The Board of Education of School District No. 61 (Greater Victoria)
Education Policy and Directions Committee Meeting - Monday, April 9th, 2018 @ 7:00 p.m.
Tolmie Boardroom, 556 Boleskine Road

AGENDA

Estimated Times

A. COMMENCEMENT OF MEETING

The Greater Victoria School District wishes to recognize and acknowledge the Esquimalt and Songhees Nations, on whose traditional territories, we live, we learn, and we do our work.

7:00 - 7:05 pm **A1. Approval of the Agenda** (pg. 1)

7:05 - 7:10 pm **A2. Approval of the Minutes**

a) Approval of the Combined Ed Policy-Operations Policy and Planning Minutes of March 5th, 2018 (pgs. 2-6)

A3. Business arising from the Minutes

B. PRESENTATIONS TO THE COMMITTEE (5 minutes)
a) None

C. NEW BUSINESS

7:10 - 7:15 pm	**C1.**	**Introduction of Student Representative** Carmen Ho - Spectrum Community School	Piet Langstraat	
7:15 - 8:00 pm	**C2.**	**French Language Review** (PowerPoint)	Shelley Green	(handout)
8:00 - 8:15 pm	**C3.**	**Trustee Elections, October 2018**	Trustee McNally	(verbal)
8:15 - 8:45 pm	**C4.**	**BAA Courses - Vic High** - Introduction to Electronics/Electrical 10 - Introduction to Auto Body 10 - Junior Art Metal	Greg Kitchen/ Aaron Parker	(pgs. 7-47)
8:45 - 9:00 pm	**C5.**	**Advocacy Ad Hoc Committee**	Trustee Watters	(pg. 48)

That the Board of Education of School District No. 61 (Greater Victoria) endorse the priority areas of focus identified by the Advocacy Ad Hoc Committee and task that committee with developing action plans on each item to be brought back to a future Education Policy and Directions Committee meeting.

D. Notice of Motion

E. General Announcements

F. Adjournment

Combined Education Policy and Directions Committee and Operations Policy and Planning Committee Meeting
March 5, 2018 – GVSD Board Office, Boardroom

REGULAR MINUTES

Education Policy and Directions Committee Members Present: Deborah Nohr, Chair, Tom Ferris, Peg Orcherton, Ann Whiteaker

Operations Policy and Planning Committee Members Present: Jordan Watters, Chair, Diane McNally, Rob Paynter, Elaine Leonard

Administration:
Piet Langstraat, Superintendent of Schools, Mark Walsh, Secretary-Treasurer, Shelley Green, Deputy Superintendent, Greg Kitchen, Associate Superintendent, Deb Whitten, Associate Superintendent, David Loveridge, Director of Facilities Services, Nella Nelson, Coordinator Aboriginal Nations Education, Craig Schellenberg, District Principal, Aboriginal Nations Education, Louise Sheffer, District Principal

The meeting was called to order at 7:00 p.m.

Chair Nohr recognized and acknowledged the Esquimalt and Songhees Nations, on whose traditional territories, we live, we learn, and we do our work.

1. APPROVAL OF THE AGENDA

It was moved by Trustee Orcherton:

That the March 5, 2018 combined Education Policy and Directions Committee and Operations Policy and Planning Committee regular agenda be approved.

Motion Carried Unanimously

2. APPROVAL OF THE MINUTES

It was moved by Trustee Orcherton:

That the February 5, 2018 Education Policy and Directions Committee Meeting regular minutes be approved with amendments.

Motion Carried Unanimously

It was moved by Trustee Leonard:

That the February 13, 2018 Operations Policy and Planning Meeting regular minutes be approved.

Motion Carried Unanimously

3. BUSINESS ARISING FROM MINUTES – None

4. EDUCATION POLICY AND DIRECTIONS COMMITTEE - Trustee Nohr, Chair

A. PRESENTATIONS TO THE COMMITTEE – None

B. NEW BUSINESS

1. Recognition of Student Representative

Superintendent Langstraat welcomed Megan Scott and Saskia Van Beers student representatives from Esquimalt High School.

2. Aboriginal Education - Annual Review

Deputy Superintendent Green, Nella Nelson, Coordinator, Aboriginal Nations Education, Craig Schellenberg, District Principal, Aboriginal Nations Education and Louise Sheffer, District Principal presented the Aboriginal Education Annual report. Trustees asked questions of clarification.

3. Policy on Inclusion

Trustee Orcherton presented her rationale.

It was moved by Trustee Orcherton:

That the Board of Education of School District No. 61 (Greater Victoria) direct the Superintendent of Schools to write a policy on inclusion and return a draft policy to the Education Policy and Directions Committee at a future meeting.

Motion Carried Unanimously

C. NOTICE OF MOTION – None

5. OPERATIONS POLICY AND PLANNING COMMITTEE - Trustee Watters, Chair

A. PRESENTATIONS

1. Artemis Place Society

Representatives of Artemis Society sent their regrets and will present at a future meeting.

2. Strawberry Vale Preschool

Kimberley Guiry, President Strawberry Vale Preschool presented on behalf of the organization. She indicated that the group has traditionally maintained their facility and are seeking a rental rate similar to their previous rate. Chair Watters thanked them for the presentation.

3. Bowker Creek Initiative

Jody Watson, CRD Harbours and Watersheds Coordinator updated the Committee on the current status and work plans related to the restoration of Bowker Creek and requested the Committee's endorsement of the "Bowker Creek Blueprint" which is a

commitment to incorporate the principles and goals into future planning. Trustees thanked Ms. Watson for her presentation.

It was moved by Trustee McNally:

That the Board of Education of School District No. 61 (Greater Victoria) endorse in principle the Bowker Creek Blueprint.

Motion Carried

For: Trustees McNally, Paynter and Watters
Abstained: Trustee Leonard

B. SUPERINTENDENT'S REPORT – None

C. PERSONNEL ITEMS – None

D. FINANCE AND LEGAL AFFAIRS

1. Lunch-Hour Supervision Costing

Deputy Superintendent Green reviewed the lunch-time monitor and playground supervision considerations and explained that the cost of thirty extra supervisors would be approximately $173,850. Trustees asked questions and provided comments.

It was moved by Trustee McNally:

That the Board of Education of School District No. 61 (Greater Victoria) direct the Superintendent to bring back operationalized recommendations for K-5 lunch hour supervision after consultation with our stakeholders.

Motion Carried Unanimously

E. FACILITIES PLANNING

1. Fortis Right-of-Way Agreement

David Loveridge, Director, Facilities Services explained that a statutory-right-of-way has been requested by FortisBC Energy Inc. related to the installation of a natural gas pipeline at Oak Bay High School to provide gas service to the school and to the tennis bubbles owned and operated by the District of Oak Bay.

It was moved by Trustee Leonard:

That the Board of Education of School District No. 61 (Greater Victoria) approve granting a Statutory Right-of-Way to FortisBC Energy Inc. for the purpose of installing and maintaining a gas pipeline on the Oak Bay High School properties legally described as Lot 2, Section 28, Victoria Land District, Plan 2376 except part in Plan 8380, PID 006-524-265, and Lot 3, Section 28, Victoria Land District, Plan 2376 except part in Plan 8380, PID 006-524-273.

Motion Carried Unanimously

The Committee supported that the following motions be brought forward to the March 12, 2018 Board of Education meeting.

That the Board of Education of School District No. 61 (Greater Victoria) agree to give all three readings of the Disposal (Right-of-Way) of Real Property Bylaw No. 18-01 at the March 12, 2018 Board meeting.

