



Windsor Secondary School

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At Windsor Secondary School we strive to treat each other with respect and dignity, appreciate diversity, actively pursue lifelong learning through different opportunities and value everyone's right to work and learn in a safe, supportive, challenging environment.

COURSE OUTLINE

SUBJECT: Drafting 12
(<https://curriculum.gov.bc.ca/curriculum/adst/12/drafting>)

BIG IDEAS:

Design for the life cycle includes consideration of social and environmental impacts.

Personal design interests require the evaluation and refinement of skills.

Tools and technologies can be adapted for specific purposes.

CURRICULAR COMPETENCIES:

Students are expected to be able to do the following:

Applied Design

Understanding context

- Engage in a period of user-centred research and empathetic observation to understand design opportunities

Defining

- Establish a point of view for a chosen design opportunity
- Identify potential users, intended impact, and possible unintended negative consequences
- Make decisions about premises and constraints that define the design space and develop criteria for success
- Determine whether activity is collaborative or self-directed

Ideating

- Critically analyze how competing social, ethical, and sustainability considerations impact design
- Generate ideas and add to others' ideas to create possibilities, and prioritize them for prototyping
- Evaluate suitability of possibilities according to success criteria, constraints, and potential gaps
- Work with users throughout the design process

Prototyping

- Choose an appropriate form, scale, and level of detail for prototyping, and plan procedures
- Analyze the design for the life cycle and evaluate its impacts

- Visualize and construct prototypes, making changes to tools, materials, and procedures as needed
- Record iterations of prototyping

Testing

- Identify and communicate with sources of feedback
- Develop an appropriate test of the prototype, conduct the test, and collect and compile data
- Evaluate design according to critiques, testing results, and success criteria to make changes

Making

- Identify appropriate tools, technologies, materials, processes, cost implications, and time needed
- Create design, incorporating feedback from self, others, and testing prototypes
- Use materials in ways that minimize waste

Sharing

- Decide how and with whom to share or promote design, creativity, and processes
- Share the product with users and critically evaluate its success
- Critically reflect on their design thinking and processes, and identify new design goals
- Identify and analyze new design possibilities, including how they or others might build on their concept

Applied Skills

- Apply safety procedures for themselves, co-workers, and users in both physical and digital environments
- Identify and assess skills needed for design interests, and develop specific plans to learn or refine them over time
- Demonstrate competency and proficiency in skills at various levels involving manual dexterity and complex drafting techniques

Applied Technologies

- Explore existing, new, and emerging tools, technologies, and systems to evaluate suitability for their design interests
- Evaluate impacts, including unintended negative consequences, of choices made about technology use
- Examine and analyze the role that changing technologies play in drafting contexts

CONTENT:

Students are expected to know the following:

- complex drafting design projects
- interrelationships among complex drawings
- preparation of detailed drawings
- components of working drawings
- computer-aided design (CAD) programs and other graphic software management
- modifying existing geometrical design using CAD software
- 3D modelling using advanced modelling techniques
- file conversion between CAD and other applications
- areas of drafting specialization
- design for the life cycle

- future career options in drafting design
- interpersonal and consultation skills to interact with clients
- ethics of cultural appropriation and plagiarism