Home Economics/Industrial Arts
Rationales and
Website Resource Listings

• Home Economics Education
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Home Economics Education

Clothing and Textiles

The Clothing and Textiles curriculum creates awareness of the role of clothing, textiles, and fashion in our daily lives. This curriculum area develops an increased knowledge of key theoretical concepts associated with the areas of clothing, textiles, and the fashion industry. Achievement and success is attained through the practical application of knowledge and skills as students participate in activities that allow them to express themselves through designing, producing, and evaluating finished textile projects.

Textile industries have a wide range of application in our society—in the home, workplace, and environment. The textile industry is made up of fiber and fabric producers. The largest percentage of the fiber produced goes to the fashion industry. The fashion industry includes anyone who is involved in the making or selling of garments and accessories. The fashion garment industry in Manitoba is a growing economy.

- Winnipeg’s garment industry represents about 10% of the Canadian garment industry.
- The apparel industry is the second largest manufacturing industry in the province.
- 8000 Manitobans work in the garment industry.
- Local, national, and international sales of garments made in Winnipeg exceed $700 million each year.

References


Young Leaders of Winnipeg. *Winnipeg’s Key Industries:* <www.youngleaders.com>

**Websites**

The Costume Gallery: <www.costumegallery.com>

Costume Museum of Canada: <www.costumemuseum.com>

History of Fashion Museum Collections: <www.library.kent.edu/branches/fashion/fashionhistory.html>

Museum for Textiles: <www.museumfortextiles.on.ca>

Textiles.org: <www.textiles.org>

Textile Web: <www.textileweb.com>


Canadian Apparel Magazine: <www.apparel.ca>

Manitoba Fashion Institute: <www.apparel-manitoba.org>

University of Manitoba—Clothing & Clothing: <www.umanitoba.ca/faculties/human_ecology/clothing>

Fashion Net: <www.fashion.net>

Fashion Internet: <www.finy.com>

Fashion Planet: <www.fashion-planet.com>

Elle Magazine: <www.ellemag.com>

Flare Magazine: <www.flare.com>

The Fabric Link: <www.fabriclink.com>

Butterick Patterns: <www.butterick.com>

McCall Patterns: <www.mccall.com>

Simplicity Patterns: <www.simplicity.com>

With advancements in technology and the increasing use of the Internet, consumers today have access to more sources of information than ever before. Information found on the Internet may be inaccurate, confusing, or misleading. It is essential to have a working knowledge of factual, research-proven information in order to recognize spurious claims.
Food and Nutrition

The Food and Nutrition curriculum is designed to teach about food and nutrition through theoretical and practical food experiences. A study of Food and Nutrition can expose students to accurate information and provide opportunities for students to gain competence in making informed reasoned choices. The learning outcomes develop skills, knowledge, and resources necessary for life. Students are provided with an opportunity to achieve success through learning activities that build self-image and increase self-confidence.

Many students may be responsible for meal preparation at home. Knowledge and understanding of basic food preparation and nutrition are important so that healthy food choices for individual and family well-being are made. The preparation of food, whether at school or at home, can be a creative, interesting, enjoyable, and rewarding experience. The skills and knowledge taught in this curriculum increases the resourcefulness of students, and helps them to develop self-reliance, independence, and positive social skills. Another benefit is the acquisition of basic life skills and knowledge that all students need.

Traditional food preparation skills are being lost in today’s fast-paced lifestyles. The impact of eating highly refined, processed foods is affecting our short and long-term health. Much of the food consumed is fast foods, partly prepared foods, or food eaten away from home. Time constraints and the effects of advertising have dramatically changed the types of foods prepared and eaten. Contrary to advertising claims, the preparation of nutritious foods does not have to be time-consuming or difficult. Less preparation at home means less transfer and less reinforcement of food preparation skills. Students need the opportunity to learn and practise preparation techniques in the classroom.

