

# Understanding and Interpreting the ICT Curriculum

CDI020131172

24 June 2013



# Technology Education

- How human beings **solve** their daily **problems**
- How the **processes** involved can be **replicated and transferred** to solve new problems
- Leading to a **quality life with positive attitude**



# ICT Curriculum and Assessment Guide

## 資訊及通訊科技課程及評估指引

Technology Education KLA

Information and Communication Technology Curriculum and Assessment Guide (S4-6) 2007

Technology Education  
Key Learning Area

**Information and  
Communication Technology**  
Curriculum and Assessment Guide  
(Secondary 4 - 6)

Jointly prepared by the Curriculum Development Council and  
the Hong Kong Examinations and Assessment Authority

Recommended for use in schools by the Education and Manpower Bureau  
HKSARG  
2007

科技教育學習領域

資訊及通訊科技課程及評估指引 (中四至中六)

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科技教育學習領域

**資訊及通訊科技**  
課程及評估指引  
(中四至中六)

課程發展議會與香港考試及評核局聯合編訂

香港特別行政區政府教育統籌局建議學校採用  
二零零七年

# The Importance of ICT

- Does not lie in the technology itself
- But its enabling function for
  - **Access** to knowledge and information
  - **Communication** in economic and social interaction

# Design Principles

- Students' prior knowledge/experiences/skills
- Balance between breath and depth
- Significance of both theoretical and applied learning
- Balance between essential and diversity
- Close alignment curriculum, pedagogy and assessment
- Multiple pathways leading to further studies and in workplace

# Curriculum Aims

- provide students with:
  - essential knowledge, concepts and applications of information, communication and computer systems
  - problem-solving and communication skills, and encourage them to think critically and creatively
  - competent, effective, discriminating, ethical and confident users of ICT, so as to support their lifelong learning
  - opportunities to appreciate the impact of ICT on our knowledge-based society, so as to nurture in them positive values and attitudes to this area

# Learning Targets

## Knowledge and Understanding

- interrelationship among hardware, software and data

## Skills

- use a range of applications software effectively, ethically and with discrimination to support information-processing and problem-solving
- demonstrate an understanding of methods for analysing problems, and planning and implementing solutions using ICT

## Values and Attitudes

- appreciate how information literacy and the sharing of knowledge using ICT influence decision-making and shape our society
- develop responsible and positive attitudes towards the use of ICT



# Curriculum Framework of ICT (to be revised)

## The Compulsory Part (165 hours)

A. Information Processing	(64 hours)	B. Computer System Fundamentals	(25 hours)
C. Internet and its Applications	(28 hours)	D. Basic Programming Concepts	(20 hours)
E. Social Implications	(28 hours)		



**School-based  
Assessment**  
(30 hours /  
To be decided)

## The Elective Part (75 hours)

(Choose one only)

A. Databases	B. Data Communications and Networking	C. Multimedia Production and Web Site Development	D. Software Development
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# Public Assessment

- Paper 1 (Compulsory part) 55%, 2 hours
- Paper 2 (Elective part) 25%, 1.5 hours
  - 2A Databases
  - 2B Data Communications & Networking
  - 2C Multimedia Production & Web Site Dev.
  - 2D Software Dev.
- School-based Assessment (SBA) 20%
  - Design & Implementation (25/60)
  - Practical ICT Skills (10/60)
  - Conclusion & Discussion (10/60)
  - Project Management (15/60)

# Information provided for each module

- **Introduction** provides an overview of the module/option approach
- **Learning Objectives** specify what extent/level students will learn
- **Topics** are numbered and sub-topics are included with suggested time allocation
- **Learning Outcomes** embody the essential contents of each learning topic in detail
- **Remarks** serve three purposes :
  1. provide further information such as the depth and breadth of the learning elements
  2. alert teachers to the opportunities for fostering the most dominant generic skills
  3. serve as teaching notes

# Action verbs to indicate the thinking or practical skills

## Examples of action verbs

Be aware of, know, define, write, list,  
relate, recognise, state

Discuss, describe, explain, identify,  
demonstrate, apply, convert

Distinguish, analyse, compare, evaluate,  
organise, prepare, test

Develop, plan, design, construct, process,  
integrate, implement

## Students need to demonstrate

The recall and understanding of specific  
terms or facts and simple concepts.

