

# Curriculum Planning and Effective Use of Resources in Teaching Business at Junior Secondary Level (New)

初中商業教育的課程規畫及有效資源運用  
(新辦)

Technology Education Section, CDI

17 May 2016

Time時間	Content/Activity內容／活動	Speaker(s)講者
2:30 – 2:35 pm	<b>Introduction</b> 簡介	
2:35 – 3:00 pm	<b>Part 1</b> 第一部分 Learning and teaching resources for junior secondary business subjects 初中商業科目的學與教資源	Curriculum Development Officer, EDB 教育局課程發展主任
3:00 – 4:30 pm	<b>Part 2</b> 第二部分 Business curriculum planning and lesson planning at junior secondary level 初中商業課程及課堂的規劃	Mrs Vivien LEE Carmel Secondary School 李鍾葆文女士 迦密中學  Mr Moses Hsiao Ning Po No. 2 College 蕭振武先生 寧波第二中學
4:30 – 4:45 pm	<b>Q &amp; A Session</b> 問答時段	Principal TAI Ming-kee STFA Leung Kau Kui College 戴明基校長 順德聯誼總會梁銶琚中學  Curriculum Development Officer EDB 教育局課程發展主任

## Part 1:

- (i) The enriched Technology Education Key Learning Area (TEKLA) curriculum**
- (ii) L&T resources for junior secondary (JS) business subjects**

# Technology Education (TE) in Hong Kong

- **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

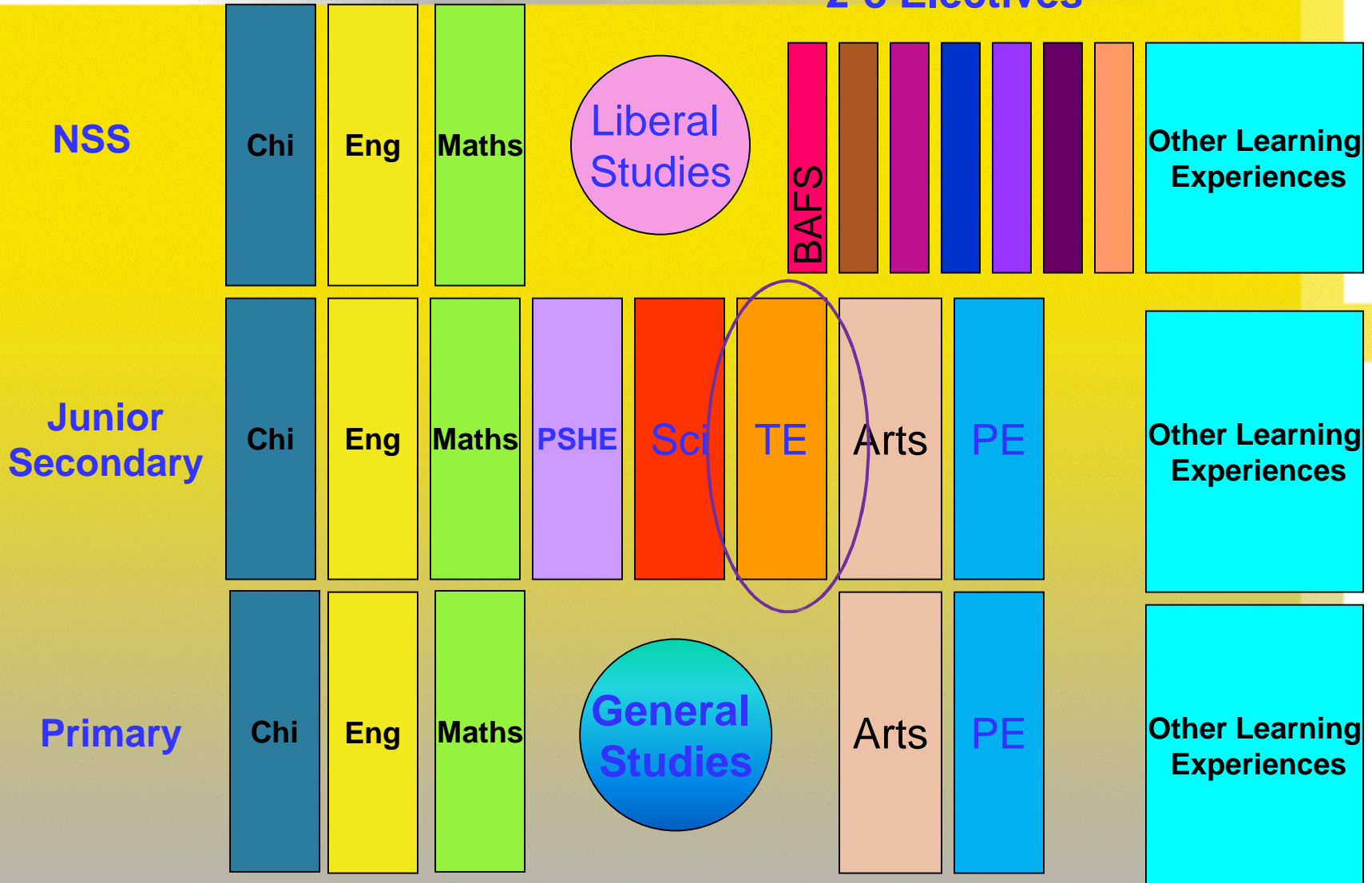
## Why TE in the curriculum?