Motion to be Carried Unanimously

That the School District No. 61 (Greater Victoria) Disposal (Right-of-Way) of Real Property Bylaw No. 18-01, being a bylaw to grant a Statutory Right-of-Way to FortisBC Energy Inc. on the properties legally described as Lot 2, Section 28, Victoria Land District, Plan 2376 except part in Plan 8380, PID: 006-524-265, and Lot 3, Section 28, Victoria Land District, Plan 2376 except part in Plan 8380, PID 006-524-273 for the purpose of installing and maintaining a gas pipeline, be:

Read a first time the 12th day of March, 2018;
Read a second time the 12th day of March, 2018;
Read a third time, passed and adopted the 12th day of March, 2018;

And that the Chairperson and the Secretary-Treasurer be authorized to sign, seal and execute this Bylaw on behalf of the Board.

2. 2020 Canadian Francophone Games in Victoria

David Loveridge, Director, Facilities Services explained that the Canadian Francophone Games offer an opportunity for participating young Francophone Canadians to compete in events in three specific areas: arts, sports and leadership every three years in a selected Canadian municipality. The Victoria Organizing Committee has been granted the right to host these games in Greater Victoria in 2020 and is seeking support from the Greater Victoria School District to potentially house and feed the participants and to provide venues for the various sporting, arts and leadership events that make up the games.

It was moved by Trustee McNally:

That the Board of Education of School District No. 61 (Greater Victoria) direct the Superintendent to work with the 2020 Canadian Francophone Games Organizing Committee to find suitable accommodations and event venue options that would help support the games.

Motion Carried Unanimously

It was moved by Trustee McNally:

That the Board of Education of School District No. 61 (Greater Victoria) direct the Superintendent to return with a detailed facilities use proposal including a financial analysis, including a cost recovery model, for Board review and approval prior to making a final commitment for the use of District facilities in support of the 2020 Canadian Francophone Games in Victoria.

Motion Carried Unanimously

3. Horticultural Update

David Loveridge, Director, Facilities Services presented on the issue of the District's forest assets. He highlighted issues of conditions and the financial challenges of having an inventory of over 5500 trees. He particularly highlighted safety concerns at Frank Hobbs and Hillcrest Elementary Schools. Trustees asked questions of clarification.

F. NEW BUSINESS

1. Trustee Questions

A question was asked regarding the promotion of the parent education fund.

G. NOTICE OF MOTION – None

H. GENERAL ANNOUNCEMENTS – None

I. ADJOURNMENT

It was moved by Trustee Leonard:

That the meeting adjourn. **Motion Carried Unanimously**

The meeting adjourned at 9:25 p.m.

Vic High - Overview of pending BAA Courses for 2018 / 2019

Due to shifts in the revised curriculum, three long-standing technology education courses at Vic High are no longer accounted for within the upcoming curriculum options. These courses are an integral part of the Vic High technology education department, have routinely had very high student registration numbers, and now be submitted as a BAA course if they are to continue.

Course Summaries

Title: Introduction to Auto Body 10
Teacher: Kevin Blecic
Summary: This course is an introductory course in Auto Collision offered to Grade 9 and 10 students. Skills and activities that are introduced include: welding, panel and dent repair, surface preparation, painting, auto detailing, automotive skill set checklists, and plastic and paint labs. Once the introductory skills sets have been taught, students will have an opportunity to bring in their own smaller projects upon approval by the instructor, or work on a larger designated vehicle project.

Title: Introduction to Electronics and Electrical 10
Teacher: Steward Wheeler
Summary: This course is an introduction to electronic and electrical theories, processes and skills development. Topics include: basic electronic concepts and applications, basic component Identification, units of measurement and prefixes, basic electronic diagrams, calculation & measurement in circuits, operation and application of basic amplifiers, oscillators, and timer circuits, introduction to residential electrical wiring – types and functions, electrical wire types and uses, electrical circuit design and wiring techniques, prototype circuit building, testing, and modification of circuits including troubleshooting strategies, project production including: planning, material/ parts list, assembly and testing, electrician tool types and use, and implications of electronics and electricity in today's society.

Title: Junior Art Metal 10
Teacher: Graeme Hamilton
Summary: This course is an introduction to art metal & jewelry making processes in the metal shop. Students will have an opportunity to create jewelry and unique personal projects. Although there is some skill development overlap with with other metalwork courses (such as welding) the application of these skills is unique and focused on aesthetic qualities and techniques. Techniques include; welding, brazing, soldering, enameling, etching (glass and copper), sand-casting, blacksmithing, and jump-ring making. Students are able to engage in meaningful applied design during this course when creating projects which they can wear, use or display at home and in everyday life.

Note: Full course frameworks are also included in this pack-up.

Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name: SD61- Greater Victoria School District	**School District/Independent School Authority Number (e.g. SD43, Authority #432):**
Developed by: Stewart Wheeler	**Date Developed:** Dec 15th 2017
School Name: Victoria High School	**Principal's Name:** Aaron Parker
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name: Introduction to Electronics and Electrical 10	**Grade Level of Course:** 10
Number of Course Credits: 4	**Number of Hours of Instruction:** 120

Board/Authority Prerequisite(s):

Special Training, Facilities or Equipment Required:

Lab/classroom and Technology Education shop. Electronics tools and equipment, Electrical trade tools and equipment

Course Synopsis:

This course is an introduction to electronic and electrical theories, processes and skills development. Topics covered include: Basic electronic concepts and applications, Basic component Identification, Units of measurement and prefixes, Basic electronic diagrams, Calculation & Measurement in circuits, Operation and application of basic amplifiers, oscillators, and timer circuits, Introduction to Residential Electrical wiring – types and functions, Electrical wire types and uses. Electrical circuit design and wiring techniques, Prototype circuit building, testing, and modification of circuits including troubleshooting strategies, Project production including: planning, material/ parts list, assembly and testing, Electrician tool types and proper use, and Implications of electronics and electricity in today's society.

Goals and Rationale:

This is a course that introduces students to the electronics profession and electrical trade. It allows student to start to form an understanding of what the electrical trade is about, both in theory and practical circumstances and applications. This course also introduces students to the opportunity of electrical apprenticeship and training such as Secondary School Apprenticeship and ACE IT/YTIT

Aboriginal Worldviews and Perspectives:

This course employs many attributes found within Connectedness and Relationship. Foremost, this is an experienced based course, with 80 percent of the content being hands-on knowledge and skill development and exploration (*Experiential Learning*).There are opportunities for students to explore their own creative design (*A Positive Learner-Centred Approach*) of electrical scenarios while still having to follow Electrical Code and safety requirements. Within the the structure of the course, peer mentorship is encouraged through verbal communication, often with senior students who have taken this course before (*Flexibility- scheduling, program/course configuration, grouping)*. Although this is a classroom/shop based course – there is an open discussion and reflection on the impact of the production and use of electricity in world today. Topics include alternative sources of energy production and their impact on the environment, and providing power/electricity to remote areas of BC and around the world. The impact of construction of the Site C Dam is specifically discussed (*Engagement with the Land, Nature and the Outdoors).*

BIG IDEAS

Social, ethical, and sustainability considerations impact design.	Complex tasks require the sequencing of skills. Complex tasks require different technologies and tools at different stages.	Employability skills in relation to understanding, accountability, implementation, review and improvement

Learning Standards

Curricular Competencies	Content
Students are expected to do the following:	*Students are expected to know the following:*
Applied Design *Understanding context* • Engage in a period of **research** and **empathetic observation** in order to understand design opportunities **Defining** • Choose a design opportunity • Identify potential users and relevant contextual factors • Identify criteria for success, intended impact, and any **constraints** **Ideating** • Take creative risks in generating ideas and add to others' ideas in ways that enhance them • Screen ideas against criteria and constraints • Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures • Choose an idea to pursue, keeping other potentially viable ideas open Prototyping • Identify and use **sources of inspiration** and information • Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability	• **Ohm's law** • **electrical theory** using parallel and series circuits • breadboard circuitry • production of simple circuits from schematic drawings • **measurement using diagnostic and testing instruments** • function and application of **components** • construction sequences involved in making a **working circuit** • function and use of **hand tools** and operation of **stationary equipment** • various **types** and **gauges of wire** and their use in residential wiring • various wiring and connection techniques found in residential wiring according to the Canadian Electrical Code • types of **controls** and **loads** used in residential wiring • layout and plan the electrical for a small house according to the Canadian Electrical Code • Universal **symbols** found on a set of electrical plans • basic electrical panel layout, components and design

