

Extracted from Technology Education Key Learning Area Curriculum Guide (Primary 1 – Secondary 6) (2017)

Modules of Learning Elements (Core and Extensions) under the Six Knowledge Contexts at the Junior Secondary Level

Knowledge contexts	Modules*		Learning objectives
Information and Communication Technology (ICT)	K1	Computer Systems	Understand and apply ICT as a prime tool for learning and in our daily life
	K2	Programming Concepts	
	K16	Information Processing and Presentation	
	E1	Computer Networks	
Materials and Structures	K3	Materials and Resources	Understand the importance of materials and resources in the design process
	K4	Structures and Mechanisms	
	E2	Material Processing	
Operations and Manufacturing	K5	Tools and Equipment	Understand how to manage the resources and processes required to realise their design solutions
	K6	Production Process	
	E3	Project Management	
Strategies and Management	K7	Business Environments, Operations and Organisations	Understand the concepts of business and management
	E4	Resources Management	
	E5	Marketing	
Systems and Control	K8	Concepts of System	Understand the concepts, applications and implications of both micro and macro systems
	K9	Application of Systems	
	E6	System Integration	
	E7	Control and Automation	
Technology and Living	K10	Food and Nutrition	Understand how technology affects our lives and enhances the nurturing of quality people and quality homes
	K11	Food Preparation and Processing	
	K12	Fabric and Clothing Construction	
	K13	Fashion and Dress Sense	
	K14	Family Living	
	K15	Home Management and Technology	
	E8	Fabric and Clothing Construction	
	E9	Fashion and Dress Sense	
E10	Home Management and Technology		

K denotes Core modules and E denotes Extension modules.

(K10) Food and Nutrition

	S1	S2	S3
Dietary goals and eating habits	<ul style="list-style-type: none">• Importance of health to personal physical, mental and social well-being• Dietary goals and food pyramid for teenagers• Importance of balanced diet• Basic idea and application of good eating habit and balanced diet in daily life	<ul style="list-style-type: none">• Dietary goals and food pyramid for different age groups (e.g. children, adult, elderly)• Balanced intake of nutrients, causes of nutritional disorders (e.g. malnutrition) and the relationship between diet and health• Nutrition labels for pre-packaged food	<ul style="list-style-type: none">• Recommended daily intake, dietary guidelines, dietary goals for different age groups (e.g. children, teenagers, adult, elderly) and people with different needs and dietary requirements• Causes of eating disorder and influences on food choices (e.g. health concerns, cultural, social, economic and technological influences, facts and myths in health messages)• Legislation and guidelines on food labeling (e.g. Food and Drug Regulation Guidelines on Voluntary Labelling of Genetically Modified Food, Labelling Guidelines on Food Allergens, Food Additives and Date Format)
Food groups	<ul style="list-style-type: none">• Functions and sources of body-building food, energy-giving food, protective food, water and dietary fibre• Types, nutritive value, choice and storage of food commodities (e.g. milk, eggs, meat, fish, soya bean products, vegetables, fruits, cereals)• Food labelling requirements of pre-packaged food	<ul style="list-style-type: none">• Classification, functions and sources of macro nutrients, including protein (animal and plant protein), carbohydrates (sugars, starch and cellulose) and fats (animal and vegetable fats, oils)• Types, nutritive value, choice and storage of food commodities (e.g. eggs, dairy products, meat, poultry, fish, soya bean products, vegetables (including pulses and nuts), fruits, cereals, cereal products, fats and oils, convenience foods)	<ul style="list-style-type: none">• Sources, functions and deficiencies of micro nutrients, including vitamins (vitamins A, B-complex, C and D) and minerals (iron, calcium, iodine and sodium)• Local and global supply, safety issues, retention of food value of different food commodities• Basic ideas of the use of functional food in enhancing health
Meal planning	<ul style="list-style-type: none">• Meal planning and meal pattern for Chinese and Western breakfasts, one-course meal for lunch/ dinner• Types of dishes for meals (e.g. beverage, soup, main dish, snacks, desserts, accompaniment)• Way of serving meals and meal presentation using simple garnishes and decoration• Table setting and appropriate table manner	<ul style="list-style-type: none">• Principles in planning Chinese and Western meals, and the meal pattern of a two-course meal• Planning meals for adults with different needs (e.g. manual worker, sedentary worker, vegetarian), special occasions (e.g. packed meal)• Meal presentation including use of accompaniments• Use of convenience foods and left-over foods	<ul style="list-style-type: none">• Principles in food costing and budgeting, meal pattern of a three-course meal• Planning meals for different age groups (e.g. children, adolescents, elderly), people with special needs (e.g. weight management) and celebration (e.g. party, festive)• Meal presentation for different occasions• Development of creative recipes for meeting different needs

