

**MINISTRY OF EDUCATION AND HUMAN RESOURCE
DEVELOPMENT**

DOMINICA

**CURRICULUM, MEASUREMENT AND EVALUATION
UNIT**



**REPORT ON CANDIDATE'S PERFORMANCE
AT THE
2013 GRADE SIX NATIONAL ASSESSMENTS
(G6NA)**

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1 Administration and Entry

1.1 Introduction

The Grade Six National Assessment (G6NA) forms part of the National Assessment Programme comprising of the Grade Two National Assessment, the Grade Four National Assessment and the Grade Six National Assessment. The NAP is aimed at determining how students are learning at key stages throughout the primary level and their readiness to access secondary level education.

Unlike the Grades two and four national assessments which are meant to be diagnostic, the Grade Six National Assessment is a high stakes test of achievement. The major purposes of the G6NA are to:

- select high performing students for the award of scholarships or bursaries and
- monitor levels of achievement across the education system.

As such the use of this examination to assess students' achievement at the end of primary school is limited.

A considerable amount of data is collected by the annual administration of the G6NA and it would appear inappropriate not to use it to give the much-requested feedback to teachers and principals. The purpose of this report, then, is to provide schools with this information on student performance so that they may strive to improve their performance based on the feedback given. The report concentrates on the general strengths and weaknesses observed nationally among students in the different subject areas assessed.

Principals and instructional support teams are urged to study the report carefully together with the individual school reports. These reports should indicate the areas the school may wish to focus on and will be of assistance in the construction phase of the school improvement plan. Appendix C shows a complete list of the facility indices (i.e. the percent of students who got an item correct) for each question on each of the four multiple-choice papers. Principals, grade 6 teachers and others may wish to review the percent correct alongside the actual question papers (enclosed) to get a good idea of national strengths and weaknesses of grade 6 students.

1.2 Overview of the test development process.

The technical development of the examination was shared by the subject committees and the CMEU. The subject committees were responsible for examination content and ensuring that key aspects of the subjects were tested. The personnel of the CMEU assisted the committees with item editing and statistical issues.

There are four major areas in the test development process:

- (a) preparation of the test plan
- (b) development of test blueprint or test specifications
- (c) item development
- (d) test construction

The test plan looks at the purpose and major curriculum objectives of the test. Test format is developed after consideration of the age of students, curriculum objectives, scoring methods etc. Content and cognitive domains to be tested were then defined. With these domains defined, tables of specifications for the four subject areas examined were drawn up and circulated to schools.

Item development followed from the table of specifications. For each content area examined the specific objectives tested were determined by the subject committees. The committees also determined the cognitive level at which these objectives were to be tested. Experienced upper grade teachers were contacted and asked to submit items according to the specifications sent to them in the different subject areas. A large number of the items written were then pilot tested. Analysis of the items and the associated item statistics were used to help the chairpersons of the subject committees and the CMEU to make the final test selections. The typed final test forms were then reviewed to eliminate typographical and other errors.

Table 1: Structure of the G6NA

Subject	Type of Item	No. of Items	Duration
Language Arts	<ul style="list-style-type: none">• Multiple Choice <i>Computer marked</i>• Essay <i>Specialized team marking</i>	60 3 topics given to select 1	90mins
Mathematics	Multiple Choice <i>Computer marked</i>	60 items	90mins
Science	Multiple Choice <i>Computer marked</i>	50 items	75mins
Social Studies	Multiple Choice <i>Computer marked</i>	50 items	75mins

1.3 Administration

The test was done over a two-day period under strict examination conditions. Exam supervisors were trained during two half-day workshops one week prior to the examination. Supervisors were given copies of the exam regulations and detailed instructions regarding the conduct of the examinations. The 2013 G6NA was administered on the 23rd and 24th May at a total of 51 centres with over 100 teachers acting as supervisors and assistants. Supervisors reported few problems in the administration of the exams and generally commended students for their good behaviour.

1.4 Entry

1155 students were registered for the 2013 G6NA (see table 3).

Table 2. Common Entrance Entry 1998 - 2013

Entry Year	Boys	Girls	Total
2000	834	861	1695
2001	834	878	1712
2002	834	757	1591
2003	821	722	1543
2004	810	774	1584
2005	772	774	1546
2006	700	657	1357
2007	696	661	1357
2008	615	620	1235
2009	604	548	1152
2010	533	517	1050
2011	539	606	1145
2012	609	596	1205
2013	605	550	1155

Of the 1155 students who were registered for the 2013 G6NA, almost half (48.9%) were from primary feeder schools that accessed the Roseau catchment area. Table 3 shows the distribution of candidates by catchment area.

Table 3. Distribution of candidates by catchment area and gender

Gender	Roseau	ITSS	PSS	NECS	CBSS	PCSS	Totals
Boys	273	67	97	93	43	38	605
Girls	292	35	77	85	23	32	550
Totals	565	102	174	178	66	70	1155

1.5 Marking

The composition scripts were marked over a three-day period by a team of 20 primary teachers under the supervision of Mr. Robert Guiste and Mr. Nicholas Goldberg. This allowed scripts to be double-marked and in some cases, triple marked, thus increasing the reliability of scoring. The scoring criteria for the compositions are given in Appendix A.