The application of declarative  
knowledge and practical skills in  
particular contexts.

The analysis of materials or systems into  
their constituent parts and the  
recognition of relationships between  
parts.

The synthesis of concepts and skills  
from different areas into a plan for  
solving a problem or reaching a  
conclusion, and the transfer of learned  
concepts and skills to new scenarios /  
situations.

# Example: Internet Services and Applications

- **Formulate** an **effective strategy** for searching for specific information on the Web by using search-engines, and **critically analyse** the sources of information

# Order and Organisation of Content

- The order of the modules and options is **arbitrary and immaterial**
- The organisation of individual module or option represents **one possible way** of organising the curriculum content
- Teachers may structure and design teaching schemes **according** to their **school situations, student needs, interests and abilities**

# Supports for ICT

- Glossary of Terms Commonly Used
- Reviewed Textbook (compulsory part) on Recommended Textbook List
- Teacher PD Programmes
- L&T Resource Packages for elective part & core part
- *Edblog* : [edblog.hkedcity.net/te\\_ict\\_e](http://edblog.hkedcity.net/te_ict_e)
- *e-platform*: [sfcs.edb.hkedcity.net](http://sfcs.edb.hkedcity.net)




# Glossary of Terms Commonly Used

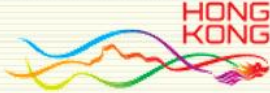
## 常用英漢及漢英辭彙

<http://www.edb.gov.hk>

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




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Print

### 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
Learning and Teaching Resources	<a href="#">Read More</a>
Seminar & Workshop Handouts	<a href="#">Read More</a>
Reference Books	 (245KB)
Resources on Web	 (262KB)
Glossary	<a href="#">Read More</a>

**Computer Education**

Description	View or download
Learning and Teaching Resources	<a href="#">Read More</a>
Seminar & Workshop Handouts	<a href="#">Read More</a>
Reference Books	<a href="#">Read More</a>



# Glossary of Terms Commonly Used

## 常用英漢及漢英辭彙



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Insider's Perspectives

School Information

iPASS

E-APP

New Milestone of Kindergarten Education

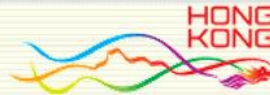
持續學習  
Continuous Education  
 lifelong Learning

### An English-Chinese and Chinese-English Glossary of Terms Commonly Used in the Teaching of Information and Communication Technology in Secondary Schools

中學  
資訊及通訊科技科  
常用英漢及漢英辭彙

Technology Education Section, Curriculum Development Institute  
Education Bureau, HKSARG  
2007



香港特別行政區政府教育局  
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ICT,

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Home » ICT\_MT\_01\_E

C&A Guide

**ICT C&A Guide**  
**Elective Part:**

**A. Databases**

**B. Data Communications and Networking**

**C. Multimedia Production and Web Site Development**  
a. Multimedia Production  
b. Web Site Development  
Supplementary Materials  
Other Resources  
Forum & Exchange Corner

**D. Software Development**

**School-based Assessment**

**Seminars/Workshops  
Reference Materials**

**ASCA C&A Guide**  
**Computer Systems**

**Office & Internet Applications**

**Databases**

**SOHO Networking**

**Office &**

### C. Multimedia Production and Web Site Development

About the Resource Package

[ICT\\_About](#)

Overview of the Package

[ICT\\_TP\\_Overview](#)

Teaching Activity Summary

[ICT\\_TPS\\_PartA](#)

#### a. Multimedia Production (Part A)

##### *i. Multimedia Applications (Chapter 1)*

#### Chapter 1.1 What is Multimedia

[ICT\\_Ch1.1\\_Unit](#)

[ICT\\_Ch1.1\\_Unit\\_animation\(WhatIsMultimedia\)](#)

[ICT\\_HO\\_Ch1.1](#)