The results of the Food Habits of Canadians research project, released in March 2001, reported that teenage males and females are not meeting their daily nutrient requirements. Teenagers are not consuming the minimum number of servings of food from the four food groups found in Canada’s Food Guide for Healthy Eating.
• almost one-half of all teenage girls were not consuming the minimum number of servings from each of the four food groups
• 60% of female teens did not have the minimum number of servings of meats and alternates
• more than one-half of the females interviewed were not consuming the minimum number of milk products
• 40% of teen males are not consuming the minimum number of milk products
• one-half of female teens and more than a half of the male teens did not consume the minimum five servings of vegetables and fruit per day
• 30% of male teens did not consume the minimum servings from the grain products group of the Food Guide
• 40% of female teens did not consume the minimum servings from the grain products group of the Food Guide

Damage caused by poor nutrition is cumulative and often begins with poor food habits in childhood. Knowledge about nutrition is an important component of a healthy lifestyle. Two-thirds of Canadians surveyed in a study by the National Institute of Nutrition felt that nutrition is very or extremely important in choosing the food they eat. Four out of five Canadians believe that food and nutrition play a “great” role in maintaining or improving overall health. Food-related health problems are major health concerns in Canada. The top health concerns of Canadians are heart or circulatory health issues (28%), cancer (24%), nutrition and diet (24%), exercise (17%), weight (12%), and diabetes (8%). Nutrition programs must remain as an integral part of the education system to address these concerns that have been identified in the National Institute of Nutrition study as well as the Food Habits of Canadians research project.

References

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Websites

Health Canada, Food Information: <www.hc-sc.gc.ca/english/food.htm>
Health Canada, Nutrition Program: <www.hc-sc.gc.ca/hppb/nutrition>
Dieticians of Canada: <www.dietitians.ca>
Canadian Health Network: <www.canadian-health-network.ca>
Canadian Institute on Health Research: <www.cihr.ca/welcome_e.shtml>
Health Canada Online: <www hc-sc.gc.ca/english/index.html>
National Institute of Nutrition: <www.nin.ca>
Center for Science in the Public Interest: <www.cspinet.org>
Health Services Utilization and Research Commission: <www.hsurc.sk.ca>
Journal of Nutrition: <www.nutrition.org>
Nutrition, Food and Health Resources: <www.blonz.com>
Research Papers and Nutrition News: <www.medportal.com>
Nutrition News Focus: <www.nutritionnewssfocus.com>
Berkley Nutrition Services: <www.nutriquest.com>
Food and Nutrition Internet Index: <www.fnii.ifis.org>
Tufts University Nutrition Navigator: <www.navigator.tufts.edu/index.html>
**Human Development**

The Family Studies/Human Development curriculum provides skills and knowledge in the areas of parenting, money management, relationships, and the well-being of individuals/families. Students have the opportunity to increase their knowledge as to how individuals/families function in society during different stages of the life cycle. Throughout the human life cycle, people need to be cared for and to care for themselves and others. Nurturing and care-giving skills are utilized along with knowledge of human growth and development to anticipate changing personal and family needs. The Vanier Institute of the Family reports that the majority of Canadians rate their families as a more important part of their lives than career or religion (1994).

The labour force participation rates of men are declining while the rates of women’s participation have increased rapidly during past decades, and more than half of Canada’s student population are in the labour market (Vanier Institute of the Family, 1994). In the majority of two-parent families, both parents are employed in the labour force. In Canada, approximately 69% of married women with young children are employed outside the home. Family structures are also more fluid as families are smaller, more couples choose not to have children, and there are more one-parent families (Vanier Institute of the Family, 2000). Many young people growing up in small or single-child families today no longer have experiences in caring for young children.

