



Board/Authority Authorized Course
Charles Bloom
Logging 12

School District/Independent School Authority Name: Vernon School District	School District/Independent School Authority Number (e.g. SD43, Authority #432): SD#22
Developed by: Martin Tooms	Date Developed: April 2019
Superintendent Approval Date (for School Districts only): June 19, 2019	Superintendent Signature (for School Districts only): On course form
Board/Authority Approval Date: June 19, 2019	Board/Authority Chair Signature: On course form
Course Name: Logging 12	Grade Level of Course: 12
Number of Course Credits: 4	Number of Hours of Instruction: 120

Board/Authority Prerequisite(s): Enrollment in the Forestry Program at CBSS; Logging 11

Special Training, Facilities or Equipment Required:

PPE (Personal Protective Equipment) including:
CSA approved hi-vis hardhat with mesh visor, and earmuffs
WorkSafe approved safety pants for chainsaw use
CSA approved safety work boots
Hi-vis vest
Work gloves
Safety glasses
All weather outerwear

The course instructor shall be a B.C. certified Technology I Industrial Education teacher, with Enform Level 1 Chainsaw certification, OFA Level 3 certified, and physically fit. To supervise and instruct at Woodlot 1908, heavy equipment operation and maintenance experience will be an asset.

Course Synopsis:

Logging 12 is an instructional program that prepares individuals to produce, protect, and manage timber and specialty forest crops; maintain, operate and repair related equipment and machinery; harvest and transport trees as a crop; and select, grade, and market forest raw materials for converting into a variety of consumer goods; and to utilize the forest for multiple purposes including game preserves, hunting, wildlife habitat, and recreation. The course will provide students with both classroom knowledge and hands-on experience in the safe operation of harvesting equipment in accordance with WorkSafe BC and Industry standards, as well as the operation and maintenance of a small primary processing facility. Students are generally in the field 3 out of 5 days of the week: safe and efficient logging methods are learned through practical experience in virtually all-weather conditions. Student led sales of firewood and saleable lumber help subsidize some of the equipment costs.

Goals and Rationale:

Logging 12 will develop advanced curricular competencies, understandings, and critical thinking around logging and sustainable forestry practices. Charles Bloom Secondary School has a Federation of BC Woodlot Association award-winning and unique woodlot program that provides students both practical fieldwork and theoretical study in many aspects of modern forest management, logging, forest recreation, community connections, and an incorporation of the First Peoples Principles of Learning and indigenous ways of knowing around sustainable natural resource use. This course takes the skills learned in Logging 11 and adds to their depth, as well as teaching some basics of primary processing of timber into firewood and saleable lumber.

Indigenous Worldviews and Perspectives:

Sustainable and appropriate forest practices support the wellbeing of the community, the family, and the land.

Learning is experiential, reflective, and connected to the land.

Forest management and resource use is connected to story, tradition, responsibility, and identity

Knowledge is passed from generation to generation.

Elders' knowledge of the land is respected and honored.

The community is involved in decisions around resource harvesting.

BIG IDEAS

Forestry has local environmental, social, and economic importance	Forest management requires active field work and hands on practice	Woodlot sustainability requires planning and working with environmental cycles	Primary processing of forest resources add value for the community	Student and worker safety in an industrial forest setting is the first consideration
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Learning Standards

Curricular Competencies	Content
<i>Students are expected to do the following:</i> Develop and communicate an understanding of the local economic impact of primary processing of forest materials. Understand the environmental implications of modern forest practices and use of forest resources in a Value-Added manner. Recognize First Peoples perspectives and knowledge around the use of forest resources for economic, social, and cultural purposes, understand the connection of the land to a positive personal and cultural identity Describe the relationships between forest users and consumers of timber and lumber goods Use, maintain, and repair appropriate tools and equipment for forest management and primary processing. Prepare and inspect basic timber products for quality, consistency, moisture content, and other important factors. Demonstrate the proper use of safety equipment in an industrial forestry setting and in primary processing activities. Process raw logs into marketable primary timber products. Tour local sawmills and logging operations to understand primary and secondary operations and components. Explore social aspects of wildfire management and investigate wildfire risk and mitigation actions Consider the role of Technologists and Professional Foresters in the forest industry.	<i>Students are expected to know the following:</i> Safe work practices and the proper use of Personal Protective Equipment The forest industry has significant importance to the local community Modern timber processing must consider environmentally sustainable use of the resource and add value to the resource First Peoples use the forest as a resource for economic, social, and cultural materials As consumers we use a wide variety of products from the forest Operation, maintenance, and repair of a variety of forestry tools for primary processing Impacts of local insects and diseases The Role of Forest Technologists and Professional Foresters.