### *Value to students and the society*

- Preparing students to meet the future challenges of a technological world
- Enhancing the quality of life

# Interfacing of Senior Secondary Curriculum and Basic Education

## 2-3 Electives



# Technology Education Key Learning Area (TEKLA)



## TEKLA

### Primary

General Studies

### Junior Secondary

For example, **Business Fundamentals**\*1  
Design & Technology\*2, Computer Literacy\*2,  
Home Economics/Technology & Living\*2

### Senior Secondary

- **Business, Accounting and Financial Studies**
- Information and Communication Technology
- Technology and Living
- Health Management and Social Care
- Design and Applied Technology

- \*1 Business Fundamentals will be phased out at S1 in 2016/17 school year
- \*2 Learning contents to be replaced by the learning elements covered in the enriched TEKLA curriculum starting from 2016/17 school year

## The enriched TEKLA Curriculum

Learning elements of the knowledge contexts at junior secondary level in the TEKLA Curriculum Guide was enriched to give students a broad and balanced foundation on technology education during their junior secondary education (please refer to EDBCM No.87/2013 issued on 1 August 2013)

<http://www.edb.gov.hk/attachment/tc/curriculum-development/kla/technology-edu/whats-new/Supplementary%20Notes%20-%20TEKLA%20Curriculum%20Guide%20Eng.pdf>

# The enriched TEKLA Curriculum

## 4 TE subjects at junior secondary level (S1-3)

- Business Fundamentals\*<sup>1</sup>
- Computer Literacy\*<sup>2</sup>
- Design and Technology\*<sup>2</sup>
- Home Economics /  
Technology and Living\*<sup>2</sup>



## EDBCM No.87/2013

“...All secondary schools are *recommended to offer* modules selected from the core learning elements under *the enriched TEKLA curriculum starting from Secondary 1 in the 2014/15 school year* and progressively move up to the next level; or in the 2013/14 school year for those schools that are more ready....”

\*1 Business Fundamentals will be phased out at S1 in 2016/17 school year

\*2 Learning contents to be replaced by the learning elements covered in the enriched TEKLA curriculum starting from 2016/17 school year



The screenshot shows the Education Bureau website interface. The top navigation bar includes the Education Bureau logo, the text 'Education Bureau The Government of the Hong Kong Special Administrative Region', and the 'HONG KONG' logo. Below this is a secondary navigation bar with 'GOVHK 香港政府一站通', language options '繁體版 简体版', and utility links for 'Mobile / Accessible Version', 'My Colour', font size 'A A A', a search bar, 'Site Map', and an email icon.

The main content area is divided into a left sidebar and a central panel. The sidebar contains a list of menu items: Home, Latest News, About EDB, Education System and Policy, Curriculum Development (circled in red), Students and Parents Related, Teachers Related, School Administration and Management, Public and Administration Related, Access to Information, and Contact Us.

The central panel features a breadcrumb trail 'Home > Curriculum Development' and a 'Print' button. It contains two columns of dropdown menus: 'Topic Highlights', 'Seven Learning Goals', 'Major Levels of Educations', and 'Key Learning Areas' in the left column; and 'Four Key Tasks', 'Resources and Support', 'Assessment', and 'Documents and Reports' in the right column.

Below these menus is a list of key learning areas, each preceded by a bullet point: Chinese Language Education, English Language Education, Mathematics Education, Science Education, Technology Education (circled in red with an arrow pointing to it), Personal, Social & Humanities Education, Arts Education, and Physical Education.

At the bottom left, there is a small graphic for 'Insider's Perspectives' and a 'School' logo.

# The enriched TEKLA Curriculum

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

## 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](#)

["Technology Education - Wisdom of Life" Information Folder](#)

[References & Resources](#)

[Questions & Answers](#)

[Contact Us](#)

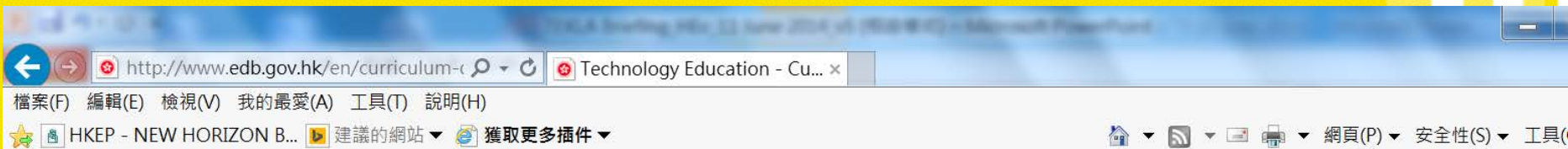
[What's New](#)

[Teacher Education Programmes](#)

[Collaborative Research & Development \("Seed"\) Projects](#)

[Technology Education Good Practices Sharing Scheme](#)

# The enriched TEKLA Curriculum



**Education Bureau**

The Government of the Hong Kong Special Administrative Region



GovHK 香港政府一站通

繁體版 简体版

Mobile / Accessible Version

My Colour

AA A

Enter search keyword(s)

Site Map



Home

Latest News

About EDB

Education System and Policy

Curriculum Development

Students and Parents Related

Teachers Related

School Administration and Management

Public and Administration Related

Access to Information

Contact Us



Home > Curriculum Development > Key Learning Areas > Technology Education > Technology Education - Curriculum Documents

Print

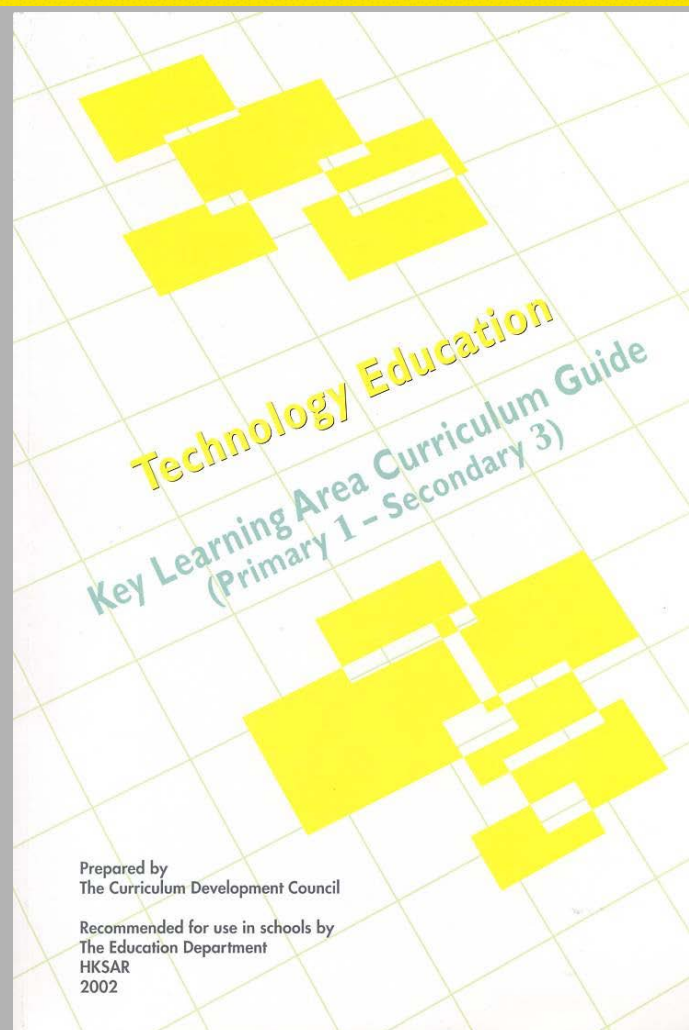
## Technology Education - Curriculum Documents

