

Learning and Teaching Resources for Secondary Mathematics (as at Mar 2014)

	Learning and Teaching Resources	Categories	Brief Descriptions & Internet Links
1.	Mathematics Curriculum Guide (P1-P6) Year of publication: 2000	Curriculum	Current Mathematics curriculum for primary education http://www.edb.gov.hk/en/curriculum-development/kla/ma/curr/pri-math-2000.html
2.	Syllabus for Secondary Schools: Mathematics (Secondary 1-5) Year of publication: 1999	Curriculum	Current Mathematics curriculum for junior secondary education http://www.edb.gov.hk/en/curriculum-development/kla/ma/curr/sec-math-1999.html
3.	The New Senior Secondary Mathematics Curriculum and Assessment Guide (Secondary 4 - 6) Year of publication: 2007	Curriculum	Current Mathematics curriculum for senior secondary education http://www.edb.gov.hk/en/curriculum-development/kla/ma/curr/ss-math-2007.html
4.	Explanatory Notes to New Senior Secondary Mathematics Curriculum – Compulsory Part Year of publication: 2009	Explanatory notes of curriculum	The explanatory notes in the booklet further explicate the requirements of the learning objectives of the Compulsory Part (CP), the strategies suggested for the teaching of the CP, the connections and structures among different learning units of the CP, the context of development from different key stages, such as Key Stage 3, to the CP, and the curriculum articulation between the CP and the Extended Part. http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/explancp_e.pdf

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5.	Explanatory Notes to New Senior Secondary Mathematics Curriculum – Module 1 (Calculus and Statistics) Year of publication: 2009	Explanatory notes of curriculum	The explanatory notes in the booklet further explicate the requirements of the learning objectives of Module 1 (M1), the strategies suggested for the teaching of M1, the connections and structures among different learning units of M1, and the curriculum articulation between the CP and M1. http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/m1_notes_e.pdf
6.	Explanatory Notes to New Senior Secondary Mathematics Curriculum – Module 2 (Algebra and Calculus) Year of publication: 2010	Explanatory notes of curriculum	The explanatory notes in the booklet further explicate the requirements of the learning objectives of Module 2 (M2), the strategies suggested for the teaching of M2, the connections and structures among different learning units of M2, and the curriculum articulation between the CP and M2. http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/m2_eng.pdf
7.	Assessment for Learning (Secondary Mathematics) The Open-ended Questions Year of publication: 2003	Booklet	This booklet introduces the idea of assessment for learning, examples of open-ended questions, tips on creating and scoring open-ended questions, and feedbacks for students. http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/s/open-ended_e.pdf
8.	Hong Kong Mathematics Olympiad Past Papers (Volume 1) & (Volume 2) Year of publication: 2009 Author: Hong Kong Mathematics Olympiad Organizing Committee	Booklet	The books contain the past papers of the Hong Kong Mathematics Olympiad. Teachers can use the past papers for training or as enrichment materials in mathematics lessons. The digital version of the books is not uploaded to the Internet. Past papers of the Hong Kong Mathematics Olympiad can be found in the following website: http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/sa/hkmo-papers.html

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9.	School Mathematics Newsletter (Issue 17) Year of publication: 2011	Booklet	The booklet contains essays on mathematics education and introduces the activities and professional development courses organised by the Mathematics Education Section. Issues 1 to 16 can also be downloaded through the following webpage: http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/smn.html
10.	Learning and Teaching Packages on S1-5 Mathematics : Vol.1 Use of Information Technology Year of publication: 2001	Resources package	The package provides teachers with resource materials for teaching mathematics through the use of Information Technology. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/it_e/IT_e%20index.htm
11.	Learning and Teaching Packages on S1-5 Mathematics : Vol.2 Catering for Learner Differences Year of publication: 2001	Resources package	The package provides teachers with more elaborated information of the strategies in catering for learner differences. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/ld_e/LD_e%20index.htm
12.	Learning and Teaching Packages on S1-5 Mathematics : Vol.3 Fostering High Order Thinking Skills Year of publication: 2001	Resources package	The package provides teachers with more elaborated information of the strategies in helping students to develop the higher order thinking skills. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/hots_e/HOTS_e%20index.htm
13.	Learning and Teaching Packages on S1-5 Mathematics : Vol.4 Number and Algebra Dimension Year of publication: 2002	Resources package	The package provides teachers with resource materials for teaching the Number and Algebra Dimension in Key Stage 3. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/NA_e/NA_e%20index.htm
14.	Learning and Teaching Packages on S1-5 Mathematics : Vol.5 Measures, Shape and Space Dimension Year of publication: 2002	Resources package	The package provides teachers with resource materials for teaching the Measures, Shape and Space Dimension in Key Stage 3. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/MSS_e/MSS_e%20index.htm

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15.	Learning and Teaching Packages on S1-5 Mathematics : Vol.6 Data Handling Dimension Year of publication: 2002	Resources package	The package provides teachers with resource materials for teaching the Data Handling Dimension in Key Stage 3. http://cd1.edb.hkedcity.net/cd/math/en/ref_res/MATERIAL/DH_e/DH_e%20index.htm
16.	Resources Package on More about Areas and Volumes Year of publication: 2011	Resources package	The package provides teachers with nets of models for the teaching of topics in the learning unit “More about Areas and Volumes”. The nets of the models can be downloaded through the following webpages: http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/js/fold_pyramid.pdf http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/js/one_third.pdf http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/js/one_sixth.pdf http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/js/pyramid.pdf http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/js/pyramid_similar.pdf
17.	Symmetry in 3D Figures Year of publication: 2011	Resources package	The package provides teaching materials (both teacher version and student version) for the teaching of reflectional symmetry and rotational symmetry. Related worksheets and nets of solids can be downloaded through the following webpage: http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/js/symmetry.html

