



UNIVERSITY *of* CAMBRIDGE  
International Examinations

# Defining Assessment Objectives for SBA

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## What will SBA look like?

- Tests?
- Homework?
- Coursework?
- Monthly / end of topic / every semester?
- How can we make sure that it is formative?  
*(Close the gap between what the student knows and what they need to know)*
- What will the assessment specification look like?



## What is the assessment specification used for?

- To define skills that are tested
- To ensure continuity across schools in tests and tasks
- To use to report back on student progress
- To give an SBA score for year 7 and 8 which is carried forward for SPE



## Examples of Assessment specifications

- O-level syllabus
- National Curriculum levels



## O-level Assessment Objectives

The examination will test the ability of candidates to:

- 1. recognise the appropriate mathematical procedures for a given situation;
- 2. perform calculations by suitable methods, with and without a calculating aid;
- 3. use the common systems of units;
- 4. estimate, approximate and use appropriate degrees of accuracy;
- 5. interpret, use and present information in written, graphical, diagrammatic and tabular forms;
- 6. use geometrical instruments;



## O-level Assessment Objectives

- 7. recognise and apply spatial relationships in two and three dimensions;
- 8. recognise patterns and structures in a variety of situations and form and justify generalisations;
- 9. understand and use mathematical language and symbols and present mathematical arguments in a logical and clear fashion;
- 10. apply and interpret Mathematics in a variety of situations, including daily life;
- 11. formulate problems into mathematical terms, select, apply and communicate appropriate techniques of solution and interpret the solutions in terms of the problems.



## National Curriculum

Divided into 4 attainment targets

- Mathematical processes and applications
- Number and algebra
- Geometry and measures
- Handling data

Each attainment target sub-divided into 8 levels



# National Curriculum level descriptors

## Level 4

Pupils use their understanding of place value to multiply and divide whole numbers by 10 or 100. When solving number problems, they use a range of mental methods of computation with the four operations, including mental recall of multiplication facts up to 10 t 10 and quick derivation of corresponding division facts. They use efficient written methods of addition and subtraction and of short multiplication and division. They recognise approximate proportions of a whole and use simple fractions and Percentages to describe these. They begin to use simple formulae expressed in words.



# National Curriculum level descriptors

## Level 5

Pupils use their understanding of place value to multiply and divide whole numbers and decimals. They order, add and subtract negative numbers in context. They use all four operations with decimals to two places. They solve simple problems in solving ratio and direct proportion. They calculate fractional or percentage parts of quantities and measurements, using a calculator where appropriate. They construct, express in symbolic form and use simple formulae involving one or two operations. They use brackets appropriately. They use and interpret coordinates in all four quadrants.



## Assessment specification for SBA

- Based on key skills taken from schemes of work
- Series of **assessment objectives**
- Each assessment objective divided into 5 **levels** of difficulty



## **Assessment Objectives and levels**

- The assessment objectives are a group of skills against which pupils will be assessed.
- There will be approximately 10 Assessment Objectives for year 7 and 8 in total.
- Each objective will cover one key area of maths, e.g. measures.
- All 10 Assessment Objectives will cover the entire scheme of work for year 7 and 8.



## Example of an Assessment Objectives

- Measures

This could contain all the work on length, mass, and capacity.

It would use unit 4 (measures and money) in year 7 to define the content in the levels



# Final layout

	Level 1	Level 2	Level 3	Level 4	Level 5
AO1					
AO2					
AO3					
AO4					
AO5					
AO6					
AO7					
AO8					
AO9					
AO10					



## Task 1

- Look at the units in the schemes of work. Divide them up into 10 assessment objectives. You will need to combine the scope and development of several units in order to do this.

Year 7	Year 8
1. Factors and multiples	1. Everyday mathematics
2. Real Numbers	2. Algebra 2
3. Approximation and estimation	3. Indices and standard form
4. Measures and money	4. Pythagoras' theorem
5. Algebra 1	5. Introduction to trigonometry
6. Introduction to geometry	6. Rectangular co-ordinates and graphs
7. Polygons	7. Graphs of equations
8. Perimeter, and area	8. Co-ordinate geometry
9. Ratio, rate and proportion	9. Surface area and volume
10. Percentage	
11. Statistics	





## Task 2

- Using the list of Assessment Objectives you suggested, discuss which objectives you think should be contained in the final list of 10.
- Also list the units you think could be used to put in the content of each level.

