Curriculum Planning and Teaching of Business Learning Elements at Junior Secondary Level (New)

規劃及教授初中商業學習元素 (新辦)

Technology Education Section, CDI

7 March 2018

Time時間	**Content/Activity內容／活動**	**Speaker(s)講者**
2:15 – 2:30 pm	**Registration** 登記	
2:30 – 3:00 pm	**Part 1** 第一部分 Introduction to the updated TEKLA Curriculum – Business Learning Elements at junior secondary level 簡介更新的科技教育學習領域課程– 初中的商業學習元素	Curriculum Development Officer of Technology Education Section, CDI 課程發展處科技教育組課程發展主任
3:00 – 4:30 pm	**Part 2** 第二部分 Planning business curriculum and teaching business through life-wide learning activities at junior secondary level 規劃初中商業課程及透過全方位學習活動教授商業	Ms KONG Suk-man Caritas Fanling Chan Chun Ha Secondary School 江淑雯女士 明愛粉嶺陳震夏中學 Ms TSE Siu-hung, Amy Belilios Public School 謝兆紅女士 庇理羅士女子中學 Curriculum Development Officer of Technology Education Section, CDI 課程發展處科技教育組課程發展主任
4:30 – 4:45 pm	**Q & A Session** 問答時段	

Introduction to the updated TEKLA Curriculum – Business Learning Elements at junior secondary level

Background

- In response to the changing local, regional and global contexts and to maintain Hong Kong's competitiveness, the school curriculum is being renewed to sustain and deepen its accomplishments achieved so far and to identify new emphases to focus on for the next five to ten years.

- The curriculum guides of the eight Key Learning Areas (KLAs) are updated to incorporate corresponding renewals of the Basic Education curriculum Guide (Primary 1 – 6) (2014) and Secondary Education Curriculum Guide (Secondary 1 – 6) (2017) to facilitate planning and implementation of a whole-school curriculum by primary and secondary schools.

Learning to Learn 2+ — The Hong Kong School Curriculum

A broad and balanced curriculum with diversification and specialisations (choices) for academic, professional and vocational development according to students' needs

Nurturing lifelong & self-directed learning capabilities

Multiple pathways

Life-wide Learning

SEVEN LEARNING GOALS

Fostering whole-person development

FIVE ESSENTIAL LEARNING EXPERIENCES

Moral and Civic Education | Intellectual Development | Community Service | Physical and Aesthetic Development | Career-related Experiences

Secondary 4-6 — SS

Core Subjects
Chinese Language
English Language
Mathematics
Liberal Studies

+

Electives
20 Elective Subjects
Applied Learning
Other Languages

+

Other Learning Experiences
Moral and Civic Education
Aesthetic Development
Physical Development
Community Service
Career-related Experiences

Secondary 1-3 — JS

Four Key Tasks: Towards major renewed emphases (MRE) at the JS level and beyond
STEM education & ITE, Values education (incl. MCE & Basic Law education), Language across the Curriculum (incl. reading), etc.

Primary 1-6 — P

Chinese Language Education	English Language Education	Mathematics Education	Science Education	Technology Education	Personal, Social & Humanities Education	Arts Education	Physical Education
Key Learning Area	Key Learning Area	Key Learning Area	Key Learning Area	Key Learning Area	Key Learning Area	Key Learning Area	Key Learning Area

General Studies

Kindergarten 1-3 — KG

Values & attitudes, Skills and Knowledge

Language | Early Childhood Mathematics | Nature & Living | Self & Society | Arts & Creativity | Physical Fitness & Health

Life-wide Learning

Values & attitudes
Seven priority values
- Perseverance
- Respect for Others
- Responsibility
- National Identity
- Commitment
- Integrity
- Care for Others

Generic skills

Basic Skills
- Communication Skills
- Mathematical Skills
- IT Skills

Thinking Skills
- Critical Thinking Skills
- Creativity
- Problem Solving Skills

Personal & Social Skills
- Self-management Skills
- Self-learning Skills
- Collaboration Skills

教育局 Education Bureau 2017

Position of Technology Education in school curriculum

- Technology is the ***purposeful application*** of knowledge, skills and experience in using resources to create products [tools/services] or systems to meet human needs
- Technology education is the learning of how human beings ***solve*** their daily ***problems*** and how the process could be replicated and transferred to solve new problems that arise from time to time
- Students are provided with ample opportunities to realise their ideas through hands-on experiences which cater for their interests and learning styles

Technology Education

Key Learning Area Curriculum Guide (Primary 1 – Secondary 3)