(K11) Food Preparation and Processing

	S1	S2	S3
Hygiene and safety	<ul style="list-style-type: none">• Importance of hygienic and safe practices in food preparation and processing• Basic principles and adaptation of safety and hygienic practices (e.g. personal hygiene, proper use of utensils and equipment)	<ul style="list-style-type: none">• Types of high risk food, potential hazards and control measures• Causes and prevention of food poisoning• Principles and adaptation of safety and hygienic practices (e.g. kitchen safety, good organisation of work, proper use of equipment and appliances)	<ul style="list-style-type: none">• Principles underlying the causes of food spoilage and preventive measures• Causes and prevention of different types of food contamination and related food-borne disease (e.g. diarrhoea, typhoid fever, vomiting, Ciguatera Fish Poisoning)• Principles and adaptation of safety and hygienic practices (e.g. proper use of labour saving equipment and appliances)
Principles of food preparation and processing	<ul style="list-style-type: none">• Basic principles and purposes of food preservation including causes, effects and prevention of food spoilage, and preservation methods (e.g. pasteurisation, refrigeration)• Basic principles of heat transference including conduction and convection• Types and basic cooking methods including boiling, steaming, stewing, grilling, stirfrying and microwave cooking• Use, care and cleaning of basic and labour saving kitchen equipment including utensils, kitchen gadgets, saucepans, cooking stoves and microwave oven• Importance and design of protective clothing, care and cleaning of aprons for kitchen safety and food hygiene	<ul style="list-style-type: none">• Principles and purposes of food preservation including causes, effects and prevention of food spoilage, and preservation methods (e.g. freezing, canning)• Different ways of heat transference including radiation and microwave• The choice, use and care of kitchen equipment and appliances (e.g. gas and electric cookers, refrigerator) and time- or labour-saving equipment (e.g. mixer, liquidiser, microwave oven, rice cooker)	<ul style="list-style-type: none">• Principles and purposes of food preservation including causes, effects and prevention of food spoilage, and preservation methods (e.g. dehydration, radiation)• Principles underlying heat transference in cooking• The choice, use and care of kitchen equipment and appliances (e.g. induction cooker) and time-or labour-saving equipment (e.g. blender, mincer)

	S1	S2	S3
Skills in food preparation and processing	<ul style="list-style-type: none"> • Basic terminologies used in recipes, methods of weighing and measuring ingredients • Time plan for preparing, cooking and serving a dish • Basic food preparation techniques including peeling, slicing, shredding, dicing, chopping and dough making • Safe practices in cooking using moist heat and dry heat methods • Proper ways for food tasting • Working habits and organisation of work in food preparation 	<ul style="list-style-type: none"> • Planning and organising time and resources in preparing a two-course meal • Food preparation techniques including blending, wrapping, roux, cake making (rubbing-in, creaming), dough making, coatings and use of raising agents (mechanical and chemical sources) • Cooking methods for different foods and dishes including moist method (e.g. braising, stewing), and dry method (e.g. deep frying, baking, roasting) • The use of sensory tasting for food tasting and evaluation • Working habits and organisation of work in food preparation 	<ul style="list-style-type: none"> • Planning and organising time and resources in preparing a three-course meal and meals for special occasion and celebrations • Food preparation techniques including shaping, stuffing, cake making (whisking and melting), dough making, batter making, use of raising agents (biological source), pastry making (short crust pastry, Chinese pastry) • Choosing and combining appropriate cooking methods for different foods and dishes • Tools for sensory tasting and evaluation • Working habits and organisation of work in food preparation

