

Public District School Board Writing Partnership

Course Profile **Integrated Technologies**

Grade 9

Open

• *for teachers by teachers*

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Course Overview

Integrated Technology, Open, Grade 9

Identifying Information:

School:

Department:

District:

Course Title: Integrated Technology

Grade: 9

Course Type: Open

Ministry Course Code: TTI 10

Credit Value: 1

Description/Rationale

This course enables students to understand the technological and computer concepts they will need in order to design, develop, and build usable products or to deliver services, as well as to pursue further Technological Education. Students use the technological design process and a variety of tools and software to solve problems, complete projects, and strengthen their communication skills. Upon completion of this course students will have had the opportunity to acquire many diverse technical skills and knowledge that may be applied to various career opportunities.

Unit Titles

| | | |
|------------|---|----------|
| Unit One | Transportation/Manufacturing Technology | 22 hours |
| Unit Two | Communications Technology | 22 hours |
| Unit Three | Construction and Technological Design | 22 hours |
| Unit Four | Computer Technology and Computer Science | 22 hours |
| Unit Five | Hospitality and Tourism/ Health and Personal Services | 22 hours |

Unit Organization

Unit 1: Transportation/Manufacturing Technologies

Time: 22 hours

Description

Students investigate four different activities covering many aspects of transportation and manufacturing technologies as well as the integration of computers into various activities. These activities may be conducted in any order but it is suggested that Activities 2 and 3 be done sequentially as the principles of flight apply to both. During this unit students have the opportunity to become aware of career opportunities, educational programs and opportunities for co-operative education in the fields of transportation and manufacturing.

Strand(s) and Expectations

Strand(s): Theory and Foundations, Skills and Processes, Impact and Consequences.

Overall Expectations: TFV.01X, TFV.02X, TFV.03X, SPV.01X, SPV.03X, SPV.05X, ICV.01X, ICV.04X.

Specific Expectations: TFS.01X, TFS.02X, TFS.03X, TFS.04X, SPS.01X, SPS.02X, SPS.03X, SPS.05X, SPS.07X, SPS.08X, SPS.09X, ICS.01X, ICS.03X, ICS.05X, ICS.06X.

Unit 2: Communications Technologies

Time: 22 hours

Description

Students explore the various applications of computers and communications technologies. Activities are listed sequentially from introductory to more challenging. Although activities may be independent of each other, skills developed throughout the unit continue to build one upon another. Students apply various problem-solving strategies throughout this unit, and produce five products by the end of the unit, including drawings, 3-D models, posters, videos, and games. During this unit students have the opportunity to become aware of career opportunities, educational programs and opportunities for co-operative education in the field of communications technology.

Strand(s) and Expectations

Strand(s): Theory and Foundations, Skills and Processes, Impact and Consequences.

Overall Expectations: TFV.01X, TFV.02X, TFV.03X, SPV.01X, SPV.03X, SPV.04X, ICV.01X, ICV.02X, ICV.03X, ICV.04X.

Specific Expectations: TFS.01X, TFS.03X, TFS.04X, TFS.06X, SPS.01X, SPS.02X, SPS.03X, SPS.04X, SPS.05X, SPS.06X, SPS.07X, SPS.08X, ICS.01X, ICS.02X, ICS.04X, ICS.07X.

Unit 3: Construction and Technological Design

Time: 22 hours

Description

Students investigate four different activities covering many aspect of Technological Design and Construction Technology, as well as the integration of computers into each activity. Although activities may be delivered independent of each other, skills developed in each activity contribute to the next activity in the unit. Throughout this unit, students apply problem-solving models to the various challenges, and at the end of the unit will have produced four products or services. During this unit students have the opportunity to become aware of career opportunities, education programs, opportunities for co-operative education, community resources, and safety issues as they apply to technological education and computers.

Strand(s) and Expectations:

Strand(s): Theory and Foundations, Skills and Processes, Impact and Consequences

Overall Expectations: TFV.01X, TFV.02X, TFV.03X, SPV.01X, SPV.02X, SPV.03X, SPV.04X, SPV.05X, ICV.01X, ICV.02X, ICV.04X, ICV.05X.

Specific Expectations: TFS.01X, TFS.02X, TFS.03X, TFS.04X, TFS.05X, TFS.07X, SPS.01X, SPS.02X, SPS.03X, SPS.04X, SPS.05X, SPS.07X, SPS.08X, ICS.01X, ICS.02X, ICS.03X, ICS.04X, ICS.07X.

Unit 4: Computer Technology and Computer Science

Time: 22 hours

Description

Students use computers and computer programming language as well as problem-solving skills to complete a multitude of tasks. Through a variety of projects students will, create a simple linear program to price out the cost of materials required in the design of a technical facility, create an image of a static scene (lakeside, garden or other natural setting), research and build a computer for a specific client, and create a 3-dimensional virtual reality object using Virtual Reality Modelling Language.

Strand(s) and Expectations

Strand(s): Theory and Foundations, Skills and Processes, Impact and Consequences

Overall Expectations: TFV.01X, TFV.02X, TFV.03X, TFV.04X, TFV.05X, SPV.01X, SPV.03X, SPV.02X, SPV.03X, SPV.04X, SPV.05X, ICV.01X, ICV.03X, ICV.04X, ICV.05X.

Specific Expectations: TFS.01X, TFS.02X, TFS.03X, TFS.04X, TFS.06X, SPS.01X, SPS.02X, SPS.03X, SPS.04X, SPS.05X, SPS.06X, SPS.07X, SPS.08X, SPS.09X, ICS.01X, ICS.02X, ICS.05X, ICS.06X, ICS.07X.

Unit 5: Hospitality and Health and Personal Services

Time: 22 hours

Description

Students investigate four very different and distinct activities in the Hospitality, Tourism and Personal Services Technologies, incorporating computer use into the activities. These activities may be conducted in any order. This unit helps students become aware of career opportunities, educational programs, and opportunities for co-operative education in the areas of Tourism, Hospitality and Personal Services.

Strand(s) and Expectations

Strand(s): Theory and Foundations, Skills and Processes, Impact and Consequences

Overall Expectations: TFV.01X, TFV.02X, TFV.03X, TFV.04X, SPV.01X, SPV.02X, SPV.03X, SPV.05X, ICV.01X, ICV.02X, ICV.04X, ICV.05X.

Specific Expectations: TFS.01X, TFS.03X, TFS.04X, TFS.08X, SPS.01X, SPS.02X, SPS.03X, SPS.04X, SPS.05X, SPS.07X, SPS.08X, ICS.01X, ICS.03X, ICS.05X, ICS.06X, ICS.07X.