Prepared by
The Curriculum Development Council

Recommended for use in schools by
The Education Department
HKSAR
2002

UPDATED

Technology Education

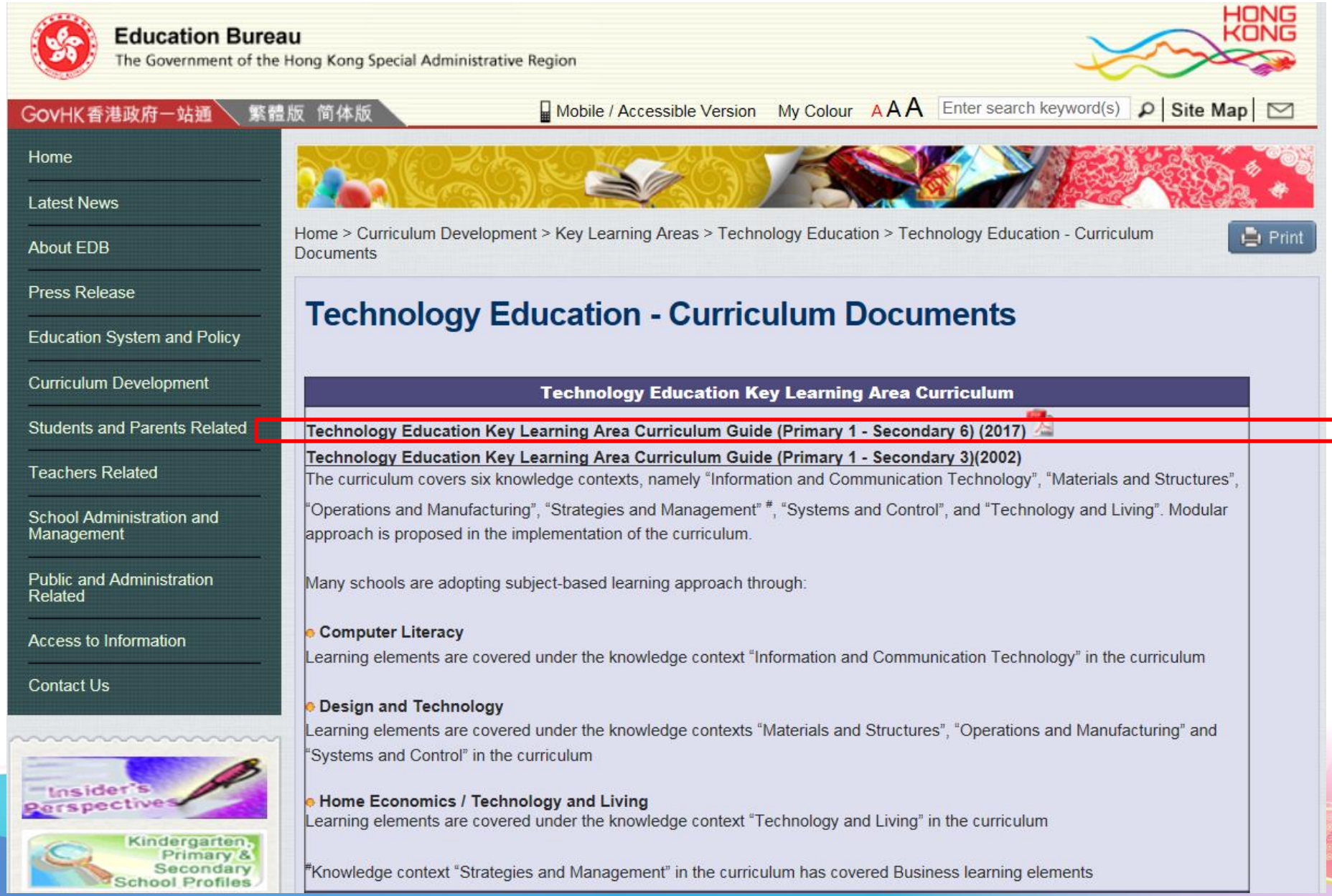
Key Learning Area Curriculum Guide (Primary 1 – Secondary 6)

Prepared by
The Curriculum Development Council

Recommended for use in schools by
The Education Bureau
HKSARG
2017

TE KLA Curriculum Guide P1-S6 2017

http://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/curriculum-doc/index.html



Curriculum Framework of TE KLA

Aims:

- Technological literacy –
  - technological capability,
  - technological understanding and
  - technological awareness

Curriculum Framework:

- Junior Secondary Level
  - An open and flexible curriculum framework. The six TE knowledge contexts with 16 core and 10 extension learning element modules
- Senior Secondary Level
  - The updated curriculum framework includes KS 4 with the five elective subjects

Primary Level (P1 - 6)	Junior Secondary Level (S1 - 3)	Senior Secondary Level (S4 - 6)
General Studies	**TE KLA Curriculum (S1-3)** (fully implemented in the 2016/17 school year)	**Elective Subjects:** • Business, Accounting and Financial Studies (BAFS) • Design and Applied Technology (DAT) • Health Management and Social Care (HMSC) • Information and Communication Technology (ICT) • Technology and Living (TL) (Food Science and Technology/Fashion, Clothing and Textiles)

Note: The TE KLA Curriculum (S1-3) comprises 6 Knowledge Contexts, namely Information & Communication Technology, Materials & Structures, Operations & Manufacturing, Strategies & Management, Systems & Control, and Technology & Living.

Source: *Technology Education Key Learning Area Curriculum Guide (Primary 1 – Secondary 6), page 6, Figure 1*

