Computer Technology

COURSE DESCRIPTION

This class is an interdisciplinary course to serve as the junction point between the core subjects. Students will use the facilities available in the computer lab to deepen their understanding of concepts being learned in other subjects through simulations and hands-on activities. In doing so, they will learn technical skills ranging from 3D modelling and design, programming/coding and computational thinking, to research and data processing. There will be regular use of the Google Apps for Education Tools (G.A.F.E.) with an emphasis in Digital Citizenship.

WORK HABITS

- Adequate time is given for work to be completed in class however, on occasion work may have to be completed at home with all the required materials and resources available online.
- Students are expected to take full advantage of the limited classroom time to receive instruction and to work on projects.
- Students who are absent from a class are responsible for the material covered in the class by consulting the Google Classroom.

PROGRAMME

- **Sept./Oct.** - Students will deepen their knowledge and skills of the Grade 8 Mathematics - *Measurement and Geometry* strands by using computer aided design (CAD) tools to design and 3D print a small motorized vehicle.
- **Oct./Nov.** - Students will deepen their knowledge and skills of the Grade 8 Science - *Understanding Structures and Mechanisms: Systems in Action* strand by designing systems that combine simple machines with their motorized vehicle to perform certain tasks.
- **Dec./ Feb.** - Students will deepen their knowledge and skills of the Grade 8 Mathematics - *Data Management and Probability* strand by using research strategies along with digital devices to gather primary and secondary data and then use a spreadsheet to process and generate graphics for analysis and interpretation.

ASSESSMENT and EVALUATION

Evaluation will be based on the results of projects, tests/quizzes and assignments completed in class. Formative feedback and summative assessment of student work will be provided according to the Ontario provincial achievement chart categories below as they relate to the curriculum expectations being evaluated.

1. Knowledge and understanding
2. Thinking - Processing and interpretation
3. Communication - Interpretation and expression
4. Application - Transfer of knowledge and skills to make connections

Results from activities that meet expectations related to the STEM subjects (Science, Technology and Mathematics) **will be shared** among corresponding subject teachers and **will be considered when determining the final mark for report cards**.