The Unit's optical mark reader (OMR) facilitated data entry. Generally, it took about one hour to enter and for the computer to read 1050 answer sheets, so that data entry was completed within one week as compared to the three weeks when done by hand. Accuracy was also enhanced, though care was taken to 'clean' the answer sheets, as unintended pencil marked scripts were rejected by the OMR. In a few instances supervisors had made errors in entering a candidate's number correctly. These errors were picked up during 'cleaning' or were apparent on data entry.

2. Results

2.1 National Mean and Measurement Error

Results of the G6NA are reported based on the following

Score	Grade	Interpretation
120+	A	Detailed knowledge of subject area
110-119	B	good knowledge of most aspects of subject area
90-109	C	good knowledge of some aspects of subject area
80-89	D	fair knowledge of some aspects of subject area
Below 90	E	limited knowledge of a few aspects of subject area.

The adoption of a grading system where students receive grades in the four subjects assessed should allow parents to more easily gauge the progress of their children at the end of primary school.

It is unlikely that a student writing the same exam on different days would obtain the same scores. It is even more improbable that scores would be the same if a parallel test was administered or a different sample of items was tested. The variation in scores owing to these factors is known as measurement error. Measurement error essentially depends on the reliability of the tests. The reliability of all the multiple-choice tests was high (Cronbach alpha greater than 0.9). The consequent measurement error in most of the G6NA multiple-choice tests was about 5. Thus, the 'true' score of a student scoring 100 on one of the tests could be anywhere between 95 - 105. This should be borne in mind when interpreting the score of individual students.

2.2 Overall Performance by Catchment and Gender

Mean standardised scores in the five papers (Language Arts, Composition, Mathematics, Social Studies and Science) written by candidates were examined. Table 8 shows these scores by catchment area.

	CBSS		ITSS		NECS		PCSS		PSS		ROSEAU		All	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Language	106	95	102	96	101	91	100	100	100	95	107	98	104	96
Mathematics	104	99	101	99	98	94	99	99	99	98	106	97	103	97
Science	102	97	102	99	98	94	98	102	97	100	104	100	101	99
Social Studies	104	95	104	99	99	91	100	102	99	96	106	98	103	97
ALL	104	96	102	98	99	93	99	101	99	97	106	98	103	97

Table 8. Mean standardised scores by catchment area and gender

As in previous years, in all catchment areas, and in all of the papers, girls outperformed boys. The gender gap still favours the girls over the boys and the results continue to be mediated by location. Girls, on average, scored about 6 % more than boys in these areas.

Location also impacted on the results. Performance in the Portsmouth Secondary and Pierre Charles Secondary (Grand Bay) catchment areas remains below the national average.

Scores in the Roseau and CBSS areas were on average higher than in other parts.

Appendix D gives a breakdown of the grades received by district.

2.3 Selection of Students for Secondary Education

As of 2005 all of the students who wrote the G6NA, were selected for secondary education. Table 9 shows the numbers selected over the past nineteen years.

Table 9. Number of students selected for secondary school 1995 - 2013 by gender

Year	No. Boys selected	% Boys selected	No. Girls selected	% Girls selected	Total selected	% Cohort writing exam
1995	372	38.2	587	61.8	959	42.7
1996	439	43	582	57	1021	46
1997	389	37.2	658	62.8	1047	47.6
1998	462	41.4	654	58.6	1116	60.5
1999	487	42.5	660	57.5	1147	66.1
2000	592	40.6	681	59.4	1273	75.1
2001	611	46.2	711	53.8	1322	77.2
2002	641	49	667	51	1308	82.2
2003	656	50.5	643	49.5	1299	84.2
2004	700	100	724	100	1424	89.9
2005	772	100	774	100	1546	100
2006	700	100	657	100	1357	100
2007	691	100	651	100	1342	100
2008	607	100	618	100	1225	100
2009	598	100	547	100	1145	100
2010	533	100	517	100	1050	100
2011	539	100	606	100	1145	100
2012	609	100	596	100	1205	100
2013	595	100	547	100	1142	100

Students are selected for secondary education by catchment area. Universal Secondary Education is now in operation in all six zones.

Table 10. Number selected for secondary education by catchment area

Zone (Catchment area)	Secondary places available	No. entered	Percent selected from zone
Roseau	565	558	100
PCSS	70	70	100
NECS	178	172	100
ITSS	102	102	100
Portsmouth	174	117	100
Castle Bruce	67	67	100
TOTALS	1150	1142	100

Overall selection rates to secondary school is at 100% since the country moved towards government's stated goal of universal secondary education, see Figure 1.

