Template for CBQ units

Unit	**Data Representation and Manipulation for IT & Telecoms 1**
SSC Code	DRM1
SQA Code	H3B8 04
SCQF Level	5
SCQF Credit Value	8
Unit summary	

Learning Outcomes The learner will:	Assessment Criteria
1. Manipulate real numbers and integers	1.1 Describe the difference between real numbers and integers 1.2 Express numbers in power and scientific notation 1.3 Perform arithmetic on numbers in power and scientific notation including multiplication and division of powers 1.4 Round real numbers and estimate the resulting error 1.5 Describe how real numbers and integers are represented in computer memory
2. Use co-ordinate systems and vectors, and linear transformations	2.1 Describe two dimensional co-ordinate systems 2.2 Represent simple shapes by finding the co-ordinates of the vertices 2.3 Describe vectors 2.4 Produce the polar representation of vectors 2.5 Offset and scale shapes described by co-ordinates 2.6 Convert between linear and polar co-ordinates 2.7 Describe co-ordinate systems used in programming output devices

3. Use simple functions and basic algebraic operations	3.1 Express simple problems as mathematical equations
	3.2 Simplify and change the subject of simple equations
	3.3 Describe the concept of a function
	3.4 Obtain the equation of a straight line from a graph
	3.5 Describe the basic properties of a circle and triangle
	3.6 Apply trigonometric and inverse trigonometric functions
4. Apply Boolean algebra to problem situations	4.1 Describe how binary states can be used to represent physical systems
	4.2. Identify and label the inputs and outputs of a binary representation
	4.3 Produce a truth table corresponding to a binary representation
	4.4 Express a truth table as a Boolean equation
	4.5 Simplify a Boolean equation using algebraic methods
Additional information about the unit	
Guidance on approaches to assessment	Further guidance is set out in the CBQ Assessment principles developed by e-skills UK and agreed by the Joint Awarding Body Forum.
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards	This unit is based on the e-skills UK NOS for IT professionals (PROCOM) available from www.e-skills.com/nos
Location of the unit within the subject/sector classification system	IT Professional
Name of the organisation submitting the unit	e-skills UK