• Prototype, making changes to tools, materials, and procedures as needed • Record **iterations** of prototyping Testing ● Identify **sources of feedback** ● Develop an **appropriate test** of the prototype ● Conduct the test and decide on changes Making ● Identify and use appropriate tools, **technologies**, materials, and processes for production ● Make a step-by-step plan for production and carry it out, making changes as needed • ● Use materials in ways that minimize waste Sharing ● Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology ● Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment ● Evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space • Identify new design issues **Applied Skills** ● Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments ● Identify the skills and skill levels needed, individually or as a group, in relation to specific projects, and develop and refine them as needed **Applied Technologies** ● Choose, adapt, and if necessary learn about appropriate tools and technologies to use for tasks ● Evaluate the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use	• the impact of electronics on society • the impact of electrical production on the environment and alternative energy production sources.

• Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies	

Big Ideas – Elaborations

Unit/Topic	Title	Time
Unit 1	Electronics Theory	10 hours
Unit 2	Employability Skills	10 hours
Unit 3	Electronics Circuit Breadboarding	10 hours
Unit 4	"Flasher" Printed Circuit Board	10 hours
Unit 5	Electrical Theory	15 hours
Unit 6	Electrical Wiring Practice	25 hours
Unit 7	Electrical Plan Development	15 hours
Unit 8	Final Electrical Mock-up	25 hours
	Total Hours	120

Unit 1:

Electronics Theory

- Basic electronic concepts and applications – powers source, Load, conductors, controls
- Basic component Identification- resistors, capacitors, switches, transistors, batteries, LEDs, diodes
- Units of measurement - Voltage, Amperage, Ohms, Farads, Wattage
- Prefixes and calculation– Mega, Kilo, milli, micro, nano, pico
- Basic electronic diagrams – Pictorial, Schematic, Block
- Calculation & Measurement in circuits – Ohms Law.

Unit 2:

Employability Skills

- Understanding what "soft skills" art in the workplace.

- Understanding what are job/trade specific skills. Employee needs versus employer needs.
- Understanding and developing electrical trade skills.
- Student developed list of employability skills required for classroom projects/units.
- Self-assessment and evaluation of employability skills – ongoing and spot.

Unit 3:

Electronics Circuit Breadboarding

- Understanding the construction and layout of a breadboard.
- Breadboarding techniques
- Basic circuit breadboarding practice
- Using a multimeter to measure voltage, amperage, and resistance in a circuit.
- Building progressive circuits using a breadboard.
- Problem solving techniques when using a breadboard

Unit 4:

"**Flasher**" **Printed Circuit (PC) Board**

- Understanding how PC boards are made
- Understanding the process of PC board development
- Laying out a PC board
- Understanding how etchants are used in PC board construction
- Using Etchant to produce a PC Board
- Assembling a PC Board
- Testing and Problem solving techniques of PC Board function
- Self –Assessment of PC Board design and construction process

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Unit 5:

Electrical Theory

- Understanding the connection between electronics and electrical – similarities and differences
- Overview of residential wiring – common uses in a home
- Basic electrical tools and equipment

- Residential electrical wire gauges and uses
- Correlation between wire gauges and amperage breakers used in a home
- Hot, Neutral, and Bare bond wires – theory and application
- Building an electrical cord
- Electrical connectors, connections and techniques
- Practical lab twisting and marretting wires together

Unit 6:

Electrical Wiring Practice

- The use of specific electrical tools and equipment
- Drawing pictorial diagrams to for understanding how circuits are built
- Measurement of wire length requirements
- Characteristics and use of plastic and metal single device and octagon boxes
- Using wire connectors and “pigtailing” techniques
- Installing lamp holders, switches, smoke alarms, receptacles
- Installing different types of switches
- Drawing and building, circuits with lamp holders, single pole single throw switches, 3-way switches, 4 way switches, smoke alarms, regular and split receptacles – according to the Canadian Electrical Code.
- Student designed circuits using controls and loads.
- Student work is inspected at each step to develop 100% accuracy in work being completed.
- The teacher will evaluate each student as they complete each circuit.

Unit 7:

Electrical Plan Development

- Common symbols found on an electrical plan for a home
- Application of the Canadian Electrical Code laying out the electrical for residences.
- Understanding and using scale and measurement in residential drawings.
- Layout of lights, fans, switches, receptacles. Baseboards, and other common electrical items in a residence
- Planning and laying out of branch circuits on residential electrical plans.
- Calculating and design an electrical breaker panel for a residence.

Unit 8:

Final Electrical Mock-up – Individual stations

- Layout, installation, and testing of a set scenario common to an residence.
- Applying the Canadian Electrical Code to the layout and installation – box layout, drilling, stapling, wire length, branch circuits
- Application of inspection practices and structure for residential wiring
- Designing and installing branch circuits. Project requires 3 branch circuits which include a kitchen receptacle, 4 way switch with lamp, split receptacle, regular receptacle, and 2 smoke alarms.
- Installing various wire types according to the Canadian Electrical Code.
- Students work is inspected at every step to ensure 100% accuracy
- Employability skills are reviewed and assessed periodically by both student and teacher, which include – use of time, teamwork, tool use, material use, attitude and conduct towards safety, clean-up.

Curricular Competencies – Elaborations

• **research**: seeking knowledge from other people as experts (e.g., First Peoples Elders), secondary sources, and collective pools of knowledge in communities and collaborative atmospheres

• **empathetic observation**: aimed at understanding the values and beliefs of other cultures and the diverse motivations and needs of different people

• **Defining**: setting parameters

• **constraints**: limiting factors such as task or user requirements, materials, expense, environmental impact, issues of appropriation, and knowledge that is considered sacred

• **Ideating**: forming ideas or concepts

• **sources of inspiration**: may include experiences; traditional cultural knowledge and approaches, including those of First Peoples; places, including the land and its natural resources and analogous settings; and people, including users, experts, and thought leaders

• **plan**: for example, pictorial drawings, sketches, flow charts

• **iterations**: repetitions of a process with the aim of approaching a desired result
• **sources of feedback**: may include peers; users; keepers of traditional cultural knowledge and approaches, including those of First Peoples; and other experts
• **appropriate test**: consider conditions, number of trials
• **technologies**: things that extend human capabilities

Content – Elaborations

• **Ohms' law**: describes how voltage, current, and resistance are related: V = IR
• **electrical theory**: source, load, control, conductor, voltage, current, resistance, insulator, alternating current (AC), and direct current (DC)
• measurement using diagnostic and testing instruments: for example, multimeter, power supplies, test probes, signal-generating devices
• **components**: for example, light-emitting diode (LED), resistor, diode, light-dependent resistor (LDR), capacitor, voltage amplifiers, audio amplifiers, rectifiers
• **working circuit**: including current, amperage, load, resistance, power, control
• **hand tools**: for example, screwdriver, pliers, cutter, wire stripper, desoldering pump, snips, punch, soldering iron
• **stationary equipment**: for example, punches, drill press,
• **types**: solid, stranded
• **gauges**: 14/2, 14/3, 12/2, 10/3, 8/3
• **controls**: single pole single throw switches, 3-way switches, 4 way switches
• **loads**:lamps, receptacles, split receptacles, smoke alarms
• **gauges of wires**: 14/2, 14/3, 12/2, 10/3, 8/3
• **symbols**: for example, lights, various receptacles, smoke alarms, fans, single pole single throw switches, 3-way switches, 4 way switches, electrical panel

Recommended Instructional Components:

- Classroom Theory
- Classroom/Lab Prototyping
- Inquiry Questions
- Lab/Shop Projects
- Individual and Pair/Collaboration project

Recommended Assessment Components:

Electronics Theory	10%
Electronics Circuit Breadboarding Labs	15%
“Flasher” Printed Circuit Board	10%
Electrical Theory	10%
Electrical Wiring Practice	15%
Electrical Plan Development	15%
Final Electrical Mock-up	15%
Employability Skills Development	10%
	100%

The course has three forms assessment being used, depending on the curricular area being covered and what the intended learning outcome is.

