



Government of Bermuda
Ministry of Education

BERMUDA DEPARTMENT OF EDUCATION

THE OFFICE OF CURRICULUM & ASSESSMENT

ACHIEVEMENT LEVEL DESCRIPTORS (ALDs)

SENIOR ONE (S1)

APRIL 2009

BERMUDA S1 ACHIEVEMENT LEVEL DESCRIPTORS (ALDs)

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BACKGROUND

The Bermuda Criterion-Referenced Test (BCRT) will be administered operationally for the first time in Spring 2009. This marks the culmination of several years of work on the part of teachers, principals and content officers. These tests will provide teachers and parent feedback on how their students perform in relationship to the Bermuda Performance Standards. To enhance this feedback, the Ministry plans to report student performance in terms of four (4) achievement levels: *Advanced*, *Proficient*, *Partially Proficient* and *Novice*.

To bring clarity to these four (4) levels, Achievement-Level Descriptors (ALDs) have been developed. The Achievement-Level Descriptors (ALDs) are critical to the success of the standard setting process. They summarise the knowledge, skills and abilities of the student who is solidly within a particular achievement level. Achievement-Level Descriptors (ALDs) will be used by the Ministry of Education to provide guidance to students, parents, educators and the public about what students in the Bermuda Public School System (BPSS) should know and be able to do in English Language Arts, Mathematics, Science and Social Studies.

ACKNOWLEDGEMENTS

In July 2008, full descriptors were written for the four (4) achievement levels for content areas previously mentioned. In collaboration with CTB McGraw-Hill personnel, principals, teachers, mentors and content officers developed these descriptors and they reflect the knowledge, skills, and abilities expected of Bermudian students (P3-S2) in each of the achievement levels in relationship to the Bermuda Performance Standards. The writing teams were comprised of diligent and devoted professionals. Appreciation is extended to these professionals for their ability to collaborate amicably and collegially in the development of the (ALDs). The members of the development teams were:

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FREQUENTLY ASKED QUESTIONS

1. What are Achievement Level Descriptors (ALDs)?

Achievement levels descriptors specify the knowledge, skills and abilities a student needs to know in order to be classified in each achievement levels.

2. What are the achievement level titles?

The four (4) achievement level titles are *Advanced*, *Proficient*, *Partially Proficient* and *Novice*. Each achievement level indicates the student can perform the majority of what is described for that level and even more of what is described for the levels below. The student may also be capable of performing some for the things described in the next higher level, but not enough to have reached that level.

Advanced: *demonstrates exemplary understanding or skill and exceeds expected level of performance*

Proficient: *demonstrates understanding or skill and meets expected level of performance*

Partially Proficient: *demonstrates an emerging or developing level of understanding and performance*

Novice: *attempt made; however, lack of understanding and performance is evident*

3. How will the Achievement Level Descriptors (ALDs) be used?

In the standard setting process, teachers will use the ALDs as a point of reference to rate each of their students in the area of English Language Arts, Mathematics, Science and Social Studies into the one of the proficiency categories.

4. What is Standard Setting?

Standard setting is a process that establishes cut-scores for students to be placed into achievement levels. This multi-step process will allow input from various stakeholders such as educators and policy makers. During the standard setting process, Bermuda educators will consider the knowledge, skills and abilities of their students. Based on teachers expectation, cut-scores will be generated using statistical data. Standard setting is currently scheduled to begin in Spring 2009.

5. What are cut-scores?

Cut-scores are the numerical values that identify the range for achievement levels.

Bermuda Public School System Performance Standards

English Language Arts (EL)

Strategic Reading (R)

Comprehension of Informational Text (I)

Comprehension of Literary Text (L)

Language Usage (U)

Writing (W)

Speaking & Listening (S)

Processing Information and Mass Media (M)

English Language Arts (EL)

Advanced Students (EL)

- summarize, compare and contrast a variety of texts making real life connections
- analyze meanings of words in context
- make/support assertions about text with elaborated and convincing evidence
- distinguish stereotype from generalization
- analyse/interpret literary elements and devices in a variety of text genres
- demonstrate correct language usage, strong organisational structure, insightful and logical sequencing of ideas, masterful vocabulary and effective control of mechanics

Proficient Students (EL)