Latest curriculum updates

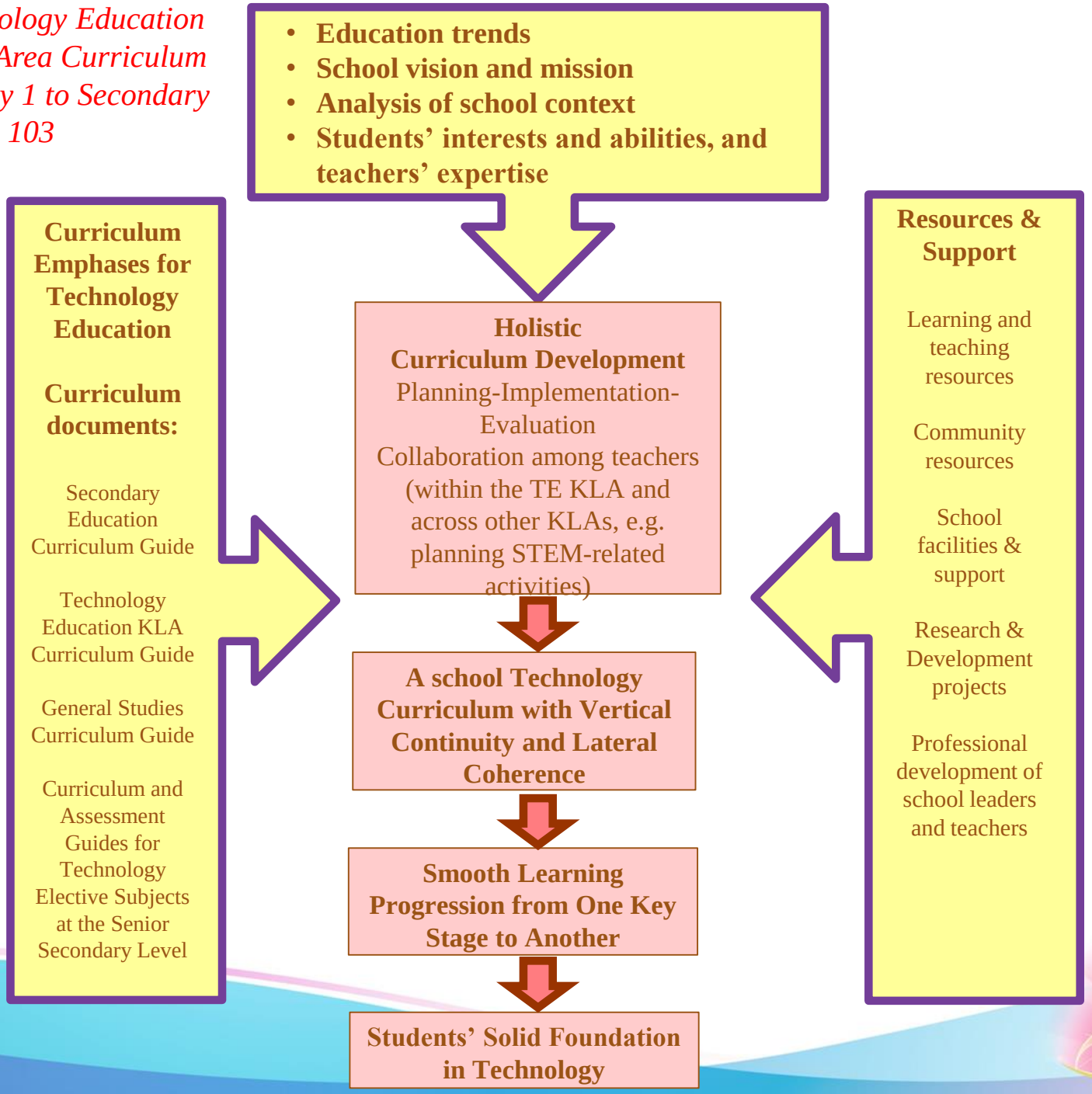
- Major Renewed Emphasis (MRE), in particular, STEM education and IT, values education and LaC, entrepreneurial spirit
- Holistic Curriculum Planning - vertical continuity and lateral coherence
- Elaboration on learning elements and providing examples of implementation (for 8% and 15% of the school's curriculum time for TE KLA) so as to provide students a solid and balanced foundation in TE
- Recommending 30% of lesson time of ICT knowledge context for teaching programming at the junior secondary levels
- Enriching learning elements with updated learning content, e.g. 3D printing
- Providing 50 examples as well as learning and teaching activities for schools' reference

Key concerns

- The importance of appropriate curriculum time, special rooms, learning experiences for students to build a strong foundation in TE and in the learning of STEM.
- A good coverage of the six TE knowledge contexts and sufficient curriculum time (8% - 15% of the schools' total curriculum time) for students' learning of TE and the implementation of STEM education.
- Role of TE in STEM education – more than just making a product (e.g. including design and make, developing students' generic skills such as problem solving skills, etc.)

Holistic Curriculum Development in the TE KLA

Source: *Technology Education Key Learning Area Curriculum Guide (Primary 1 to Secondary 6), Fig.9, page 103*

