TMT3C Robotics & Control Technician TMY3C Welding Technician TM03E Machine Operator TMS3E Sheet Metal TMW3E Welding Experiences in Manufacturing Technology • Co-op • OYAP • SHSM	TMJ4C Manufacturing Technology TMJ4E Manufacturing Technology TMJ4M Manufacturing Technology TMM4M Mechanical Engineering TMR4M Robotics & Control Systems TMC4C Computer aided Manufacturing TMi4C Industrial Maintenance TMP4C Precision Machining TMT4C Robotics & Control Technician TMY4C Welding Technician TM04E Machine Operator TMS4E Sheet Metal TMW4E Welding Experiences in Manufacturing Technology • Co-op • OYAP • SHSM	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/journeyperson • Machinist • Facilities Mechanic • Machinist • Drafting Technician • Hydraulic/Pneumatic Mechanic • Instrumentation and Control Technician • Ironworker • Tool & Die Maker • Fitter - Assembler (Motor Assembly) College Certificate, Diploma &/or Degree • Robotics • Designer • CNC, CAD, CAM University Bachelor, Master's, Doctoral Degree • Engineering • Mechatronics • Robotics Work • Practical Experience on the job • Moving into an apprenticeship with a journeyperson/sponsor	• Machinist • Drafting Technician • Drafting Designer • Draftsperson - Mechanical • Draftsperson - Plastic Mould Design • Draftsperson - Tool And Die Design • Cad / Cam Operator • Cnc Programmer • Product Developer • Chemical Technologist • Chemical Technician • Industrial Electrician • Machining Tool Operator • Mechanical Engineer • Ironworker • Ironworker - Structural & Ornamental • Bearings Mechanic • Construction Boilermaker • Metal Fabricator • Manufacturing Organization • President • Controller • Purchasing /Inventory Control • Human Resources • Marketing • Engineering • Sales • Production • Certified Engineering Technologist • Certified In Production & Inventory Management • Licensed Professional Engineer

Manufacturing Technology

THINK SKILLED
TRADES.



Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Additive manufacturing • Advanced automation • Material transformation • Metallurgy • Metrology • Process engineering • Quality control • Sustainable manufacturing • Inspection and quality control • Precision measurement • Programming automated equipment • Speeds and feeds • Workpiece and machine setup	To develop knowledge & skills related to design, process planning, control systems, & quality assurance. Students will use a broad range of tools & equipment & will combine modern manufacturing techniques & processes with computer-aided manufacturing as they develop critical decision-making, problem-solving, & project-management skills. Students will develop an awareness of environmental & societal issues related to manufacturing & will learn about pathways leading to careers in the industry.	• Analyze, properly operate, & maintain quality in a manufacturing system or process • Use of tools and equipment • Assembly and disassembly • Finishing processes



Technological Design

THINK SKILLED
TRADES.



Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TDJ20 Tech Design	TDJ3M Technological Design	TDJ4M Technological Design	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/ journeyperson • Utility Arborist • Saddlery • Process Operator – Food Manufacturing • Process Operator – Power • Process Operator – Wood Products • Process Operator – Refinery, Chemical, and Liquid Processes • Native Clothing and Crafts Artisan • Painter and Decorator – Commercial and Residential • Painter and Decorator – Industrial • Draftsperson – Mechanical • Draftsperson – Plastic Mould Design • Draftsperson – Tool and Die Design College Certificate, Diploma &/or Degree • Architecture • Arc. Technician (2yrs) • Arc. Technologist (3yrs) • Drafting & Design • Mech Eng Drafting & Design University Bachelor, Master's, Doctoral Degree • Architect • Engineering Work • Practical Experience on the job • Moving into an apprenticeship with a journeyperson/sponsor	• Architect • Architectural Technologist • Utility Arborist • Saddlery • Process Operator – Food Manufacturing • Process Operator – Power • Process Operator – Wood Products • Process Operator – Refinery, Chemical, and Liquid Processes • Native Clothing and Crafts Artisan • Painter and Decorator – Commercial and Residential • Painter and Decorator – Industrial • Draftsperson – Mechanical • Draftsperson – Plastic Mould Design • Draftsperson – Tool and Die Design • Designer • CAD (computer-aided design) Operator • Interior Designer • Mechanical Engineer Sustainable design: • Engineering • Architecture • Industrial Design • Control Systems • Apparel/Textile Design
		TDJ30 Technological Design	TDJ40 Technological Design		
		TDA3M Architectural	TDA3M Architectural		
		TDM3M Mechanical & Industrial	TDM3M Mechanical & Industrial		
		TDP3M Apparel & Textile	TDA4M Architectural		
		TDR3M Robotics & Control System	TDM4M Mechanical & Industrial		
		TDV3M Interior Design	TDP4M Apparel & Textile		
		Experiences in Tech Design • Co-op • OYAP • SHSM	TDR4M Robotics & Control System		
			TDV4M Interior Design		
			Experiences in Tech Design • Co-op • OYAP • SHSM		

