

**MINISTRY OF EDUCATION AND HUMAN RESOURCE
DEVELOPMENT**

DOMINICA

**CURRICULUM, MEASUREMENT AND EVALUATION
UNIT**



**REPORT ON CANDIDATE'S PERFORMANCE
AT THE
2014 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	• 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 a half-day workshop one week prior to the examination. Supervisors were given copies of the exam regulations and detailed instructions regarding the conduct of the examinations. The 2014 G6NA was administered on the 29th and 30th 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 commended students for their good behaviour.

1.4 Entry

1057 students were registered for the 2014 G6NA (see table 2).

Table 2. Common Entrance Entry 2000 - 2014

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
2014	515	542	1057

Of the 1057 students who were registered for the 2013 G6NA, over half (50.9%) 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	CBSS	ITSS	NECS	PCSS	PSS	ROSEAU	Grand Total
F	57	39	63	33	72	278	542
M	44	49	51	28	82	261	515
Grand Total	101	88	114	61	154	538	1057

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 4 shows these scores by catchment area.

Table 4. Mean standardised scores by catchment area and gender

	Language Arts		Mathematics		Science		Social Science		ALL	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
CBSS	103	88	100	91	99	90	98	89	100	90
ITSS	105	96	100	100	101	102	101	100	102	99
NECS	101	88	101	95	99	93	98	92	100	92
PCSS	103	92	100	98	98	96	99	97	100	96
PSS	101	94	98	96	100	97	100	99	100	96
ROSEAU	106	99	105	99	103	101	104	100	105	100
Nat'l Means	103	93	101	97	100	97	100	96	101	96

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 5 % more than boys in these areas. The gap in Language Arts was the largest with girls outperforming boys by 10 standardized points.

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 area were on average higher than in other parts.

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

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 twenty years.

Table 9. Number of students selected for secondary school 1995 - 2014 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
2014	515	100	542	100	1057	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	550	538	100
PCSS	65	61	100
NECS	120	114	100
ITSS	90	88	100
Portsmouth	160	154	100
Castle Bruce	100	102	100
TOTALS	1085	1057	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.

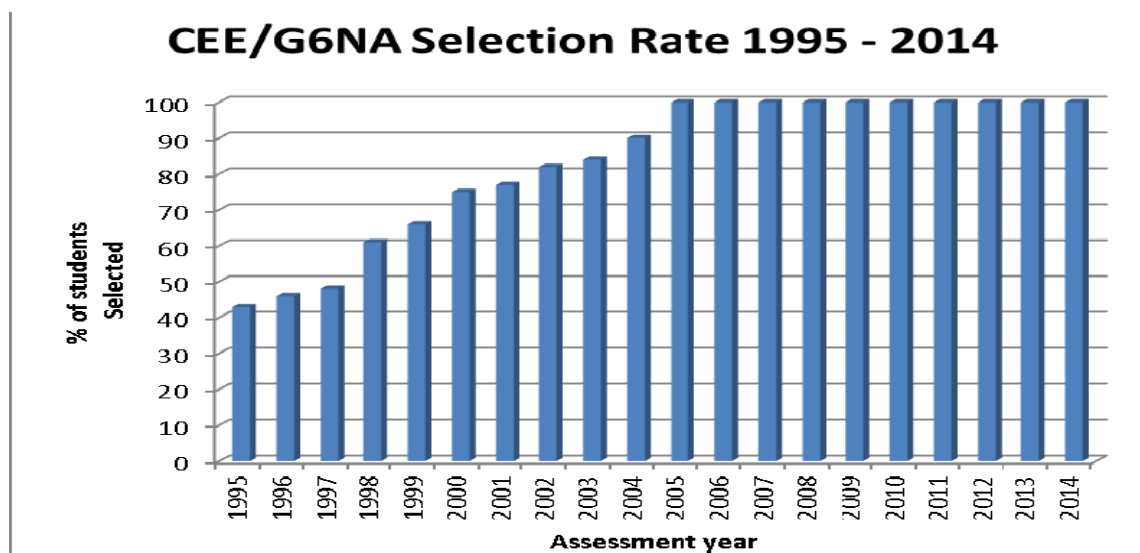


Fig. 1 - From 2005, 100% of the students writing the G6NA have secured a place in a secondary school.

