

Metal Fabrication and Welding/Art Metal and Jewelry

Term 4 Course Outline

Learning Intentions:

During Term 4 our goal at NKSS is to provide the required curriculum in order to satisfy prerequisites for course credits as well as future course requirements.

Student agency:

Over the remaining time during Term 4 we want NKSS students to take ownership and control of their learning. While we will provide guidance and direction ultimately we are wanting students to take the foundational knowledge we give and use that to explore their personal interests related to the subject matter and invest in their own learning.

Assessment:

Students will continue to have a choice over the next two months between theoretical based activities and hands-on practical learning with both requiring weekly checkups as we have been doing already. At NKSS we ask that students devote 2-3 hours per week to the course material or hands-on practical work in a safe and supervised environment. Final Term 4 grades will be a combination of Term 3 work before Spring break and our weekly activities that started on March 24th, 2020.

Big Ideas:

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

Sample Task: Students were asked to reuse pop cans to create either a decorative box, flower, or project of their choosing.

2) Personal design interests require the evaluation and refinement of skills.

Sample Task: Students are asked to research a metal artist and design an inspired piece of metalwork either on paper/cad/3d model, etc or practical homemade piece if tools are available.

3) Tools and technologies can be adapted for specific purposes.

Sample Task: Students are asked to design and build a tool using household or easily available materials that accomplishes a specific task to make a job at home easier.

Curricular Competencies:

The following curricular competencies have been chosen to reflect the challenge for students who do not have access to shop tools and/or have limited technology at home.

Understanding Context

-research done directly with potential users to understand how they do things and why, their physical and emotional needs, how they think about the world, and what is meaningful to them.

Defining

-Make decisions about premises and constraints limiting factors, such as task or user requirements, materials, expense, environmental impact that define the design space, and develop criteria for success.

Ideating

-Identify, critique, and use a variety of sources of inspiration.

-may include personal experiences, First Peoples perspectives and knowledge, the natural environment, places, cultural influences, social media, and professionals.

Prototyping: Just because we are not in the shop does not mean we can't use materials around us for creating something interesting as a base prototype.

-Choose an appropriate form, scale, and level of detail for prototyping, and develop a plan for example, pictorial drawings, sketches, flow charts that include key stages and resources.

Making:

-Identify appropriate tools, technologies, materials, processes, cost implications, and time needed.

-Use materials in ways that minimize waste.

Sharing:

-Evaluate new possibilities for plans, products and processes, including how they or others might build on them.