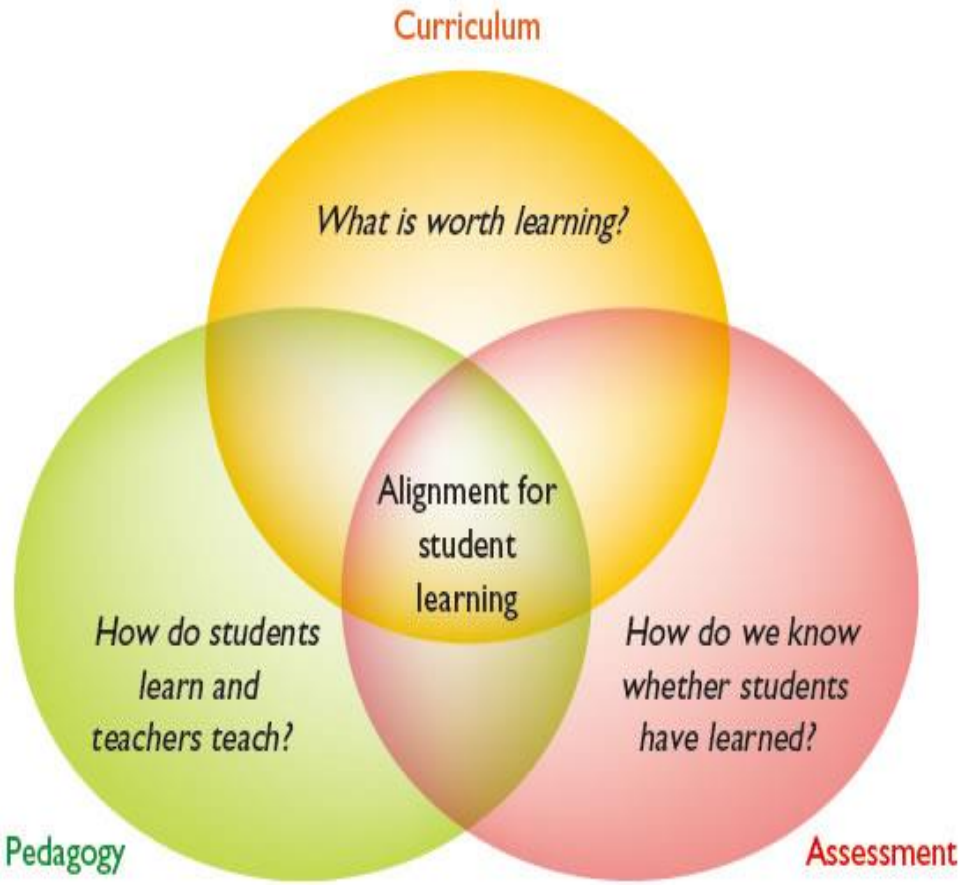


Interlocking Relationships between Curriculum, Pedagogy and Assessment

(Source: *Secondary Education Curriculum Guide (Draft – May 2017), Booklet 3 Figure 3.4*)

Alignment between curriculum, pedagogy and assessment is instrumental in bringing about effective learning and teaching. In the course of lesson planning, attention needs to be given to:

- how to build on students' prior knowledge and experiences;
- whether the lesson or series of lessons covers adequately, in terms of breadth and depth, what is worth learning as set out in the curriculum; and
- what specific learning, teaching and assessment strategies should be used to facilitate, monitor, inform and improve learning.



TE KLA Curriculum - Curriculum Planning

How to implement TE?

- Providing broad and balanced knowledge contexts through purposeful learning activities
- Collaboration within TE KLA and extending learning experience across other KLAs

Understanding of the TE KLA curriculum:

1. **Curriculum aims of the TE KLA curriculum** **(slide 9)**
2. **Suggested time allocation** **(slides 10 & 16)**
3. **Continuum of business-related learning (P1-S6)** **(slides 17-19)**
4. **Modes of implementation** **(slide 20)**

2. Suggested Time Allocation

Total lesson time for All Key Learning Areas in S1–3	2754 hrs (over 3 years)
Lesson times suggested for TE KLA Curriculum in S1-3	220 – 413 hours (8-15% over 3 years)
Module K7 Business Environments, Operations and Organisations	720 mins i.e. 18 lessons (40 minutes a lesson)
Module E4 Resources Management	210 mins i.e. 5-6 lessons (40 minutes a lesson)
Module E5 Marketing	150 mins i.e. 3-4 lessons (40 minutes a lesson)

Learning Elements under Six Knowledge Contexts in Technology Education

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	

Source: *Technology Education Key Learning Area Curriculum Guide (Primary 1 to Secondary 6) 2017, page 54, Fig.8*

Business-related Learning Elements

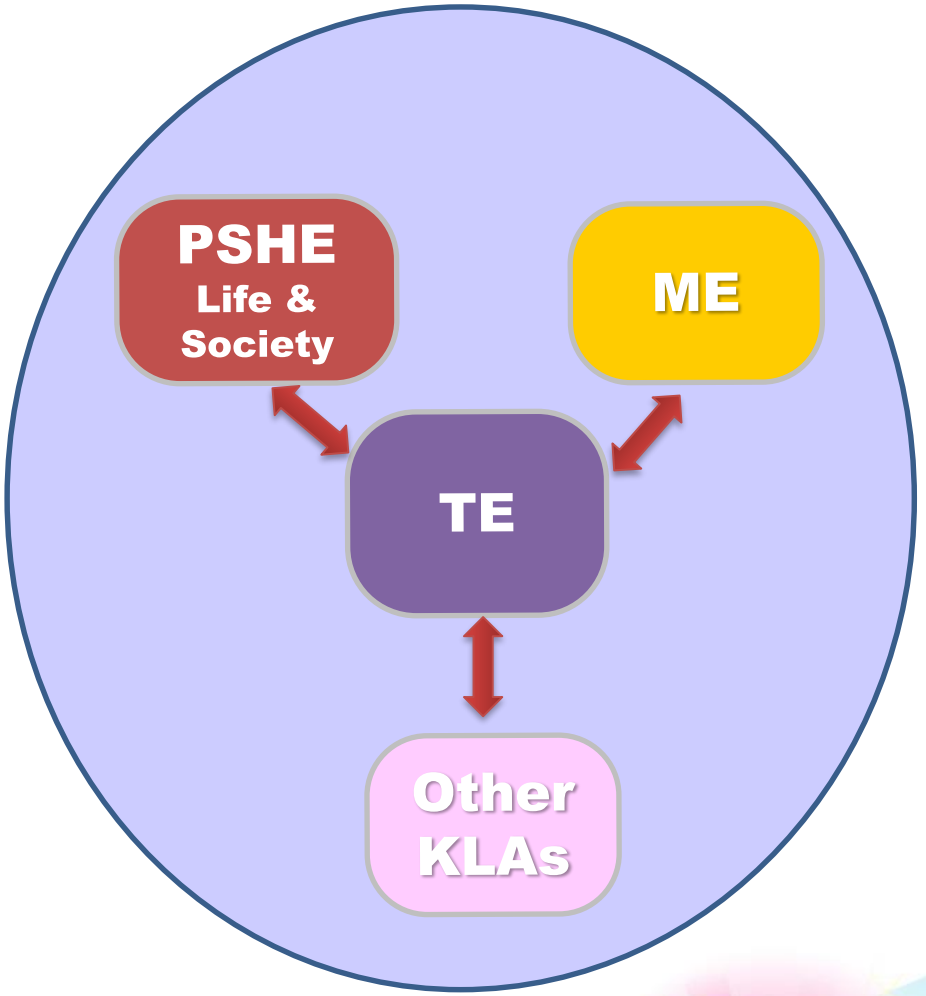
under Knowledge Contexts in Technology Education

Apart from common topics such as: technology & society, safety & health, information & processing & presentation, design & applications, consumer education; there are both core and extension learning elements under each context.