Balancing work and family responsibilities has become a major preoccupation for many people. Children and adolescents are assuming responsible roles within their own families at an early age. Students are faced with the changing make-up of their present family/families and making decisions about establishing their own future roles and relationship patterns. Young Canadians are experiencing more strain in their relationships with their parent(s) and with each other (King and Coles, 1992). There is a need to have young people gain a better understanding of how to communicate with, and relate to parents and peers, and techniques to manage stress in today’s rapidly changing world.
These indicators highlight the importance of family studies education, which can provide students with an opportunity to

- gain an understanding of present family experience and improve their capacity as family members
- evaluate a variety of social circumstances such as declining incomes, alternate role arrangements, increasing globalization, the aging population, and their influence on family well-being
- develop values and expectations that will assist them in establishing Canada’s future families
- develop technical, communicative, and critical thinking skills that foster a productive work and family life

Home Economics is a field of study that specializes in the ways families can improve their quality of life. The Family Studies/Human Development courses offer a preventative, proactive, and practical approach to supporting families.

References


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**Websites**

All Family Resources: <www.familymanagement.com>
Child and Family Canada: <www.cfc-efc.ca>
Child Care Canada: <www.childcarecanada.org>
Canadian Services for Children: <www.cio-bic.gc.ca/children-enfants/serv_e.htm>
American Association for Marriage and Family Therapy: <www.aamft.org>
Vanier Institute for the Family: <www.vifamily.ca>
Family Works: <www.urbanext.uiuc.edu/familyworks>
Parents Helping Parents: <www.php.com>
The Whole Family Center: <www.wholefamily.com>
Families and Work Institute: <www.familiesandwork.org>
National Foundation for Family Research & Education: <www.nffre.org>
Center for Families Work and Well-Being: <www.worklife canada.ca>
Parenting Resource: <www.parentsoup.com>
Parents Place: <www.parentsplace.com>
Parenthood: <www.parenthood.com/>
Principles of Parenting: <www.humsci.auburn.edu/parent/index.html>
National Parent Information Network: <http://npin.org/>
Today’s Parent Magazine: <www.todaysparent.com/>
Childbirth: <www.childbirth.org>
On line Birth Center: <www.moonlily.com/obc>
Baby Center: <www.babycenter.com>
Child Care Parent Provider Information Network: <www.childcare-ppin.com>
Canadian Day Care Registry: <www.canadiandaycare.com>
National Youth in Care Network: <www.youthincare.ca>
National Adoption Center: <www.adopt.org>
National Center for Missing and Exploited Children: <www.missingkids.org>
Fathering Magazine: <www.fathermag.com>
Fathers Forum: <www.fathersforum.com>
Motherheart: <www.motherheart.org>
Parenting the Preschooler: <www.uwex.edu/ces/flp/pp/index.html>
National Center for Infants, Toddlers and Families:
<www.zerotothree.org>
Adolescents Change and Continuity:
<www.personal.psu.edu/faculty/n/x/nxd10/adolesce.htm>
Teen Information: Go Ask Alice!:
<www.goaskalice.columbia.edu/index.html>
Kids Source on Line: <www.kidsource.com>
National Council on Aging: <www.ncoa.org>
Association of Retired Persons: <www.aarp.org>
Resource for Aging and Divorce Issues: <www.flyingsolo.com>
Industrial Arts Education

Graphic Communications

The Graphic Communications technology curriculum is based on the development of knowledge, skills, and attitudes in drafting and graphic arts. Drafting offers a skill set that allows students to communicate ideas and designs through technical drawings. Graphic arts provides opportunities for students to develop principles, techniques, and processes relating to imaging technology. This programming explores current and innovative practices in the industry, and provides an understanding of graphic arts’ relationship to self, people, careers, consumerism, industry, economics, and technology.

Technical drawing has played an important part in human progress and is the oldest type of written expression. A word is an abstract symbol representing a thing or an idea, but a picture represents the way an object appears in real life. Technical drawings are essential to constructing everything in society from the computer on a desk to the house in which a person lives.