2.4 Award of scholarships

This year government awarded a total of 82 scholarships and 117 bursaries to students. As Figure 2 demonstrates the distribution of the 200 highest performing students is dependent on location and gender.

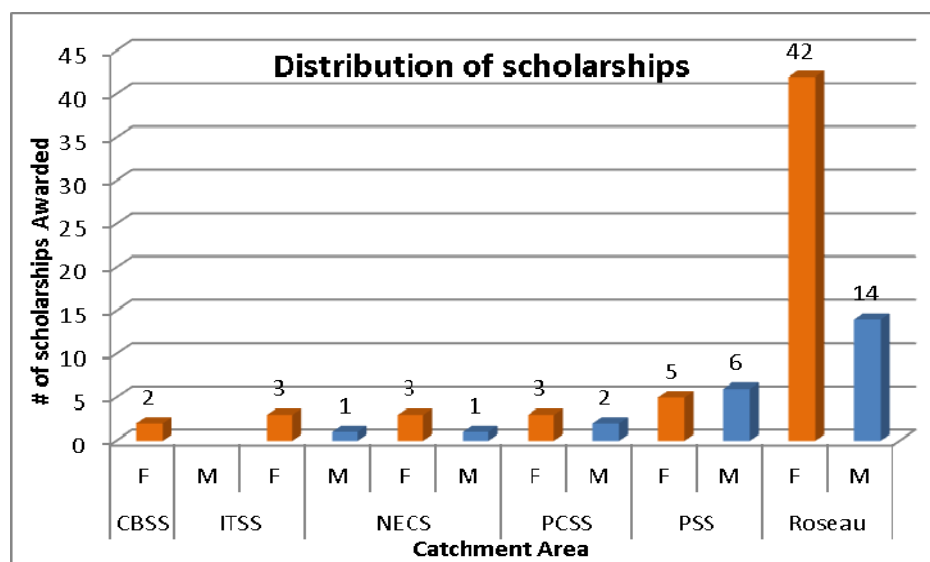


Fig. 2 – Distribution of scholarships by catchment area.

127 of the top 200 students 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 (159 students) obtained such grades in the 2014 examinations. In many cases these learning problems are related to student reading difficulties. **102 boys** and 57 girls fell in this category.

More details can be found in the attached CMEU's "**Performance of Primary Schools at the 2014 Grade Six National Assessment by District**" (included in package).

3 Subject Reports

3.1 Language Arts

The national mean raw score in the language arts multiple-choice paper was 41 (69%) with 7.5% of the entrants scoring less than 24 (40%) and 44% scoring 45 (75%) or more. Only 15 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

73% of the students were able to answer the questions in this section without much difficulty. All the items in this section was answered by more than 60% of the students

3.1.2 Vocabulary

This section was also handled well by the students. The average on this section was 73%. Between 57% - 88% of the students answered the questions in this section with relative ease.

3.1.3 Spelling

The spelling section posed the most difficulty to the students. Only 63% of the students handled this section with relative ease. Two questions proved to be the most difficult for the students. Items 29 and 30 were answered correctly by 43% and 39% of the students respectively (see below). Item 32 was disqualified since there was no correct answer listed.

Item No.	Item	Percent Correct
29	<i>Choose the word which is <u>INCORRECTLY</u> spelt</i> A. calendar B. candidate C. cemetery D. despair	43
30	<i>Chose the word which is spelt <u>CORRECTLY</u></i> A. choclote B. dimond C. hankerchief D. kindergarten	39

3.1.4 Study Skills

This section consisted of 8 questions. The average was 74%. No items were answered correctly by less than 55% of the candidates.