Formative assessment is done through a range of formal and informal assessment procedures conducted during the learning process in order to modify teaching and learning activities to improve student attainment. Most of this assessment is done through worksheets, labs and quizzes.

Due to the fact that electrical trade work is expected to be done to 100% accuracy for safety reasons, a portion of the assessment in the practical areas where accuracy is required before continuing to the next level, the student will be given either a complete (0/10) or complete (10/10) evaluation. Student will be given multiple opportunities to successfully complete all portions of this course which require a 100% completion.

Where the assessment of practical projects can be based completion or the quality can be assessed the following assessment rubric can be used.

Example A (out of 10)

Work Not Attempted	0
Project Completed but contain 6+ safety/work quality items	5
Project Completed but contains 4 to 5 safety/work quality items	6
Project Completed but contains 3 safety/work quality items	7
Project Completed but contains 2 safety/work quality items	8
Project Completed but contains 1 safety/work quality items	9
Project Completed and contains no safety/work quality items	10

Learning Resources: There is no formal textbook to accompany this course. The following resources will be accessed

- Canadian Electrical Code
- ECS- Electrical Code Simplified – BC Book1
- Teacher Developed Curriculum
- Online Website
- BC Hydro “Electrojuice” Electrical safety video
- Electronics and Electrical Tools and Equipment

Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name: Greater Victoria School District	**School District/Independent School Authority Number (e.g. SD43, Authority #432):** SD61
Developed by: Kevin Blecic	**Date Developed:** December 11, 2017
School Name: Victoria High School	**Principal's Name:** Aaron Parker
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name: Introduction to Auto Body 10	**Grade Level of Course:** 10
Number of Course Credits: 4	**Number of Hours of Instruction:** 120

Board/Authority Prerequisite(s):

None

Special Training, Facilities or Equipment Required:

The course requires a Theory/Classroom, Lab/Shop space to perform the many aspects of Auto Collision.

Course Synopsis:

This course is an introductory course in Auto Collision offered to Grade 9 and 10 students. Skills and activities that are introduced include: welding, panel and dent repair, surface preparation, painting, auto detailing, automotive skill set checklists, and plastic and paint labs. Once the introductory skills sets have been taught, students will have an opportunity to bring in their own smaller projects upon approval by the instructor, or work on a larger designated vehicle project.

Goals and Rationale:

This course will be taught in a semester timetable. The class will run Monday to Thursday at a 84 minute block and on Friday at a 62 minute block.. That is a total of 398 minutes a week of instructional time.
There is an approximate 19 weeks of instructional time in the semester timetable during the 2018-2019 school calendar year. The modules will be grouped under 7 units each requiring different instructional hours. Please see table included in *Elaborations* for detailed units/topics.

Aboriginal Worldviews and Perspectives:

This course employs many attributes found within the Aboriginal Connectedness and Relationship Document. Foremost, this is an experienced based course, with 80 percent of the content being hands-on knowledge and skill development and exploration (*Experiential Learning*). There are opportunities for students to explore their own creative design (*A Positive Learner-Centred Approach*), for example students can utilize cultural symbols within the class; such as using a stencil design on their fender project. Within the structure of the course, peer mentorship is encouraged through verbal communication, often with senior students who have taken this course before (*Flexibility- scheduling, program/course configuration, grouping).* Although this is a classroom/shop based course – there is an open discussion and reflection on the impact and changes to the transportation industry on the world. Topics may include alternative energy vehicles and alternate substrates used to reduce the weight of vehicles to improve fuel mileage, as in the new F150 truck bed.

BIG IDEAS

Social, ethical, and sustainability considerations impact design.	Complex tasks require the sequencing of skills.	Complex tasks require different technologies and tools at different stages.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Applied Design** ● Engage in a period of research and empathetic observation in order to understand design opportunities **Defining** ● Choose a design opportunity ● Identify potential users and relevant contextual factors ● Identify criteria for success, intended impact, and any constraints **Ideating** ● Take creative risks in generating ideas and add to others' ideas in ways that enhance them ● Screen ideas against criteria and constraints ● Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures ● Choose an idea to pursue, keeping other potentially viable ideas open **Prototyping** ● Identify and use sources of inspiration and information ● Choose a form for prototyping and develop a plan that includes key stages and resources	*Students are expected to know the following:* ● General shop safety and orientation ● Use of proper safety equipment (Respirator with proper particle and vapor cartridges), safety googles, and hear protection. ● WHMIS (Workplace Hazardous Materials Information System) Orientation and evaluation. ● Basic hand and power identification. ● Basic measurement skills in imperial and metric systems that related to Auto Collision. ● Basic fasteners in imperial and metric systems in relationship to the Auto Collision industry. ● Proper set up and shut down procedures for oxy-acetylene welding and M.I.G Welding equipment. ● Produce different weld types (Butt, Edge, Lap) ● Identification of types of materials or substrates (including steel, aluminum and plastic). ● Auto Body terminology in basic dent repair. ● Auto Body terminology in refinishing.

● Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability ● Prototype making changes to tools, materials, and procedures as needed ● Record iterations of prototyping **Testing** ● Identify sources of feedback. ● Develop an appropriate test of the prototype. ● Conduct the test, collect and compile data, evaluate data, and decide on changes. ● Iterate the prototype or abandon the design idea. **Making** ● Identify and use appropriate tools, technologies, materials, and processes for production. ● Make a step-by-step plan for production and carry it out, making changes as needed. ● Use materials in ways that minimize waste. **Sharing** ● Decide on how and with whom to share their product and processes. ● Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology. ● Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment. ● Critically reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space. ● Identify new design issues.	● Historical and potential future impact of energy, power, and transportation systems on society and the environment.

Applied Skills

- Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments.
- Identify the skills and skill levels needed, individually or as a group, in relation to specific projects, and develop and refine them as needed.

Applied Technologies

- Choose, adapt, and if necessary learn about appropriate tools and technologies to use for tasks.
- Evaluate the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use
- Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies

Big Ideas – Elaborations

Unit/Topic	Title	Time
Unit 1	Safety (Basic Shop Safety, Shop Orientation, WHMIS)	5hours
Unit 2	Basic hand tool/power tool use and safety, Measurement, New Driver Curriculum	5 hours
Unit 3	Gas Welding (Oxy/Acetylene)	20 hours
Unit 4	Basic Fender Repair and Refinishing	55 hours
Unit 5	Basic Auto Body and Automotive Checklist	10 hours
Unit 6	M.I.G Welding	5 hours
Unit 7	Personal Projects	20 hours
	Total Hours	120

Unit 1:

Safety (Basic Shop Safety, Shop Orientation, WHMIS)

- General shop safety
- Introduction of proper safety equipment (Respirator with proper particle and vapor cartridges), safety googles, and hear protection.
- Shop Orientation to allow students to become familiar where supplies are kept and potential hazards.
- WHMIS (Workplace Hazardous Materials Information System) Orientation and evaluation.