[ICT\\_HO\\_Ch1.1\\_video01](#)

[ICT\\_HO\\_Ch1.1\\_video02](#)

[ICT\\_RP\\_Ch1.1](#)

[ICT\\_USA\\_Ch1.1](#)

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<http://www.hkedcity.net/edbosp/>

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技術查詢

中文	中國語文教育	als	English Language Education
數學	數學教育	科學	科學教育
科技	科技教育	個人、社會及人文	個人、社會及人文教育
體育	體育	藝術	藝術教育
小學常識	小學常識科	高中通識	高中通識教育科
跨學科 / 學習領域	跨學科 / 學習領域		

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[教城主頁](#) > [教育局一站式學與教資源平台](#) > [學與教資源](#)

### 科技教育



- 首頁
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- 學與教資源**
- 評估課業參考站
- 教師培訓
- 聯絡我們

#### 學與教資源

#### 搜尋資源

#### 瀏覽資源

<b>第三學習階段</b> <ul style="list-style-type: none"> <li>共通課題</li> <li>資訊和通訊科技</li> <li>物料和結構</li> <li>營運和製造</li> <li>策略和管理</li> <li>系統和控制</li> <li>科技與生活</li> </ul>	<b>全部</b>	<b>科技教育 (920) &gt; 第三學習階段 (771) &gt; 共通課題 (354)</b> <table border="1"> <tr> <td>科技與社會 (130)</td> <td>安全與健康 (33)</td> <td>資訊處理與演示 (91)</td> </tr> <tr> <td>法律問題 (49)</td> <td>保護衣物 (3)</td> <td>電腦及電腦操作 (12)</td> </tr> <tr> <td>道德問題 (13)</td> <td>工具、用具及化學品的選擇、使用及保養 (17)</td> <td>資訊科技的應用 (13)</td> </tr> <tr> <td>環境問題 (18)</td> <td>工作態度 (5)</td> <td>資訊處理及資訊處理工具 (63)</td> </tr> <tr> <td>健康問題 (33)</td> <td>工作區的良好管理 (17)</td> <td>有關使用資訊科技的問題 (5)</td> </tr> <tr> <td>生活模式的改變 (34)</td> <td></td> <td></td> </tr> </table>	科技與社會 (130)	安全與健康 (33)	資訊處理與演示 (91)	法律問題 (49)	保護衣物 (3)	電腦及電腦操作 (12)	道德問題 (13)	工具、用具及化學品的選擇、使用及保養 (17)	資訊科技的應用 (13)	環境問題 (18)	工作態度 (5)	資訊處理及資訊處理工具 (63)	健康問題 (33)	工作區的良好管理 (17)	有關使用資訊科技的問題 (5)	生活模式的改變 (34)		
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生活模式的改變 (34)																				
<b>第四學習階段</b> <ul style="list-style-type: none"> <li>設計與應用</li> <li>基本設計元素</li> <li>設計過程</li> <li>設計上的考慮</li> <li>時裝設計</li> <li>產品設計</li> <li>成本效益分析</li> </ul>	<b>全部</b>	<table border="1"> <tr> <td>設計與應用 (92)</td> <td>消費者教育 (24)</td> </tr> <tr> <td>基本設計元素 (38)</td> <td>消費者的權益及選擇 (19)</td> </tr> <tr> <td>設計過程 (19)</td> <td>消費行為所產生的影響 (5)</td> </tr> <tr> <td>設計上的考慮 (35)</td> <td></td> </tr> <tr> <td>時裝設計 (26)</td> <td></td> </tr> <tr> <td>產品設計 (27)</td> <td></td> </tr> <tr> <td>成本效益分析 (1)</td> <td></td> </tr> </table>	設計與應用 (92)	消費者教育 (24)	基本設計元素 (38)	消費者的權益及選擇 (19)	設計過程 (19)	消費行為所產生的影響 (5)	設計上的考慮 (35)		時裝設計 (26)		產品設計 (27)		成本效益分析 (1)					
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時裝設計 (26)																				
產品設計 (27)																				
成本效益分析 (1)																				



# Assessment Tasks Reference

## 評估課業參考站

<http://www.hkedcity.net/edbatr/>



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教育局評估課業參考站

科技教育  
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課程： 科技教育

題型：

搜尋結果 - 排序

共有 417 項評估題目 / 課業 | 顯示第 1 - 10 項

1 2 3 4 5 6 下一頁

評估題目 / 課業 1.