Big Ideas – Elaborations

Forestry has local environmental, social, and economic importance:

Sample questions to support inquiry with students:

- How can forestry products be used as environmentally sustainable packaging materials?
- What challenges do local loggers face in harvesting, storing, processing, and marketing their resources in a sustainable way?
- How does the health of the local forest ecosystem affect a local logging industry?
- What are some of the principles of sustainable logging?
- What are some First Peoples Principles for sustainable use of natural resources?

Forest management requires active field work and hands on practice:

Sample questions to support inquiry with students:

- What are some of the forestry skills you learned in Logging 11?
- What is one skill you can help a new forestry student with?
- What was your favorite forestry activity from logging, for example - operating equipment, saw maintenance, trail clearing, etc?

Woodlot sustainability requires planning and working with environmental cycles:

Sample Questions to support inquiry with students:

- How do the natural cycles of a forest impact decisions on forest management?
- Show how an active woodlot is divided into different sections to maintain a sustainable resource.
- What strategies can we employ to maintain a sustainable fiber supply?

Primary processing of forest adds value for the community:

Sample opportunities to support the inquiry with students:

- Who are the 3 local wood processors? What products do they create?
- Book a tour of the Lavington Tolko plant.
- Create a slideshow on local forest products.
- Describe the process of creating wood pellets for fuel.
- Compare wood pellets vs firewood as a heating fuel.
- Develop an advertisement for a new local forest product.

Student and worker safety in an industrial forest setting is the first consideration:

Sample opportunities to support the inquiry with students:

- Create a safety orientation for Grade 11 s beginning the forestry program.
- What safety equipment is required when operating the Bandsaw Mill?
- Describe the different types of hearing protection and their advantages and disadvantages.
- Complete the Heads Up for Safety test package.

Curricular Competencies – Elaborations

Develop and communicate an understanding of the local economic impact of primary processing of forest materials.

Sample opportunities to support inquiry with students:

Describe the variety of primary processing activities that take place in the North Okanagan
Present to the class on one local processor

Understand the environmental implications of modern forest practices and use of forest resources in a value-added way.

Sample opportunities to support inquiry with students:

What are 3 ways that forestry in BC has changed and become more sustainable over the last 100 years?
How is Oriented Strand Board produced?
What are some of the ways that low-value forest resources have been turned into higher value products?

Recognize First Peoples perspectives and knowledge around the use of forest resources for economic, social, and cultural purposes, understand the connection of the land to a positive personal and cultural identity

Sample opportunities to support inquiry with students:

How are First Nations communities consulted and involved in forest resource management?
Research a First Nations owned forestry-company and their products.

Describe the relationships between forest users and consumers of timber and lumber goods

Sample opportunities to support inquiry with students:

Describe 5 common products that we use from the forest.
Show how lumber is valued and sold to mills.
Review a lumber package for framing a house.
Describe how engineers test the strength of wood products

Use, maintain, and repair appropriate tools and equipment for forest management and primary processing.

Sample opportunities to support inquiry with students:

Describe the different types of sawmills.
Create a poster that shows the pathway from forest to lumber yard
Describe the process for sharpening bandsaw mill blades
Demonstrate how to setup the bandsaw mill for cutting lumber
Demonstrate how to cleanup and maintain the bandsaw mill after cutting

Content – Elaborations

The forest industry has significant importance to the local community:

Sample opportunities to support inquiry with students:

Local forestry companies

Local products

Local Producers

Value of forestry to the local economy

Modern timber processing has to take into account environmentally sustainable use of the resource and add value to the resource:

Sample opportunities to support with students:

Stumpage fees and royalties

Log exports

Value Added manufacturing

First Peoples use the forest as a resource for economic, social, and cultural materials

Sample opportunities to support inquiry with students:

First nations use of forest materials

Social and cultural importance of the natural world

As consumers we use a wide variety of products from the forest, including:

Sample opportunities to support inquiry with students:

Firewood

Graded Lumber

Utility Lumber

Peeler logs for plywood veneer

Poles

Recommended Instructional Components:

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Logging 12 takes place both in the classroom and on woodlot 1908.