- make/support inferences about text
- provide synonyms and antonyms
- identify types of text
- use text features
- demonstrate understanding of themes, author's purpose, supporting details and text features
- explain literary devices
- explain setting, plot, characters, conflict, theme, point of view, movement through time, tone, mood, monologue, soliloquy, chorus, aside and dramatic irony
- distinguish and apply formal and informal language
- use correct subjects, predicates, modifiers and coordination, subordination and sequencing strategies
- demonstrate development of ideas using structure, precise vocabulary, sustained focus, sentence fluency and correct mechanics

Partially Proficient Students (EL)

- recognize context clues
- identify synonyms/antonyms
- summarize
- determine sequence
- compare/contrast themes, characters and styles
- support assertions
- draw conclusions
- identify and discuss plot, theme, characterization, point of view, setting in expository and literary text
- show awareness of author's purpose and persuasive techniques
- reference personal/world experiences
- analyse poetry
- distinguish complete/incomplete sentences
- correct run-ons
- combine and extend sentences (coordination/subordination)
- use correct spelling/punctuation/vocabulary
- compose text supporting a position
- show awareness of audience, word choice and mechanics

Novice Students (EL)

- identify main idea
- find important details
- use organisational structure to understand text
- connect elements of text to personal experiences, other texts and world experiences
- make connections between print/non-print texts and Bermudian culture/life
- distinguish fact from opinion in text
- provide supporting evidence from text
- demonstrate general development of ideas
- use general language conventions and mechanics

BERMUDA S1 ACHIEVEMENT LEVEL DESCRIPTORS (ALDs)

PLANNING NOTES

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Bermuda Public School System Performance Standards

Mathematics (MT)

Number and Number Operations (N)

Patterns, Functions and Algebra (A)

Geometry (G)

Measurement (M)

Data Handling (D)

Mathematics (MT)

Advanced Students (MT)

- apply the relationship between cubes/cube roots to solve problems
- apply the properties of special numbers such as 0, 1, and p
- extend and create patterns/functions/graphs to represent/solve problems
- analyse the nature of change in quantities with linear relationships
- interpret negative/fractional exponents
- solve linear equations with unknowns on both sides, including fractions
- solve systems of equations and interpret their solution(s)
- apply angle/line properties of circles
- describe properties of figures by using appropriate transformations
- explain how change in dimensions affects volume and surface area
- compare/analyse the probability of dependent and independent events

Proficient Students (MT)

- add/subtract/multiply/divide negative numbers
- apply fractions/decimals/percents in a variety of equivalent forms
- apply relationships of ratio/proportion/percentage
- analyse patterns/functions/graphs to represent/solve problems
- compare properties of functions among tables/graphs/equations
- divide expressions with positive exponents
- model inequalities
- classify/analyse similar and congruent triangles
- describe geometric properties and relationships using the coordinate system and transformations
- calculate volumes/surface area
- apply mean/median/mode to solve problems
- find probability of dependent events
- design/use experimental and theoretical probability

Partially Proficient Students (MT)

- understand relationship between squares/square roots
- represent/use integers and exponentials
- use estimation
- solve proportion problems
- use patterns/functions/graphs to represent/solve problems

Partially Proficient Students (MT) continued

- factor simple polynomials
- multiply expressions with positive exponents
- solve linear equations
- graph ordered pairs
- solve problems using geometric properties
- recognise basic trigonometry ratios
- convert measures within the same system
- solve problems based on perimeter/area
- explain how change in dimensions affects perimeter/area
- solve speed/distance/time problems
- execute experiments
- construct frequency tables
- calculate mean/median/range
- find probability of independent events

Novice Students (MT)

- calculate squares/square roots
- represent/use whole numbers
- multiply/divide rational numbers
- use decimals/percent
- generalise patterns represented pictorially
- recognise mathematical relationships expressed as numbers/symbols
- use basic algebraic operations
- graph ordered pairs on coordinate grid
- describe geometric properties
- recognise right triangles
- solve real-world problems using the Pythagorean Theorem
- recognise transformations
- build physical models
- draw shapes
- use appropriate units
- calculate perimeter/area of triangles/rectangles
- execute surveys
- gather data to answer questions
- represent and display data
- determine mode
- find probability of simple events

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Bermuda Public School System Performance Standards

Science (SC)

Physical Science (P)