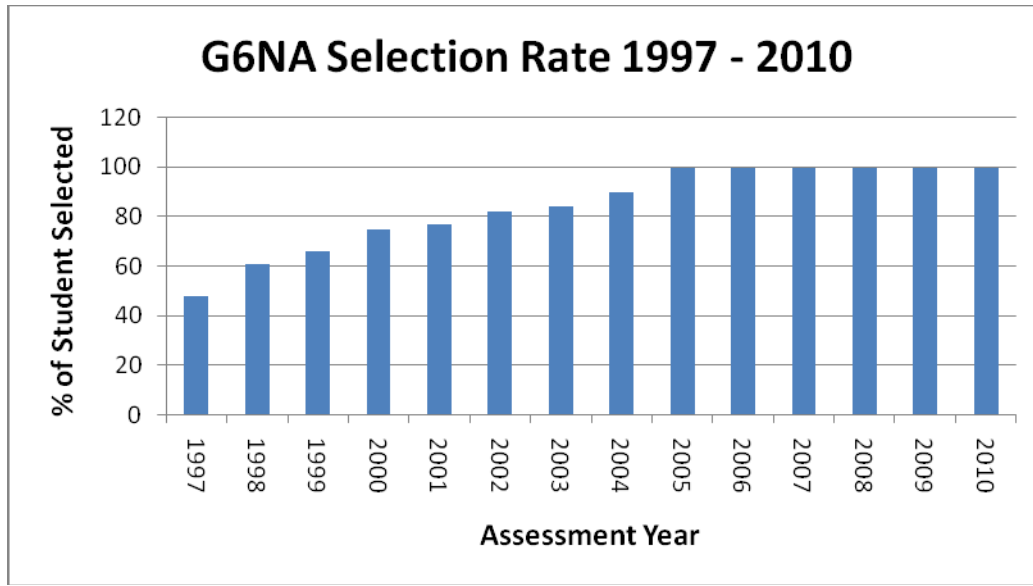


Fig. 1 - From 2005, 100% of the students writing the G6NA have secured a place in a secondary school.

2.4 Award of scholarships

This year government awarded a total of 88 scholarships and 115 bursaries to students. As Figure 2 demonstrates the distribution of the 200 highest performing students is dependent on location and gender.

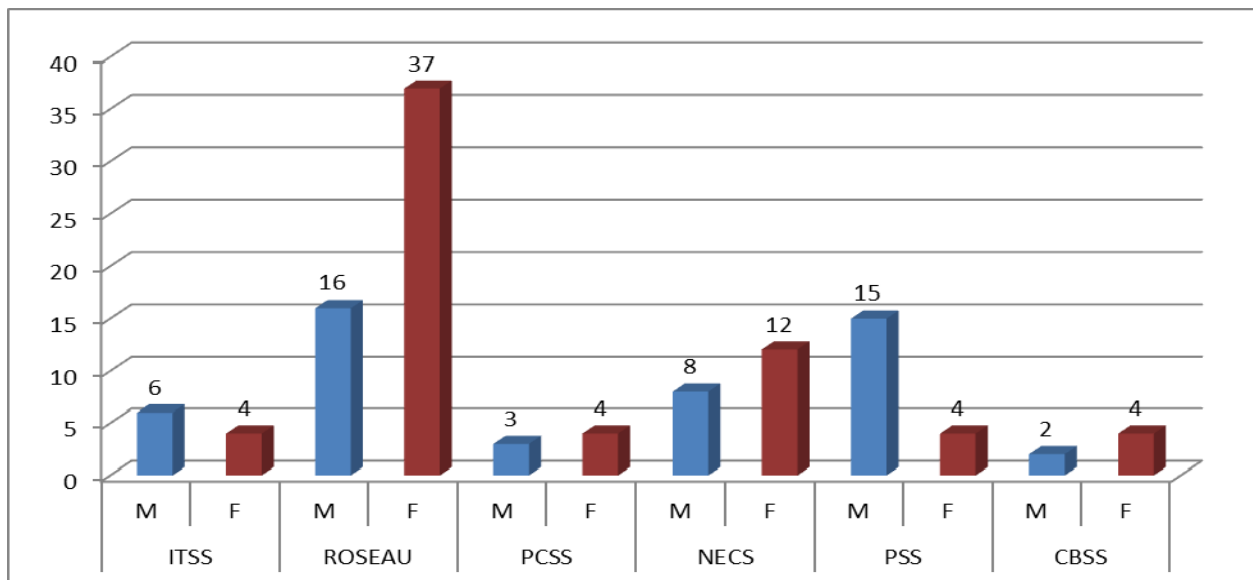


Fig. 2 – Distribution of scholarships by catchment area.

86 of the 292 (i.e. 29%) girls from the Roseau catchment area were in the top 200 places. 61% of the top 200 students were girls while 70% of those girls were from the Roseau catchment area.

2.5 Weak performance

Students who obtained a total of eight points or less (i.e. scored at best, 1C, 2 D's and 1E or equivalent) can be considered as having some serious learning problems. 15% of the entry (170 students) obtained such grades in the 2013 examinations. In many cases these learning problems are related to student reading difficulties. **123 boys** and 47 girls fell in this category.

