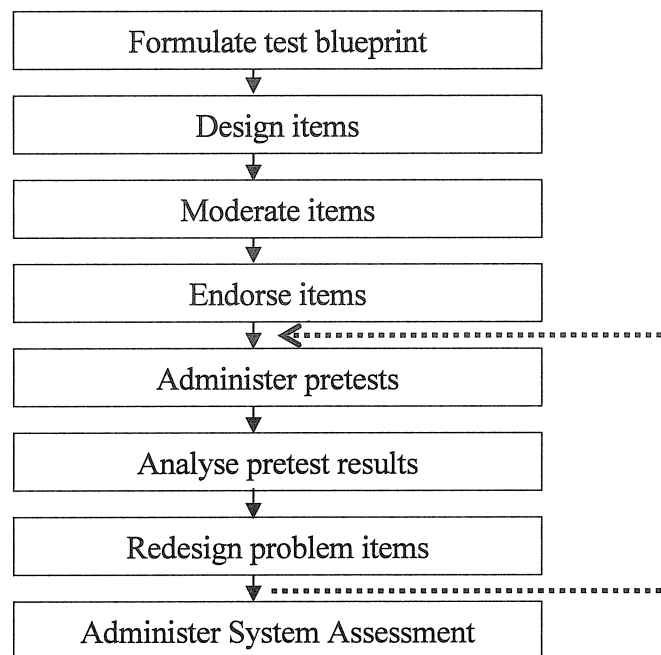


## 2. SURVEY DESIGN

### *The Development Process*

The process used in the TSA 2006 was based on the development design used in TSA 2004. Each of the tests making up the TSA is designed to measure a set of basic competencies. These are set out in the Basic Competency (BC) documents of the Curriculum Development Institute (CDI). These documents provide descriptors that encompass four skills in the Chinese Language and English Language. The descriptors for English Language are organised under three interrelated strands: Knowledge, Interpersonal and Experience. Concepts, knowledge, skills and applications are covered in Mathematics in the following four dimensions: Number, Measures, Shape & Space and Data Handling for P.3, with the addition of Algebra for P.6 and S.3.

The process in developing the assessments can be summarised as follows:



## ***The Development of the Assessments***

### **Working Groups**

For each of the three subjects, a working group consisting of serving teachers, staff from the HKEAA and the CDI was established. Each group drew up ‘test blueprints’ covering all assessable Basic Competencies ensuring coverage across different contexts, text types and item types. Each group also made decisions regarding the number of items and the duration of each sub-paper. It was decided that a given student be required to attempt only one sub-paper in each subject. Since a reduction in assessment time was recommended in the TSA Report 2005, the length of each sub-paper at P.3 and P.6 was shortened by 5 minutes. For P.3, each sub-paper was 40 minutes in duration for English Language and Mathematics and 85 minutes for Chinese Language. For P.6, each sub-paper was 110, 80 and 50 minutes in duration for Chinese Language, English Language and Mathematics respectively. For S.3, each sub-paper was 135, 90 and 65 minutes in duration for Chinese Language, English Language and Mathematics respectively. Full- and part-time item writers as well as seconded teachers were appointed to assist in the development of necessary items. Meetings were conducted to ensure item quality and to endorse moderated items.

### **Oral Exemplars**

Students’ oral performances in both Chinese and English Languages at P.3 and P.6 were randomly collected from the previous two years (2004 and 2005) and used as exemplars for oral assessors’ workshops. About 24 S.3 students from each school (a total of 10 schools) were randomly selected to take a mock assessment in June and July 2005. In April and May 2006, workshops for oral assessors (Chinese and English Languages) for secondary and primary levels were conducted.

### **Pretesting**

In the pretesting, a large number of items were developed and an adequate sampling of students participated. Overlapping items were compiled to equate each sub-paper. Equating of test scores was used to compare the performance of students taking different sub-papers. Schools were identified for participation in the pretesting using a stratified sample to ensure a representative distribution of schools ranked by student ability.

Pretesting for P.3 was carried out with students who had just commenced P.4 and pretesting for P.6 was carried out with S.1 students. Pretesting for S.3 was carried out with S.3 students in June and those who had just commenced S.4 in September. All items were pretested to ensure their suitability, time required to complete them and the appropriateness of the marking schemes.

A total of 120 schools participated in the pretesting, which took place in May and June and from late September to early October 2005. Items were revised on the basis of the results of the pretesting.

The results of the pretesting were provided to the working groups so that they could evaluate the quality of all items and initiate rewriting or redesigning of items where necessary. At the end of the process, a final set of items was assembled into sub-papers for each subject. The number of items on the various sub-papers is summarised in Table 2.1. These numbers include several overlapping items that appear in more than one sub-paper to enable equating of test scores.