Design and the creative process are viewed as integral to graphic communication technology. Design is creative problem solving which begins with a specific human need and results in a product or solution that addresses that need. Visualization of design can take many forms, from sketches to computer animation, and can range from highly creative to highly technical. There is an increasing demand for aesthetic quality in advertising and publications. This is being driven by advancements in computer and communications technology.

Graphic communications technology affects all aspects of our lives. From work to leisure, it extends our ability to communicate and is an important part of being technologically literate. The knowledge, skills, and attitudes attained provide opportunities for students to move into employment in one of the many design and drafting areas, and gain personal and life skills.
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Power/Energy

The Power and Energy curriculum develops knowledge, skills, and attitudes in electronics/electricity/power mechanics and related systems and subsystems. Programming allows students flexibility to exercise time management, quality control, and teamwork, and provides theories and concepts associated with the efficient use of resources to move goods, materials, electricity, and people. The knowledge and skills developed include, but are not limited to, the areas of power mechanics, energy sources, and power conversion. Students explore the language of industry and gain an understanding of its relationships to self, people, careers, consumerism, industry, economics, and technology.

Electricity and electronic devices are at the core of a wide variety of specialized technologies that have been developing over several decades. An understanding of electrical and electronics theory and applications enhances the student’s ability to manage new technologies as they emerge. The employment opportunities vary from appliance, wire, and cable sectors to computer-related areas.

Power mechanics encompasses the resources, processes, application, and technological impacts of transportation systems on society. An understanding of today’s power, energy, and transportation systems is needed by all students who are interested in working in these areas at home or on the job.

There has been a substantial development in high-tech industry which encompasses electricity/electronics and power mechanics. Concern for the environment has enabled the rapid development of technology in these sectors. Research and development in these industries are at their all-time high and will continue to be in the future. Expansion of the industry and technological change will result in a shortage of qualified workers in these technology-related industries.

References


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**Websites**

Electronics Industry Market Research and Knowledge Network: <www.electronics.ca>

Power Designers—Electrical Engineering Design Solutions: <www.powerdesigners.com>

Robotics, Control and Electronics Technology: <www.totalrobots.com>

Lynx motion: robotics: <www.lynxmotion.com>

Ohms Law: electronics and robotics: <www.ohmslaw.com>

Natural Resources Canada: Energuide: <http://energuide.nrcan.gc.ca/>

ShopBot: The Work Shop RoBot: <www.shopbottools.com>

Home Power Magazine: <www.homepower.com>
Manufacturing

Manufacturing is the transformation of materials into products to meet human needs and wants. In the manufacturing process, natural and recycled resources such as wood, metal, and plastic are transformed into organized and useful products. A fundamental aspect of these programs is adding value to raw materials.

Woodwork, metalwork, and plastics courses provide students with opportunities to acquire knowledge, skills, and attitudes needed to plan, design, build, and evaluate projects using instruments, tools, equipment, and machinery related to these materials. These courses also help students understand the role of manufacturing in our economy and its relationship to other economic sectors. Students also study the impact the manufacturing process has on people, society, and the environment.

In today’s global economy, manufacturing is the foundation of a nation’s wealth and power. The fabricated materials sector of the Canadian economy is characterized by a large number of small entrepreneurial businesses that supply the construction and manufacturing industries. Industry is investing in leading edge technology and is hiring highly trained and talented people to manage and operate this technology effectively and efficiently. These high-tech industries depend on skilled labour in the design, manufacturing, marketing, and servicing of products.