Much of the class time is experiential and place-based, working in the woods with expert guidance.

The class makes use of a wide variety of guest speakers, forest professionals, First Nations teachers, Technology/ Industrial Education teachers, and resource managers.

There will be elements of direct instruction, demonstrations, and much practical work.

Recommended Assessment Components: Ensure alignment with the [Principles of Quality Assessment](#)**Post-Assessment:**

Classroom assessments are mostly project based and reflective

Goal setting at the start of each term

Quizzes on safety, student demonstrations

Daily work logs and journaling

Learning Resources:

Woodlot 1908

Guest Speaker

Online resources:

BC Council of Forest Industries

Healthy Forests - Healthy Communities

Canadian Institute of Forestry

BC Forest Safety Council

First Nations Educational Steering Committee

<https://interiorlogging.org>

Forestry Tools and Equipment

SD22 Story of Our Ways

Additional Information:

Forestry at Charles Bloom is a unique program that serves students with a broad range of learning styles and learning goals. For more information, please contact Mr. Martin Tooms. MTooms@sd22.bc.ca



BOARD/AUTHORITY AUTHORIZED (BAA) COURSE FORM

PART A: BAA COURSE VERIFICATION STATEMENT - To be completed by District Superintendent, Independent School or Offshore School Principal

Prior to submitting the attached BAA Course Framework to the Board/Authority for approval, I Joe Rogers, Superintendent verify that I have reviewed the BAA Course to ensure that it is fully compliant with the *School Act* (if offered by a Board or Offshore School), the *Independent School Act* (if offered by an Independent School Authority), the *Board Authorized Course Order*, policy document *Board/Authority Authorized Courses: Requirements and Procedures*, and for ELL courses the ELL Guidelines: *Template for BAA Language Acquisition/Culture Courses*.

By signing below, I verify that the BAA Course:

- is not preparatory, remedial, or modified
- does not significantly overlap with current provincial curriculum
- name reflects the subject area and includes the grade level
- assigned grade level reflects the appropriate level of instruction
- credit value appropriately reflects the length and scope of the course
- synopsis clearly outlines what a student has gained when the course is completed
- rationale outlines the reasons for wanting to offer opportunities to study the course
- organizational structure outlines the specific topics, units or modules which include the learning outcomes, instruction and assessment components, and time allotments
- learning outcomes are assessable and observable and can be understood by students and parents
- instructional component clarifies learning outcomes and provides a range of pedagogical opportunities
- assessment component provides formative and summative opportunities to assess student achievement
- learning resources are age appropriate, support learning outcomes and diversity of learning rates and styles.

Course Name Logging

Grade 12

Course Code

School District Name and Number 22 (Vernon)

Independent School Name and School Number

Name of District Superintendent/Independent or Offshore School Principal Joe Rogers, Superintendent of

Signature [Signature]

Date 06/19/2019

PART B: BAA COURSE AUTHORIZATION STATEMENT - To be completed by Board/Authority Chair or Designate

A signed copy of this document must be submitted to the Student Certification Branch. The original document and accompanying BAA Course Framework must be retained by the district/school for submission to the Ministry upon request.
(Board Authorized Course Order, M285/04, s. 3; Educational Standards Order, M41/91, s. 5 (2)(c))

Name of Board/Authority Chair or Designate Robert Lee, Board Chair

Signature [Signature]

Date 06/19/2019

I declare that this BAA course is approved by the Board/Authority

PART C: FOR INDEPENDENT SCHOOLS ONLY BAA INSPECTOR CONFIRMATION

To be completed by Inspector of Independent Schools or Designate during regular inspection/monitoring visit

A signed copy of this document (Parts A and C) must be retained for submission to the Ministry upon request.

The BAA course noted above is fully compliant with the *Independent School Act* and the BC Ministry of Education requirements outlined in the policy document *Board/Authority Authorized Courses: Requirements and Procedures*. (Educational Standards Order, M41/91, s. 5(2)(c))

Name Inspector of Independent Schools or Designate

Signature

Date