

SKILLED**TRADES**<sup>BC</sup>

# Youth Explore Trades Skills

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## Contents

Introduction .....	3
Rationale .....	3
Goals for Youth Explore Trades Skills 10-12 .....	3
Curricular Considerations.....	4
Applied Design, SKILLS, and Technology Curriculum .....	5
Career Exploration and Awareness .....	5
Safety Considerations .....	6
Learning Resources for Skills Exploration Modules .....	6
Student Assessment.....	7
Ministry of Education Considerations.....	7
Reporting Youth Explore Trades Skills for grades 10-12 .....	7
Work-based training.....	8
Industry Certificate Courses .....	8
Registering with SkilledTradesBC.....	9
Registration Payments .....	9
Forecasting Process.....	9
Funding Agreement Process .....	10
Appendix A: Sample STX Learning Plan.....	12
Core Module.....	12
Automotive Technician Module.....	12
Baker Module .....	12
Carpentry Module .....	13
Cook Module .....	13
Design and Drafting Module .....	13
Electrician Module .....	13
Electronics and Robotics Module.....	13
Plumber Module .....	13

Local Option Module(s).....	14
Appendix B: links to SkilledTradesBC Program Outlines.....	15
Automobile Technician: .....	15
Baker: .....	15
Carpenter: .....	15
Cook: .....	15
Electrician:.....	15
Metalwork: Welding, Machinist, Sheet Metal .....	15
Plumber:.....	15
Local Option, any of these trades are eligible.....	15

# Introduction

Youth Explore Trades Skills 10-12 (STX) is a Ministry authorized course jointly supported by the Ministry of Education and SkilledTradesBC. Through participation in STX, students explore, practice, and develop a variety of trades-related skills, and earn graduation credits.

SkilledTradesBC leads and coordinates British Columbia's skilled trades system. Together with employers and industry partners, we uphold the highest standards for training, issue credentials, support apprentices, fund programs and promote a wide range of rewarding careers in the trades. SkilledTradesBC awards provincial credentials (Certificate of Qualification & Red Seal Endorsements) to candidates after they successfully complete their training programs.

Working with BC educators, the Ministry of Education and SkilledTradesBC jointly developed this program guide to ensure it reflects best practices in teaching and industry training. School district staff are responsible for implementing STX according to the standards contained in this program guide, and for providing access to STX for all interested students.

## Rationale

Youth Explore Trades Skills 10-12 is a Ministry-authorized course intended to allow students to explore trades or technology careers through hands-on activities, and subsequently enroll in Youth Train in Trades (TRN) and/or Youth Work in Trades (WRK) programs. Although STX is not a prerequisite for these programs, it involves learning that explores some of the skills, knowledge and technologies associated with various trades.

This program guide sets out the expectations and responsibilities for the delivery of STX, and identifies what students are expected to learn, know and be able to do. Schools have flexibility in determining content delivery in the context of provincial [Applied Design, Skills and Technologies](#) and [Career Education](#) curricula.

### GOALS FOR YOUTH EXPLORE TRADES SKILLS GRADES 10-12

Youth Explore Trades Skills Grades10-12 has several goals:

- Provide students with opportunities to explore and develop trades and technology skills.
- Introduce students to several trades and technology careers.
- Increase students' job-readiness by exploring the skills needed and type of work involved in a variety of trades and technology careers.
- Provide students with opportunities to resolve design challenges.

- Expose students to specific pre-apprentice skills and the expectations of formal apprenticeship training.
- Provide students with an opportunity to meet the Applied Design, Skills, and Technologies graduation requirement by completing one four-credit or two two-credit STX courses (NOTE: SkilledTradesBC does not fund two two-credit STX courses)
- Help prepare students to enter the world of work with the skills, attributes, and sense of responsibility necessary to be successful.

