



Windsor Secondary School

931 Broadview Drive
North Vancouver B.C.V7H 2E9
Tel: (604) 903-3700 Fax:(604) 903-3701



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 9
(<https://curriculum.gov.bc.ca/curriculum/adst/9/core>)

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.

CURRICULAR COMPETENCIES:

Students are expected to be able to do 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
- Choose a form for prototyping and develop a plan that includes key stages and resources
- 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

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

CONTENT:

Students are expected to know the following:

- drafting technique, including dimensioning and standards
- drafting styles, including perspective, mechanical, and architectural
- CADD/CAM, CNC and 3D printing
- function of models
- basic code
- digital output devices
- virtual creation using CAD/CAM