Information & Communication Technology	Materials & Structure	Operations & Manufacturing	Strategies & Management	Systems & Control	Technology & Living
(K1) Computer System (K2) Programming Concepts **(K16) Information Processing & Presentation**	(K3) Materials & Resources (K4) Structure & Mechanisms	(K5) Tools & Equipment (K6) Production Process	**(K7) Business Environments, Operations & Organisations**	(K8) Concepts of Systems (K9) Application of Systems	(K10) Food & Nutrition (K11) Food Preparation & Processing (K12) Fabric & Clothing Construction (K13) Fashion & Dress Sense (K14) Family Living **(K15) Home Management & Technology**
(E1) Computer Networks	(E2) Material Processing	**(E3) Project Management**	**(E4) Resources Management** **(E5) Marketing**	(E6) System Integration (E7) Control & Automation	(E8) Fabric & Clothing Construction (E9) Fashion & Dress Sense **(E10) Home Management & Technology**

Business-related learning across KLAs at junior secondary level

- Collaboration among KLAs and subjects achieves synergy in enhancing the overall effectiveness of learning and teaching in school
- To develop **knowledge** and **skills** to facilitate the acquisition of knowledge and skills
- To provide subject-based or **real-life contexts** to promote a deeper learning and for consolidation, integration and application of knowledge and skills



Modes of Implementation

- Subject-based
- Aligning subjects
- Collaborative teaching of subjects
- Theme-based learning
- Life experiences of students

e.g.

- Remedial or enhancement studies in KLA(s) or across KLA(s)
- School Assembly / Class teacher period to complement values education across KLAs
- Moral and Civic Education / Guidance to complement values education across KLAs
- Class reading sessions
- Co-curricular activities and Other Learning Experiences to complement life-wide learning

Examples in TE KLA CG

Example 36

Case Study: 3G - Green Design, Green Technology and Green Enterprise

Key Stage: 3

(A) Key Features

In this learning activity, students are expected to:

- have a sense of global economy regarding the environmental issue;
- understand the detrimental effect of electronic products to the environment;
- understand what the green design concept;
- understand what Green technologies are being used and developed;
- what policies are being adopted by "Green Enterprise" in response to environmental conscious consumers;
- consider the economical factor in green policy;
- propose a sustainable green policy for the school or propose a conceptual design of a green electronic gadget;
- develop their communication and organisation skills by implementing their plan.

(B) Task Definition

In this case study, students will apply their knowledge to propose a sustainable green policy for their school. It will be conducted in form of a competition. Each group needs to make a presentation of their plan. The winning group will put their plan into action in their campus with other group members as their partners.

Suggested Student Tasks:

1. Interview the school stakeholders to collect information about the way of promoting sustainable green policy in school.
2. Propose a plan on sustainable green policy for the school.
3. List the green design features to be adopted in a selected new product.
4. Design a promotion poster for a selected new product with focus on the green design features.

(C) Integrated Dimensions of Technology

In developing this learning activity, students will incorporate the following learning elements:

- Technology & Society - environmental issues, green design, green technology and green enterprise
- Design and Applications - design consideration, product design

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Connecting STEM and Business Education

Think a little more about the connection between STEM and Business Education…

- e.g. provide insights into the asynchronies between technological maturation and investment activity that help translate the promising technologies into new products, as well as business strategies and policies (STEM+accounting/finance+management+civic engagement)
- e.g. help study how the increase in energy literacy among consumers may save individuals and the regional money (STEM+accounting+economics+civic engagement)

To understand the promotion of STEM Education in a broad sense…

- To translate scientific insights and innovative items into public value in the form of new products and services that meet personal and public needs
- To equip students with the interdisciplinary skills to function effectively in a technology-intense business environment
- To ensure students from all backgrounds are equipped for careers in science, technology and mathematics

"***Reciprocal Integration***" (Lee Shulman, 2011)

- Fusion of Liberal Education and Business Education

The importance of developing knowledge regarding the interrelationship of disciplines to business students ??

References:

Ledley, Fred D. 2012, “Bridging the Boundary between Science and Business,” *International Journal of Science in Society* 3(3): 171-194.

Ledley, Fred D. and Stephan S. Holt. 2014. “Learning Objectives and Content of Science Curricula for Undergraduate Management Education.” *Journal of Management Education* 38(1): 86-113.

Ledley, Fred D. and Eric A. Oches. 2013. “Business Education in an Age of Science and Technology.” In *Shaping the Future of Business Education - Relevance, Rigor and Life Preparation*, edited by Gordy M. Hardy and Daniel L. Everett, 162-174. Basingstoke, UK: Palgrave Macmillan.

Shulman, Lee S. 2011. “Foreword.” In *Rethinking Undergraduate Business Education: Liberal Learning for the Profession*, edited by Anne Colby, Thomas Ehrlich, William M. Sullivan, and Jonathan R. Dolle, vii. The Carnegie Foundation for the Advancement of Teaching.