## Curricular Considerations

STX is intended to expose students to different trades and technologies, and to help them develop competence in applying the related content, skills, and technologies safely and appropriately in a hands-on environment. STX has 4 modules, consisting of the mandatory Core module, and 3 other modules that can be chosen by the School District, Independent School, or First Nation Schools. The suggested learning outcomes have been developed by the Ministry of Education and Child Care, SkilledTradesBC, OpenSchoolBC, and educators to align with the competencies identified in each trade. These can be found in Appendix A and are divided into modules, please note, the trades listed are just examples of modules that have been created, and a School is free to offer any trades program that they see fit to deliver:

- Core (mandatory)
- Automotive Technician
- Baker
- Carpenter
- Cook
- Design and Drafting (non-trade)
- Electrician
- Electronics and Robotics (non-trade)
- Metalwork
- Plumber
- Local Option(s)

The intention of this modularization is to offer choice and flexibility while retaining a full core module in a four-credit course (alternatively: two credit courses). Educators are encouraged to structure the delivery of course content in a manner that best suits students' needs while ensuring students experience at least three trades.

The Core Module is cross-curricular in nature and includes general information that is not specific to a skill, trade, or technology area, and may include the following:

- Safety training
- BC's apprenticeship system
- Careers related to each module via both internet exploration and in person experiences.

- Employment and Social Development Canada’s nine Skills for Success (Essential Skills) and how workers in an occupation use them
- Conference Board of Canada’s employability skills for successful transitions to the workplace
- Potential industry certifications

The other modules contain content specific to a trade and are intended to introduce students to a variety of career possibilities related to that trade. It is expected that each of the trade or technology areas will be given roughly the same weighting in terms of time spent on each module.

The Local Option Module provides flexibility for teachers to respond to local and regional labour market needs and community interests. Local Options can be used to replace the content of any other module except the Core Module and are to be given the same instructional time and weighting as any of the other modules. Local Options of a SkilledTradesBC -designated trade must align with SkilledTradesBC competencies for that trade. There is no limit to the number of Local Option modules a district could offer in its STX programming.

## APPLIED DESIGN, SKILLS, AND TECHNOLOGIES CURRICULUM

Teachers are also expected to guide STX students through the application of *design thinking principles*. Design thinking helps students learn how to identify challenges and solve them in creative ways by using appropriate technology for the task at hand. The Applied Design, Skills, and Technologies (ADST) curriculum offers:

- A focus on designing thinking principles, the acquisition of skills, and the application of technology.
- Multiple methods of delivery that can be offered in different ways at different grade levels.
- Curriculum that encourages the use of a range of approaches to support student learning in the manner best suited to their abilities

## CAREER EXPLORATION AND AWARENESS

STX is a component of the Ministry of Education’s broader Career Education programming, and through exposure to the core skills common to many trades and technologies, STX helps students to make informed choices regarding secondary school courses and career options.

Teachers are expected to ensure that career awareness is an integral part of STX and will help students identify potential interests and passions they might want to pursue. The provincial Career Education curriculum contributes to students’ development as educated residents through the achievement of the following goals. Students are expected to:

- Recognize the need to be adaptable, resilient, and flexible to meet the changing opportunities and challenges of today’s world,
- Understand how ongoing purposeful career and life development contributes to the success and wellbeing of individuals, communities, and society.

- Build personal career and life development capacity to effectively learn and grow new interests, knowledge, skills, and competencies throughout their lives.
- Develop awareness of their personal strengths, competencies, values, and passions, and use this self-knowledge to inform career and life choices.
- Communicate and interact collaboratively with others, valuing diversity of people, perspectives, worldviews, ideas, and opportunities.
- Explore a range of experiences, roles, and opportunities in personal, educational, and workplace contexts to advance their personal career and life journeys.

In support of these goals, resources such as WorkBC's [Labour Market Snapshots](#) and [Labour Market Outlook](#) can help inform students' understanding of the labour market and the value of technical training. For students that have recognized the benefits of a career in trades and wish to continue on their journey to becoming a certified tradesperson here is a link to help them to see the steps required: <https://skilledtradesbc.ca/become-an-apprentice>

## SAFETY CONSIDERATIONS

One of the fundamental requirements of the workplace is an understanding and application of safe work practices and procedures. As students begin to experience a more complex work environment, essential safety procedures must become second nature and be reinforced throughout students' time in a workshop or on a job site.