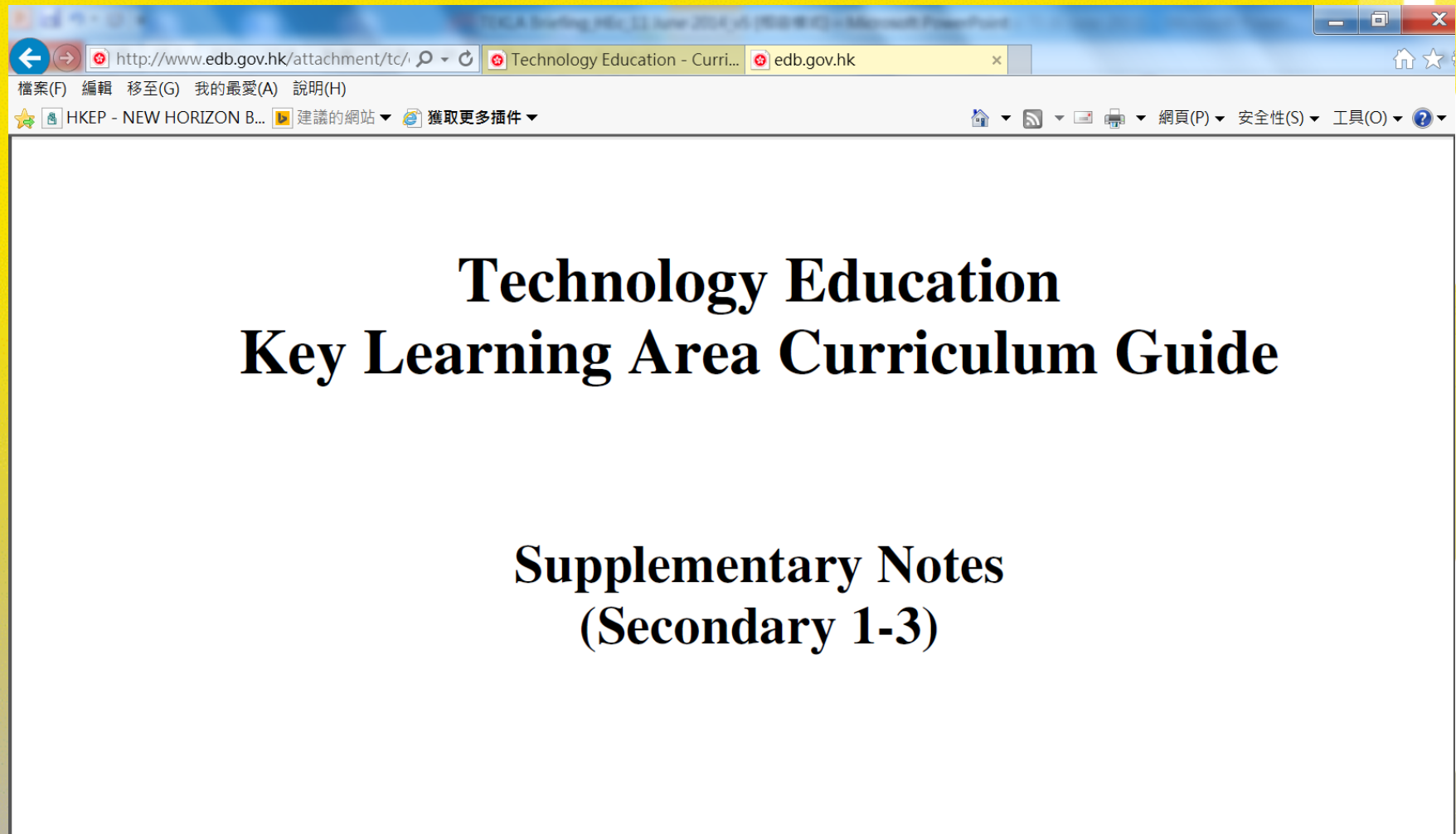
Junior Secondary - **Technology Education Key Learning Area Curriculum Guide (Primary 1 - Secondary 3)**

Enriched Technology Education Key Learning Area Curriculum (Secondary 1-3) - Supplementary Notes

- [Automobile Technology](#)
- [Business Fundamentals](#)
- [Catering services](#)
- [Computer Literacy](#)
- [Design & Technology](#)
- [Design & Technology \(Alternative Syllabus\)](#)
- [Design fundamentals](#)
- [Desktop Publishing](#)
- [Electronics & Electricity](#)
- [Fashion Design](#)
- [Graphical Communication](#)
- [Home Economics / Technology and Living](#)
- [Retail Merchandising](#)
- [Technology Fundamentals](#)

# TEKLA Curriculum Guide





The screenshot shows a web browser window with the address bar displaying <http://www.edb.gov.hk/attachment/tc/>. The browser's menu bar includes options like 檔案(F), 編輯, 移至(G), 我的最愛(A), and 說明(H). The main content area of the browser displays the following text:

## Technology Education Key Learning Area Curriculum Guide

### Supplementary Notes (Secondary 1-3)

# Business-related learning elements under the enriched TEKLA curriculum

Information & Communication Technology	Materials & Structures	Operations & Manufacturing	Strategies & Management	Systems & Control	Technology & Living
Computer Systems	Materials & Resources	Tools & Equipment	<b>Module (K7) Business Environments, Operations &amp; Organizations</b>	Concepts of System	Food & Nutrition
Computer Networks	Material Processing	Production Process	<b>Module (E4) Resources Management</b>	Application of Systems	Food Preparation & Processing
Programming Concepts	Structures & Mechanisms	Project Management	<b>Module (E5) Marketing</b>	System Integration	Fabric & Clothing Construction
				Control & Automation	Fashion & Dress Sense Family Living
					<b>Module (K15) &amp; (E10) Home Management &amp; Technology I &amp; II</b>