(K12) Fabric and Clothing Construction

	S1	S2	S3
Choice of fabric in relation to the design and construction	<ul style="list-style-type: none">• Basic design process• Classification of fibres and properties (e.g. natural, man-made and synthetic fibres)• Types, use and care of fabrics including cotton and linen• Identification of fibres and fabrics using simple apparatus and experiments (e.g. magnifying glass, burning tests, tensile strength)	<ul style="list-style-type: none">• Animal fibres (wool and silk) including properties and types• Basic fabric construction, including weaving and knitting• Choice and care of different kinds of fabrics (e.g. silk, woolen, woven and knitted fabric)• Fibre and fabric experiments (e.g. tensile strength)	<ul style="list-style-type: none">• Man-made fibres (rayon, acrylic, polyester, nylon) including properties and types• Fabric construction, including non-woven (bonding and felting) fabrics and fabric finishes (e.g. flame resistance, wrinkle free, stain resistance, easy care)• Choice and care of different kinds of fabrics (e.g. man-made, woven and nonwoven fabric)• Fibre and fabric experiments (e.g. abrasion, insulation, absorbency)
Pattern and garment construction	<ul style="list-style-type: none">• Importance and basic principles of pattern drafting for articles/garments• Pattern drafting including basic body measurement, drafting of basic blocks (e.g. skirt/shorts), pattern styling/adaptation (e.g. skirts/shorts) and pattern specifications• Basic sewing techniques including the use of sewing machines (threading, straight stitching), basic sewing stitches (e.g. tacking, running, back, hemming/slip hemming) and simple embroidery stitches (e.g. chain, blanket)• Basic garment construction technology to meet specific purposes including seam and seam neatening (e.g. open seam), disposal of fullness (e.g. darts, gathers), treatment of raw edges (e.g. hem), fastenings (e.g. button, hook and eye/bar), opening (e.g. semi concealed zip), pocket (e.g. patch), trimmings and decoration (e.g. lace, appliqué)• Working habits and systematic work practices for garment construction	<ul style="list-style-type: none">• Pattern drafting including basic body measurement, drafting of basic blocks (e.g. bodice), pattern styling/adaptation (e.g. simple top) and pattern specifications• Sewing techniques including the use of sewing machine (e.g. zigzag stitching), basic sewing stitches (e.g. herringbone) and simple embroidery stitches (e.g. cross)• Various garment construction technology to meet specific purposes including seam and seam neatening (e.g. French seam), disposal of fullness (e.g. pleats), treatment of raw edges (e.g. facing, binding), fastenings (e.g. press fasteners, hook and loop), opening (e.g. concealed zip, slit), pocket (e.g. patch with flap), trimmings and decoration (e.g. patchwork)• Working habits and systematic work practices in garment construction	<ul style="list-style-type: none">• Pattern drafting including basic body measurement, drafting of basic blocks (e.g. collar, sleeve), pattern styling/adaptation (e.g. blouse/shirt) and pattern specifications• Sewing techniques including the use of sewing machine (embroidery stitching) and basic sewing stitches (e.g. tailor's tack, button stitch)• Various garment construction technology to meet specific purposes including seam and seam neatening (e.g. overlaid seam), disposal of fullness (e.g. tucks), neckline finishes (e.g. flat collar, shaped facing), fastenings (e.g. rouleau loop), opening (e.g. fly-front), pocket (e.g. patch), trimmings and decoration (e.g. quilting)• Working habits and systematic work practices in garment construction

