TECHNOLOGY and DESIGN 6

Course Outline

Timeline: September – December 2021
Location: Devon Middle School, Technology and Design Lab
Teacher: Mr. Graham Rich, graham.rich@nbed.nb.ca
Witty.ca → Courses → "DMS 2021-2022" → "Tech and Design Grade 6"

Program Overview

Assessments
- Assignments and Projects
- Tests (both written and practical)

Technology and Design classwork will help students build practical skills in technology through assignments and creative project work. Once critical skills have been demonstrated, students will have flexibility to select design projects according to their strengths and interests. This class offers the opportunity to examine, create, reflect and appreciate technological design as personal and cultural expression. Students will also learn to recognize technology and design in their daily lives and it's influence on society and on themselves.

Course Description

Students will have the opportunity to develop skills in the use of various technologies, in design principles and in project management.

Possible Topics of Study
- Digital Citizenship
- Graphic Design
- Woodworking
- Photo Taking and Editing
- Building Design in 3D
- Robotics

Curriculum Outcome Strands

- Technological Operations and Concepts
- Critical Thinking and Problem Solving
- Responsible Citizenship

Expectations on Students for Learning

- Technology and Design 6 is a hands-on project-based course and **attendance is essential**. If a student should **miss 2 classes**, they must arrange with Mr. Rich to catch up after school.
- Students: arrive prepared and on-time; give help to and receive help from other students; follow instructions; brainstorm project ideas; create unique projects; work safely, efficiently and be productive; always try your best!

Requirements for Students

- Technology and Design 6 will involve computer work and therefore requires a school login. Students must always know or have their login username and password.

- Headphones will be required for much of our computer-based work, as students will be expected to follow instructional videos provided by the teacher.
  - Students must always bring **headphones** to class.
    - Headphones do not need to be expensive. Mr. Rich uses $4 headphones from Dollarama (although with taxes and technology recycling fees, they actually cost $5.75.)

- One final reminder: **attendance is essential**. If you miss class time, talk to Mr. Rich.
- Mr. Rich intends to have the technology lab open for most lunch periods so students can catch up for missed time.
- Mr. Rich will also be offering extra-curricular clubs that use the Technology and Design Lab. Stay tuned!

Parents can contact Mr. Rich by phone, email, at parent-teacher meetings or by appointment.

Technology and Design 6

I have read the course outline. I understand the course objectives and assessments.

Parent/Guardian Name: _____ Signature: _____

Student Name: _____ Signature: _____

Curriculum Outcomes – Middle School Technology Education

By the end of grade 8, students will be expected to:

1. Students will understand technological operations and concepts.	
1.1 Students will use technological operations and concepts.	• File Management • Word Processing • Computer Sketching • Basic Digital Operations
1.2 Students will be able to use tools and technology applications safely.	• Hand Tools • Workshop Protocol • Power Tools • Electronic Equipment
1.3 Students will conceptualize, design, and create products respective of standards and specifications.	• Measurement • Precision • Workmanship • Pride of Project
1.4 Students will communicate information and ideas using a variety of multimedia.	• Video Production • Image Production • Audio Production • Presentations • Digital Literacy • Electronic Portfolio

2. Students will practice critical thinking and problem solving skills.	
2.1 Students will investigate and solve technological problems.	• Help Function • Troubleshooting • Research Skills • Critical Thinking
2.2 Students will examine data to draw conclusions and recommend solutions to improve performance.	• Spreadsheets • Coding • Prototypes • Product Evaluation
2.3 Students will work in teams to solve problems.	• Collaboration • Communication • Work Sharing
2.4 Students will investigate and demonstrate the relationship between technology and society.	• Enterprise • Innovation • Environmental Sustainability • Energy management • Ethics
2.5 Students will understand and demonstrate computer coding/programming concepts and terminology.	• App Development • Robotics • Game Development • Electronics

3. Students will practice responsible citizenship.	
3.1 Students will demonstrate an awareness of human, cultural, and societal issues related to technology.	• Digital Access • Digital Etiquette • Communication
3.2 Students will practice safe, legal, and ethical use of technology.	• Digital Security • Legal Issues • NB Policy 311 (Acceptable Computer Use in Schools)
3.3 Students will explore the educational and career pathways that exist in technology.	• Career Exposure • Online Courses
3.4 Students will interact, collaborate, and publish using technology respective of copyright.	• Responsible Publishing • Referencing
3.5 Students will understand the concept of, and demonstrate appropriate decision making with regards to, “Digital Footprint”	• Privacy • Legal Issues • Rights and Responsibilities • Cyberbullying • Digital Finances • Internet Safety • Security, Phishing, Malware