## Common Topics

Technology & Society

Safety & Health

Information Processing & Presentation

Design & Applications

Consumer Education

# How to implement the enriched TEKLA curriculum

## How to implement TE?

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



## Understanding of the enriched TEKLA curriculum:

1. Curriculum aims of the enriched TEKLA curriculum
2. Suggested time allocation
3. Continuum of business-related learning at junior and secondary levels
4. Modes of school-based curriculum

# 1. Curriculum Aims of Technology Education

To develop technological literacy in students through the cultivation of

## ■ Technological Understanding

- understand the interdisciplinary nature of technological activities; the **concepts**, knowledge and processes of different technologies

## ■ Technological Capability

- to identify needs, problems and opportunities; communicate and evaluate solutions; and **make informed decisions**

## ■ Technological Awareness

- be aware of the cultural and contextual dependence of developing technologies, and their impact on the **individual, family, society and environment**



## 2. Suggested Time Allocation

Total lesson time for All Key Learning Areas in S1–3 (Key Stage 3)	2754 hrs (over 3 years)
Lesson times suggested for Technology Education (TE)	220 – 413 hours (8-15%)

## 2. Suggested Time Allocation

Range

8% - 15%

(about 220 – 413 hours over 3 years)

- Remedial or enhancement studies in KLA(s) or across KLA(s)
- Other learning experiences such as community service, co-curricular activities, and aesthetic and physical activities to complement life-wide learning
- 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

### 3. Continuum of Business-related Learning between Junior and Senior Secondary Levels

#### KS 3 (Secondary 1-3)

##### Technology Education

- **Knowledge context:** Strategies and Management
- **Core learning elements: Module (K7) Business, Environments, Operations and Organisations**
  - Business environment: economics, technological, cultural and physical, social-political-legal
  - Different types of business organisations
  - Decision making, planning, organization, control, evaluation, and quality assurance in business Operations and projects
- **Extension learning elements:**

##### Module (E4) Resources Management

- Financial budgeting (personal and company) and reporting
- Scheduling of resources
- Human resources

##### Module (E5) Marketing Management

- Market research
- Promotion campaigns
- Customer services
- Quality assurance

- **Knowledge context:** Technology and Living
- **Core learning element: Module (K15) & (E10) Home Management and Technology I & II**
  - Management of family resources and budgeting

#### KS 4 (Secondary 4 - 6) BAFS (Compulsory Part)

##### 1(a) Business Environment

- Hong Kong business environment
- Forms of business ownership
- Business ethics and social responsibilities

##### 1(b) Introduction to Management

- Management function
- Key business functions
- Small and medium enterprises (SMEs)

##### 1(c) Introduction to Accounting

- Purposes and role of accounting
- The Accounting cycle
- Uses of financial statements
- Accounting assumptions, principles and convention
- Basic ratio analysis

##### 1(d) Basics of Personal Financial Management

- Time value of money
- Consumer credit
- Personal financial planning and investment
- Stock trading as an investment

## 4. Modes of TE School-based Curriculum Development

TE School-based Curriculum Development



# Learning and Teaching Resources



**Education Bureau**

The Government of the Hong Kong Special Administrative Region



GovHK 香港政府一站通

繁體版 简体版

Mobile / Accessible Version

My Colour

AAA

Enter search keyword(s)



Site Map



Home

Latest News

About EDB

Education System and Policy

**Curriculum Development**

Students and Parents Related

Teachers Related

School Administration and Management

Public and Administration Related

Access to Information

Contact Us



Home > [Curriculum Development](#)

Print

Topic Highlights

Four Key Tasks

Seven Learning Goals

Resources and Support

Major Levels of Educations

Assessment

Key Learning Areas

Documents and Reports

- Chinese Language Education
- English Language Education
- Mathematics Education
- Science Education
- **Technology Education**
- Personal, Social & Humanities Education
- Arts Education
- Physical Education



# Learning and Teaching Resources

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

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• (of both genders) have equal opportunities to gain access to broad and balanced learning experiences in TE</li> <li>• engage in authentic, hands-on problem-solving learning activities using easily available materials and equipment</li> <li>• develop their knowledge and skills to cope with rapidly emerging technologies</li> <li>• develop their willingness to update their knowledge and skills in technology from time to time</li> <li>• appraise the impacts of technology and develop critical thinking ability</li> </ul> | <ul style="list-style-type: none"> <li>• provide equal learning opportunities in TE for both genders</li> <li>• move away from subject-based teaching and specific skills training to hands-on problem-solving teaching</li> <li>• integrate student learning within TE KLA and with other KLAs through different knowledge areas</li> <li>• provide life-wide learning experiences to students encourage students to appraise their solutions</li> <li>• use a variety of methods to assess students' learning processes and outcomes</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Secondary 4 and above

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• study through different knowledge areas in technology, such as information and communication technology, design &amp; planning, system &amp; management, sciences &amp; technology, etc. according to their aptitudes, interests and abilities, in order to prepare themselves for their future studies and career</li> <li>• 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</li> <li>• develop a global outlook on the innovative and sustainable development of technology</li> </ul> | <ul style="list-style-type: none"> <li>• provide multiple channels for students to study technology through different knowledge areas according to their aptitudes, interests and abilities</li> <li>• 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</li> <li>• provide learning opportunities for students to explore innovative and sustainable development in technology</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <a href="#">Curriculum Documents</a></li> <li>• <a href="#">"Technology Education - Wisdom of Life" Information Folder</a></li> <li>• <a href="#">References &amp; Resources</a></li> <li>• <a href="#">Questions &amp; Answers</a></li> <li>• <a href="#">Contact Us</a></li> </ul> | <ul style="list-style-type: none"> <li>• <a href="#">What's New</a></li> <li>• <a href="#">Teacher Education Programmes</a></li> <li>• <a href="#">Collaborative Research &amp; Development ("Seed") Projects</a></li> <li>• <a href="#">Technology Education Good Practices Sharing Scheme</a></li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



**Education Bureau**

The Government of the Hong Kong Special Administrative Region



GovHK 香港政府一站通

繁體版 简体版

Mobile / Accessible Version

My Colour

AAA

Enter search keyword(s)



