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Ministry of Education

BERMUDA DEPARTMENT OF EDUCATION

THE OFFICE OF CURRICULUM & ASSESSMENT

ACHIEVEMENT LEVEL DESCRIPTORS (ALDs)

MIDDLE TWO (M2)

APRIL 2009

BERMUDA M2 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)

- use prefixes, suffixes and roots to coin new words
- use multiple meanings of words, interpret author's word choice/words in context
- summarize/synthesize main ideas and make connections to text, self, Bermuda and the world
- use correctly facts and opinions in their own writing
- restate/summarize information from lengthy, more complicated grade level text
- interpret/analyze literary elements (setting, plot, characters, conflict, theme, point of view) using both local and international literature
- make comparisons/contrasts across works and explain figurative language used to determine the tone of both print and non-print information
- can determine their own procedure for following general instructions/directions given
- can apply to their own writing the characteristics of fiction, non-fiction, poetry, drama (skits)
- use different strategies to develop a topic with attention to audience
- use a full range of grammatically correct sentence types

Proficient Students (EL)

- use prefixes, suffixes and roots to determine the meaning of new words
- relate new words to synonyms/antonyms/homonyms
- summarize and synthesize significant ideas in grade level text, references/resources
- explain author's use of fact and/or opinion to support a particular point of view
- restate/summarize information from lengthy, but simple, grade level text
- determine authors purpose/stance by identifying main idea, important details, literary elements
- determine character motivation using local and international literature
- compare/contrast across works
- use print and non-print texts to locate information
- can identify sequence needed for carrying out a procedure
- compare/contrast the characteristics of fiction, non-fiction, poetry and drama across literary works including the use of more figurative language
- extend ideas by providing facts/illustrations and or stating opinions to support point of view being taken
- vary the types of sentence structure, using grammatical conventions

Partially Proficient Students (EL)

- give meanings of prefixes, suffixes and roots in common words
- identify important facts/details in grade-level references, text and resources
- describe evidence used to support an argument
- distinguish fact from opinion in more complicated grade level text
- recognise recurring themes across works
- restate/summarize information from short, but complicated grade level text
- identify and analyze the characteristics of fiction, non-fiction, poetry and drama, including the use of figurative language
- interpret the impact of the author's decisions regarding word choice using international and local literature
- locate and paraphrase information in grade level texts
- follow more complex instructions/directions in sequential order to carry out a procedure
- combine sentences by using strategies of correct coordination, subordination and sequencing of ideas
- create text demonstrating a flow of ideas with a somewhat clear message using control of language and language conventions

Novice Students (EL)

- identify prefixes, suffixes and roots in common words
- identify important facts/details in grade level text
- use structure to retrieve facts
- distinguish fact from opinion, in simple, grade level text
- restate/summarise information from simple grade level text
- determine author's purpose through word choice, using both local and international literature
- locate specific information in grade level texts
- follow instructions/directions in sequential order to carry out a procedure
- distinguish literary elements in texts about Bermudian culture/life
- identify characteristics of fiction, non-fiction, poetry, drama- including basic figurative language
- demonstrate minimal development of ideas and control of language and language conventions
- use grammatically correct minimal sentence structure

BERMUDA M2 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 rational numbers, including scientific notation, exponents and percents in a variety of equivalent forms
- model/solve problems in context such as representations, patterns, graphs, tables and equations
- add and subtract simple algebraic expressions of the first degree
- demonstrate strong understanding of geometric concepts, apply the relationship between the number of sides and the sum of the angle measures of polygons
- identify flat patterns (nets) that represent rectangular prisms
- solve simple probability problems
- demonstrate understanding of the ways probabilities can be represented
- use theoretical probabilities and experimental results to make predictions and results

Proficient Students (MT)

- apply all operations with percents
- use different methods of presenting a pattern
- add and subtract simple algebraic expressions of the first degree
- graph ordered pairs in all quadrants
- estimate size of angle with reference to benchmark angles
- predict and describe result of reflection and rotation of a plane figure on coordinate grid
- calculate perimeter and area of regular polygons
- calculate the volume of cuboids
- create, read and interpret data from a variety of representations
- determine when to use mean, median or mode
- determine the probability of a simple event and use probability to make predictions

Partially Proficient Students (MT)

- apply the four operations with whole numbers and fractions
- perform addition and subtraction with integers
- apply inverse operations
- calculate ratios, proportions, percents
- identify how change in quantity results in change in another
- identify and explain patterns

Partially Proficient Students (MT) continued

- represent situations as algebraic expressions
- graph ordered pairs in first quadrant
- classify and describe planes and solids
- apply angle sum of triangle
- select appropriate measurement tools and units
- convert units within same system
- calculate perimeter and area of triangles and parallelograms
- create, read, interpret data from line graphs, bar graphs and pictograms
find median