(K13) Fashion and Dress Sense

	S1	S2	S3
Fashion trend and development	<ul style="list-style-type: none">• Basic elements of fashion trend and examples• Principles of fashion design including design concepts (e.g. use of forms and shapes) and design elements (e.g. primary and secondary colour)• Design presentation including drawing design sketch/figure drawing with front and back view of the garments• Appreciation of a design by studying the use of forms and shapes on figure• Application of the design cycle in textile product development and fashion design by considering different needs, e.g. cultural and social, functional, aesthetic, economic, health and safety, ergonomic	<ul style="list-style-type: none">• Current fashion trend with its specific features and elements• The principle of fashion design including design concepts (e.g. style features, silhouette) and design elements (e.g. lines, colour combinations, textures, patterns)• Design presentation including design sketch/figure drawing (i.e. front and back view of the garment with style features and colour) and the use of mood/theme board• Appreciation of a design by studying different figure types• Application of the design cycle in textile product development and fashion design by considering different needs (e.g. cultural and social, functional, aesthetic, economic, health and safety, ergonomic)	<ul style="list-style-type: none">• Cultural, social, economic and technical influences on the development of fashion• The principle of fashion design including design concepts (e.g. balance, harmony) and design elements (e.g. colour value)• Application of the design cycle in textile product development and fashion design by considering different needs (e.g. cultural and social, functional, aesthetic, economic, health and safety, ergonomic)• Life cycle of a product, ways to evaluate and appreciate different products, development of mock-ups/working models/prototypes• Basic ideas of evaluating a product in relation to cost (e.g. life span, function, breakeven analysis)
Choice of clothing for different considerations	<ul style="list-style-type: none">• Dress sense including the use of colours and styles in relation to one's personality• Wardrobe planning including the appreciation of forms and shapes on figure• Planning for family activities• Technological developments related to apparel and their implications when making personal choices (e.g. recycled textile materials and products)	<ul style="list-style-type: none">• Dress sense including the use of colours and styles in relation to different occasions• Wardrobe planning including the understanding of different figure types, types of accessories and to review one's clothing and plan according to one's needs• Planning for social occasions (e.g. social gathering)• Technological developments related to apparel and their implications when making personal choices (e.g. fair trade)	<ul style="list-style-type: none">• Dress sense including the use of colours and styles in relation to effects of colour on individual figures• Wardrobe planning including the understanding of the effects of fabric texture, colour and style lines in relation to individual figures, choice of accessories to complement one's outfit and to plan a clothing budget• Planning for social occasions (e.g. interview)• Technological developments related to apparel and their implications when making personal choices (e.g. bio-engineering)

(K14) Family Living

	S1	S2	S3
Family relationship	<ul style="list-style-type: none">• Different types of family including nuclear, extended and single parent• Roles and duties in the family• Healthy lifestyle/sedentary lifestyle/unhealthy lifestyle• Community health including health promotion and disease prevention	<ul style="list-style-type: none">• Roles and responsibilities of family members• Ways to maintain a harmonious relationships in the family (e.g. sharing of common vision, ways to deal with conflict, understanding and consideration of others, proper social habits and manners)• Healthy lifestyle/sedentary lifestyle/unhealthy lifestyle• Community health including health promotion and disease prevention	<ul style="list-style-type: none">• Impact of technology on family life (e.g. values and beliefs on the quality of life, structure of the family and roles of family members)• Healthy lifestyle/sedentary lifestyle/unhealthy lifestyle• Community health including health promotion and disease prevention