Site Map



Home

Latest News

About EDB

Education System and Policy

Curriculum Development

Students and Parents Related

Teachers Related

School Administration and Management

Public and Administration Related

Access to Information

Contact Us



Home > Curriculum Development > Key Learning Areas > Technology Education > Technology Education - References & Resources






## Technology Education - References & Resources

[TEKLA at Junior Secondary Level: Depository of Curriculum-based Learning and Teaching Resources](#)

[TEKLA at Senior Secondary Level: Subject-based Strategies – Annotated Exemplars on Implementation Practices for the Senior Secondary Curriculum and Catering for Learner Diversity](#)

### Business Subjects

Description	View or download
Business, Accounting and Financial Studies Curriculum Supplementary Notes (to be implemented at S4 in 2013/14 school year leading to the 2016 HKDSE examination and onwards)	<a href="#">Read More</a> 
Business, Accounting and Financial Studies Curriculum Supplementary Notes (to be implemented at S5 & S6 in 2013/14 school year leading to the 2015 and 2014 HKDSE examinations)	<a href="#">Read More</a>
<b>Learning and Teaching Resources</b>	<a href="#">Read More</a>
Learning and Teaching Platform	<a href="#">Read More</a>
Seminar & Workshop Handouts	Information Sheet <a href="#">Read More</a>
Reference Books	 (245KB)
Resources on Web	 (262KB)
Glossary	<a href="#">Read More</a>



# Learning and Teaching Resources

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

Home

---

Latest News

---

About EDB

---

Education System and Policy

---

Curriculum Development

---

Students and Parents Related

---

Teachers Related

---

School Administration and Management

---

Public and Administration Related

---

Access to Information

---

Contact Us



Home > Curriculum Development > Key Learning Areas > Technology Education > Technology Education - References & Resources > 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	<a href="#">Details</a>	<a href="#">Details</a>
2. C for Communication	<a href="#">Details</a>	<a href="#">Details</a>
3. Organic Farming at School	<a href="#">Details</a>	<a href="#">Details</a>
4. Smart Spending	<a href="#">Details</a>	<a href="#">Details</a>
5. Start your own BIZ	<a href="#">Details</a>	<a href="#">Details</a>
6. Superb Business Ideas	<a href="#">Details</a>	<a href="#">Details</a>

**Modular-based Resources for the TEKLA curriculum at Junior Secondary (Trial Version)**

**(i) Knowledge Context > Strategies and Management > Extension Learning Element > Module E4 Resources Management**

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

**(ii) Knowledge Context > Strategies and Management > Extension Learning Element > Module E5 Marketing**

Topics	English Version	Chinese Version
8. Simple Method to Conduct Market Research	<a href="#">Details</a>	<a href="#">Details</a>
9. Introduction to Marketing Mix (4Ps)	<a href="#">Details</a>	<a href="#">Details</a>
10. Buying Behaviour	<a href="#">Details</a>	<a href="#">Details</a>
** E5 Quiz **	<a href="#">Details</a>	<a href="#">Details</a>











# Learning and Teaching Resources

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

## Modular-based

### **(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

## Theme-based

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

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

# Sharing of Learning and Teaching Materials

Learning and Teaching Platform

[http://edblog.hkedcity.net/bafs\\_learning\\_and\\_teaching\\_platform](http://edblog.hkedcity.net/bafs_learning_and_teaching_platform)

# Promotion of STEM Education

*Unleashing Potential in Innovation*



# 2015 Policy Address

152. The EDB will renew and enrich the curricula and learning activities of Science, Technology and Mathematics, and enhance the training of teachers, thereby allowing primary and secondary students to fully unleash their potential in innovation.

152. 教育局會更新及強化科學、科技及數學課程和學習活動，並加強師資培訓，讓中小學生充分發揮創意潛能。



## What is STEM Education?

- STEM – Science, Technology, Engineering and Mathematics
- Introduced in 1990s by the National Science Foundation, USA, now variously used for initiatives in education, industry, economy, etc.

# Objectives of Promoting STEM Education

- ▶ To **develop among students a solid knowledge base** and to enhance their interests in **Science, Technology and Mathematics** for **further studies and careers** in meeting the changes and challenges in the contemporary world
- ▶ To **strengthen students' ability to integrate and apply knowledge and skills**, and to nurture students' creativity, collaboration and problem solving skills, as well as to foster their innovation as required in the 21st century
- ▶ To strengthen the **professional capacity of** and **collaboration among teachers** in schools and the **partnerships** with community stakeholders
- ▶ To nurture talents and develop experts in STEM areas so as to **contribute to the development of Hong Kong and the nation.**