**Table 2.1a Number of Items and Score Points for P.3**

Subject	No. of Items (Score Points)				
	Paper 1	Paper 2	Paper 3	Paper 4	Total*
<b>Chinese Language</b>					
Written Paper					
Listening	13(13)	14(16)	--	--	27(29)
Reading	22(24)	22(25)	22(25)	--	50(55)
Writing	2(28)	2(28)	2(28)	--	5(28)
Audio-visual	13(18)	12(13)	--	--	21(26)
Total	50(83)	50(82)	24(53)	--	103(138)
Speaking					
Storytelling	2(21)	2(21)	2(21)	2(21)	8(21)
Group Interaction	1(10)	1(10)	1(10)	1(10)	4(10)
<b>English Language</b>					
Written Paper					
Listening	18(18)	17(17)	16(16)	--	34(34)
Reading	24(24)	27(27)	27(27)	--	55(55)
Writing	2(8)	2(8)	2(7)	--	4(15)
Total	44(50)	46(52)	45(50)	--	93(104)
Speaking					
Reading Aloud	1(4)	1(4)	1(4)	1(4)	4(4)
Personal Experiences (short answers)	1(4)	1(4)	1(4)	1(4)	4(4)
Picture Descriptions (short answers and pronunciation)	1(6)	1(6)	1(6)	1(6)	4(6)
Spontaneous Language Use	1(2)	1(2)	1(2)	1(2)	1(2)
<b>Mathematics</b>					
Written Paper					
Number	16(20)	15(22)	16(23)	16(24)	48(68)
Measures	10(20)	10(19)	9(17)	7(15)	32(60)
Shape and Space	8(18)	9(19)	9(17)	10(19)	27(55)
Data Handling	2(5)	2(5)	2(5)	3(7)	7(17)
Total	36(63)	36(65)	36(62)	36(65)	114(200)

\* Items that appear in different sub-papers are counted once only.

**Table 2.1b Number of Items and Score Points for P.6**

Subject	No. of Items (Score Points)				
	Paper 1	Paper 2	Paper 3	Paper 4	Total*
<b>Chinese Language</b>					
Written Paper					
Listening	12(12)	12(16)	--	--	24(28)
Reading	20(26)	20(21)	20(26)	--	42(49)
Writing	2(28)	2(28)	2(28)	--	4(28)
Audio-visual	14(18)	14(18)	--	--	23(30)
Total	48(84)	48(83)	22(54)	--	93(135)
Speaking					
Storytelling	1(21)	1(21)	1(21)	1(21)	4(21)
Presentation	1(21)	1(21)	1(21)	1(21)	4(21)
Group Discussion	1(10)	1(10)	1(10)	1(10)	4(10)
<b>English Language</b>					
Written Paper					
Listening	24(24)	23(23)	26(26)	--	51(51)
Reading	37(37)	36(36)	37(37)	--	81(81)
Writing	2(7)	2(7)	2(7)	--	4(14)
Total	63(68)	61(66)	65(70)	--	136(146)
Speaking					
Reading Aloud	1(4)	1(4)	1(4)	1(4)	4(4)
Teacher-Student Interaction	1(7)	1(7)	1(7)	1(7)	4(7)
Presentation	1(11)	1(11)	1(11)	1(11)	4(11)
<b>Mathematics</b>					
Written Paper					
Number	22(29)	21(32)	22(32)	20(30)	66(94)
Measures	9(15)	10(16)	$9\frac{1}{2}$ (16)	$11\frac{2}{3}$ (22)	$31\frac{1}{6}$ (54)
Shape and Space	5(11)	4(9)	$3\frac{1}{2}$ (6)	$3\frac{1}{3}$ (8)	$15\frac{5}{6}$ (34)
Data Handling	3(8)	4(8)	4(9)	3(6)	13(30)
Algebra	3(5)	3(5)	3(5)	4(5)	12(19)
Total	42(68)	42(70)	42(68)	42(71)	138(231)

\* Items that appear in different sub-papers are counted once only.

**Table 2.1c Number of Items and Score Points for S.3**

Subject	No. of Items (Score Points)				
	Paper 1	Paper 2	Paper 3	Paper 4	Total*
<b>Chinese Language</b>					
Written Paper					
Listening	14(15)	10(16)	--	--	24(31)
Reading	20(23)	20(25)	19(23)	--	46(54)
Writing	2(30)	2(30)	2(30)	--	6(30)
Audio-visual	9(9)	--	--	--	9(9)
Total	45(77)	32(71)	21(53)		85(124)
Speaking					
Presentation	2(16)	2(16)	2(16)	2(16)	8(16)
Group Discussion	2(16)	2(16)	2(16)	2(16)	8(16)
<b>English Language</b>					
Written Paper					
Listening	24(24)	22(22)	22(22)	--	44(44)
Reading	33(33)	34(34)	32(32)	--	81(81)
Writing	1(12)	1(12)	1(12)	--	3(12)
Total	58(69)	57(68)	55(66)	--	128(137)
Speaking					
Presentation	2(14)	2(14)	2(14)	2(14)	8(14)
Group Interaction	2(6)	2(6)	2(6)	2(6)	8(6)
<b>Mathematics</b>					
Written Paper					
Number and Algebra	20 (24)	21 (27)	21 (29)	17 (24)	62 (80)
Measures, Shape and Space	24 (33)	24 (33)	23 (30)	27 (35)	71 (96)
Data Handling	7 (12)	7 (12)	8 (11)	7 (12)	22 (35)
Total	51 (69)	52 (72)	52 (70)	51 (71)	155(211)

\* Items that appear in different sub-papers are counted once only.