References


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Websites

Woodworkers Journal: <www.woodworkersjournal.com>
Fine woodworking magazine on line:
<www.taunton.com/finewoodworking/index.asp>
Wood Web: <www.woodweb.com>
Wood Net: <www.woodnet.net/main/woodwork.html>
Wood Information Services: <www.woodmagazine.com>
Top Ten Woodworking Links:
<www.hobbymall.com/woodworking/woodlink.html>
Woodworking Tips: <www.WoodworkingTips.com>
101 Woodworking Tips and Techniques:
<www.WoodworkingTips.com/woodtips>
Canadian Plastics Products Industry:
<http://strategis.ic.gc.ca/SSG/pl01279e.html>
Plastic Sheeting in Canada:
<http://strategis.ic.gc.ca/SSG/gi16311e.html>
Canadian Plastics Industry Association of Canada:
<www.cpie.ca/staticcontent/staticpages/index.html>
Society of Plastics Engineers: <www.4spe.org>
Society of the Plastics Industry: <www.plasticsindustry.org>
Polymers Dot Com: <www.plastics.com>
Plastics and Rubber Industries Home Base: <www.polysort.com>
EMetalworking.com: <www.emetalworking.com>
Precision Metal Forming Association: <www.metalforming.com>
Metal Working Industry: <www.metalworkingindustry.com>
Modern Machine Shop Online: <www.mmsonline.com>
American Welding Society: <www.aws.org>
Welding and Joining Information Network:
<www.ewi.org/resources>
On line metals: <www.onlinemetals.com>
Welding-Engineers.com: <www.welding-engineer.com/links.html>
Welding.com: <www.welding.com>
Weldsite.com: <www.weldsite.com>
Society of Manufacturing Engineers: <www.sme.org>
Industry Link: <www.industrylink.com>
Institute of Industrial Engineers: <www.iienet.org>
International Manufacturing Technology Show: <www.imts.org>
Manufacturers Alliance: <www.mfrall.com>
Technical Books for Industry: <www.industrialpress.com>
Construction

The Construction curriculum provides knowledge and skills within approximately twenty trade areas that comprise the construction industry. Through construction courses, students learn about the tools, equipment, and processes required to design, construct, and maintain a variety of structures. Construction technology programming integrates new developments and practices related to a product, system, process, or service. The development of new practices and products involves the identification of a problem that leads towards a solution that meets the intended want or need. There is never one answer and all solutions involve trade-off and risk. The problem-solving process involves a logical or rational process similar to a scientific method, but is different in purpose. The problem-solving method is to technology (invention/innovation) what the scientific method is to science (discovery).

In recent years, dramatic changes have occurred in the way buildings and other products have been designed and built due to the ability of the industry to simulate and evaluate designs with extreme accuracy. Construction technologies are used to build structures or objects to provide protection from the elements, to make work easier, and to make life more enjoyable. Today, our social and economic well-being is closely linked to our ability to use materials for the construction or maintenance of products.

Residential, commercial, industrial, or recreational construction technology has always played a central role in human life as it is a reflection of the needs and wants of society. The construction industry is one of the biggest sectors of our provincial and national economies. This industry employs over 880,000 Canadian men and women and produces $134 billion in goods and services (Canadian Construction Association). The demand for workers in trades and technology will increase significantly as Canada moves into the high-tech information economy. Studies show that an aging workforce, expansion of the industry, and technological change will result in a shortage of qualified workers in construction and technology-related industries.

Careers in skilled trades have been identified as high-demand occupations in Canada. Skilled labour shortages and job growth in most sectors offer diverse opportunities for ambitious people with many different interests and work styles. Skill levels required in trade careers are extremely high and demand analytical and
problem-solving abilities, as well as creative thinking skills. Today’s tradespeople find they have transferable skills, giving them plenty of choices in terms of how and where they practise their trade in a variety of professional, technical, and skilled occupations.

References


Websites

Construction Information Sources:
<http://ctca.unb.ca/CTCA/sources/toc.html>

Institute for Research in Construction: <www.nrc.ca/irc/irc.html>

Canadian Contractor Magazine:
<www.canadiancontractormagazine.com>

Canadian Industry Analysis:
<www.corporateinformation.com/casector/Construction.html>

Canadian Construction Association: <www.cca-acc.com>

Building links and wood technology: <www.umass.edu/bmatwt/bm_links.html>

Construction Innovation Forum: <www.cif.org>