(K15) Home Management and Technology

	S1	S2	S3
Management of family resources and budgeting	<ul style="list-style-type: none">• Planning a personal budget• Wise shopping for household products and services• Standards to protect the safety of consumers, rights for correct information including information on labels and descriptions (e.g. food labels, care labels, different ways to present weights and measures)• Utilisation of resources in the family (e.g. use and care of equipment and appliances for cleaning personal clothing)• Health concepts and safety precautions may include common causes and prevention of accidents at home• Risk assessment, emergency and care, simple risk and emergency management, safety precautions in different settings including precautions and rules in handling equipment, household appliances and simple first aid• Current issues concerning health and environmental hygiene including its problems and solutions (e.g. application of 3R (reduce, reuse and recycle) at home and in school)	<ul style="list-style-type: none">• Planning family budget including value of money and keeping accounts• Different modes of shopping, comparing shops and products, online shopping and security issues• Roles and functions of the Hong Kong Consumer Council• Understanding of consumers' rights including product verification, product safety, product selection, product information and complaining to related authorities• Awareness on consumer protection including legislation, product testing and monitoring product prices• Principles and proper attitude towards managing personal finance for youths (e.g. a holistic view of life instead of a desire for wealth and money)• Utilisation of resources in the family (e.g. effective use of space in the kitchen), use and care of equipment and appliances for food preparation and laundry work• 'Health by Design' including ergonomics in the home setting (e.g. work triangle)• Choice of furniture, equipment, floor and wall coverings, different ways of refuse disposal and pest control• Current issues concerning health and environmental hygiene including its problems and solutions	<ul style="list-style-type: none">• Planning of family budget including income and fixed expenditure and ways of payment• Influence on shopping (e.g. peer group)• Impact of consumers' choices including environmental, technological, social and economic factors• Utilisation of resources in the family (e.g. effective use of space in the home), 3Rs (reduce, reuse and recycling), use and care of equipment and appliances for food preparation, laundry and cleaning in relation to environmental protection, conservation of resources (e.g. energy, water), waste management, environmentally friendly products• Principles in developing strategies for sustainable development (e.g. use of clean and alternative technologies, managing resources and reserves, implementation of eco-labelling and energy-labelling schemes)• 'Health by Design' including addressing people with special needs (e.g. elderly, disabled)• Choice of floor and wall coverings, lighting, ventilation• Current issues concerning health and environmental hygiene including its problems and solutions

	S1	S2	S3
Food technology	<ul style="list-style-type: none"> • Impact of processed food on daily life (e.g. pros and cons of processed food, health issues and concerns) 	<ul style="list-style-type: none"> • Technology in food processing including functional properties of foods (e.g. gelatinisation and dextrinisation of starch, denaturation and coagulation protein) • Use of food additives (e.g. preservatives, colourings and flavorings in food production) 	<ul style="list-style-type: none"> • Technology in food processing including functional properties of foods (e.g. foaming of protein, emulsification of fats) • Food product development including idea generation, development of prototype, trial and sensory evaluation and consumer costing • Basic idea of evaluating a food product in relation to cost (e.g. life span, function and breakeven analysis)
Energy saving device	<ul style="list-style-type: none"> • Use of energy saving devices (e.g. rice cooker) 	<ul style="list-style-type: none"> • Choice and care of energy saving devices (e.g. microwave oven, mixer, liquidiser) 	<ul style="list-style-type: none"> • Cost, benefit and impact of using energy saving devices (e.g. mincer, pressure cooker, food processor)

Extension Modules

	S1	S2	S3
(E8) Fabric and Clothing Construction	<ul style="list-style-type: none">• Choice of fabric in relation to the design and construction• Fabric construction processes in apparel sector (e.g. spinning of fibres)	<ul style="list-style-type: none">• Choice of fabric in relation to the design and construction• Fabric construction processes in apparel sector (e.g. weaving, knitting, felting)	<ul style="list-style-type: none">• Choice of fabric in relation to the design and construction• Specific features of blended fibres
(E9) Fashion and Dress Sense	<ul style="list-style-type: none">• Fashion trend and development• Factors affecting the development of the current fashion trend	<ul style="list-style-type: none">• Fashion trend and development• Renowned fashion designers and their signature work pieces	<ul style="list-style-type: none">• Fashion trend and development• Current trend in fashion design and fashion illustrations
(E10) Home Management and Technology	<ul style="list-style-type: none">• Management of family resources and budgeting• Different means of money transactions for household goods and services (e.g. cash, cheques, credit cards)	<ul style="list-style-type: none">• Management of family resources and budgeting• Different means of money transactions for housing, household goods and services (e.g. on-line shopping, hire purchase, mortgages and loans)	<ul style="list-style-type: none">• Management of family resources and budgeting• Financial planning for different stages of family life cycle (e.g. savings, fixed deposit, insurances)