To Conclude

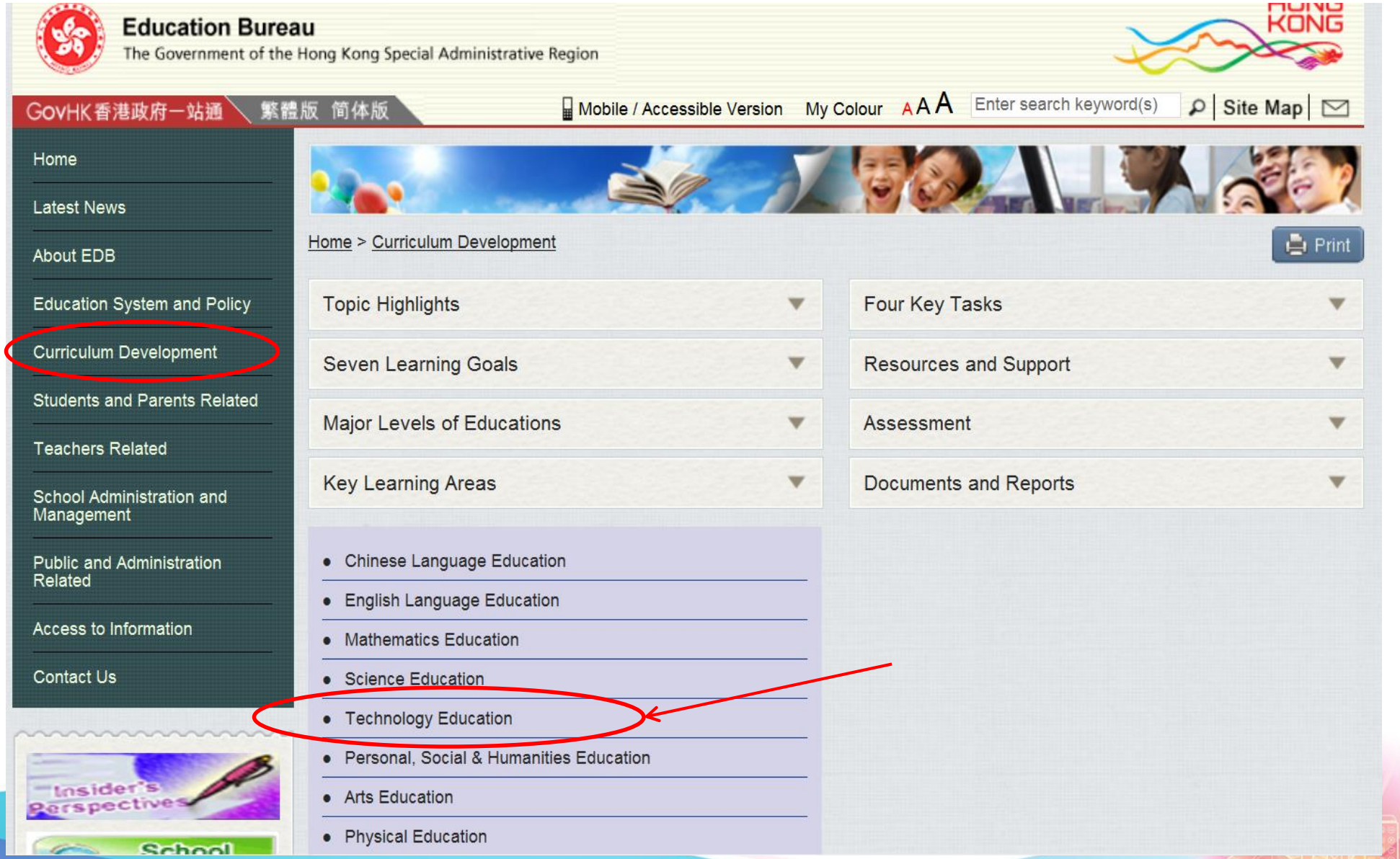
The following issues should be taken into consideration before offering the business-related learning elements at junior secondary level :

- Discussion with the school head, TE coordinator and TE teachers
- In line with Major Renewed Emphasis at junior secondary level and beyond, School Development Plan & School Curriculum Plan
- Curriculum Planning - TE Curriculum
- Collaboration and Sharing among teachers
- Learning Objectives, Teaching Contents & Assessment

Learning and Teaching Resources

- EDB Web pages (PDF Files)
- EDB One-stop Portal (Word Files)
- BAFS Learning and Teaching Platform (Word Files)

Learning and Teaching Resources



Learning and Teaching Resources

EDB YouTube Channel

Related Websites

- progressive and iterative in nature
- involving the coordination of the mind (problem-solving) and hands (hands-on experiences).