Teachers need to be keenly aware of safety issues while students are involved in maintenance, repair, replacement, servicing, or production activities. Safe work practices and procedures for STX teachers include:

- Establishing consistent rules and routines that ensure safety.
- Always modelling correct procedures for students.
- Verifying suitability of all equipment, facilities, and students' clothing.
- Teaching specific instructions on the safe and correct use and handling of equipment and tools, and the handling and disposal of waste or hazardous materials.
- Selecting tasks appropriate to students' skills and abilities.
- Ensuring students are always under supervision.
- Teaching industry-specific safety standards and procedures.

To deliver STX programs in BC schools, districts should have adequate facilities, equipment, and resources, and should include:

- A safe facility and healthy working environment as defined by [WorkSafeBC](#).
- An appropriate quality and quantity of tools, equipment, supplies, materials.
- Safety equipment for effective demonstration and instruction.

## LEARNING RESOURCES FOR SKILLS EXPLORATION MODULES

To assist teachers in delivering STX and ensuring students meet the competencies for the various modules, the following are suggested learning resources:

- SkilledTradesBC's website which hosts open-source resources to support delivery of the modules. Detailed lesson plans and activity guides for select trades are available for download at: [Youth Explore Skills Activity Plans](#)
- [Skills Ready](#), an initiative of the [Construction Foundation of BC](#), provides online resources for young people to prove they are work ready, and enable them to build a real-world understanding of the future benefits of starting out in the skilled trades and technology sectors.
- The [Heads Up for Safety](#) booklet developed by the BC Technology Education Association for technical education shops in secondary schools.
- WorkSafeBC's [Student WorkSafe 10-12: Resource for Teachers](#) and [Student Resources](#)

Teachers wishing to use these materials should preview and select those that are appropriate for use in their classroom.

## STUDENT ASSESSMENT

Student evaluation is generated from information collected through school-level assessment activities. Teachers use their experience and insight, along with the module-specific criteria they establish, to make judgments about student performance. Some of the competencies may require a specific demonstration of the learning tasks, while others might involve a demonstration of knowledge as determined by the teacher.

# Ministry of Education Considerations

In addition to delivering STX in the context of the provincial [Applied Design, Skills and Technologies](#) and [Career Education](#) curricula, district staff and STX teachers should consider the following.

## REPORTING YOUTH EXPLORE TRADES SKILLS 10-12

To support flexible delivery, there are course codes at Grades 10, 11, and 12, enabling schools to deliver Youth Explore Trades Skills at any grade in the Graduation Program.



Youth Explore Trades Skills 10A 4 Credits	Youth Explore Trades Skills 10B 4 or 2 Credits
Youth Explore Trades Skills 11A 4 Credits	Youth Explore Trades Skills 11B 4 or 2 Credits
Youth Explore Trades Skills 12A 4 Credits	Youth Explore Trades Skills 12B 4 or 2 Credits

Students may earn up to a maximum of 8 credits by earning full credit for both STXA and B. Completion of four-credits in STX programming meets the Applied Design, Skills, and Technologies graduation requirement. All credits must be earned by completing different modules within each of the courses. Students may not receive course credit for receiving duplicate instruction in any module. This applies regardless of course grade levels.

### WORK-BASED TRAINING

Work-based training is an integral part of an industry training program. STX has an intrinsic fit with Ministry-authorized Work Experience (WEX 12), Youth Work in Trades, and Youth Train in Trades programming. The goal is to help STX students transition from school into the workforce through work experience which hopefully leads to a sponsor employer for an apprenticeship. It is recommended that students undertake WEX 12 to apply the learning from STX either concurrently or subsequently. It can be either paid or unpaid work experience in the trade of their study and under the supervision of a qualified journey person (or sign-off authority).

### INDUSTRY CERTIFICATE COURSES

Youth Explore Trades Skills 10-12 can involve industry and trade-specific content, which could result in students qualifying for specific industry-related certificates. Districts that offer such certificates as part of their STX programming should not report those certificates through Workforce Training Certificates 12.