More details can be found in the attached CMEU's "**Performance of Primary Schools at the 2013 Grade Six National Assessment by District**"

3 Subject Reports

3.1 Language Arts

The national mean raw score in the language arts multiple-choice paper was 40 (67%) with 11% of the entrants scoring less than 24 (40%) and 35% scoring 45 (75%) or more. 41 students scored 15 items or less correctly i.e. scores that could be achieved by guessing, this suggests that these students have considerable language difficulties and are, possibly, unable to read.

The paper assessed six areas of language performance – Usage and grammar, vocabulary, spelling, study skills, comprehension and composition.

3.1.1 Usage and grammar

64% of the students were able to answer the questions in this section without much difficulty. Only item 10 was answered correctly by less than 60% of the students.

Item No.	Item	Percent Correct
10	Which sentence below is written with correct subject/verb agreement? A. Camille and Vanessa eats lunch together. B. Camille and Vanessa eated lunch together. C. Camille and Vanessa eat lunch together. D. Camille and Vanessa eating lunch together.	41%

3.1.2 Vocabulary

This section was also well done by the students. The average on this section was 71.3%. Only 29% were able to answer item 12 correctly.

Item No.	Item	Percent Correct
12	Tim was elated when Thomas got promoted to senior manager. A. angry B. happy C. sad D. surprised	29

3.1.3 Spelling

Students did not encounter much difficulty with the spelling section. The average for this section was 75.4%, as compared to over 55% in 2012. Only one item was answered incorrectly by less than 60% .

Item No.	Item	Percent Correct
23	<p><i>In questions 23 – 25, choose the correct spelling of the word which will complete the sentence.</i></p> <p>Adding _____ to cakes gives it a great flavor.</p> A. cinammon B. seenamon C. sinamon D. cinnamon	41

3.1.4 Study Skills

This section consisted of 8 questions. The average was 65.4%. Items 32 and 36 were answered correctly by less than 30% of the candidates.

Item No.	Item	Percent Correct
32	Charles is searching for the meaning of the word <u>serpent</u> . Which guide words should appear at the top of the page? A. Serious and Serous B. Serow and Serried C. Serpentine and Servant D. Serve and Service	27
36	Which book can be found in the literature section of a library? A. The national symbols of Dominica. B. Flags of the world. C. The Wizard of Oz. D. The Oxford Senior Dictionary.	22

3.1.5 Comprehension

Students continue to struggle with the comprehension section of the exam. The average for the comprehension section was 61%. This section consisted of a **letter, an advert, a poem and an article**.

Students performed best in the sugar cane article although only about 69% of the students were able to handle this section with ease. The average scores for the police interview, the poem and history article were 54%, 58% and 67% respectively.

Five of the 24 questions were answered incorrectly by over 50% of the students.

3.2 Composition

Three choices of topics were given to students:

1. Imagine yourself as a passenger on a bus. The bus driver announces “Everyone off the bus!” As the bus pulls away, you realize you don't know where you are. Write a **story** about your experience.

2. Write a composition **describing** the most interesting place you have ever visited. Use interesting adjectives and descriptions to make your paper interesting to read.
3. Think about **three** (3) things that need to be improved at your school to make it a better place for **learning**. Write a **letter** to your principal to convince him/her why the changes are necessary. Give reasons for your choice, and write about your reasons in detail.

The following five criteria were used for the grading of the compositions: General Impression/Organization, Relevance, Usage and Spelling, Sentence Structure, Capitalization and Punctuation (See Appendix A).

The mean score for the composition was 55%. The minimum score was 5/40 (15 students) while the max score was 39/40 (2 students). 151 students (13%) attained scores greater than 80% (32/40) while only 66 students (5.8%) scored less than 20% (8/40 or less) which seem to indicate that they are operating at about the K level. 260 students (23%) scored 40% or less in the composition and 275 students (24%) were in the low category – scoring 19 or less out of 40.

3.2.1 Strengths

Markers continue to note the following strengths among the average in good compositions

- Generally students were able to express themselves clearly.
- Very creative interpretations were given to many of the essays.
- Generally students stayed on topics and handled them quite well.
- Events, for the most part, were properly sequenced and detailed.

3.2.2 Areas for improvements

On the other hand many essays continue to show deficiencies in the following areas:

- Poor mechanics - spelling, punctuation and capital letters and grammar
- Usage needs to improve, the students need to learn new words and write at the level of Grade 6 and above.
- A lack of variety in sentences shows that students have not learned sentences structure and use of prepositions to join sentences sufficiently.
- Inattention to paragraphs continues to be a major problem. Many students' essays consisted of one very long paragraph.
- Insufficient use of descriptive words
- Students still have problems with subject/verb agreement
- Many students did not seem to understand what was required of them.

Generally, the weaker compositions were brief and to the point. Some writers had nothing to show, and some, though very few, still are not even to the level of grade K students.

3.3 Recommendations for the teaching of writing

The recommendations from previous years need to be reiterated.