Unit 2:

Basic hand tool/power tool use and safety, Measurement, New Driver Curriculum

- Students will gain the knowledge of basic hand and power tool safety and identification.
- Students will learn basic measurement skills in imperial and metric systems that relate to Auto Collision.
- Students will gain knowledge of basic fasteners in imperial and metric systems in relationship to the Auto Collison industry.

Unit 3:

Gas Welding– Oxy-Acetylene (Statue Project)

- Safety orientation and testing (Proper set up and shut down procedures)
- Students will first develop fusion welding and brazing skills on welding coupons.
- Students will practice three main gas welds (butt, lap, and edge)
- Students will practice one main braze welds (lap weld)
- Students will first develop welding and brazing skills necessary to design and build their own sculpture using new or re-cycled materials. This is achieved by having students practice welding and brazing on small pieces of steel sheet metal.
- Students are shown samples of past projects made by students and shown samples of sculptures and images found online.
- Students are introduced to different types of materials used and what is available to them (ferrous & non-ferrous metals).
- Students develop ideation sketches that are submitted to teacher for feedback and direction
- *Plan and Material Preparation:* Students will develop a production plan and material list for the project (submitted to teacher for feedback and direction)
- Students craft sculpture and adapt as required to refine the finished product.
- Student provide final product self-evaluation and reflection on what went well

Unit 4:

Basic Fender Repair and Refinishing

- Students are introduced to the project and shown past samples of work done by past students
- Students learn the basic steps to finishing a fender from analyzing body damage to finial prep and paint.
- Student learn basic body repair techniques (Body on and off hammering Techniques) First in and last out.
- Students learn basic grinding, and proper light weight filling techniques.
- Students learn to apply a urethane primer.
- Student learn the proper sanding techniques before base coat is applied.
- Students learn to properly mix paint from a formula to apply to their fender.
- Students will apply a base coat to their fenders as shown by the teacher.
- Students will apply a design to their fender from an image that is either drawn by them or taken from an online source.
- Students will cut out and mask off their final design and apply paint to their design.
- Students will apply clear coat.
- Student will complete a finial polish and finish to their fender.

- Student provide final product self-evaluation and reflection on what went well and challenges met.

Unit 5:

Basic Auto Body and Automotive Checklist

- Students will learn how to use specific automotive tool and equipment
- Students will learn to complete a basic vehicle inspection
- Students will learn how to properly wash and detail a vehicle
- Students will learn how to remove a door panel and reinstall it.
- Students will properly learn how lift a vehicle with a floor jack and secure it properly
- Students will learn how to properly remove a tire from a vehicle and re install it.
- Students will learn how to properly balance a tire.
- The teacher will evaluate each student as they complete each competency.

Unit 6:

Mig. Welding (Metal Inert Gas Welding)

- Students will learn to setup and shut down a Mig setup properly with proper safety equipment.
- Students will conduct a series of weld beads on welding coupons for practice.
- Students will learn to weld a lap, butt, and plug weld.

Unit 7:

Personal Projects

- Students will be given personal projects that are assigned by the teacher.
- Students will use their learned skills to complete these projects.
- Student provide final product self-evaluation and reflection on what went well.

Curricular Competencies – Elaborations

- research: seeking knowledge from other people as experts (e.g., First Peoples Elders), secondary sources, and collective pools of knowledge in communities and collaborative atmospheres
- empathetic observation: aimed at understanding the values and beliefs of other cultures and the diverse motivations and needs of different people
- Defining: setting parameters
- constraints: limiting factors such as task or user requirements, materials, expense, environmental impact, issues of appropriation, and knowledge that is considered sacred
- Ideating: forming ideas or concepts
- sources of inspiration: may include experiences; traditional cultural knowledge and approaches, including those of First Peoples; places, including the land and its natural resources and analogous settings; and people, including users, experts, and thought leaders
- plan: for example, pictorial drawings, sketches, flow charts
- iterations: repetitions of a process with the aim of approaching a desired result
- sources of feedback: may include peers; users; keepers of traditional cultural knowledge and approaches, including those of First Peoples; and other experts
- appropriate test: consider conditions, number of trials
- technologies: things that extend human capabilities
- share: may include showing to others, use by others, giving away, or marketing and selling
- product: for example, a physical product, a process, a system, a service, or a designed environment

Content – Elaborations

- non-fuel vehicle repair: battery or hybrid
- Structural terminology: relating to fundamentals of operation; classification and types of Vehicle structure
- Repair Techniques: for example, Dolly on and off hammering
- Refinishing: for example, Spot repair and blending
- Automotive Substrates repair techniques: for example, Steel, plastic and fiberglass

Recommended Instructional Components:

Theory

Demonstrations

Labs (Skills sets) in shop

Discussions

Research Designs

Recommended Assessment Components: Ensure alignment with the Principles of Quality Assessment

Each project and competency is assessed individually and usually in conjunction with the student by including a self-reflection and peer assessment component. Progress is assessed by taking into consideration the starting skill level of the student. In addition to a mark for project work, students are also given credit for various other aspects of achievement and assessment in class. The following areas are used in overall assessment of the student in this class:

- **Skill development:** Students are assessed on a daily and weekly basis on how they are improving their skills within the shop.
- **Final Product:** The quality and content of required production techniques are used for assessment purposes. Special consideration is taken in regards to whether a project was methodically worked on versus being rushed and whether the production techniques where done in the appropriate manner. (Example A)

Where the assessment of practical projects can be based completion or the quality can be assessed the following assessment rubric can be used.

Example A (out of 10)

Work Not Attempted	0
Project Completed but contain 6+ safety/work quality items	5
Project Completed but contains 4 to 5 safety/work quality items	6
Project Completed but contains 3 safety/work quality items	7
Project Completed but contains 2 safety/work quality items	8

Project Completed but contains 1 safety/work quality items 9

Project Completed and contains no safety/work quality items 10

- **Social & Career Responsibility:** Students are expected to 'pull their weight' when cleaning up and helping to maintain the Auto Body shop. Students are also expected to conduct themselves in a safe, respectful and effective manner that translates into an atmosphere of treating the shop as one would treat a workplace. Part of their overall grade in the course is derived from these considerations and is arrived through a consultation process with the student and a self-evaluation. (Example B)

(Example B)

Term 1 Self Evaluation

Name: _____

Assessment Scale: 0 = Not meeting expectations 10 = Exceeds expectations. Try to be realistic and accurate with your self-assessment. If I find that your assessment is far away from what I have concluded we should have a discussion. ***Circle the number that you feel you deserve.***

Work Ethic & Attitude: Are you coming prepared and ready to work in class. Do you have a plan with what you are going to work on each day and are you able to work independently?

1 2 3 4 5 6 7 8 9 10

Classroom engagement: When you are learning something new in this class, are you actively engaging with the activity and trying to see how it might be useful to you in the future or is it just some 'tool thing'

1 2 3 4 5 6 7 8 9 10

Productivity: How effective do you use class time. Would you hire someone who has your work ethic? Are you using your phone or socializing more than you are working?

1 2 3 4 5 6 7 8 9 10

Skill Development: Are you using the time offered in class to try and get better at developing skills or are you just trying to get an assignment finished? For example: how many welding samples did you try? Have you tried to improve your sanding technique or are you just 'getting it done'?

1 2 3 4 5 6 7 8 9 10

Final Product: How is your final product and project work? Is it something you are proud of and want to take home and keep?

1 2 3 4 5 6 7 8 9 10

Please provide some more information about your final product work. If it is something you have taken home and are proud of, what did you do with it. If it is not something you are proud of, what can we do differently to have you engage in a meaningful way a create something that you care about in this class?