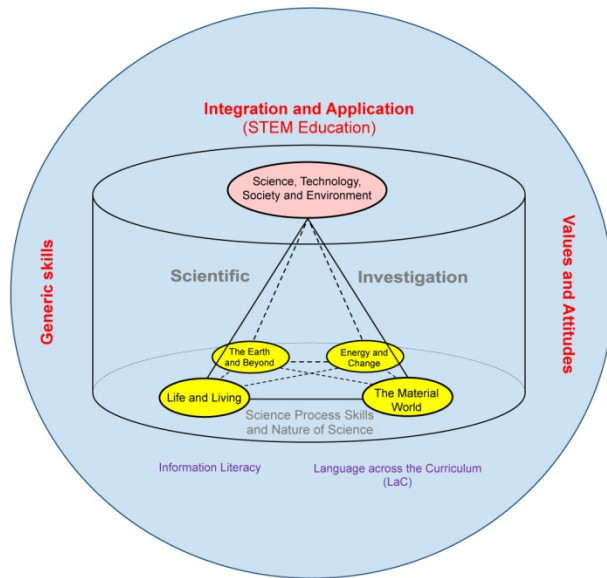
Integrate & Apply

Subject  
Knowledge

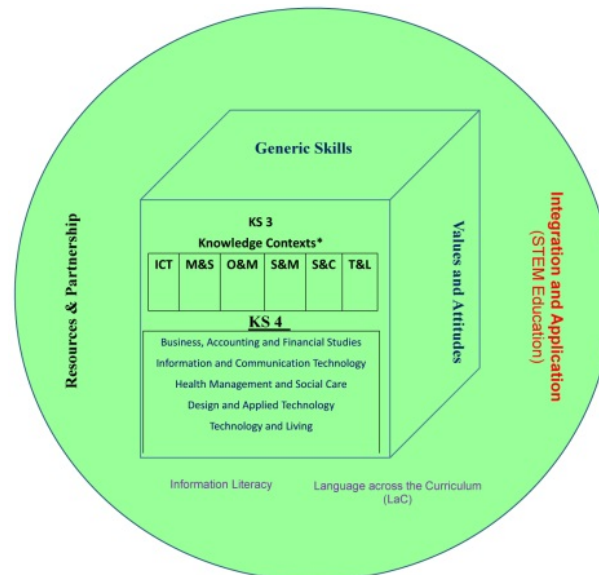


# Recommended Approaches for Organising Learning Activities on STEM Education

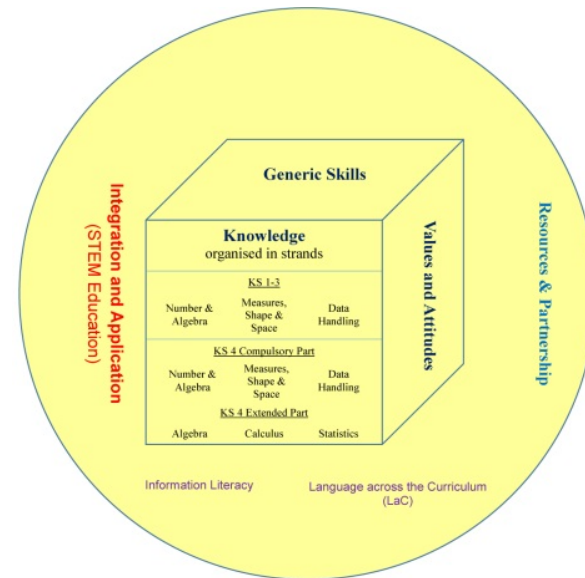
# Approaches for STEM Learning Activities



