



# TIJ101

Bur Oak Secondary School  
York Region District School Board

## Exploring Technologies

### COURSE OUTLINE

**Grade:** 9  
**Course Type:** Open  
**Credit Value:** 1.0  
**Prerequisite:** NONE

**Curriculum Policy Document:** The Ontario Curriculum, Grades 9 and 10 Technological Education, 2009  
**Department:** Technological Education  
**Revised:** February, 2021

### COURSE OVERVIEW

This course enables students to further explore and develop technological knowledge and skills introduced in the elementary science and technology program. Students will be given the opportunity to design and create products and/or provide services related to the various technological areas or industries, working with a variety of tools, equipment, software commonly used in industry. Students will develop an awareness of environmental and societal issues, and will begin to explore secondary and postsecondary education and training pathways leading to careers in technology-related fields.

### OVERALL COURSE EXPECTATIONS

#### TECHNOLOGY FUNDAMENTALS

- A1.** demonstrate an understanding of the fundamental concepts and skills required in the planning and development of a product or service, including the use of a design process and/or other problem-solving processes and techniques;
- A2.** demonstrate the ability to use a variety of appropriate methods to communicate ideas and solutions;
- A3.** evaluate products or services in relation to specifications, user requirements, and operating conditions.

#### TECHNOLOGICAL SKILLS

- B1.** use problem-solving processes and project-management strategies in the planning and fabrication of a product or delivery of a service;
- B2.** fabricate products or deliver services, using a variety of resources.

#### TECHNOLOGY, THE ENVIRONMENT, AND SOCIETY

- C1.** demonstrate an awareness of the effects of various technologies on the environment;
- C2.** demonstrate an awareness of how various technologies affect society, as well as how society influences technological developments.

#### PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

- D1.** follow safe practices and procedures when using materials, tools, and equipment;
- D2.** identify careers in various technological fields, and describe the educational requirements for them.

## UNITS OF STUDY

The order of the units will vary depending on scheduling and availability of school labs and resources

<b>TERM WORK: 70% of final mark</b>		
<b>Unit 1 - Course Introduction</b>		
Expectations	Focus	Assessment
A1, D1	Student Agenda Items Learning Skills and Work Habits Course Outline	KU/TI/CA Formative assessments
<b>Unit 2 - The Design Process</b>		
Expectations	Focus	Assessment
A1, B1, D1	Assess the 8-step design process Apply the design process to a manufacturing problem Straw tower assignment and reflective essay	KU/TI/CA Formative assessments Performance Task
<b>Unit 3 - Orthographic Drawings</b>		
Expectations	Focus	Assessment
A2, B1	Imperial Measurement Orthographic Design Principles Orthographic drawings	KU/TI/CA Formative assessments Performance Task Unit Test
<b>Unit 4 - Design and Build</b>		
Expectations	Focus	Assessment
A1, A3, B2, D1	Application of design process Design and build projects	KU/TI/CA Formative assessments Performance Task- Design report
<b>Unit 5 - Photo Editing Fundamentals</b>		
Expectations	Focus	Assessment
A1, A2, B1, B2, C2	Photoshop fundamentals Elements and Principles of Design Creation of original work with Photoshop	KU/TI/CA Formative assessments Performance Task- PSA Poster
<b>Unit 6 - Video Production</b>		
Expectations	Focus	Assessment

A1, A2, B1, B2, C2, D1	Pre-production, Production & Post Storyboarding Camera shots and angles Filming and editing techniques	KU/TI/CA Formative assessments Performance Task - video assignment
<b>Unit 7 - Technology, the Environment, and Society</b>		
Expectations	Focus	Assessment
A3, C1, C2, D2	Impact of technology on the environment and society Online Dangers	KU/TI/CA Formative assessments Research assignment and presentation
<b>SUMMATIVE ASSESSMENT: 30% of final mark</b>		
Focus		Assessment
Unit assignment suitable to the course content; formats may include practical assignments and/or multimedia presentations.  Project 30%		KU/TI/CA Formative assessments Research assignment and presentation