Technological Design

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Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Development & prototyping • Drafting standards • Performance & safety standards • Rapid prototyping • Sustainable design	To provide students with a variety of learning experiences that focus on the practical application of the principles of engineering, architecture, & design. These activity-based courses emphasize problem solving to meet design challenges in a wide range of areas, which may include apparel & textile design, architectural design, interior design, mechanical & industrial design, & robotics & control systems.	• Advanced simulation tools • Drafting techniques • Presentation methods • Rendering techniques • Use of scale



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Transportation Technology

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Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
TAS10 OR TAS20	TTJ20 Transportation Technology	TTJ3C Transportation Tech	TTJ4C Transportation Tech	Apprenticeship Skilled Trades • Level 1 & Level 2 Working and learning from a sponsor/ journeyperson • Automotive Service Technician • Electric Motor System Technician • Heavy Duty Equipment Technician • Marine Engine Technician • Motorcycle Technician College Certificate, Diploma &/or Degree • Aircraft • Auto Design and Repair • Marine • Truck & Coach • Auto Body • Logistics • Railway • International Transportation & Customs • Civil Engineering Technology • Sustainable Urban & Transportation Planning • Supply Chain Management University Bachelor, Master's, Doctoral Degree • Science • Engineering • Design • Robotics • Mechatronics • Management & Organizational Studies (Commercial Aviation Management) - Flight & Non-Flight	• Automotive Service Technician • Electric Motor System Technician • Heavy Duty Equipment Technician • Marine Engine Technician • Motorcycle Technician • Automotive Service Technician • Aviation Technician • Marine Mechanical assistant • Urban and Land Use Planner • Aircraft Maintenance - Aviation Technician • Automotive Parts & Service Operations • Aircraft Maintenance Technician • Aviation Management • Motive Power Auto Technician Service & Management • Motive Power Technician - Truck & Coach • Aviation Technology - Aircraft & Avionics • Auto Design and Repair • Marine • Truck & Coach • Auto Body • Logistics • Railway • Automotive Fundamentals • Pilot Licence • Aerospace Operations • Aerospace Manufacturing • Manufacturing Engineer • Design Engineer • Robotics - Mechatronics
		TTJ30 TT: Vehicle Ownership	TTJ4E TT: Vehicle Maintenance		
		TTA3C Auto Service	TTA4C Auto Service		
		TTB3C Auto Body	TTB4C Auto Body		
		TTH3C Heavy Duty & Agricultural Equipment	TTH4C Heavy Duty & Agricultural Equipment		
		TTL3C Light Aircraft	TTL4C Light Aircraft		
		TTS3C Small Engine & Recreation Equipment	TTS4C Small Engine & Recreation Equipment		
		TTT3C Truck & Coach	TTT4C Truck & Coach		

Transportation Technology

THINK SKILLED
TRADES.



Gr. 9/10	Gr. 10	Gr.11	Grade 12	Post Secondary Examples	Career Examples
		Experiences in Transportation Tech • Co-op • OYAP • SHSM	Experiences in Transportation Tech • Co-op • OYAP • SHSM	Work • Practical Experience on the job • Moving into an apprenticeship with a journeyperson/sponsor	• Pilot • Automotive Engineering • Automotive & Vehicle Engineering (Bach. of Technology) • Aerospace Engineering • General Labourer at Airport • Auto Parts • Auto Service In-Store • Auto Sales

Examples of Concepts and Topics	Examples of Concepts & Topics	Examples of Skills and Applications
• Autonomous vehicles & devices • Fuel economy & alternative fuels • Inspections & diagnostics • Mechanical advantage • Performance & safety standards	This course introduces students to the servicing, repair, and maintenance of vehicles through practical applications. The course is appropriate for all students as a general interest course to prepare them for future vehicle operation, care, and maintenance or for entry into an apprenticeship in the motive power trades. Students will develop an awareness of environmental and societal issues related to transportation, and will learn about careers in the transportation industry and the skills and training required for them.	• Assembly & disassembly of vehicles systems • Routine maintenance • Safety system maintenance • Seasonal system checks • Troubleshooting

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