- Workplace Hazardous Materials Information System (WHMIS) - [ohstrainingbc.com/](http://ohstrainingbc.com/)
- First Aid (OFA Level 1) - [Training providers](#)
- Fall Protection
- FOODSAFE Level I - [Course](#)
- Site Ready BC - [Course](#)
- Traffic Control Person - [BCCSA](#) or [Universal Group](#)
- Powder-actuated Fastening (e.g., Hilti training)
- Confined Spaces Training

# Registering with SkilledTradesBC

## REGISTRATION PAYMENTS

School Districts, First Nation Schools, or Independent School Authorities are eligible for up to a \$100 payment for each school-aged student registered in STX. Registration payments can only be claimed once per student, if a student repeats the STX course there will be no payment for the second registration. SkilledTradesBC will confirm that the registration summary is correct. Once confirmed, SkilledTradesBC will transfer a payment.

To receive SkilledTradesBC funding a District must ensure that 2 out of the 3 modules being offered are trade related modules with the Core module being mandatory. On the Youth Explore Skills Activity page linked above you can find which modules are trade modules and which are considered non-trade modules.

Districts may not receive funding if STX is taken concurrently with Youth Explore Trades Sampler. SkilledTradesBC will track the number of students registering into the STX program and use this information for checking continuation rates into the TRN, WRK, or regular apprenticeship programs.

## FORECASTING PROCESS

SkilledTradesBC supports School Districts, Independent School Authorities or First Nation Schools to offer STX programs by providing funding through an annual Funding Agreement. Through the funding agreement process outlined below, School Districts, Independent School Authorities or First Nation Schools can qualify for up to \$100 per student (funded once).

The funding agreement outlines the funding amount that a School District /Independent School Authority or First Nation School can expect from SkilledTradesBC if they meet all the funding conditions in the agreement. The process starts in spring of the prior school year so it can be finalized before the new school year begins. This provides School Districts, Independent School Authorities or First Nation Schools full visibility to the total funding they would receive for the whole school year to support them in planning activities and initiatives that best support students to discover, explore, train, work and continue a career in skilled trades.

The funding agreement contains the target number of registrations for each SkilledTradesBC Youth Program, funding amount, funding conditions, and payment schedule.

Some examples of what the School District will be responsible for in the agreement are:

- Submit all student registrations for STX to SkilledTradesBC, two weeks after the program begins (or at the earliest point once students are confirmed in the class), and before the end of the school year.
- Provide the teacher(s) contact information to SkilledTradesBC, so they can be included in group communications regarding this program.
- Ensure the program is delivered according to the SkilledTradesBC Youth program outline.

Some examples of what SkilledTradesBC agrees to do in the agreement:

- Schedule ongoing meetings with School Districts, Independent Schools, or First Nation Schools.
- Establish connections with key SkilledTradesBC staff who can provide support to the district such as: Apprenticeship Advisors, Industry Relations, Indigenous Initiatives, Regional Trades Representatives, and others.
- Work with the stakeholders to create, share and make available marketing materials that promote skilled trades careers to youth, parents, caregivers, educators, and employers within the school environment. These items can be, but are not limited to brochures, posters, information sheets, information sessions, career fairs, webinars, videos, emails, and surveys.
- Work collaboratively with stakeholders to establish key metrics, provide data and analytics to support achieving goals.

## FUNDING AGREEMENT PROCESS

The funding agreement process starts off with the submission of the Forecast Document between April and June. School Districts, Independent School Authorities or First Nation Schools will submit a completed forecast document to SkilledTradesBC showing anticipated registrations for the upcoming school year. Both SkilledTradesBC and School Districts, Independent School Authorities or First Nation Schools will meet to review the Forecast Document and agree on targets and the funding amount. The funding amount will be based on the projected number of registrations at \$100 each.

The Forecast Document will be sent to all School Districts, Independent School Authorities or First Nation Schools between April and June. The document will contain instructions/definitions and must be returned to [youth@skilledtradesbc.ca](mailto:youth@skilledtradesbc.ca) by the deadline date provided. Forecasted numbers should be based on realistic numbers of students that the School District, Independent School Authority or First Nation School will be able to register for the upcoming year. Historical and current school year

registrations will be used to help determine registration targets and funding amounts in the agreement and could result in an increase or decrease in funding based on available funds.

