

METAL TECHNOLOGY 8 COURSE OUTLINE

The following is an outline of the general course content, evaluation, and attendance. Please read carefully.

COURSE OBJECTIVES:

The course objective is to help young people prepare to live and work in a technological world by developing lifelong learning and technological literacy with respect to tools, materials, systems, processes and using them in an informed, ethical and responsible way.

GLOBAL LEARNING OUTCOMES and CORE COMPETENCIES:

Students will be introduced to and evaluated on both the practical and theoretical aspects of Metal technology and design within the framework of the ADST and its following curriculum organizers:

1. Communication

- Collaborate
- Connect and Engage
- Acquire, Interpret and Present
- Explain, Recount, and Reflect

- Solve Problems and value diversity
- Contributing to the community
- Strengths and abilities
- Relationships
- Values and choices

2. Personal, Social and Cultural

- Self-Determination
- Self-Regulation
- Well-Being
- Care for the environment

3. Thinking

- Creative Thinking:
 - Generate and Expand
 - Develop and Transform
- Critical Thinking:
 - Analyze and Critique
 - Question and Investigate

MAJOR CONTENT

We run our course in a roughly 5 week rotation at which point students will switch to a different class (woodwork, computer studies, drama, art, textiles, foods, music, etc). During Metalwork 8 students will complete a minimum of 2 projects with the potential for bonus work depending on the time available.

Students will create a garden shovel/trowel and a sheet metal rose with a bonus project usually requiring the use of the large shop equipment (engine lathe). During these projects students will experience the following:

- Element of plans/drawings and following procedures
- Metalwork layout tools and measurement using both metric and imperial units
- Shaping tools (both hand tools and power)
- Characteristics and uses of ferrous and non-ferrous metals
- Operation and of both stationary drills and hand drills
- Jigs and metal bending
- Sheet metal tools and forming
- Different types of fastening techniques
- Geometry tools and creating personal templates
- Reclamation and repurposing of metals
- Metal Inert Gas (MIG) welding
- Paint and other finishing procedures for metal

EVALUATION:

Evaluation will be based on a variety of the following:

- Teacher observations
- Student self assessment
- Practical assignments (samples of student work)
- Projects (quality & workmanship)
- Tests

This class uses the Provincial Proficiency Scale – a scale used to communicate a student’s progress in relation to the learning outcomes, with the following 4 indicators: **Emerging, Developing, Proficient, and Extending.**

The terms above are descriptors that provide an indication of where a student is in their understanding and mastery of curriculum content.

Here's a general interpretation of these descriptors:

Emerging: The student is beginning to demonstrate an understanding of the concept, skill, or knowledge area, but there's still significant room for growth. They require additional support and practice.

Developing: The student is showing growth in their understanding but hasn't yet reached full proficiency. They understand the basic concepts and can apply them in familiar contexts, but may struggle in more challenging, complex or unfamiliar situations.

Proficient: The student consistently demonstrates an understanding of the content, skills, and concepts as outlined in the curriculum. This is the expected level of understanding and capability for the grade level or course.

Extending: The student not only understands the basic curriculum expectations but can also apply, analyze, and extend those concepts in more complex and in-depth ways. This descriptor suggests a depth of understanding beyond the grade level or course expectations.

It's important to note that these descriptors are not equivalent to traditional letter grades or percentages.. They're intended to provide more descriptive feedback about a student's progress and understanding.

Assessments are done to drive student learning and learning will be done continually throughout the course. Feedback will be given on a daily basis as work is being completed and projects and assignments will be marked when completed on their due dates. Repeated testing of work will allow for improvement and students' efforts and quality of work will be reflected in final marks for each unit.

ATTENDANCE REQUIREMENTS:

This is a participation programme that requires substantial hands-on work as well as theoretical instruction. Student missing class(es) cannot easily make up for these experiences. This course emphasizes the expectation of the employer in the world of work - your employer expects you to be at work on time everyday. The practical mark component of the course will be acquired from project work and related activities. If you are not in attendance, no evaluation can be given for the day's activities. Excessive absences will be discussed with administration, your counselor and your parents. Prolonged illness will be a reason for appeal. A note from a doctor will be required. The student is responsible for making up missed work and assignments.

LATE POLICY:

Students reporting to class late must provide a note from other school staff to be excused for their tardiness. Late arrivals may be given written work, clean-up, or other duties as seen appropriate by the teacher. In addition, marks could be lost due to not being in attendance to stay caught up with required work. Attending and being on time will greatly affect student’s standing; therefore, anyone with excessive absences and lates cannot expect to reap the full benefits of the course.

EQUIPMENT, SUPPLIES, COURSE FEES:

- Footwear enclosing the foot (sandals/crocs are prohibited), shop appropriate clothing, and personal safety glasses.
- 3-ring binder/duotang, ruled and blank paper, pen & pencil

** Students that show up for class without the above will be considered NOT PREPARED FOR CLASS and will NOT be allowed to fully participate in the class until they are obtained. The above requirements are mandatory for reasons of safety and learning.

- There will be a charge for supplemental projects and materials taken home, to the student over and above the basic required project(s) which are included in student fees. Students are also able to bring in their own material for personal projects if they complete the core content early.

SHOP OPERATIONS:

SHOP CLASSES DO NOT BEGIN UNTIL ALL STUDENTS ARE PREPARED

Each student will be expected to clean and put away the tools and materials they have used at their work stations as well as clean up their bench and floor area around it. **TOOLS NOT RETURNED TO THEIR PROPER LOCATION DEPRIVES YOU AND OTHERS OF THEIR USE IN FUTURE.**

The last 5 to 10 minutes of the shop period will be devoted to general clean up of the facilities. All students will participate collectively in the clean up regardless of whether they used the tools or made the mess. *Clean-up means properly putting away all tools and equipment and cleaning up all work areas before removing coveralls and washing up.*

During the course year, there will be scheduled major shop clean-ups done. When major shop clean-ups occur will be determined by the instructor.

Property of others must be left alone unless one has permission. Property going missing in the shop is everyone's responsibility and therefore, anything going missing will result in practical work ceasing until its return or for a time period deemed appropriate by the instructor, or some other mutual arrangement has been made for compensation. To protect your valuables it is best to leave them at home.

In case of an emergency (fire drill, earthquake, etc.) all students are to meet together as a group at the designated emergency location following emergency evacuation procedures in an orderly fashion.

Long hair must be confined by a hat, hair tie, or other acceptable means.

All students must score a minimum of proficient/80% on the safety test before shop privileges begin.

Students participating in horse play, or endangering others in any way will have their shop privileges restricted or terminated as decided by the instructor and school administration.

All students must remain in the shop or classroom. No one is to leave without the express consent of the instructor.

About the teacher:

I have been teaching technology education/shop class in a high school setting since 2010 and put an emphasis on student engagement, and how to learn useful life skills that will serve students in the classroom as well as their journey into the world. I am committed to the continual tweaking of my courses for the benefit of my students and my professional colleagues across the province. I share many resources via my google classroom, personal teacher website, and YouTube channel.

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