## ASSESSMENT AND EVALUATION

Evaluation will take the form of the four level system as provided by the Ministry of Education:

- **Level 1 - 50 - 59%** - **Limited** effort in relating: Knowledge, Thinking/ Inquiry, Communication and Application
- **Level 2 - 60 - 69%** - **Moderate** effort in relating: Knowledge, Thinking/ Inquiry, Communication and Application
- **Level 3 - 70 - 79%** - **Considerable** effort in relating: Knowledge, Thinking/ Inquiry, Communication and Application
- **Level 4 - 80 - 100%** - **High Degree** of effort in relating: Knowledge, Thinking/Inquiry, Communication and Application

Grades will be based upon the following:

<b>Term Work (70% of the course grade)</b>		<b>Course Culminating (30% Final Assignment)</b>
Knowledge/Understanding	15%	To be completed near the end of the course.
Thinking/Inquiry	15%	
Communication	15%	
Application	25%	
<b>Term Work:</b> Daily individual and group tasks, note taking, projects, homework monitoring, presentations and practical assignments.		<b>Summative Evaluations:</b> Unit assignments suitable to the course content; formats may include practical assignments and/or multimedia presentations.
<b>Learning Skills:</b> These are specific skills for which marks are not allotted. Instead, one of four levels will be assigned to the following: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self Regulation. The levels are Excellent, Good, Satisfactory, and Needs Improvement.		

**Teaching Strategies:** didactic demonstrations, multimedia presentations, handouts, hands-on application, one-on-one support, individual and group tasks, chunking, open-ended problem solving, discovery learning.

**Assessment Strategies:** design briefs, design reports, research, sketches, charts, logs, presentations, tutorials, teacher-student and peer conferences, commissioning, quizzes.

### **Knowledge & Understanding 15%**

Understanding subject-specific content and comprehension of its meaning and significance. Knowledge and understanding will be assessed through a variety of question formats, including multiple choice, matching, diagrams and short answer questions during summative assessments.

### **Thinking & Inquiry 15%**

Use of planning skills. Use of processing skills. Use of critical/creative thinking processes

### **Communication 15%**

Expression and organization of ideas and information in oral, visual, and written forms. Communication for the specific audience in oral, visual, and/or written forms. Use of conventions vocabulary, and terminology of the discipline in oral, visual, and written forms,

### **Application 25%**

Application of knowledge and skills in familiar contexts. Transfer of knowledge and skills to new contexts  
Making connections within and between various contexts

Assessment marks will be posted on the YRDSB Teach Assist where they are available for viewing by students and parents/guardians. During the first week of school students will be given access to the Google Classroom which will contain assignments, powerpoints and practice activities for students.

## **LEARNING SKILLS**

**In addition to the specific skills that are developed throughout the course, students learn to:**

- Solve problems through careful analysis, cooperation and communication;
- develop time-management skills to design and follow organizational plans to complete a range of tasks;
- develop individual and group skills through student-centred activities;
- show commitment to a task by maintaining a level of effort required to complete a product;
- develop the ability to self-monitor progress using record-keeping and tracking procedures such as logs, journals and project portfolios.

<b>Learning Skills</b>	<b>Behaviour/Descriptions</b>
<b>Responsibility</b>	Completes and submits class work, homework, and assignments according to the agreed upon timelines Takes responsibility for and manages own behaviour
<b>Organization</b>	Devises and follows a plan and process for completing work and tasks Establishes priorities and manages time to complete tasks and achieve goals
<b>Independent Work</b>	Uses class time appropriately to complete tasks Follows instructions with minimal supervision