SE KLA



TE KLA

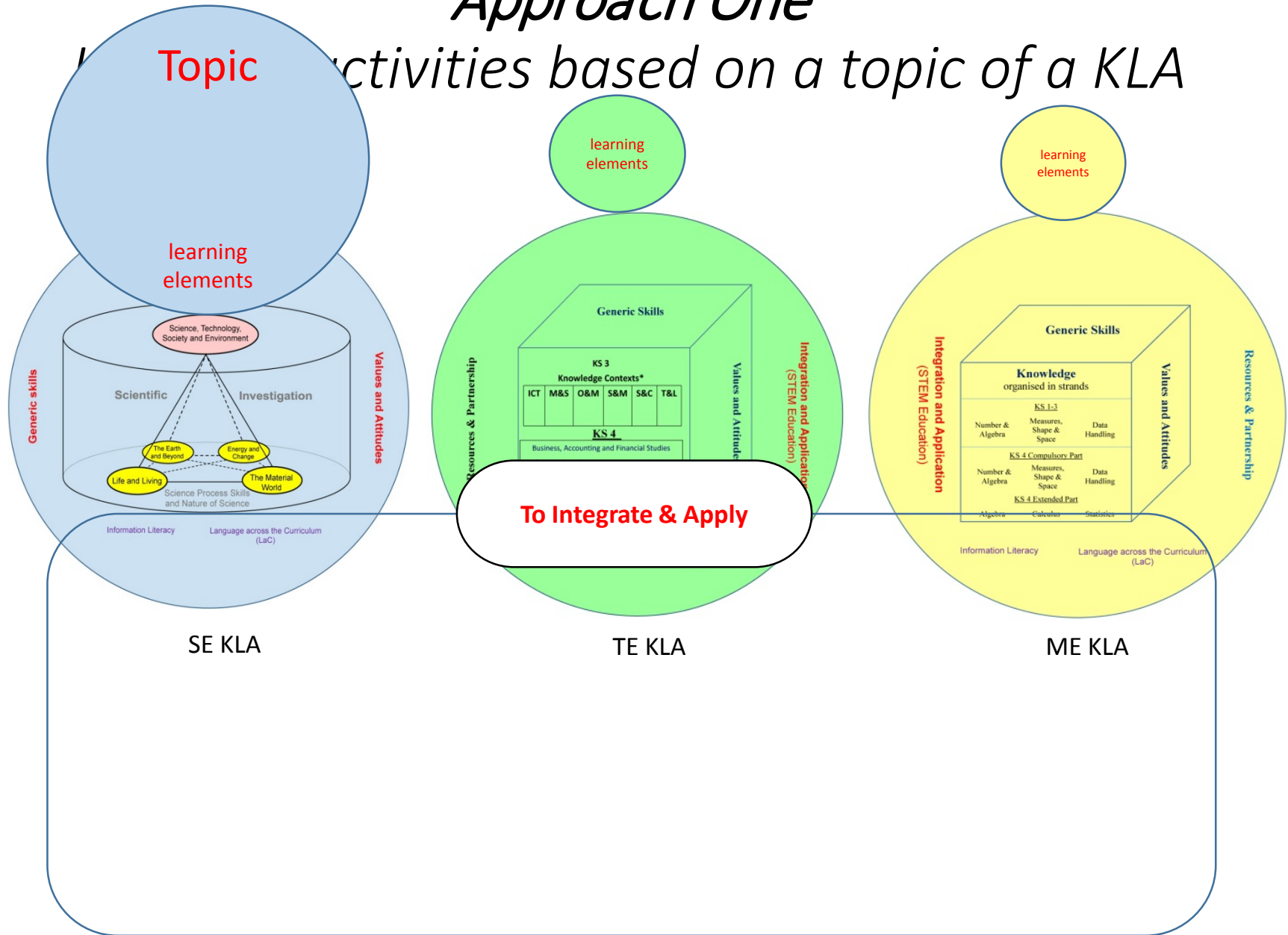


ME KLA

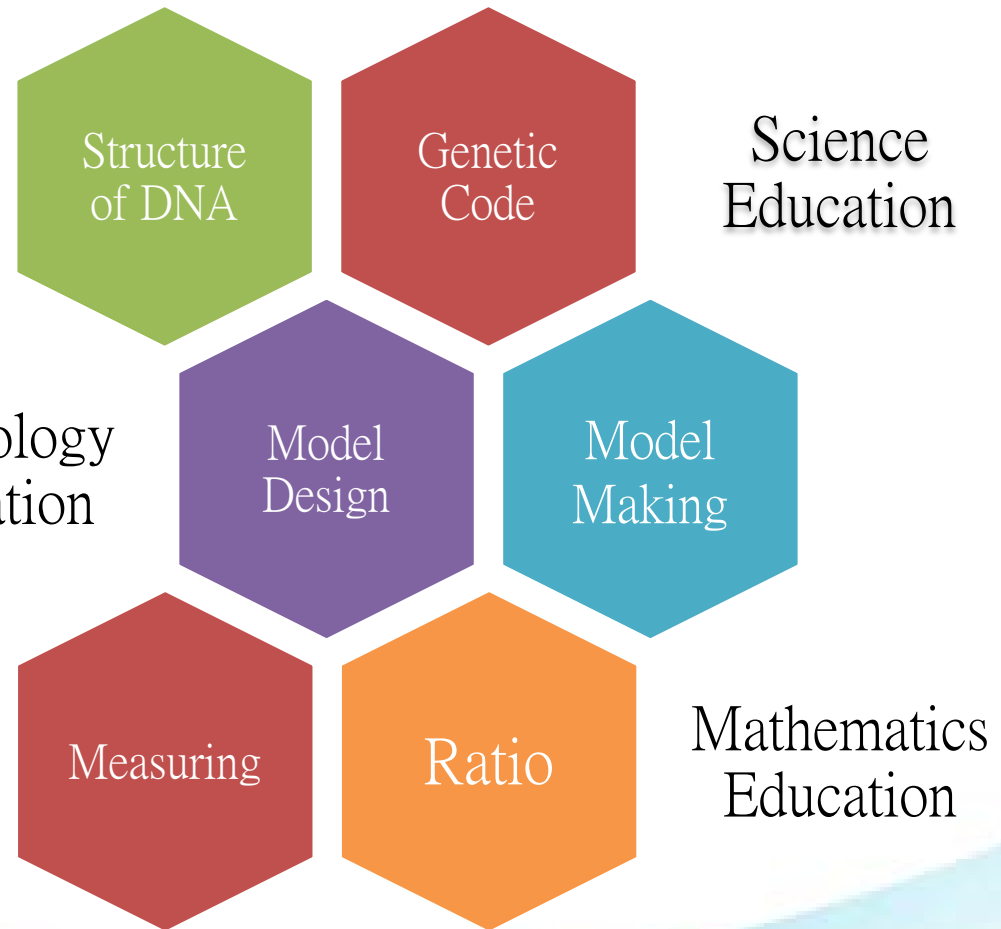
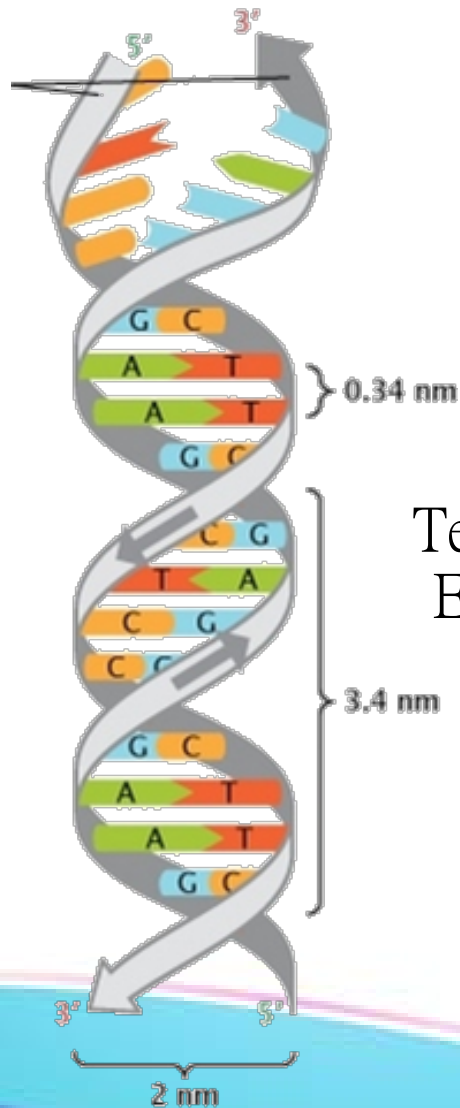