We understand the challenge of trying to forecast the exact number of students that will be taking the program; therefore, the funding agreement conditions do not require STX registrations to exactly match the target but within range of it. If registrations end up slightly below the target, full funding will still be provided and the same for when registrations are slightly above the target. The funding amount for STX is part of the total funding agreement to the School Districts, Independent Schools or First Nation Schools and does not state funding is exclusive to a particular program to provide flexibility to a school district when it comes to planning for SkilledTradesBC Youth programs. If there are any questions or concerns about this, please contact the Youth Team at [youth@skilledtradesbc.ca](mailto:youth@skilledtradesbc.ca).

Once the School District, Independent School Authority or First Nation School meets with SkilledTradesBC to discuss and finalize the funding amounts for the upcoming school year, a funding agreement will be issued.

**\*\*Note: For some School Districts, Independent School Authorities, or First Nation Schools with only a few Youth programs and/or cannot forecast ahead how many participants they will have, a funding agreement is not required. Instead, these registrations will be approved on an ongoing basis throughout the school year and will be funded at \$100 per student (once per student). Please contact the Youth Team at [youth@skilledtradesbc.ca](mailto:youth@skilledtradesbc.ca) if you are in this situation.**

# Appendix A: Sample STX Learning Plan

The learning plan and outcomes are determined by teachers and guided by the ADST Curriculum Big Ideas, Curricular Competencies, Core Competencies, and design thinking principles. Listed below are some Modules as well as sample learning plans used to highlight the suggested skills, knowledge, and abilities in different trade modules. Detailed activity plans for some modules are available here: <https://skilledtradesbc.ca/youth-explore-trade-skills-activity-plans>.

## CORE MODULE

- Students will demonstrate knowledge of BC's Apprenticeship system.
  - Career Planning
  - Essential Skills
  - Entrepreneurship
  - Safety, Safe Work Practices, and WHMIS
- Note: Every student must receive instruction in the mandatory Core Module.

## AUTOMOTIVE TECHNICIAN MODULE

- Vehicle repair and maintenance
- Troubleshooting
- Specialized tools and equipment
- Brake, steering, suspension, and electrical systems
- Engine mechanics and components

## BAKER MODULE

- Monitoring and active learning
- Safe food storage and handling
- Baked goods materials, principles, and terminology

## CARPENTRY MODULE

- Critical thinking and coordination
- Awareness of safety practices
- Hand and power tool operation
- Measure, cut, shape, assemble and join materials.

## COOK MODULE

- How to order, organize and store food safely
- How to prepare and cook with a wide variety of ingredients
- How to experiment with different flavours and cuisines
- Coordination and time management

## DESIGN AND DRAFTING MODULE

- How to Define Drafting
- Problem Solving Models
- Design Process in Manufacturing

## ELECTRICIAN MODULE

- How to interpret drawings, circuit diagrams and electrical code specifications
- How to splice, join and connect wires to fixtures
- How to install and repair electrical equipment
- How to test and repair faults in electrical systems

## ELECTRONICS AND ROBOTICS MODULE

- Learn Essential Skills of Robotics
- Demonstrate Design Thinking
- Learn Robot Applications in the Real World

## PLUMBER MODULE

- Plumbing components preparation and assembly
- How to install, repair and maintain plumbing fixtures and systems

- How to select, measure, shape and join pipes
- How to locate, prevent, repair and test pipes for leaks

### LOCAL OPTION MODULE(S)

Competency: Learn and demonstrate skills that apply to SkilledTradesBC apprenticeship Level 1 technical training in a specific trade.

Note: Local Option Modules(s) are intended to allow School Districts, Independent Schools, or First Nation Schools the flexibility to modify STX to meet their requirements in terms of internal capacity, regional employment opportunities, or ability to effectively deliver instruction.

The content and competencies for any Local Option Module must be based, in part, on current SkilledTradesBC apprenticeship technical training. Schools must ensure that the amount of time spent in a Local Option Module is roughly equal to the time spent on tasks in the other modules.

# Appendix B: links to SkilledTradesBC Program Outlines

The following links are to be used as references for teachers to assist in developing content for Youth Explore Trades Skills modules. The Program Guides contain detailed information on competencies, facility, and tooling requirements.

- Automobile Technician:
- Baker:
- Carpenter:
- Cook:
- Electrician:
- Metalwork: Welding, Machinist, Sheet Metal
- Plumber:
- Local Option, any of these trades are eligible