

**408/1**

Original:  
1989

Revised:  
2001



Curriculum  
Council

# PHYSICAL SCIENCE

(Year 11 D408 & 12 E408)

## Grade-Related Descriptors





## GRADE-RELATED DESCRIPTORS

### THE GRADING PROCESS

The current model for assigning grades at the conclusion of a subject is “standards-referenced”. In such a system each student’s performance in a subject is considered with reference to a set of predetermined standards at each grade level. The “predetermined standards” are defined through the use of grade-related descriptors.

Grade-related descriptors aim to capture and describe (as explicitly as possible and in relatively broad terms) those behaviours expected to be typically displayed by students at each grade level for each subject. For teachers they are a *point of reference* against which they must match their professional judgment in determining students’ final grades.

### FEATURES OF GRADE-RELATED DESCRIPTORS

As a general principle, grade-related descriptors should:

- summarise the *general characteristics* of student performance at each level of achievement
- express, in *positive terms*, what a student knows, understands and is able to do
- *clearly define* on a continuum of performance the level of proficiency for *all grades* (A, B, C, D and E)
- be readily *usable* by teachers in making judgments about final grades to be assigned
- provide a ‘*target*’ for students in their efforts to obtain various grades
- be developed with reference to student work samples as *source material* at each grade level
- relate directly to the content of the course

### USING GRADE-RELATED DESCRIPTORS

In planning the assessment program and developing each component task teachers will need to ensure that:

- the nature of each task takes account of the ways that students typically develop over the period of studying the subject
- the rubric for numerical assessment (marking key) for each task is designed with reference to the grade-related descriptors.
- each task that counts towards the awarding of a grade provides students with the opportunity to demonstrate achievement across the full range of performance described in the relevant section/objective of the grade-related descriptors.

The *critical use* of grade-related descriptors is to assist teachers in making comparable judgments about the grades to be awarded at the conclusion of a subject. They do not stand alone. They are *one of a number* of mechanisms available to teachers in deciding summative assessments to be reported to Curriculum Council. They are best used as a point of reference in determining cut-offs after the evaluation of the assessment data collected.

When applying grade-related descriptors, it is also necessary to note that an A student, for example, need not achieve an ‘A’ on all objectives. Teachers will develop a *profile* of achievement of their students across different aspects of the subject and must themselves, with reference to exemplars and moderation procedures, make the *final judgment* of the grade achieved.

**PHYSICAL SCIENCE – YEAR 11 AND 12**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>LEARNING OUTCOMES</b>	<b>The Student:</b>	<b>The Student:</b>	<b>The Student:</b>	<b>The Student:</b>	<b>The Student:</b>
<p><b>Cognitive -Knowledge (50-55%)</b>                      Recalls and comprehends scientific facts concepts and principles.                      Understands scientific concepts and conceptual schemes.</p>	<p>Recalls most factual material.</p> <p>Describes, outlines and explains in a thorough, organised and consistent manner.</p>	<p>Can recall a majority of the factual information.</p> <p>Describes, outlines and explains in an original manner.</p>	<p>Can recall about half the factual information.</p> <p>Briefly outlines, describes and explains knowledge and ideas.</p>	<p>Recalls limited factual information.</p> <p>Attempts to describe, outline, explain, but with limited success.</p>	<p>Frequently has difficulty recalling more than isolated facts.</p> <p>Has difficulty outlining, explaining, describing in more than one sentence</p>
<p><b>Cognitive -Process Skills (30-35%)</b>                      Applies knowledge qualitatively and quantitatively.                      Makes reasoned judgements.                      Explains relationships between Science, Technology and Society.                      Applies a range of methods of science.                      Uses scientific data to solve problems.                      Designs experiments.                      Organises information and ideas.                      Formulates and communicates ideas.</p>	<p>Applies all knowledge to identify, classify, predict, design, infer etc.                      Proficient in all intellectual skills                      Appreciates the investigative nature of science.</p>	<p>Shows proficiency in most intellectual skills, eg identify, classify, predict, design, infer.                      Able to apply knowledge to new situations.</p>	<p>Although some difficulty is experienced, the student is usually able to apply knowledge, to identify, classify, predict, design, infer, etc.</p>	<p>Has difficulty applying knowledge to identify, classify, predict, design, infer, etc. May succeed if shown.</p>	<p>Has very limited ability to apply knowledge in identifying, classifying, predicting, designing etc.</p>

**PHYSICAL SCIENCE – YEAR 11 AND 12**

		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>LEARNING OUTCOMES</b>	<b>OBJECTIVES</b>	<b>Outstanding Achievement</b>	<b>High Achievement</b>	<b>Satisfactory Achievement</b>	<b>Low Achievement</b>	<b>Very limited Achievement</b>
<b>Sensori-Motor (10-20%)</b>	Identifies, manipulates and assembles a variety of scientific equipment. Designs experiments and chooses the appropriate scientific equipment needed.	Always uses equipment in a confident, proficient manner. Has good sensori-motor skills.	Uses equipment proficiently in most situations. Above average sensori-motor skills.	Normally uses equipment proficiently but may require some help. Average sensori-motor skills.	Experiences difficulty when using equipment, but can generally perform satisfactorily if shown. Satisfactory sensori-motor skills.	Has very limited ability to satisfactorily use equipment, even if shown several times. Well below average sensori motor skills