Life Science (L)

Earth and Space Science (E)

Nature of Science (N)

Science (SC)

Advanced Students (SC)

- explain how elements are placed on the periodic table
- relate structure of atoms to reactivity trends of groups
- name compounds formed and write word equations for reactions when chemical changes occur
- apply concepts relating to the interaction of waves
- explain theories of formation of the solar system
- explain active transport
- recognise theories are refined as space technologies improve/data are gathered
- select the best way to represent data (charts/graphs/tables/histograms)
- use graphs to determine relationships between variables
- support conclusion with evidence from experiments/research
- evaluate investigations
- describe the formation/impact of new products

Proficient Students (SC)

- understand trends of periods/groups
- classify elements in periodic table
- understand composition of matter/Bohr model/particle size and reaction rate
- understand how sound and light travel/kinetic motion theory/fusion
- identify parts of a wave
- distinguish between conduction/convection/radiation
- describe star life cycle
- use the Hertzsprung-Russell diagram
- understand Linnaeus classification/binomial nomenclature/natural selection/evolution
- use dichotomous keys
- explain structure of organelles/diffusion and osmosis/the response of cells to environment changes
- organise data
- identify trends
- analyse results
- draw conclusions
- cite possible benefits/consequences of using technology

Partially Proficient Students (SC)

- understand examples of oxidation/characteristics of waves/conservation of energy
- identify that during many processes energy is transferred to the environment in the form of heat
- understand a cell is a specialized/complex system
- know organelles in cells use chemical reactions to carry out life processes
- describe the organisation of the solar system
- use data to compare characteristics of planets
- plan/attempt to avoid bias in/suggest improvements to simple investigations
- use sources to support predictions
- understand that development/use of technologies can have environmental/economic concerns
- know that toxic substances influence health

Novice Students (SC)

- understand atomic structure /temperature and reaction rates/ periodic table/ heat transfer/ how light travels
- know energy can be transmitted as waves
- know stars differ in size
- classify our sun as a star/planets as natural satellites held in orbit by gravity
- understand cause of tides
- state cell theory
- determine questions that can be investigated/some experimental steps/outcomes
- understand concept of fair test
- display simple data set given a table
- interpret data in table/simple graph
- identify natural/man-made products
- know applications of technology
- recognise contributions of different cultures
- explain the effect of diet and exercise on the health of an individual

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Bermuda Public School System Performance Standards