<b>Collaboration</b>	Responds positively to the ideas, opinions, values, and traditions of others Shares information, resources and expertise, and promotes critical thinking to solve problems and make decisions
<b>Initiative</b>	Demonstrates the capacity for innovation and a willingness to take risks Demonstrates curiosity and interest in learning
<b>Self Regulation</b>	Sets own individual goals and monitors progress towards achieving them Seeks clarification or assistance when needed

### **Assessment/Evaluation Techniques**

Methods of assessment and evaluation include a wide variety of approaches to enhance the learning environment. Assessment methods may include: performance assessment such as project deliverables and skill demonstrations; personal communication assessment such as instructional questions and answers, conferences, classroom discussions, journals, or log books; and standardized tests such as classroom tests or examinations. Self and peer assessment assist the student by providing directions to improve performance. Assessment charts included in each activity provide the basis for teacher evaluation rubrics, student self-assessment, and peer assessment.

### **Teaching/Learning Strategies**

A variety of teaching and learning strategies are used throughout the course, including: classroom lessons, brainstorming, collaborative and cooperative learning, student-teacher conferencing, design process, independent study, demonstrations, practical applications, theory lessons and assignments, research and reflection.

## **SAFE AND APPROPRIATE USE OF COMPUTERS**

Students are expected to practice safety/censorship on the Internet by following School Board Policies relating to appropriate student use and access to Internet services.

Teacher addresses safety/censorship on the Internet by implementing School Board Policies relating to appropriate student use and access to Internet services.

### **Plagiarism, attendance, late and missed assignments, tests and performance activities:**

**Please refer to the YRDSB/SVS Assessment, Evaluation and Communication Policy for more information**

Students who are absent for part or all of a class may miss important learning opportunities. **Students are responsible for work covered during any absence**, and can expect to be evaluated on all information covered in the course. It is the student's responsibility to find out what they have missed.

### **Students with unauthorized absences will be given a mark of zero on missed evaluations.**

Persistent absences may place the student in jeopardy of losing the credit. Sometimes absences from class are unavoidable. If a student has an anticipated absence on the day of summative assessment the student must notify the teacher two days prior to the absence and arrange for submission or completion of the assessment prior to the absence.

**If a student has an unscheduled, authorized absence on the due date for a summative assignment the student will be expected to make arrangements to submit the assignment directly to the teacher on the scheduled due date despite the absence.** This may be achieved by having a friend, sibling or parent/guardian hand the assignment directly to the teacher or by submitting evidence of the completed assignment via email or google classroom.

**If a student has an unscheduled, authorized absence on the day of a summative test the student will be expected to write the test on the day of their return at lunch or during class, whichever comes first.** Students who have absences during some or all of any group work projects will be expected to complete alternate assignments. Limited opportunity may be available in class for catching up.

All assignments must be submitted on time. Students are expected to submit completed projects at the beginning of class on the due date. **Work submitted later than the beginning of the class on the due date will be considered late.** Incomplete work handed in on time will be assessed using the assessment outline and rubric. **All late assignments may be subject to a mark reduction of 3% per day to a maximum of 15%.**

Students who need extra time or assistance with understanding course content and project expectations should arrange to see the teacher during non-teaching periods.

To assist students in recognizing and avoiding plagiarism, most summative work will be done and submitted through Google Classroom. Students will be expected to show evidence of their process in the Google Classroom and as instructed, **all work should be done in the Google Classroom on the documents provided** by the teacher. Students may also be asked to submit some of the assignments to Turnitin. **If a project expectation is submission through Turnitin, then the project will not be graded until this step is completed.**

## **EQUITY AND INCLUSIVE EDUCATION**

Throughout the units of study in the Exploring Technologies course, students are guided to explore and discuss a variety of social, economic and cultural perspectives related to the application of technology and society. Concepts of technology are presented so that students can see themselves, and their own and their classmates' lived experience, reflected in what and how they are learning.

We will work together to minimize the barriers that limit students' ability to achieve and to pursue their chosen pathways after graduation while supporting the choice of appropriate pathways to work, college, apprenticeship, or university.

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