



NANAIMO LADYSMITH
PUBLIC SCHOOLS

COURSE OUTLINE

Course: Applied Design, Skills and Technology 9 – Information and Communication Technologies

Teacher: Mr. M. Dang

Contact Information: Mike.Dang@sd68.bc.ca

Room: F107

Reporting Procedure:

- Ongoing progress is available on Fresh Grades, MyEd BC and Google Classroom
 - There will be a minimum of 2 Ongoing Communications of Student Learning per semester
 - At mid-course, there will be a Progress Report
 - There will be a formal, Summative Report at the end of the course
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Assessment:

- The new Ministry of Education Assessment and Reporting Order has changed the way we report to parents. We will now be communicating **with** parents rather than reporting **to** parents. Students will be assessed on the following levels of competency at grade level:

Beginning to acquire knowledge, skills, strategies and processes.	Developing the ability to apply knowledge, skills, strategies and processes.	Applying knowledge, skills, strategies and processes consistently.	Extending knowledge, skills, strategies and processes creatively and strategically.
<ul style="list-style-type: none"> ▪ Student is beginning to understand at grade-level expectations ▪ Shows evidence that learner can demonstrate some progress towards the learning standards 	<ul style="list-style-type: none"> ▪ Student is developing understanding at grade-level expectations ▪ Shows evidence that learner can understand the learning standards in basic or familiar situations 	<ul style="list-style-type: none"> ▪ Student is applying understanding at grade-level expectations ▪ Shows evidence that learner can transfer understanding of the learning standards to both predictable and new situations 	<ul style="list-style-type: none"> ▪ Student is extending understanding at grade level expectations ▪ Shows evidence that learner can insightfully and creatively apply an in-depth understanding of the learning standards in complex situations

BIG IDEAS: *Students are expected to understand the following:*

1. Social, ethical, and sustainability considerations impact design.
2. Complex tasks require the sequencing of skills.
3. 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

1. Engage in a period of research and empathetic observation in order to understand design opportunities

Defining

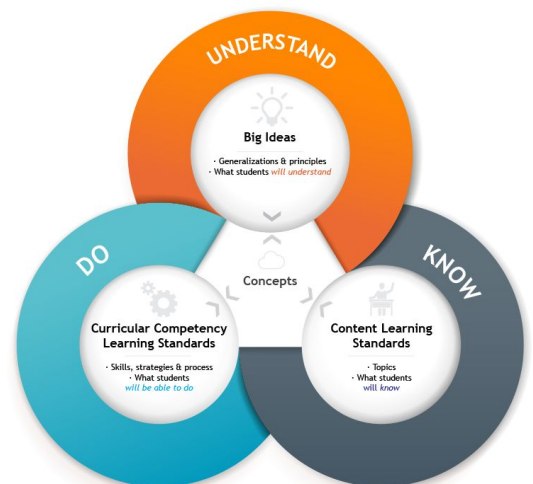
2. Choose a design opportunity
3. Identify potential users and relevant contextual factors
4. Identify criteria for success, intended impact, and any constraints

Ideating

5. Take creative risks in generating ideas and add to others' ideas in ways that enhance them
6. Screen ideas against criteria and constraints
7. Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures
8. Choose an idea to pursue, keeping other potentially viable ideas open

Prototyping

9. Identify and use sources of inspiration and information
10. Choose a form for prototyping and develop a plan that includes key stages and resources



11. Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability
12. Prototype, making changes to tools, materials, and procedures as needed
13. Record iterations of prototyping

Testing

14. Identify sources of feedback
15. Develop an appropriate test of the prototype
16. Conduct the test, collect and compile data, evaluate data, and decide on changes
17. Iterate the prototype or abandon the design idea

Making

18. Identify and use appropriate tools, technologies, materials, and processes for production
19. Make a step-by-step plan for production and carry it out, making changes as needed
20. Use materials in ways that minimize waste

Sharing

21. Decide on how and with whom to share their product and processes
22. Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology
23. Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment
24. 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
25. Identify new design issues

Applied Skills

26. Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments
27. 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

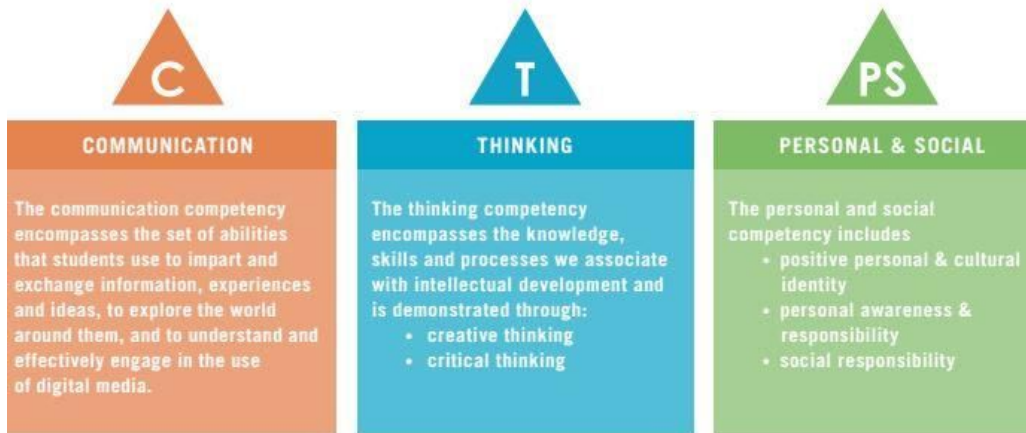
28. Choose, adapt, and if necessary learn about appropriate tools and technologies to use for tasks
29. Evaluate the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use
30. Evaluate how the land, natural resources, and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

CONTENT: *Students are expected to know the following:*

1. text-based coding
2. binary representation of various data types, including text, sound, pictures, video
3. drag-and-drop mobile development
4. programming modular components
5. development and collaboration in a cloud-based environment
6. design and function of networking hardware and topology, including wired and wireless network router types, switches, hubs, wireless transfer systems, and client-server relationships
7. functions of operating systems, including mobile, open source, and proprietary systems
8. current and future impacts of evolving web standards and cloud-based technologies
9. design for the web
10. strategies for curating and managing personal digital content, including management, personalization, organization, maintenance, contribution, creation, and publishing of digital content
11. relationships between technology and social change
12. strategies to manage and maintain personal learning networks, including content consumption and creation
13. keyboarding techniques

CORE COMPETENCIES:

Students will be accessing the Core Competencies in all their curricular areas. They may be self-assessing the Core Competencies on their Ongoing Communications. Summative reports at the end of the course will report that the student has engaged in this self-assessment.



COMMUNICATION

THINKING:

CREATIVE THINKING

CRITICAL THINKING

PERSONAL AND SOCIAL RESPONSIBILITY:

POSITIVE PERSONAL AND CULTURAL IDENTITY

PERSONAL AWARENESS AND RESPONSIBILITY

SOCIAL RESPONSIBILITY

SUPPORT:

Counseling: A-E – Ms. C. Linn F-N – Ms. K. Gustafson O-Z – Ms. S. McRae

Academic: Study Buddies: Monday 2:10-4:00 Downstairs 'C' Hall Orange Room

Tues/Thurs 3:00-4:00 Library

Wednesday 3:00-4:00 Downstairs 'C' Hall Orange Room

Aboriginal Support: Ms. N. Wedholm (C120)