Achieving the Goals of TE

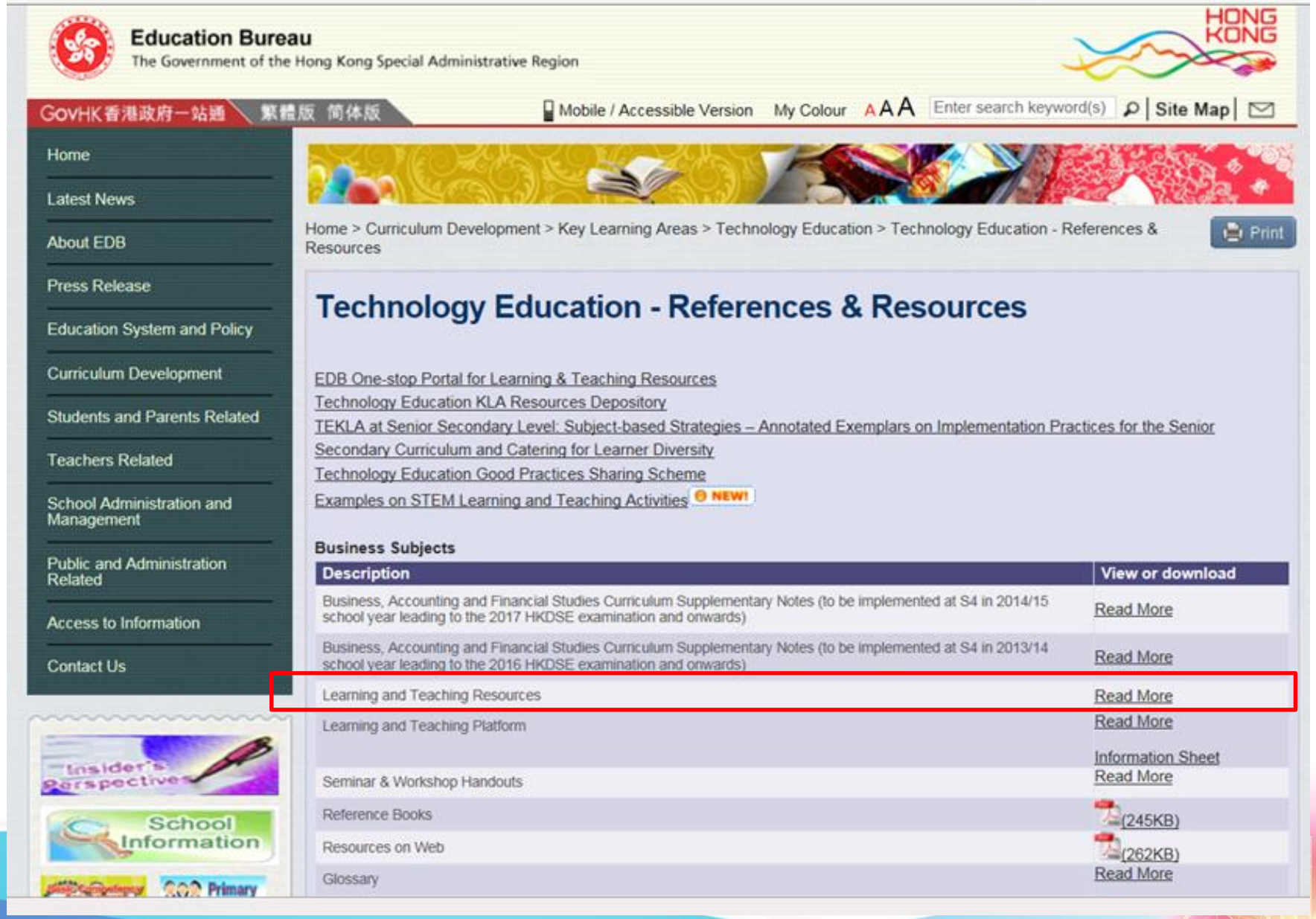
Our Students	Our Teachers
Primary 1 – Primary 3	
Please refer to the section on General Studies for Primary Schools	Please refer to the section on General Studies for Primary Schools
Primary 4 – Primary 6	
Please refer to the section on General Studies for Primary Schools	Please refer to the section on General Studies for Primary Schools
Secondary 1 – Secondary 3	
• (of both genders) have equal opportunities to gain access to broad and balanced learning experiences in TE • engage in authentic, hands-on problem-solving learning activities using easily available materials and equipment • develop their knowledge and skills to cope with rapidly emerging technologies • develop their willingness to update their knowledge and skills in technology from time to time • appraise the impacts of technology and develop critical thinking ability	• provide equal learning opportunities in TE for both genders • move away from subject-based teaching and specific skills training to hands-on problem-solving teaching • integrate student learning within TE KLA and with other KLAs through different knowledge areas • provide life-wide learning experiences to students encourage students to appraise their solutions • use a variety of methods to assess students' learning processes and outcomes
Secondary 4 and above	
• study through different knowledge areas in technology, such as information and communication technology, design & planning, system & management, sciences & technology, etc. according to their aptitudes, interests and abilities, in order to prepare themselves for their future studies and career • engage in authentic, hands-on problem-solving learning activities related to various applications of knowledge areas in TE, such as programming, networking, home management, design and make, graphical communication, marketing, etc. in order to acquire skills, concepts and underlying principles, etc. of the applications • develop a global outlook on the innovative and sustainable development of technology	• provide multiple channels for students to study technology through different knowledge areas according to their aptitudes, interests and abilities • provide students with a wide range of learning experiences (including workplace learning experiences) so that students are better prepared for their future studies and work • provide learning opportunities for students to explore innovative and sustainable development in technology

- Curriculum Documents
- References & Resources
- Questions & Answers
- Contact Us
- What's New
- Teacher Education Programmes
- Collaborative Research & Development ("Seed") Projects
- STEM Education