1. **Encourage more oral work** – public speaking, story telling etc. in the classroom. Provide many opportunities for students to write daily.
2. **Have students collect photos and write about it.**
3. **Encourage journal writing**
4. **Place more emphasis on organisation and relevance** - reflect this emphasis when scoring written work.
5. **Encourage peer editing and assessment.**
6. **Encourage students to read more**, this should help them to model the language and style of a variety of authors.
7. **Give regular writing practice (at least twice a week).** Get students to write on a variety of topics using a variety of forms e.g. narrative, description, letter etc. Explain the meaning of key words such as describe, explain, imagine, write, tell etc
8. **Teach the basics** - a good introduction, good follow up sentences and a good conclusion.
9. **Teach the writing process - drafting** (key ideas and sequence), **writing, editing** and **rewriting**. In class award marks for drafts and rewrites. Let students read their efforts to the class and display the final products in the classroom.

Students must be made to read and write more and practise writing compositions of various types. Descriptive writing should allow students to make use of adjectives, and verb tenses in the context of the writing task. It is also very important that the students are encouraged to use the **Writing Process**.

3.4 Mathematics

The national mean raw score in mathematics was 38 (out of 60) or 63%. Thirty eight students (3%) scored less than 15 (25%) and 379 (34%) scored 45 (75%) or more. 16% (180 students) attained scores of 40% or less.

Students' knowledge and problem solving ability in the areas of number concepts and operations, measurement, geometry, patterns, functions & algebra were tested. Problem solving was incorporated into every section of the paper.

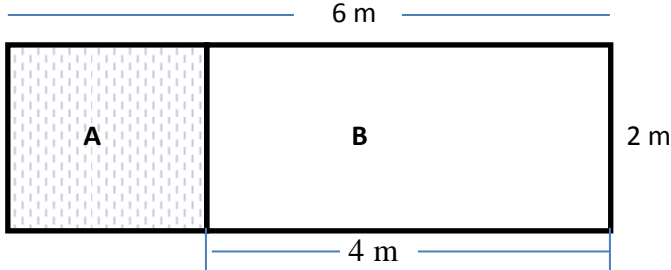
3.4.1 Number concepts and operations

This section included topics such as number concepts, operations, fractions and decimals. The average score for this section was 65%. 6 of the 29 questions were answered correctly by less than 50% of the students. Items 6, 17, 21, 22, 26, and 28 were all answered incorrectly by more than half the respondents.

Item No.	Item	Percent Correct
6	See attached test booklet	23
17	<p>Which of these will give the greatest result?</p> <p>A. 69 x 7</p> <p>B. 67 x 9</p> <p>C. 79 x 6</p> <p>D. 97 x 6</p>	44
21	<p>In the first year of production a play sells 1572 tickets, in its second year it sells 1753 tickets, in its third year it sells 152 less than in its second year. How many tickets are sold in 3 years?</p> <p>A. 4926</p> <p>B. 3477</p> <p>C. 3173</p> <p>D. 1601</p>	39
26	<p>Two thirds of the mangoes in a bag are bad. If the bag contains 27 mangoes, how many are good?</p> <p>A. 9</p> <p>B. 12</p> <p>C. 18</p> <p>D. 20</p>	36
28	<p>15 tenths is the same as</p> <p>A. 1.5</p> <p>B. 150</p> <p>C. 0.15</p> <p>D. 15</p>	33

3.4.2 Measurement

Students continue to show poor performance in the area of measurement. They experienced most problems with this section. The average score was 60%. Five questions were answered incorrectly by more than 50% of the students. 55% of the students answered item 40 incorrectly. Items 42 and 43 were answered correctly by only 42% and 39% respectively.

Item No.	Item	Percent Correct
40	See attached test booklets	45
41	<p>A football field is 100 m long and 70 meters wide. How much fence is needed to go around it?</p> <p>A. 70 m B. 100 m C. 170 m D. 340 m</p>	48
43	 <p>What is the area of section 'A'?</p> <p>A. 12 m^2 B. 8 m^2 C. 6 m^2 D. 4 m^2</p>	39

3.4.3 Statistics and data handling

Students' best performance was in the area of Statistics and data handling. 73% of the students handled this section with relative ease. All the questions in this section was answered correctly by more than 55% of the students

3.4.5 Patterns, Functions And Algebra

This section posed the most problems to students. There were four items in this section and only 56% were able to answer these questions with relative ease. One item was answered correctly by only 20% of the students.

Item No.	Item	Percent Correct
58	If $2p - 6 = 0$ then p is? A. 0 B. 2 C. 3 D. 6	20

3.5 Science

The national mean raw score in science was 33.4 or 67%. Eighty-seven students 7.5% of the entrants scored 20 or less and 26% scored 40 (80%) or more. The paper was divided into the four sub-areas of life processes, earth & space and the physical sciences and agriculture.

3.5.1 Life Processes

The average for this section was 68%. Only one question was answered incorrectly by more than 50% of the candidates. 73% of the candidates answered item 7 incorrectly.

Item No.	Item	Percent Correct
7	What is the largest organ in our body? A. The stomach (31%) B. The heart(22%) C. The skin D. The thigh muscle (19%)	27

3.5.2 Earth and Space,

The average for this section was 64%. Two of the 10 questions (17 and 19) were answered correctly by less than 50% of the respondents.