_____

_____

_____

- **Theory:** Students do have tests which are focused on safety, tool identification, production path needed to complete their fender project.
- **Research:** Students have the opportunity to do a self-directed project which could be done after all skill developments are complete. They can take their learned knowledge and apply it to their personal project to help them engage in a deeper more meaningful way. For example: If a student has demonstrated maturity and a willingness to go 'above and beyond' the scope of this course, they are able to research and engage in more advanced project work, as in their own car.

Learning Resources:

There is no formal textbook to accompany this course. Course material will be composed from Vancouver Community College Auto Collision Dept., various Auto Body text books, compiled Auto Body video's and you tube clips.

Additional Information:

Victoria High School is one of two schools that offer Auto Collision in the Province. The senior Auto Body program has been running since the mid 1980's originally starting at SJ Willis by Ed Wignall. The Grade 11/12 program offers an opportunity for students to participate in a Career Prep program or carry on with a Youth in Trades program in conjunction with Vancouver Community College. They receive their first year of apprenticeship training when finished.

If you have any more questions related to the Introduction to Auto Body 10 or the senior programs please do not hesitate to contact me either by email at kablecic@sd61.bc.ca or at Victoria High School 2503885456 ext. 613.

Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name:	**School District/Independent School Authority Number (e.g. SD43, Authority #432):**
Developed by: Graeme Hamilton	**Date Developed:** Dec 11 2017
School Name: Victoria High School	**Principal's Name:** Aaron Parker
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name: Junior Art Metal	**Grade Level of Course:** 10
Number of Course Credits: 4	**Number of Hours of Instruction:** 120

Board/Authority Prerequisite(s):

Special Training, Facilities or Equipment Required:

Course Synopsis: This course is an introduction to Art Metal & jewelry making processes in the Metal Shop. Students will have an opportunity to create jewelry and unique personal projects. Although there is overlap with some skill development with other Metalwork courses (such as welding) the application of these skills is unique and focused on an aesthetic qualities. Techniques include; welding, brazing, soldering, enameling, etching (glass and copper), sand-casting, blacksmithing, and jump-ring making. Student are able to engage in meaningful Applied Design during this course when creating projects which they can wear, use or display at home and in everyday life.

Goals and Rationale:

This is an Applied Design, Skills, and Technologies course taught in the Metalwork facility of the school. It is designed to be an introductory course that leads into the new (2018) grade 12 Art Metal and Jewelry course curriculum as developed by the B.C. Ministry of Education. The aim of this course is to teach students about metalwork processes tht are used to create jewelry and artistic products as well as providing an opportunity for students to design and craft their own artistic projects. Applied Design is a fundamental element of study that is incorporated throughout the course and in all Course Units.

Aboriginal Worldviews and Perspectives:

This course employs many attributes found within the Aboriginal Connectedness and Relationship Document. Foremost, this is an experienced based course, with 80 percent of the content being hands-on knowledge and skill development and exploration (*Experiential Learning*). There are opportunities for students to explore their own creative design (*A Positive Learner-Centred Approach*), for example students can utilize cultural symbols within the class. Within the structure of the course, peer mentorship is encouraged through verbal communication, often with senior students who have taken this course before (*Flexibility- scheduling, program/course configuration, grouping)*. Although this is a classroom/shop based course – there is an open discussion and reflection on the impact of metalworking technologies on the natural world and the importance of craft traditions to bolster cultural heritage.

In this course students are encouraged to utilize materials in a thoughtful and respectful manner that is not wasteful and has the least negative environmental impact as possible. Students are encouraged to use materials found outside of class and in the natural environment or that are recycled and re-purposed. There is also ample opportunity for students of First Nations heritage to utilize cultural symbols within the class; such as using a stencil design that has been created by a member of their community, however it is up to the student to bring this art in as it is not the teachers place to appropriate symbols, designs or other artwork representing First Nations cultural heritage without permission from the band in question. I would encourage such development of cultural integration in the future in partnership with local First Nations communities. Perhaps a district initiative with funding to help facilitate this could be possible.

Course Name: **Grade:**

BIG IDEAS

DESIGNING	TESTING	MAKING	SHARING
Student led design leads to individual ownership of the final product	*Students learn that making prototypes and practicing new skills leads to a higher quality final product*	*Having a production plan and a thoughtful creative process contributes to higher quality work*	*Sharing final products with other students helps to foster a sense of pride in one's work and inspires other students in their creative process*

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: The following section outlines aspects of the new Grade 12 Art Metal curriculum (with the Applied Design focus) which are being integrated into and throughout this Introductory level Art Metal Course. **Designing** • Learn basic sketching and design techniques • Keep log of designs and ideas as well as research ideas for designs **Testing** • Develop an appropriate test of the prototype • Iterate the prototype or abandon the design idea **Making** • Identify appropriate tools, technologies, materials, processes, potential funding sources, and time needed for production, and where/how these could be available • Use project management processes when working individually or collaboratively to coordinate production	*Students are expected to know the following:* • General shop safety and student expectations • How to identify and safely use basic hand-tools used in the Art Metal classroom; such as scribers, squares, hammers, hack-saws and jewelers saws • How to communicate design ideas using rough sketches • Proper use of Oxy Acetalene welding equipment and use of propane torches • How to sand and polish using different abrasives • How to use the sand blaster to do etched glass Advanced skill development: • Safely using the forge to do blacksmithing • Make a pattern for aluminum sand-casting

Sharing

• Share their progress while making to increase feedback, collaboration
• Critically evaluate their design thinking and processes, and their ability to work effectively both as individuals and collaboratively in a group, including the ability to implement project management processes
• Identify new design issues, including how they or others might build on their concept

Applied Skills

• Demonstrate an awareness of safety issues for themselves, co-workers, and users in both physical and digital environments
• Identify and evaluate their skills and skill levels, in relation to their project or design interests, and develop specific plans to learn or refine their skills over time

Applied Technologies

• Explore existing, new, and emerging tools, technologies, and systems and evaluate their suitability for their design interests

Big Ideas – Elaborations

- Designing: Learning to design and visually communicate can be a useful life skill as well as being an indispensable skill for artistic endeavours. At the beginning of the course students are taught how to freehand sketch Isometric (3-D) drawings. Later this skill is used when they are planning the designs for their projects.

- Testing: Students often want to get their projects finished as soon as possible; they are keen to have a final product. Often they will try do engage in a process before developing the skill enough to be successful, which sometimes ruins the work which they have already done. For example, learning to weld on scrap material before welding a shelf bracket (see sample photos below) will ensure higher levels of success.

- Making: Learning by doing has always been at the foundation of Technology Education. After a student actually creates a project using their own hands, they can start to appreciate how and why it is important to design, test and plan how a project will be made.

  Learning to how to plan the production of a product, step by step, is one of the most challenging aspects of Technology Education. This is why most projects are developed in sequential order for students to follow. If a student is able to design, make prototypes, plan and then build a project using materials in a thoughtful manner, they are operating at a high level of functioning

- Sharing: When students are able to share their finished projects with others, a certain amount of pride and ownership can take place. Other students can become inspired by seeing what others have made and seeing the possibilities that exist. Using photographs to document past student projects can be a powerful tool to inspire new students. There is also a great amount of higher level learning that occurs when students are able to mentor others. This is not always possible, but when a student is finished their work and they demonstrate the proper demeanor and temperament, it can be a valuable exercise to have them help others within the class who need help catching up.

