COURSE OUTLINE

NANAIMO LADYSMITH PUBLIC SCHOOLS

Course: **Applied Design, Skills and Technology (ADST) 8**

Contact Information:

Teacher:

Ms. M. Ney **mney@sd68.bc.ca** **(Art)**

Mr. R. Goertzen **RGoertzen@sd68.bc.ca** **(Computers)**

Mr. T. Surette **TSurette@sd68.bc.ca** **(Woodwork)**

Mr. P. Spencer **PSpencer@sd68.bc.ca** **(Drama)**

Mr. M. Dang **Mike.Dang@sd68.bc.ca** **(Robotics)**

General Information

Students will have an opportunity to experience 5 electives in the Applied Design Skills and Technology Curriculum.

Each rotation will be 17 classes in each area.

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

1. Design can be responsive to identified needs.
2. Complex tasks require the acquisition of additional skills.
3. Complex tasks may require multiple tools and technologies.

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

Computer Skills

1. digital and non-digital media technologies, their distinguishing characteristics, and their uses, including layout and design, graphics and images, and video production techniques for using images, sounds, and text to represent characterizations and points of view of people, including themselves, as well as settings and ideas
2. story principles and genre conventions
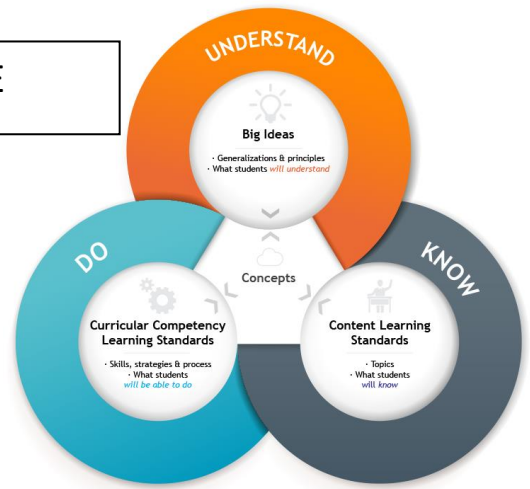
3. media technologies and techniques to shape space, time, movement, and lighting within images, sounds, and text for specific purposes
4. processes for manipulating and testing digital media data
5. issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy
6. elements of media arts used to communicate meaning
7. influences of digital media, including on communication and self-expression

Art/Drama

Manipulation of elements, principles, and design strategies to create mood and convey ideas in the arts, including but not limited to:

    a. dance: body, space, dynamics, time, relationships, form, and movement principles
    b. drama: character, time, place, plot, tension, mood, focus, contrast, balance
    c. music: beat/pulse, metre, duration, rhythm, tempo, pitch, timbre, dynamics, form, texture, notation
    d. visual arts: elements of design: line, shape, space, texture, colour, form, value; principles of design: pattern, repetition, balance, contrast, emphasis, rhythm, movement, variety, proportion, unity, harmony

2. processes, materials, movements, technologies, tools, strategies, and techniques to support creative works
3. choreographic devices
4. drama forms and drama conventions
5. notation in music, dance and drama to represent sounds, ideas, movement, elements, and actions
6. image development strategies
7. symbolism and metaphor to explore ideas and perspective
8. traditional and contemporary Aboriginal arts and arts-making processes
9. a variety of national and international works of art and artistic traditions from diverse cultures, communities, times, and places
10. ethical considerations and cultural appropriation related to the arts
11. personal and collective responsibility associated with creating, experiencing, or presenting in a safe learning environment

Woodwork

1. historical and current contexts of woodworking
2. identification, characteristics, and properties of a variety of woods, both manufactured and natural
3. elements of plans and drawings
4. woodworking techniques
5. traditional and non-traditional joinery using hand tools and power equipment
6. options for reuse of wood and wood products

Robotics

1. uses of robotics in local contexts
2. types of sensors
3. user and autonomous control systems
4. uses and applications of end effectors
5. movement- and sensor-based responses
6. program flow
7. interpretation and use of schematics for assembling circuits
8. identification and applications of components
9. various platforms for robotics programming