選擇： ☐

課程： 科技教育

科技教育 > 資訊及通訊科技(中四至中六)

科技教育 > 資訊及通訊科技(中四至中六) > 必修部分

科技教育 > 資訊及通訊科技(中四至中六) > 必修部分 > 電腦系統基礎

科技教育 > 資訊及通訊科技(中四至中六) > 必修部分 > 電腦系統基礎 > 電腦系統

題型： 简答题

難易度： 適合所有程度

提供者： 科技教育組

更新日期： 28/03/2013

關鍵字詞：

評估內容：

學校將要為每位老師購置新的電腦。假如你是其中一位老師，你會向學校建議購買桌上電腦或是筆記簿型電腦？試引用這兩種電腦的特徵來支持你的答案。

評估準則：

給學生的指示：  
所有答題內容會以其準確性、完整性、清晰性和所表達意念的相關性去評定。


參考：

# HKEAA Subject Information - ICT

## 考評局科目資訊——資訊及通訊科技

[www.hkeaa.edu.hk](http://www.hkeaa.edu.hk)

Home > HKDSE > Assessment Framework  
> Information and Communication Technology



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HKALE

**HKDSE**

HKCEE


School-based Assessment

International Recognition

BCA/TSA

LPAT

Other Exams and Assessments



### Subject Information - Subject Overview

HKDSE subjects are divided into three categories, including 24 new senior secondary subjects (4 core subjects and 20 elective subjects), Applied learning subjects and other language subjects.

**Category A: New Senior Secondary Subjects**

Core Subjects		
<a href="#">Chinese Language</a>	<a href="#">English Language</a>	<a href="#">Mathematics</a>
<a href="#">Liberal Studies</a>		

Elective Subjects		
<a href="#">Chinese Literature</a>	<a href="#">Biology</a>	<a href="#">Business, Accounting and Financial Studies</a>
<a href="#">Literature in English</a>	<a href="#">Chemistry</a>	<a href="#">Design and Applied Technology</a>
<a href="#">Chinese History</a>	<a href="#">Physics</a>	<a href="#">Health Management and Social Care</a>
<a href="#">Economics</a>	<a href="#">Science: Integrated Science</a>	<b><a href="#">Information and Communication Technology</a></b>
<a href="#">Ethics and Religious Studies</a>	<a href="#">Science: Combined Science</a>	<a href="#">Technology and Living</a>
<a href="#">Geography</a>		<a href="#">Music</a>
<a href="#">History</a>		<a href="#">Visual Arts</a>
<a href="#">Tourism and Hospitality Studies</a>		<a href="#">Physical Education</a>

**Assessment Framework of 24 new senior secondary subjects**

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**Section Focus**

**Int'l Recognition**

HKDSE level 5\*\* awarded with UCAS Tariff Points

**HKDSE**

2013 HKDSE App

- About HKDSE
- Important Dates
- Examination Timetable
- Exam Registration
- Examination Fees
- Handbook for Candidates
- Exam Regulations
- Report on Exam Irregularities
- Exam Centres
- Participating Schools
- Circulars
- Assessment Framework
- Subject Information**
- Category A: New Senior Secondary

# HKEAA Subject Information - ICT

## 考評局科目資訊——資訊及通訊科技

HKALE

HKDSE

HKCEE

School-based  
Assessment


International  
Recognition

BCA/TSA

LPAT

Other Exams  
and  
Assessments

### Category A – HKDSE Elective Subjects: Information and Communication Technology

 [Assessment Framework](#)

 [Curriculum and Assessment Guide](#)


 [Samples of Candidates' Performance](#)

 [Practice Papers](#)

 [Sample Papers](#)

 [Level Descriptors](#)

 [Other Resources](#)