Curricular Competencies – Elaborations

Unit 1:

- **Sculpture Project – Oxy-Acetalene**
  - Safety orientation and testing
  - Students will first develop welding and brazing skills necessary to design and build their own sculpture using new or re-cycled materials. This is achieved by having students practice welding and brazing on small pieces of steel sheet metal.
  - Students are shown samples of past projects made by students and shown samples of sculptures and images found online.
  - Students are introduced to different types of materials used and what is available to them (ferrous & non-ferrous metals).
  - Students develop ideation sketches that are submitted to teacher for feedback and direction
  - *Plan and Material Preparation:* Students will develop a production plan and material list for the project (submitted to teacher for feedback and direction)
  - Students craft sculpture and adapt as required to refine the finished product.
  - Student provide final product self-evaluation and reflection on what went well and challenges met.
  -

Unit 2:

- **Key Fob/Chain**
  - Students are introduced to the project and shown past samples of work done by past students
  - Students develop ideation sketches which are submitted for feedback and input by teacher for final design
  - Project design is laid out on material in preparation for production.
  - Students will be able to drill hole(s), hacksaw, file, sand and polish their key fob.
  - Student provide final product self-evaluation and reflection on what went well and challenges met.

Unit 3:

- **Etched Glass/Mirror**
  - Teacher introduces project by providing samples of past student work and explains production process.
  - Students research designs online and either printout a design on the computer or develop their own if their artistic skill is adequate.
  - Students draw and cutout design on glass/mirror in preparation for sandblasting
  - Student make a stand out of wood material provided
  - Students will be able to prepare materials for and use the sandblaster to etch glass and treat the edges of the glass so it is no longer sharp. Students may also learn how to cut glass.
  -
-

Unit 4:

- **Band Rings**
  - Students will make simple band rings out of sheet stock which is soldered, sanded and then polished. Prototypes are made from copper, good ones from Nickel Silver.
  - Students will be able to use a ring sizer to determine the length of material required, learn how to silver solder, and sand and polish final product using job specific tools such as a ring mandrel.
  -
  -
    - **The following projects are alternatives for final projects to be made during the remainder of the term**

Unit 5:

- **Jump Ring projects (Chain Mail projects)**
  - A variety of projects can be made using this process. Some students create a simple project and find that enough while others spend the rest of the semester dedicated to jump-ring projects of increasing difficulty, including soldering the individual links as in traditional necklace making.
  - Students learn how to create many multiple rings by coiling wire around a mandrel rod then cutting the individual rings using a piercing (jewelers) saw.
  - Students then learn to create one or multiple patterns used to create a myriad of artistic artifacts such as bracelets, necklaces or 'hacky-sacks'.

Unit 6:

- **Blacksmithing**
  - Students first learn basic blacksmithing techniques by drawing material to a taper and then creating a 'Rat-Tail' which is used in a jig to create scroll patterns. These 'S' scrolls are then used to make simple shelf brackets.
  - After developing basic blacksmithing skills students are able to research design and build more elaborate projects such as candle stick holders or furniture in the Grade 12 Metalwork course or for the remaining time available in the semester.

Unit 7:

- **Etched Copper**
  - Students learn how the copper etching process is achieved and how to make their own acid etched designs in a safe manner using etch resistant pens.
  - These projects can be used in many different ways such as making pendants.
-

Unit 8:

- **Enameled Copper Beads**
  - Students learn how to cut copper tubing into small lengths (beads) that are then enameled with glass powder by using propane torches.
  - These beads are then braided into bracelets and necklaces using hemp twine or other string material.
  - More advanced enameling processes can be developed in conjunction with the skills used in Copper etching.
-

Unit 9:

- **Tool Making – Heat Treating**
  - Students learn how to heat treat carbon steel in order to make tools such as wood, cold and embossing chisels as well as wood carving knives.

Assessment Component

Each project is assessed individually and usually in conjunction with the student by including a self-reflection component. Progress is assessed by taking into consideration the starting skill level of the student. In addition to a mark for project work, students are also given credit for various other aspects of achievement and assessment in class. The following areas are used in overall assessment of the student in this class:

- **Skill development:** Students are assessed on a daily and weekly basis on how they are improving their skills within the classroom. In order to be successful students must attend regularly and participate.
- **Applied Design:** The value and importance of the design process is imbedded within most projects undertaken in this course. Although students are all learning essentially the same skills, how they incorporate these processes into their final products has a large impact on the final success and ownership of their final products. Keeping and submitting ideation sketches, production plans, final plans and prototype development documentation are all used for assessment purposes.
- **Final Product:** The quality and content of required production techniques are used for assessment purposes. Special consideration is taken in regards to whether a project was methodically worked on versus being rushed and whether the production techniques where done in the appropriate manner.
- **Social & Career Responsibility:** Students are expected to 'pull their weight' when cleaning up and helping to maintain the Tech Ed classroom. Students are also expected to conduct themselves in a safe, respectful and effective manner that translates into an atmosphere of treating the shop as one would treat a workplace. Part of their overall grade in the course is derived from these considerations and is arrived at through consultation with the student before term reports are generated.

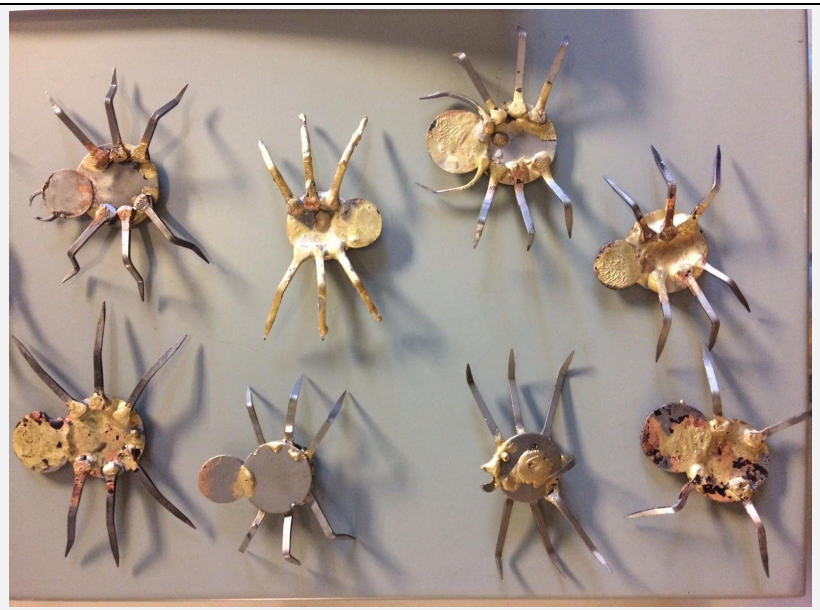
- **Theory:** Students do have tests which are focused on proper tool identification, identification of materials and processes such as the heat treatment of metals. These are often in the form of 'Pop Quizes' or semester end theory review and testing to help reinforce important concepts.
- **Research:** Students may have the opportunity to do a self-directed research project which could be done in conjunction with or separate from other project work to help them engage in a deeper more meaningful way with this course. For example: If a student has demonstrated maturity and a willingness to go 'above and beyond' the scope of this course, they are able to research and engage in more advanced project development. As well, if the teacher deems it appropriate a research project could be incorporated into the class using time in the library for such topics as: recycling metals, heat treatment of metals, advanced casting processes etc.

Content – Elaborations



Key Fob/Chain samples

Jump Ring/Chain Mail samples



Basic Sculpture samples (fridge magnets)

Blacksmithing ‘Rat Tail’ Scroll

Key Fob Project
Art Metal

Name:_____

Block: _____

Tools Required

Hacksaw/ coping saw
Scriber/ prick punch/ center punch
Bastard cut file / smooth cut file/ round cut file
Emory cloth of various grits/ rubbing and glazing compound/ metal polish

Steps to follow: After completing each step worth marks report to your instructor to be checked off and your mark recorded on this sheet.