Item No.	Item	Percent Correct
17	How many days are there between each full moon? A. 7 B. 14 C. 28 D. 365	45
19	Which statement is correct? A. The sun orbits the Earth B. The moon orbits the Earth C. Mars orbits the Earth D. The Earth orbits the moon	48

3.5.3 Physical Sciences

This average on this section was 68%. four of the questions proved to be a bit challenging for the students. Items 28, 29, 34 and 41 were answered incorrectly by more than 50% of the candidates.

Item No.	Item	Percent Correct
29	Which material will sound travel through the fastest? A. Water B. Air C. Steel D. Cloth	30

(See attached test booklet for items 34, 41)

3.5.4 Agriculture

Students performed better this year on this section than in previous years. 66% of the students handled this section with relative ease. Only 1 item (item 46) was answered incorrectly by over 50% of the students.

Item No.	Item	Percent Correct
46	<p>Farmer Brown noticed that his oranges on his field had some holes. This most likely could be done by which animal?</p> <p>A. Caterpillar B. Bird C. Slug D. Weevil</p>	17

It should be reiterated that children learn best by doing and so, principals should encourage that students engage in hands on activities for science. Schools should promote inquiry based learning where students are encouraged to discover for themselves and work in collaborative groups.

3.6 Social Sciences

The national mean raw score on the Social Sciences paper was 34 or 68%). 7% of the entrants scored 20 or less (40% or less) and 28% scored 40 (80%) or more. The four major strands were assessed –civic ideals and practices, people and places, resources, and social issues and change.

3.6.1 Civic Ideas and Practices

The average for this section was 69%. Three items in this section were answered incorrectly by over 60% of the respondents. Only 33% of the students were able to answer item 9 correctly.

Item No.	Item	Percent Correct
9	<p>Which statement best describes an autocratic leader?</p> <p>A. Plans everything for the group B. Lets members have their own way C. Shares activities with all members D. Plans activities with every member of the group</p>	34
13	<p>1. Which of the following would be considered a cooperative?</p> <p>A. The Royal Bank of Canada B. H.H.V Whitchurch and company</p>	35

	<p>C. The Vielle Case Credit Union</p> <p>D. The Dominica Public Service Union</p>	
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3.6.2 Location, People and Places

The average for this section of the paper was 71%. Only question 28 was answered by less than 50% of the students.

Item No.	Item	Percent Correct
28	<p>The indentured servants came mostly from</p> <p>A. East India</p> <p>B. Africa</p> <p>C. Europe</p> <p>D. North America</p>	48

3.6.3 Resources

This section appeared to be the one which posed the most difficulty to students. A mere 59% of the students were able to answer the 12 questions with relative ease. Items 31, 33 and 35 were a major challenge for the students. Only 37%, 25% and 20% of the students were able to answer these questions correctly, respectively. It very likely that the students had difficulty with the acronyms used. Item 40 was answered correctly by only 32% of the students.

Item No.	Item	Percent Correct
31	<p>DBS News announced that “<i>a formal discussion between the government and the opposition on the income and expenditure of the country</i>” will be held from July 1 to July 15. This discussion is referred to as a</p> <p>A. budget debate</p> <p>B. constitution</p> <p>C. rally</p> <p>D. meeting</p>	37

33	<p>Which of these resources is most abundant in Dominica?</p> <p>A. Banana</p> <p>B. Forests</p> <p>C. Geothermal energy</p> <p>D. Water</p>	25
35	<p>Most of DOMLEC's energy comes from</p> <p>A. fuel</p> <p>B. water</p> <p>C. sunlight</p> <p>D. coal</p>	20

3.6.4 Social Issues and Change

This section of the paper proved to be the least challenging. About 72% of the students were able to answer this section correctly. All of the questions were answered correctly by more than half the students.

It should be noted that 40% of the test was based on Dominica while 38% was general knowledge. 16% was based on the region while 6% was based on the wider world.

Appendices

Appendix A

GRADE SIX NATIONAL ASSESSMENT 2013

COMPOSITION MARKING SCHEME

AREA	HIGH	MIDDLE	LOW
Ideas/Organisation	8-10	5-7	1-4
Relevance to Topic	8-10	5-7	1-4
Sentence Structure	8-10	5-7	1-4
Usage and Spelling	4-5	2-3	1
Capitalization and Punctuation	4-5	2-3	1
TOTAL	35-40	20-34	5 - 19
Minimum Score = 5 (<i>mainly to indicate that student was registered or attempted exam.</i>)			

G6NA Composition: Marking Scheme Details

IDEAS/ORGANISATION

HIGH The opening is effective and catches the interest of the reader. There is no wandering, and organisation is clear and sequential. Content is adequately informative and reflects sound, logical details that support the main idea. Transitions clearly show how ideas are connected. The closing is effective and gives the reader the impression that the process is over, and there is an understandable conclusion. Anticipated questions are answered.

MIDDLE There is a general introduction but the reader's interest is not captured. Few ideas given but content is not adequate enough to support main ideas. Transitions sometimes work but are unclear at other times. The reader is not provided with the necessary background and the reader is left with some questions. Sequence is unclear and there is little or no sense of closure.