Novice Students (MT)

- order and compare fractions and decimals
- apply benchmark fractions, decimals, and percentages
- combine like terms and substitute for unknowns in a given expression
- solve simple linear equations
- graph ordered pairs in the first quadrant
- measure and classify angles
- classify triangles
- predict and describe translations, reflections and rotations
- calculate area and perimeter of triangles
- calculate elapsed time
- determine the probability of a simple event
- choose the appropriate graphical representations
- find the mean and mode in a set of numbers

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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)

- consistently use formulas/symbols in chemical equations to represent chemical reactions
- identify reactants/products in unfamiliar chemical reactions
- evaluate methods of reducing heat loss from homes and the future impact of heat on environment/atmosphere/oceans
- explain how organ systems coordinate
- explain why organisms in a small oceanic island like Bermuda may be found in more than one habitat
- combine simple land food chains into food webs
- analyse impact of removing an organism from a food web
- apply information about rock cycle processes to rocks like Bermuda limestone
- design follow-up investigations
- explain how to avoid toxic/harmful substances in the environment

Proficient Students (SC)

- use symbols/formulas for common substances
- understand acids and bases/oxidation reactions/heat transfer/work/how energy can be stored/transformed
- explain potential/kinetic energy
- understand cell structure/function and cell/tissue/organ/organ system relationship
- explain impact of physical isolation on species in habitats and of weathering/erosion on landforms/materials
- explain rock cycle processes
- recognise significance of geology in providing evidence of Earth's history
- evaluate experimental procedure
- identify anomalies
- draw conclusions
- recognise importance of cultures in science/technology
- compare/contrast science careers
- explain importance of health care advances

Partially Proficient Students (SC)

- explain physical/chemical changes
- name forms of energy
- understand conservation of energy
- know energy transformations usually produce heat
- have a basic understanding of cells/organ systems/Bermuda's six land habitats/organisms
- know roles of producer/consumer/decomposer
- understand decomposition/recycling of material/ways plants and animals obtain energy/relationship between land and sea food webs/rock layers and fossils
- distinguish between rocks and minerals
- interpret rock cycle diagram
- distinguish between physical and chemical weathering
- plan investigation
- read/interpret bar/circle/line graphs
- identify/explain basic patterns
- identify desirable/undesirable consequences of development

Novice Students (SC)

- identify physical/chemical changes and energy transformations
- can understand conservation of matter/heat conduction/competition/cells/organ systems/Bermuda habitats/organisms
- draw/interpret simple food chains/webs
- know that Bermuda, as a small island, has ecosystems that are especially at risk due to development
- describe examples/formation of rock types
- know that human decisions have changed Earth's land/oceans/atmosphere
- have a limited understanding of investigative techniques (plan investigation, gather evidence, read apparatus, use charts/tables)
- are aware of role of science/technology/mathematics in the modern world
- recognise things that affect human health

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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)

- show how the behaviours of explorers have impacted on global systems
- evaluate community solutions to industrialisation and colonialism
- extend the solutions to the present
- use cause and effect arguments to demonstrate understanding of how exploration influenced cultures
- describe the interactions of religious institutions and governments during the Reformation period
- provide the rationale of governments for empire building in the 1600's to 1700's
- demonstrate their understanding of the economic issues that arose from the abolition of slavery in Bermuda

Proficient Students (SS)

- create and interpret timeline of events of the Reformation and analyse how the events affected religious change
- demonstrate effects of industrialisation
- evaluate the reasons for slavery and its abolition
- explain how culture affects interpretation of information and experiences
- demonstrate the ability to read, use and interpret a variety of maps
- analyse human impact on the environment during the industrial and scientific revolution
- demonstrate effects of colonisation and exploration
- examine the cause and effect of slavery in Bermuda
- evaluate the impact of the Industrial Revolution to present day

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Partially Proficient Students (SS)

- demonstrate knowledge of the development of the Town of St. Georges, contributions of Bermuda's early governors and their impact on the island's growth and development
- show knowledge of working with historical documents
- explain causes behind working conditions that existed in England during the Industrial Revolution
- understand the importance of the Renaissance and its significance to the development of modern society
- display working knowledge of temperature zones and time zones
- understand cause and effects of migration on the culture of Bermuda
- understand accomplishments of governors Moore, Tucker and Butler
- understand factors that brought about the Age of Exploration

Novice Students (SS)

- identify and explain early visitors and their relationships to Bermuda from 1500-1610
- describe and explore the origins and consequences of slavery
- explain interactions of slaves and others in the society
- provide example of government attempts to control the world
- locate African regions where slaves were taken
- explain difference between voluntary and involuntary migration
- examine meaning of Bermuda's symbols
- create own/family Coat of Arms
- identify key personalities on the Sea Venture
- examine role of the Bermuda Company in Bermuda's development

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