Ideating:

1. Sketch 6 key fob ideas on the squares provided on the back of this sheet (remember that your design will need to be cut out and should not be to intricate) **/6**
2. Choose your 3 favorite ideas and re-draw in good copy **/6**
3. Choose your final design and draw it in the template box **/5**
4. Layout your key ring hole evenly from 2 edges at least 5mm away **/3**

Layout and breaking out stock:

5. Cut out your final design
6. Obtain 50mm wide aluminum flat bar from your instructor
7. Layout 40mm with a square and scriber
8. Place aluminum in a vice and cut with a hacksaw
9. Tape your design onto the material and prick punch the outline **/10**

Making:

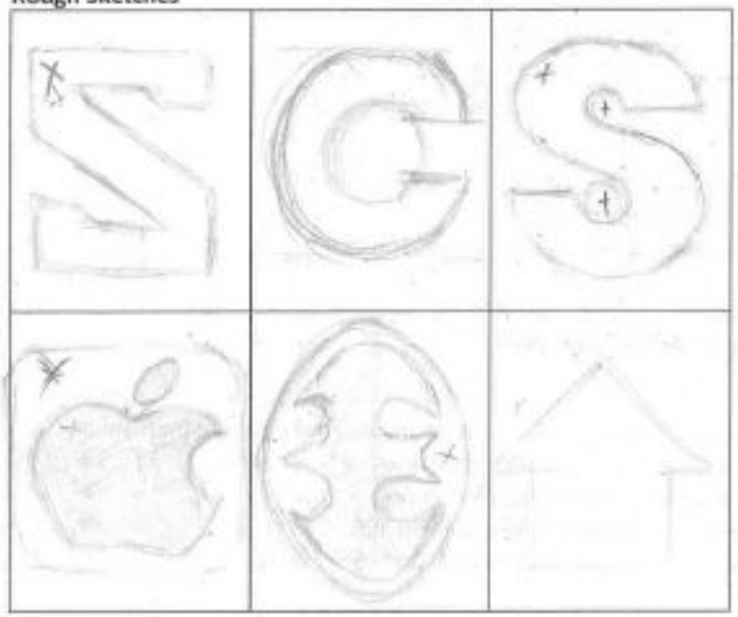
10. Use a center punch to mark your key ring hole and use drill press for your hole **/5**
11. Place your key fob into a vice and cut out your design
12. Using a bastard file continue to shape your design down to your punch marks
13. Using a smooth file, finish the final shape of your design **/20**

Finishing

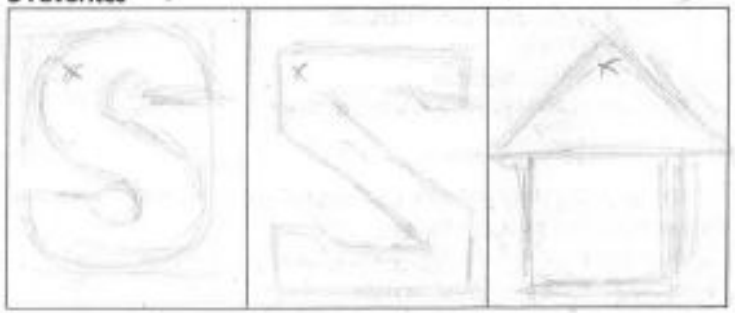
14. Using emery cloth remove all deep scratches and step-up in grit until you have a clean and flat surface and edges
15. Finish by using a Rubbing and then Glazing compound and finally Metal polish **/45**
16. Hand in your final project with your name written on masking tape

Final keyfob mark **/100**

Rough Sketches



3 Favorites



Final Design Template

Band Ring

Name:_____ Grade:____

Upon completion of this project you will be able to do...

- Solder silver
- Shape silver
- Polish and file
- Size a ring

Safely

Tools: -Jeweler's Saw -Files & Sandpaper
-Mandrel -Flat jaw pliers
-Propane torch -Bench Pin
-Tripoli (buffing compound) -Wooden hammer
-Buffer, Drill press & Dremel -Easy solder & Flux

Materials: One piece of 3' Nickel Silver

After watching the demo..... it's your turn! Each step must be checked ☑ by the teacher.

☐ **Step 1.**

Get your piece of nickel silver and ANNEAL it.

Be careful it's hot!

☐ **Step 2.**

Bend your piece around a MANDREL and size it accordingly.

->See me before you cut. I want to make sure it's the right size.<-

*My initials*_____

Mark it and cut the excess with a JEWELR'S SAW and BENCH PIN.

Wear your safety glasses while cutting.

☐ **Step 3.**

Bend your ring so the joint is flat. File the inside edges if needed. Make sure there isn't a gap between the ends. Align the ends perfectly.

☐ Step 4.

SOLDER the ring together by using FLUX, a propane torch and a very small piece of solder. Apply the flux to the joint. Apply solder. Heat the ring first and then the solder. Allow to cool.

Be Careful it's hot! Remember, you only need a very small amount of solder.

☐ Step 5.

Shape your ring back into a circle on the mandrel using a wooden hammer. Drop into the NICKEL PICKLE. You must ONLY use the copper tongs.

YOU MUST WEAR EYE PROTECTION! PICKLE IS VERY TOXIC, THEREFORE, DON'T BREATHE IT, DRINK IT, OR TOUCH IT!

After it's white, rinse in the sink using the tongs and dry.

☐ Step 6.

Start filing outside, and inside. Go from files to sandpaper, deepest grit first.

For sanding the inside, use the drill press and sanding rod, wear gloves because the ring can get HOT!

You know when you're done when you can't see the solder joint and every side is filed.

Wear safety glasses when using the drill press.

Step 7.

Start to buff, and use Tripoli on both buffers. The outside will be done on the buffer with a ring clamp. The inside will be done on the Dremel, also wear gloves because the ring will get HOT! Once all the scratches are gone, wash your ring, and hand it in with the marking sheet.

Remember to wear safety glasses.

Evaluation

"What did I get?"

Evaluation sheet & all ☑ checked	/1
Correct size for you	/4
Correct shape (round)	/5
Solder joint and aligned	/5
Invisible joint	/5
Finishing (sanding & buffing)	/10
Total	**/30**

MEMO

From: Advocacy Ad Hoc Committee
To: Education Policy and Directions Committee
Date: April 9, 2018

RE: Priority Areas for Advocacy

Background:
The Advocacy Ad Hoc Committee ("the Committee") was established by the Board for the purpose of developing advocacy action plans to support public education initiatives. The Committee has met three times since it was established. The Committee's work has focused on identifying what is effective advocacy and determining priorities for advocacy.

Priority Areas for Advocacy:

The Committee has identified three priority areas for advocacy

1. Private School Funding

   At the January 29, 2018 meeting of the Board, the following motion was passed:

   > That the motion "That the Board of Education of School District No. 61 (Greater Victoria) direct the chair to write a letter to the Minister of Education urging development of a strategy for ending public funding of all private schools by September 2021" be referred to the Advocacy Ad Hoc Committee.

   Given this direction from the Board, and further discussions of the Committee, ending private school funding has been identified as a priority for advocacy. Specifically, the committee has decided to focus on advocating for the government to cease funding Group 2 Independent Schools ("elite" schools).

2. Children in Care

   A recent report from the Representative for Children and Youth, *Room for Improvement: Toward Better Education Outcomes for Children in Care,* outlines the need to improve educational experiences and outcomes for children in care and provides a baseline for advocacy.

3. Child Care and Early Learning

   The Committee believes that School Boards should be informing the Ministry on preferred approaches to school district involvement in providing child care and early learning, rather than waiting for government to inform us of their decisions. At this time the Committee is reviewing the Superintendent's Childcare and Early Learning Discussion Paper in order to determine the best course for advocacy.

Recommendations:

The Advocacy Committee would like direction from the Board on the above priorities, so that action plans may be developed to support each priority area.

Recommended motion:

> *That the Board of Education of School District No. 61 (Greater Victoria) endorse the priority areas of focus identified by the Advocacy Ad Hoc Committee, and task that committee with developing action plans on each item to be brought back to a future Education Policy and Directions Committee.*