LOW The opening does not catch the attention of the reader. Necessary background is lacking. Connections between ideas are confusing or absent. The sequence is confusing and there is no sense of closure or completeness at the end of the composition. Information is limited or unclear or the length is not adequate for development.

RELEVANCE TO TOPIC

HIGH Details and incidents relate to the topic and purpose of the composition. The purpose of the writing is reflected in the writers' arrangement of ideas. Narratives make the reader think about the writer's point of view.

MIDDLE Details and incidents are not clearly related to the topic. The information in the essay is unnecessary and elements of the writing are unrelated to the topic.

LOW Details and incidents are unrelated to the topic. Information given is completely irrelevant and leaves the reader unclear about the purpose of the composition.

- *A composition, which scores 1 on this scale, may not obtain a total score above 15 marks for the entire composition.*

SENTENCE STRUCTURE

- HIGH** The writer displays interesting variety of structures which are effectively employed. Sentences are constructed in a way that enhances the meaning of the passage. Dialogue sounds natural. Beginnings are purposeful and varied.
- MIDDLE** The writer displays an interesting variety of structures but these are at times clumsy or ambiguous. Sentences are usually constructed correctly. Some variety in beginnings attempted.
- LOW** Structures are little more than simple sentences. They are repeated to the effect that the paper becomes boring or predictable. Sentences are choppy, incomplete or awkward. Many sentences begin the same way (*and, so, but, and then, because, etc.*).

USAGE AND SPELLING

- HIGH** Words convey the meaning in a precise and natural way. Words used are specific and accurate and it is easy to understand what the writer means. Usage is appropriate and spelling attracts little or no attention. Error in spelling reflects meaningful guesses. Lively verbs and modifiers add depth to the writing.
- MIDDLE** Words are adequate and correct. Verbs and modifiers add some depth to the writing. Usage errors are few and do not detract from the impact of the composition. Spelling errors are few. Most guesses are reasonable and do not detract from the impact of the composition.
- LOW** Writer has limited vocabulary. Errors in usage and spelling detract substantially from the readability and impression of the composition. The reader must stop and puzzle over words to figure out what they are or what the writer intended.

CAPITALIZATION AND PUNCTUATION

- HIGH** In general, punctuation is accurate and used to make writing clear and readable. Consistent application of capitalization skills is present.
- MIDDLE** Errors in capitalization and punctuation may be present but do not perceptibly detract from the clarity and readability of the paper.
- LOW** Error in capitalization and punctuation substantially detract from the clarity and readability of the composition,

Appendix B

Subject Specifications

Science Paper

A single 1 hour paper consisting of 50 multiple-choice items will be set.

Topic	Subtopic	Know	C U	Reason	Total	Total
Life science	Living things in the environment					
	Plants and animals					
	Adaptations of organisms					
Earth and space	Weather and climate					
	Resources					
	Solar system					
Physical science	Energy					
	Forces					
	Matter					
Agriculture science	Agricultural practices					
	Crops					
	Animals					

The content level categories were for the most part taken from the Primary Science Curriculum Guides for grades 5-7. Details of the specific objectives tested can also be found in these Curriculum Guides.

The cognitive level categories are:

Knowledge – recall of facts and procedures

Conceptual understanding – identifies, labels, gives examples and non examples for concepts; uses words, drawings, symbols etc. to represent ideas, concepts; demonstrates an understanding of principles, concepts and applies these to different situations; demonstrates skills of comparing, classifying, ordering, sequencing and measuring.

Reasoning – infers, predicts, interprets data and hypothesises

Mathematics Paper

One 75-minute paper consisting of 60 multiple-choice items will be set.

Topic		Subtopic	Paper 1 # of Ques	Total
Number		Number concepts	6	29
		Operations	17	
		Fractions & decimals	6	
Geometry		3D shapes	2	7
		2D shapes	4	
Measurement	Selected from...	Length	15	15
		Area		
		Volume/capacity		
		Mass		
		Time		
		Money		
Statistics and data handling		Data collection	1	5
		Data representation and interpretation	5	
Patterns, functions and algebra			4	4
TOTALS			60	60

Number concepts will deal with concepts of place value, properties of numbers etc. as specified by objectives 1.1 – 1.14.

Computation will deal with the four operations on whole numbers as specified by objectives 2.1 – 2.12

Measurement will cover concepts of length, area, capacity/volume, mass, time and money as specified by objectives 4.1.1 – 4.6.6.

Geometry will deal with concepts and properties of simple two and three-dimensional shapes as specified by objectives 3.1 – 3.14.

Fractions/decimals – elementary concepts of fractions and decimals will be tested as specified by objectives 5.1- 5.14.

Statistics – interpretation of various common ways of representing data will be tested as specified by objectives 6.1 – 6.4.

Problem Solving – solution of routine and non-routine problems using a variety of strategies as specified by objective 7.1.

Social Studies

A single 1 hour paper consisting of 50 multiple-choice items will be set.