WAI-AA WCAG 2.0 HTML 4.01

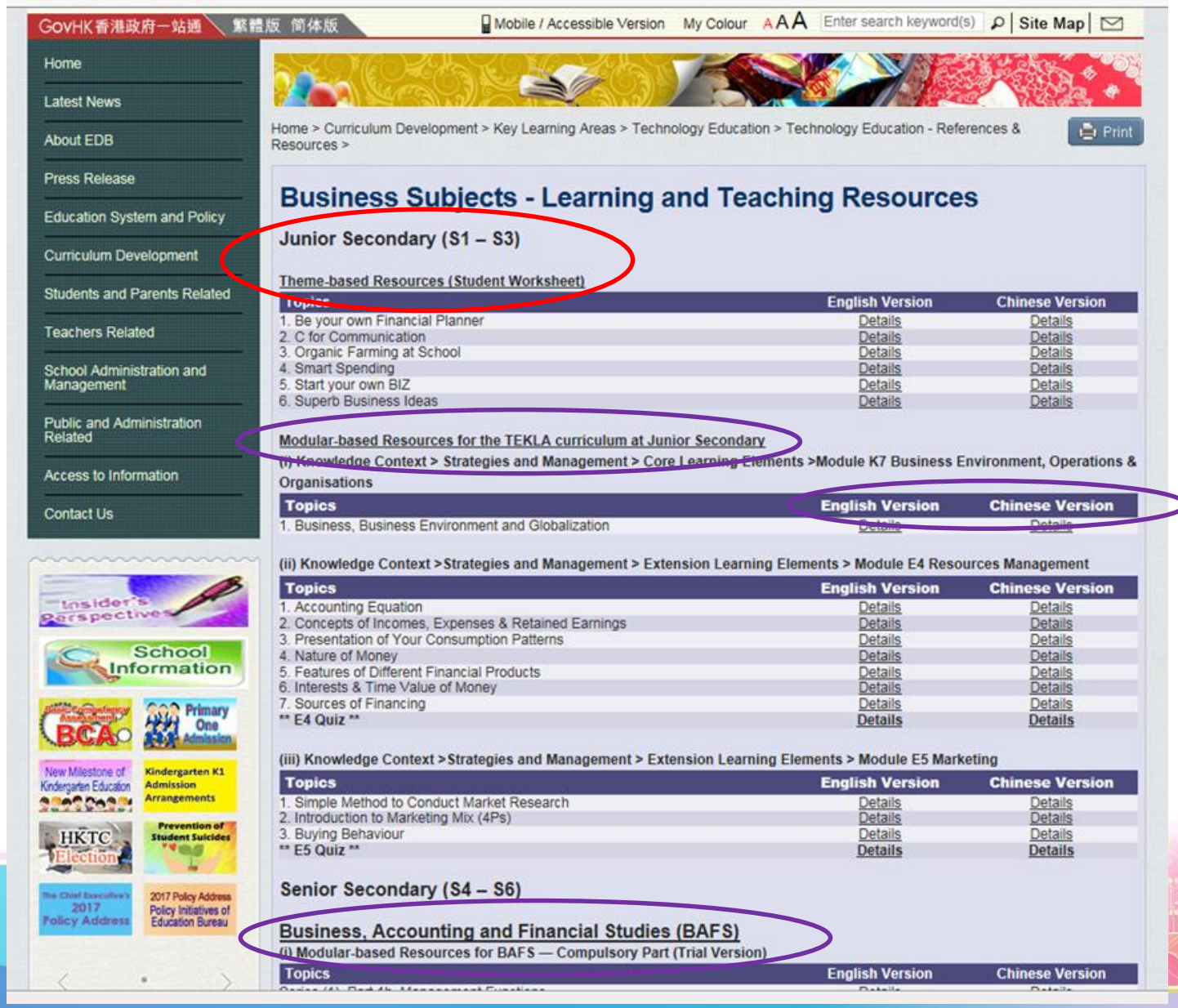
Last revision date: 30 December 2016

Learning and Teaching Resources



Learning and Teaching Resources

http://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/resources/business-edu/resources.html



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Print

Business Subjects - Learning and Teaching Resources

Junior Secondary (S1 – S3)

Theme-based Resources (Student Worksheet)

Topics	English Version	Chinese Version
1. Be your own Financial Planner	Details	Details
2. C for Communication	Details	Details
3. Organic Farming at School	Details	Details
4. Smart Spending	Details	Details
5. Start your own BIZ	Details	Details
6. Superb Business Ideas	Details	Details

Modular-based Resources for the TEKLA curriculum at Junior Secondary

(i) Knowledge Context > Strategies and Management > Core Learning Elements >Module K7 Business Environment, Operations & Organisations

Topics	English Version	Chinese Version
1. Business, Business Environment and Globalization	Details	Details

(ii) Knowledge Context >Strategies and Management > Extension Learning Elements > Module E4 Resources Management

Topics	English Version	Chinese Version
1. Accounting Equation	Details	Details
2. Concepts of Incomes, Expenses & Retained Earnings	Details	Details
3. Presentation of Your Consumption Patterns	Details	Details
4. Nature of Money	Details	Details
5. Features of Different Financial Products	Details	Details
6. Interests & Time Value of Money	Details	Details
7. Sources of Financing	Details	Details
** E4 Quiz **	Details	Details

(iii) Knowledge Context >Strategies and Management > Extension Learning Elements > Module E5 Marketing

Topics	English Version	Chinese Version
1. Simple Method to Conduct Market Research	Details	Details
2. Introduction to Marketing Mix (4Ps)	Details	Details
3. Buying Behaviour	Details	Details
** E5 Quiz **	Details	Details

Senior Secondary (S4 – S6)

Business, Accounting and Financial Studies (BAFS)

(i) Modular-based Resources for BAFS — Compulsory Part (Trial Version)

Topics	English Version	Chinese Version

Learning and Teaching Resources

http://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/resources/business-edu/resources.html

Modular-based	Theme-based
(K7) Business, Business Environment and Globalization **(E4) Resources Management** 1. Accounting Equation 2. Concepts of Incomes, Expenses & Retained Earnings 3. Presentation of Your Consumption Patterns 4. Nature of Money 5. Features of Different Financial Products 6. Interests & Time Value of Money 7. Sources of Financing **(E5) Marketing** 8. Simple Method to Conduct Market Research 9. Introduction to Marketing Mix (4Ps) 10. Buying Behaviour	1. Be your own Financial Planner 2. C for Communication 3. Organic farming at school 4. Smart spending 5. Start your own BIZ 6. Superb business ideas

Learning and Teaching Resources

- Topic Overview
- Teaching Plan
- PowerPoint Presentation
- Learning Activities / Exercises (Questions and Answers)
- Quiz (Questions and Answers)

The EDB One-stop Portal

http://minisite.proj.hkedcity.net/edbosp-te/cht/learning_and_teaching_resources/index.html

Sharing of Learning and Teaching Materials

Learning and Teaching Platform

http://edblog.hkedcity.net/bafs_learning_and_teaching_platform