# Approach One

Activities based on a topic of a KLA



# DNA Model Making



# Measurement by GPS Tracking Apps and Investigating the Errors of Measurement



Mathematics  
Education

Using tablet  
computers

GPS  
tracking  
apps

Technology  
Education

Estima  
tion

Rate and  
ratio

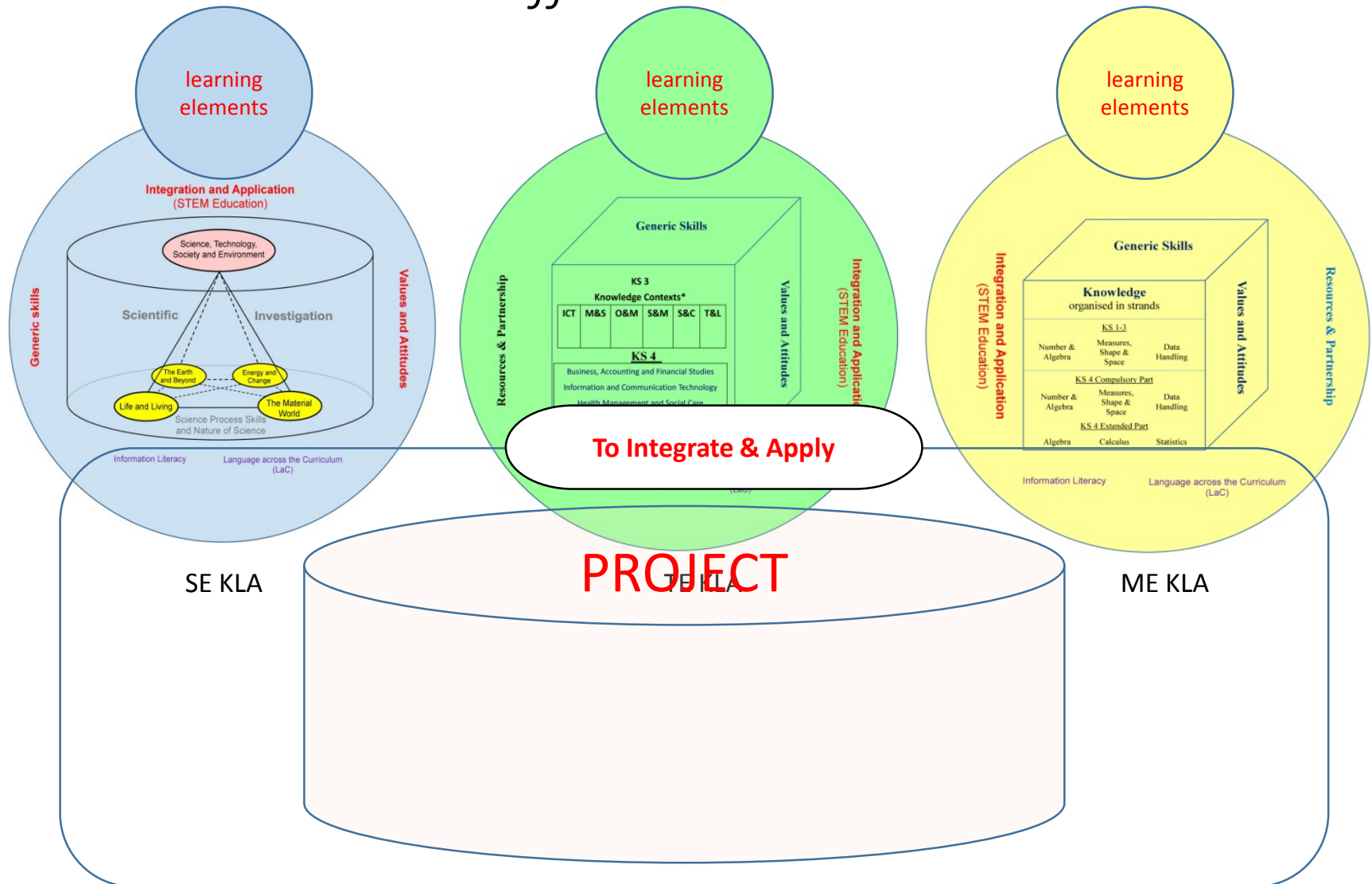
Science  
Education

Errors

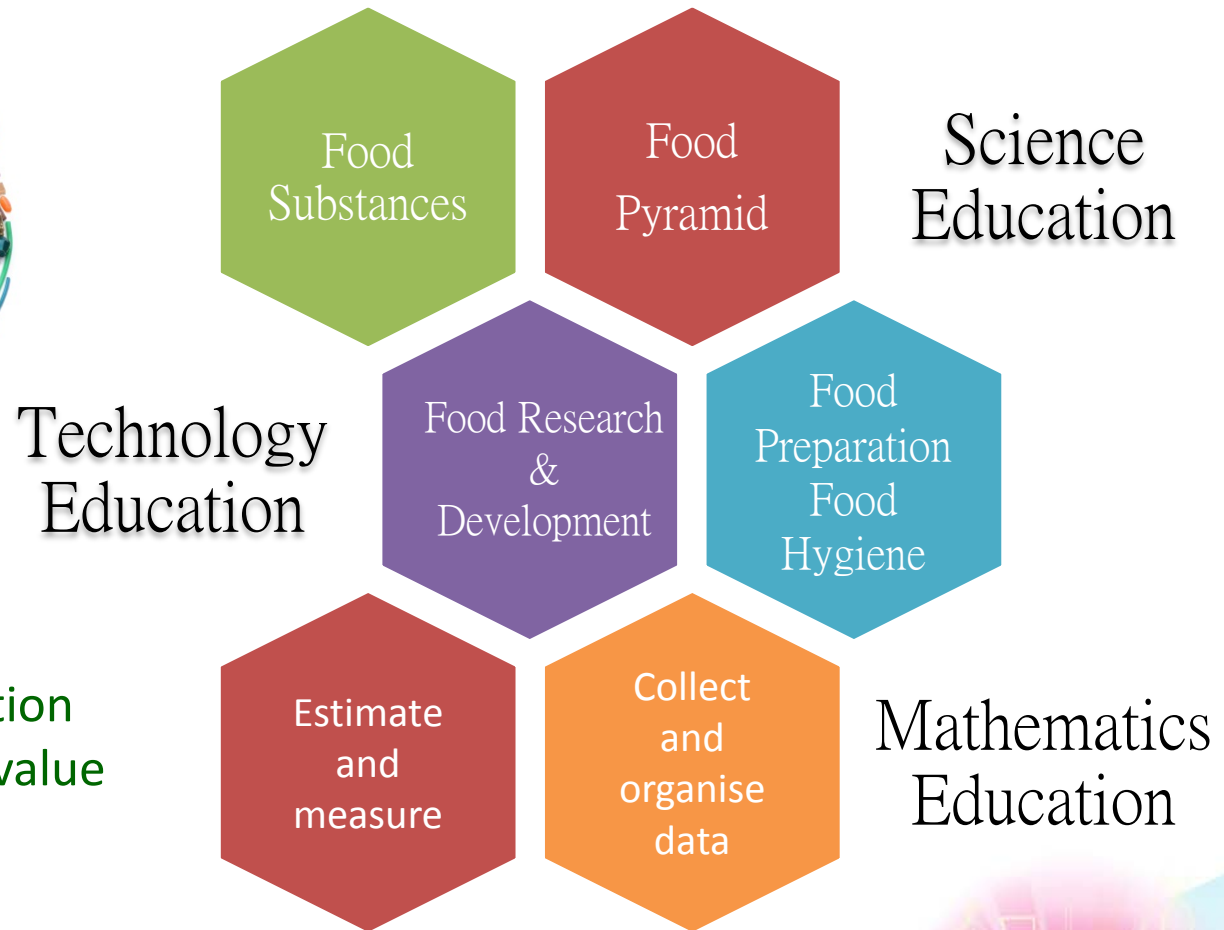


# Approach Two

Projects integrating relevant learning elements of different KLA



# Healthy Diet



- Design menu
- Design mobile application for calculating calorie value
- Food research and development



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

- Discussion with Principal, TE coordinator and TE teachers
- Alignment with School Development Plan & School Curriculum Plan
- Curriculum Planning - TE School-based Curriculum
- Collaborative Lesson Preparation
- Learning Objectives, Teaching Contents & Assessment