**Grade 8 Wood Shop Syllabus**

Name: Date:

Welcome to Grade 8 Applied Design, Skills, and Technologies. This class focuses on Woodworking. In this course, we will establish Wood Shop Safety, explore basic hand and power tool use, safety, and maintenance. We will learn about the sources, types, and treatments of wood and wood products. We will go on field trips and we will conduct our own woodworking projects.

The BIG IDEAS to keep in mind during this course are the following:

\*Design can be responsive to identified needs.\*

\*Complex tasks require the acquisition of additional skills.\*

\*Complex tasks may require multiple tools and technologies.\*

*By the end of the course, students will be expected to know the following content:*

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

*By the end of the course, students should be capable of the following:*

* Choose a design opportunity
* Identify key features or potential users and their requirements
* Identify criteria for success and any constraints
* Understanding context
* Generate potential ideas and add to others’ ideas
* Screen ideas against criteria and constraints
* Evaluate personal, social, and environmental impacts and ethical considerations
* Identify and use sources of information
* Develop a plan that identifies key stages and resources
* Explore and test a variety of materials for effective use
* Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed
* Record iterations of prototyping
* Testing
* Test the first version of the product or the prototype
* Gather peer and/or user and/or expert feedback and inspiration
* Make changes, troubleshoot, and test again
* Making
* Identify and use appropriate tools, technologies, and materials for production
* Make a plan for production that includes key stages, and carry it out, making changes as needed
* Use materials in ways that minimize waste
* Decide on how and with whom to share their product
* Demonstrate their product and describe their process, using appropriate terminology and providing reasons for their selected solution and modifications
* Evaluate their product against their criteria and explain how it contributes to the individual, family, community, and/or environment
* 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
* Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments
* 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
* Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task
* Identify the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use
* Identify how the land, natural resources, and culture influence the development and use of tools and technologies