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18.	EDB One-stop Portal for Learning and Teaching Resources	Website	<p>The resources of the website are categorised into the learning dimensions Number and Algebra; Measures, Shape and Space; and Data Handling. Learning and teaching aims, learning and teaching suggestions and teacher's notes / tips are suggested in the resources for teachers' reference.</p> <p>http://minisite.proj.hkedcity.net/edbosp-math/eng/learning_and_teaching_resources/index.html</p>								
19.	EDB Assessment Tasks Reference: Mathematics Education	Website	<p>The website contains assessment items and suggested answers on different topics. Teachers can access to and download the items through their Hong Kong Education City accounts.</p> <p>http://www.hkedcity.net/edbatr/math/</p>								
20.	Junior Secondary Mathematics	Website	<p>The website provides teachers with animations and interactive games for the learning and teaching of the following topics:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1. Approximation and error</td> <td style="width: 50%;">2. Coordinate geometry of straight lines</td> </tr> <tr> <td>3. Integral indices</td> <td>4. Introduction to coordinates</td> </tr> <tr> <td>5. Using percentages</td> <td></td> </tr> </table> <p>http://resources.edb.gov.hk/~jsmaths/broadband/flash/template/template.htm?goHelp=false&lang=ch (click "English")</p>	1. Approximation and error	2. Coordinate geometry of straight lines	3. Integral indices	4. Introduction to coordinates	5. Using percentages			
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21.	Algebra Net	Website	<p>The website provides teachers with online exercise and interactive learning tools for the learning and teaching of the following topics:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1. Number & Number System</td> <td style="width: 50%;">2. Algebraic Relations & Equations</td> </tr> <tr> <td>3. Polynomials</td> <td>4. Functions</td> </tr> <tr> <td>5. Simultaneous Equations & Inequalities</td> <td>6. Transformation</td> </tr> <tr> <td>7. Vectors</td> <td>8. More about Vectors</td> </tr> </table> <p>http://resources.edb.gov.hk/algebra/</p>	1. Number & Number System	2. Algebraic Relations & Equations	3. Polynomials	4. Functions	5. Simultaneous Equations & Inequalities	6. Transformation	7. Vectors	8. More about Vectors
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22.	Trigonometry in 3-Dimensional Space	Website	The website provides teachers with interactive tools for the explanations of concepts of angles in 3-D solids. It also provides on-line exercises. http://resources.edb.gov.hk/trigo/
23.	Basic Competency Assessment: Student Assessment (SA)	Website	The website provides schools with an additional assessment tool. It includes a web-based central assessment item bank and online assessments. The assessment items are designed according to the Basic Competency of different Key Stages. Instant reports on students' performance after computer marking are provided for teachers' reference. https://www.bca.hkeaa.edu.hk/bca/login.do?language=en&country=US
24.	Basic Competency Assessment: Territory-wide System Assessment (TSA)	Website	The websites provides all TSA past papers, marking schemes, and reports. http://www.bca.hkeaa.edu.hk/web/TSA/en/Introduction.html
25.	Web-based Learning and Teaching Support (WLTS)	Website	The website is set up by the Education Bureau. It is an integral part of the BCA project. It provides some possible problems of students and suggests follow-up actions or learning and teaching activities/materials for teachers' reference. It aims to support teachers in providing timely assistance to students who need help in achieving the Basic Competencies. http://wlts.edb.hkedcity.net/en/home/index.html
26.	ETV by EDB	Website	There are 13 and 5 Mathematics programmes for KS3 and KS4 students respectively in the website. http://resources.hkedcity.net/etv/ (select the English language and Mathematics subject , click "Search ETV")
27.	Mathematics Education Section, EDB	Website	It is the website of Mathematics Education Section. It contains curriculum documents and learning and teaching resources. http://www.edb.gov.hk/cd/math (then choose "ENG" at the top left)

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28.	Mathematics Education - Teacher Education Programmes	Webpage of Math Ed Section	The webpage provides the list of professional development courses organised by EDB in the current school year. http://www.edb.gov.hk/en/curriculum-development/kla/ma/pdp.html
29.	Seminar and Workshop Handouts (Junior secondary)	Webpage of Math Ed Section	The webpage contains reference materials of some professional development courses organised by Mathematics Education Section. http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/js/handout.html
30.	Seminar and Workshop Handouts (Senior secondary)	Webpage of Math Ed Section	The webpage contains reference materials of some professional development courses organised by Mathematics Education Section. http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/ss/handout.html
31.	Secondary Mathematics KS4 Seed Project Tryout Material : Functions and their Graphs	Webpage of Math Ed Section	The webpage contains worksheets and additional files for the topic “Functions and their Graphs” http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/ss/function.html
32.	Supplementary Notes to Senior Secondary Mathematics Curriculum (for S4 in the 2013/14 school year)	Webpage of Math Ed Section	http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/Supplementary%20Notes%20(E).pdf

Remarks

1. If teachers of S1 want to use learning and teaching resources of primary levels to consolidate the basic knowledge of their students, they may visit the website <http://www.edb.gov.hk/en/curriculum-development/kla/ma/res/pri/teaching.html>
2. To download the “Entrance Requirements of University Grants Committee-funded Institutions under the New Academic Structure”, please visit the following website and find the link in the paragraph titled “Entrance Requirements”.

<http://334.edb.hkedcity.net/EN/pathways-01.php> or

http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/Entrance%20Requirements%20on%20Math_UGC.pdf

Prepared by Mathematics Education Section, EDB