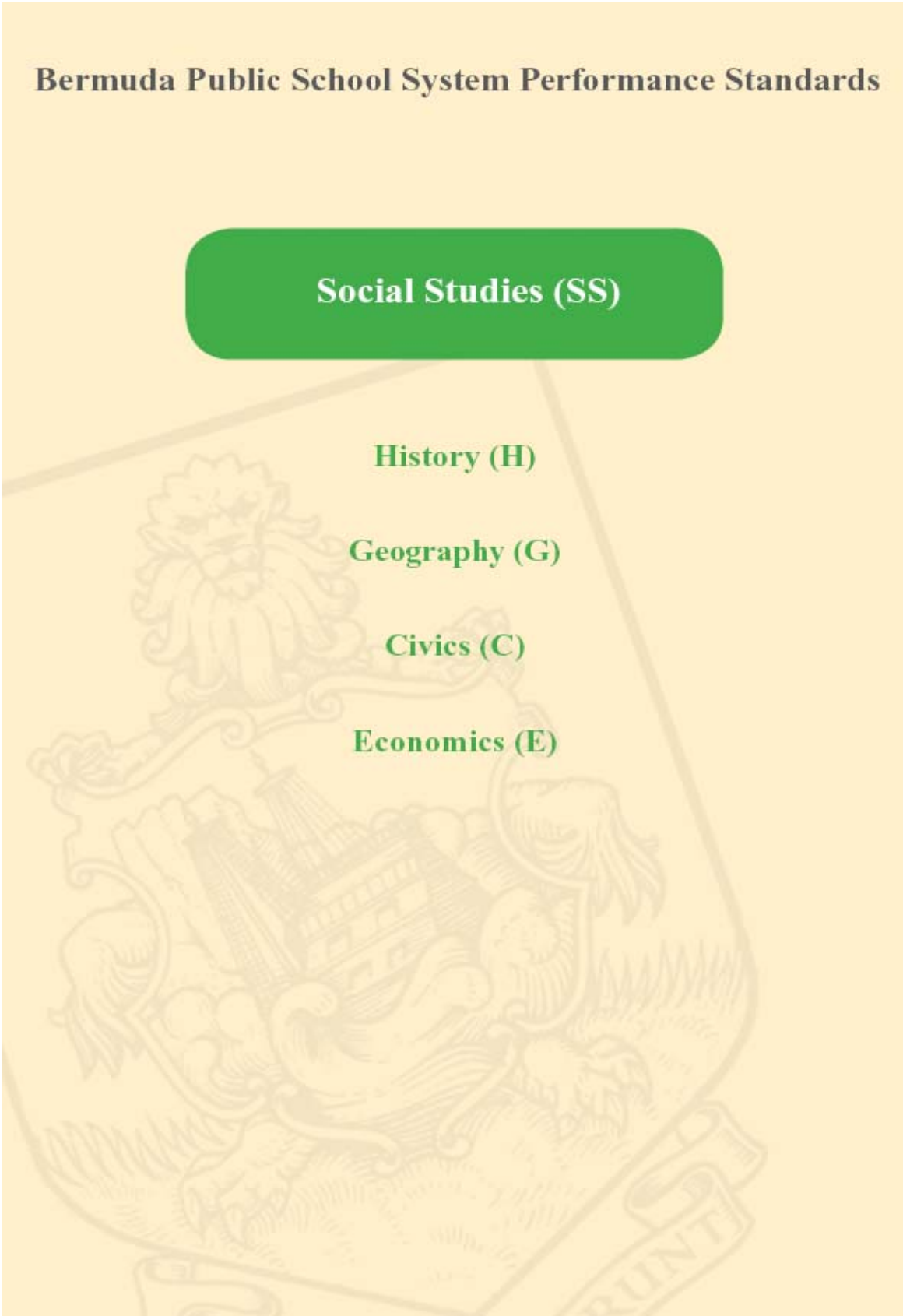
Social Studies (SS)

History (H)

Geography (G)

Civics (C)

Economics (E)



Social Studies (SS)

Advanced Students (SS)

- interpret historical data using artefacts
- analyse historical information to make decisions, and evaluate multiple perspectives to solve problems
- explain how world events impact individual countries
- write complete answers with detailed explanations
- predict outcomes of environmental consequences of humans changing the physical environment
- evaluate influence of organisations, individuals and political parties
- make recommendation to solve issues that arise
- write a persuasive argument on pros and cons on independence versus colonialism
- formulate and assess importance of formal and informal meetings between governments of major nations and Bermuda with detailed explanations

Proficient Students (SS)

- apply key concepts such as change/conflicts
- create organising structures for charts/graphs/reports
- identify and explain reasonable/ethical solutions to recent problems
- formulate opinions and write detailed answers
- use geographic tools to interpret information
- analyse effects of human action on the physical environment
- interpret patterns of behaviour reflecting values/attitudes
- recognise cause/effect relationships between individuals/political parties/political documents
- make predictions about Bermuda's economic future/career opportunities
- formulate opinions on importance of formal/informal meetings between governments of major nations and Bermuda with detailed answers

Partially Proficient Students (SS)

- explain key concepts such as causality to historical interpretation
- distinguish facts from opinions
- examine land use and ecosystem changes in Bermuda and globally
- identify causes and effects of migration (Amerindians before Columbus)
- use cause and effect arguments to show how significant events influenced Bermuda's past and present
- describe structure of Bermuda government and influence of individuals and political parties
- evaluate importance of political documents and powers given to the Governor
- explain impact of immigration on career opportunities in Social Studies disciplines
- distinguish fact from opinion in problems identified with Bermuda's colonial status

Novice Students (SS)

- identify key concepts such as time and chronology to show connections and relationships to events
- use appropriate resources
- examine and explain interactions of human beings and effects on their physical environment
- identify and explain how the main immigrant groups have altered the character of the island
- identify the cultural characteristics that link regions
- design an organisational chart showing the structure of the Bermuda government
- identify important political documents
- explain the reasons for continuing economic change
- identify career opportunities in Bermuda according to Social Studies disciplines
- identify problems that have arisen due to Bermuda's colonial status

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