Reporting Procedure:

- There will be a minimum of 1 Ongoing Communications of Student Learning per rotation
- There will be a formal, Summative Report at the end of the course

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.
▪ Student is beginning to understand at grade-level expectations ▪ Shows evidence that learner can demonstrate some progress towards the learning standards	▪ Student is developing understanding at grade-level expectations ▪ Shows evidence that learner can understand the learning standards in basic or familiar situations	▪ 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	▪ 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

CURRICULAR COMPETENCIES: *Students are expected to be able **to do** the following*:

Applied Design
Defining
1. Choose a design opportunity
2. Identify key features or potential users and their requirements
3. Identify criteria for success and any constraints

Ideating
4. Generate potential ideas and add to others' ideas
5. Screen ideas against criteria and constraints
6. Evaluate personal, social, and environmental impacts and ethical considerations

7. Choose an idea to pursue

Prototyping
8. Identify and use sources of information
9. Develop a plan that identifies key stages and resources
10. Explore and test a variety of materials for effective use
11. Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed
12. Record iterations of prototyping

Testing
13. Test the first version of the product or the prototype
14. Gather peer and/or user and/or expert feedback and inspiration
15. Make changes, troubleshoot, and test again

Making
16. Identify and use appropriate tools, technologies, and materials for production
17. Make a plan for production that includes key stages, and carry it out, making changes as needed
18. Use materials in ways that minimize waste

Sharing
19. Decide on how and with whom to share their product
20. Demonstrate their product and describe their process, using appropriate terminology and providing reasons for their selected solution and modifications
21. Evaluate their product against their criteria and explain how it contributes to the individual, family, community, and/or environment
22. 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
23. Identify new design issues

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

Applied Technologies

1. Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task
2. Identify the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use
3. Identify how the land, natural resources, and culture influence the development and use of tools and technologies

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.
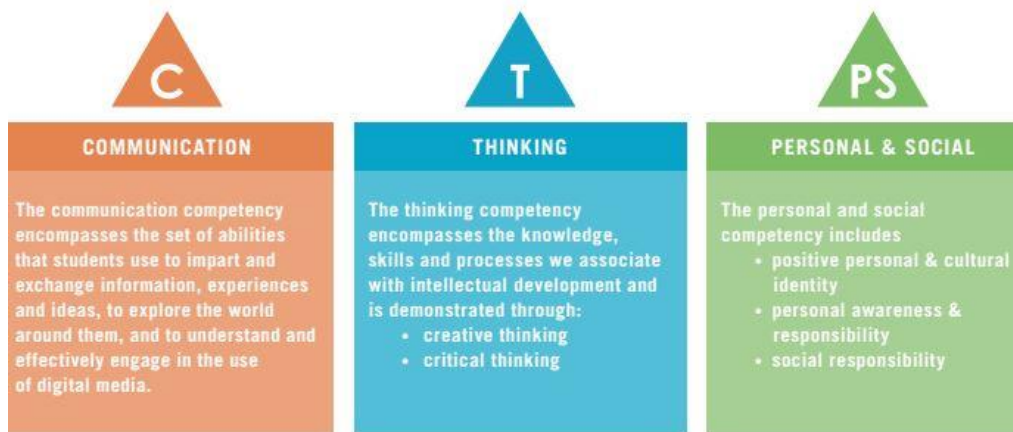
COMMUNICATION

THINKING:

       CREATIVE THINKING

       CRITICAL THINKING

PERSONAL AND SOCIAL RESPONSIBLITY:

       POSITIVE PERSONAL AND CULTURAL IDENTITY

       PERSONAL AWARENESS AND RESPONSIBILITY

       SOCIAL RESPONSIBILITY

SUPPORT:

Counseling: A-J – Ms. C. Linn   K-R – Ms. K. Gustafson   S-Z – Ms. S. McRae

Academic: Study Buddies: Tues/Thurs 3:30-5pm

                  Aboriginal Support: Mr. N. Weldhom