Topic	Subtopic	K	C. U.	R	Subtotal	Grand Total
Civic ideals and practices (40%)	Patriotism				6	
	Cooperation				4	
	Rights, responsibilities & governance				5	
	Groups				3	18
Location, People and places (20%)	Location				4	
	Physical earth, natural phenomena and climate				3	
	People and origin				3	10
Resources (20%)	Types, uses, availability & allocation				4	
	Conservation, preservation of resources				4	
	Economic activities				4	12
Social Issues and change (20%)	Social issues				5	
	Social change				5	10
		14	21	15	50	50

For questions that pertain to countries, landmasses or bodies of water, about 20% will concern Dominica, 60% the Caribbean and 20% the world.

Teachers are advised to consult the new Social Studies Curriculum Guides for examples of the objectives to be tested (the sub- topic headings have been taken from these Guides). *Objectives tested will emphasize those from the new Grade 6 Guide and work that was done previously in grades 3- 5.*

Language Arts Paper

A one hour 60 item multiple-choice paper dealing with English mechanics and comprehension will be set. Students will be given a further 40 minutes to write a composition. This written composition will be worth 40% of the total score.

TOPIC	TOTAL
Composition	40
Usage/grammar	10
Vocabulary	10
Study skills	7
Spelling	10
Comprehension	23
TOTALS	100

Only areas of the Language Arts curriculum that can be assessed by pencil and paper methods will be tested. The composition will be assessed using the following criteria:

- General impression/organisation
- Relevance to topic
- Sentence structure
- Usage and spelling
- Capitalisation and punctuation

Appendix C

Answer Keys - G6NA 2013 Multiple Choice Papers

Item Number	Mathematics	Language Arts	Science	Social Studies
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APPENDIX D

Standardizing Test Scores

Since the scores for each of the test are on different scales, it presents a challenge in determining overall achievement. The raw scores on each test have different values – Language Arts is marked over 100; Mathematics is marked out of 60 and Social Studies and Science are each marked over 50. Adding the score in Mathematics to Science, Language and Social Studies would be like adding miles, meters and inches.

Calculating Standard Scores

Using an academic test example, we will examine the scores of five students who wrote the G6NA. The Language Arts paper 1 has 60 multiple choice questions worth 1 mark each and one written paper worth 40 marks. The mathematics paper consists of 60 multiple choice items while the Science and Social Studies papers each have 50 multiple choice questions. Each multiple choice item is worth 1 mark. The table below represents the scores obtained by each student.

Table 6: Scores obtained by students

NAME	LA		Math		Sci		SS	
	Raw	%	Raw	%	Raw	%	Raw	%
Ivan Terrible	93	93	58	96.7	46	92	36	72
Mike John	86	86	57	95.0	47	94	46	92
Sally Saucer	87	87	56	93.3	48	96	45	90
John Doe	71	71	35	58.3	37	74	42	84
Ty Lawson	55	55	17	28.3	21	42	27	54
Mean	78.4	78.4	44.6	74.3	39.8	79.6	39.2	78.4
Standard Deviation	15.4		18.1		11.4		7.9	

In order to calculate the standardized score, the mean (78.4 for LA) and standard deviation (15.4 for LA) are needed (included in table). The CMEU uses a standard mean of 100 and standard deviation of 15 in order to calculate standard scores.

Two steps are involved in calculating the standard scores for students. First, the raw scores are calculated to Z_{scores} . The Z_{scores} are then converted to Standardized scores.

- Converting raw scores to Z_{score}

$$\frac{\text{Raw score} - \text{Population mean}}{\text{Standard deviation}}$$

Standard deviation

- Converting z-scores to standard scores

$$(Z_{score} \times \text{standard scale standard deviation}) + \text{Standard scale mean}$$

Using test LA as an example, the standard score is calculated as follows for Ivan Terrible:

- Calculate z-score by subtracting the population mean from the raw score and the dividing the result by the standard deviation, that is:

$$\frac{93 - 78.4}{15.4} = 0.948$$

- Next the z-score is converted to the standard score by multiplying the z-score by the agreed standard scale standard deviation of 15, then adding the mean of 100, that is

$$(0.95 \times 15) + 100 = 114.23 \text{ (or 114)}$$

The standardized scores for all the students are shown in the table 7 below.

Table 7: Computed Standard scores

NAME	LA		Math		Sci		SS		Comp. Score
	Zscore	Stand	Zscore	Stand	Zscore	Stand	Zscore	Stand	
Ivan Terrible	0.95	114.23	0.74	111.08	0.54	108.17	-0.41	93.89	427.36
Mike John	0.49	107.41	0.68	110.25	0.63	109.48	0.87	112.99	440.13
Sally Saucer	0.56	108.38	0.63	109.42	0.72	110.80	0.74	111.08	439.68
John Doe	-0.48	92.79	-0.53	92.06	-0.25	96.31	0.36	105.35	386.51
Ty Lawson	-1.52	77.19	-1.52	77.19	-1.65	75.24	-1.55	76.70	306.32

Standard scores are calculated for all the papers and summed to obtain the composite standard score. The composite standard score accurately represents students overall performance.