 [Frequently Asked Questions](#)

#### Section Focus

##### Int'l Recognition

HKDSE level 5\*\*\*  
awarded with UCAS  
Tariff Points

##### HKDSE

2013 HKDSE App

- [About HKDSE](#)
- [Important Dates](#)
- [Examination Timetable](#)
- [Exam Registration](#)
- [Examination Fees](#)
- [Handbook for Candidates](#)
- [Exam Regulations](#)
- [Report on Exam Irregularities](#)
- [Exam Centres](#)
- [Participating Schools](#)
- [Circulars](#)
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- [Subject Information](#)
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- [Practice Papers](#)
- [School-based Assessment](#)
- [Release of Examination Results](#)
- [Marking and Processing of Marks](#)
- [Rechecking and Remarking](#)
- [Appeal Review](#)
- [Exam Report](#)



<http://www.edb.gov.hk>

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> "Technology Education - Wisdom of Life"



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### Technology Education

- Foreword
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- Poster
- Technology Education
- Design and Technology
- Health Management
- Technology Education

Remark: Distribution

For enquires, please contact the relevant school.

### Information and Communication Technology (ICT)

Citizens in the 21<sup>st</sup> century need to understand the principles and applications of information and communication technologies in order to function efficiently in the society. In order to maintain the competitive edge of the territory in the world, it is essential to develop students' interests and capabilities in information and communication technologies. Rapid advances in information and communication technologies do not only initiate economic changes and business restructuring, but also affect skills and employment, contributing significantly to economic growth and wealth creation.

Students will acquire content knowledge, practical skills and understanding of the processes involved in information and communication technologies. The curriculum focuses on helping students to apply these technologies in solving problems. It encompasses problem identification, solution and design, and the application of knowledge and skills in information and communication technologies during these processes.

The ICT curriculum prepares students with solid foundation for pathways into the workforce or further studies in the related fields. The subject also provides opportunities for the development of key generic skills such as critical thinking, communication, creativity and problem-solving in contextual and authentic settings that are relevant to students' life experiences.

- Learning ICT is fun.
- The application of information and communication technologies in daily life can improve the quality of living.



Mr Arice POON  
Managing Director  
Oracle South China & Hong Kong



Miss CHOI Sin-man  
The 17<sup>th</sup> International Olympiad  
in Informatics Silver Medalist

The ideal employee's attributes that corporate employers are looking for, can be found in students completing ICT.







# Considerations in Curriculum Management and Planning

- Statistics on NSS ICT
- Learning Goals and Emphases of Curriculum Reform

# Statistics on NSS ICT

	2012	2013
<b>No. of School Candidate</b>	8019	7759
<b>No. of Schools</b>	449	453
<b>No. of Private Candidate</b>	0	334
<b>Total</b>	8019	8093
	Candidate(School)	Candidate(School)
<b>Elective A: DB</b>	862(60)	907(55)
<b>Elective B: NW</b>	269 (25)	325(27)
<b>Elective C: MM</b>	5607 (341)	5674(367)
<b>Elective D: SD</b>	1239 (94)	1187(104)

# PDP for ICT Teachers (1)

- Understanding and Interpreting Curriculum
- Assessing Student Learning
  - Assessment Design and the Conduct of SBA
  - SBA Workshop
- Learning and Teaching Series
  - Teaching Programming in Computer Literacy (New)
  - Curriculum planning and effective use of resources in teaching Computer Literacy at the junior secondary level (New)
  - Curriculum Planning for Junior Secondary Computer Education (New)
  - NSS Learning and Teaching Strategies for the Information and Communication Technology Curriculum Series: (1) Catering for Learner's Diversity (Re-run)

# PDP for ICT Teachers (2)

- Enriching Knowledge
  - NSS Enriching Knowledge for the Information and Communication Technology Curriculum Series: (10) Database Applications, Development and Society (Re-run)
  - NSS Enriching Knowledge for the Information and Communication Technology Curriculum Series: (13) Recent Development in Systems Development (New)
- Curriculum Management and Leadership
- Other related PD programmes

# Thank you!