3.1.5 Comprehension

Students showed improvement in the comprehension section of the exam. The average for the comprehension section was 69%. This section consisted of a **letter, a poem, a narrative, and an article on turtles.**

Students performed best on the article on turtles with 81% of the students being able to handle this section with ease. The average scores for the letter, the poem and narrative article were 52%, 68% and 77% respectively.

3.2 Composition

Three choices of topics were given to students:

1. Look at the property in this picture. Write a **letter** to the village council chairperson in your area **persuading** them to break down the building. In the letter state the dangers the property can pose to people in the community and what should be done to the area that will be of benefit to the community.

2. One day at school, your teacher comes into the classroom, places a box on the floor, and leaves the room. Suddenly, the box begins to move. Write a **story** about what happens next.
3. Write a composition giving **three** (3) reasons why you think your **school** is the best school. Give detailed information to **explain** your reasons

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).

There was a marked improvement in the writing performance this year. The mean score for the composition was 65% - a 10% improvement over 2013. The minimum score was 5/40 (5 students) while the max score was 39/40 (5 students). 213 students (13%) attained scores greater than 80% (32/40) while only 17 students (5.8%) scored less than 20% (8/40 or less) which seem to indicate that they are operating at about the K level. 75 students (7%) scored 40% or less in the composition and 199 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

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.
10. **Let students write about what they like.**

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 39 (out of 60) or 65%. Twenty one students scored less than 15 (25%) and 417 (39%) scored 45 (75%) or more. 165 students (16%) attained scores of 40% or less.

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

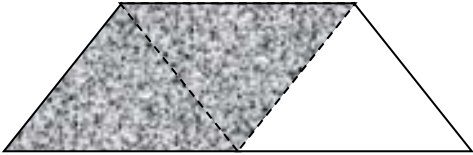
3.4.1 Number concepts and operations

This section included topics such as number concepts, operations, fractions and decimals. The average score for this section was 67%. 5 of the 29 questions were answered correctly by less than 50% of the students. Items 22, 23, 24, 26 and 27 were all answered incorrectly by more than half the respondents.

Item No.	Item	Percent Correct
22	See attached test booklet	48
23	See attached test booklet	38
24	$\frac{3}{4}$ written as a decimal is A. 3.4 B. 0.75 C. 0.34 D. $1\frac{1}{4}$	38
26	25. Ed had 22 more marbles than Doug. Doug lost 8 of his marbles at the playground. How many more marbles does Ed have than Doug now? A. 14 B. 16 C. 22 D. 30	46
27	See attached test booklet	46

3.4.2 Measurement

The average score in the area of measurement was 58%. This area posed the most difficulty to students. No question was answered correctly by more than 75% of the students. 3 questions - 36, 37 and 45 - were answered incorrectly by more than 50% of the students.

Item No.	Item	Percent Correct
36	The shape below can be divided into 3 identical triangles.  If the area of the shaded part is 16 cm^2, what is the area of the whole shape? A. 8 cm^2 B. 24 cm^2 C. 32 cm^2 D. 48 cm^2	49
37	The floor of a rectangular school building is 100 metres by 120 metres. What is the perimeter of the floor? A. 220 metres B. 440 metres C. 1200 square metres D. 12,000 square metres	48
45	See attached booklet	39

3.4.3 Statistics and data handling

Students' continue to perform well in the area of Statistics and data handling. 71% 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

There were four items in this section and only 60% were able to answer these questions with relative ease. This shows a slight improvement over 2013 (56%) One item (57) was answered correctly by only 36% of the students.

Item No.	Item	Percent Correct
57	Sheila started the pattern shown below 1, 3, 9, 27, ____ If the pattern continues as shown, what is the next number in the pattern? A. 36 B. 54 C. 81 D. 108	36

3.5 Science

The national mean raw score in science was 36 or 72%. This represents a 5% increase over 2013 (67%). Eighty-seven students 7.5% of the entrants scored 20 or less and 26% scored 40 (80%) or more. Only two questions (25 and 26) were answered incorrectly by more than 50% of the candidates. 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 77%.

3.5.2 Earth and Space,

The average for this section was 75%. Two of the 10 questions (25 and 26) were answered correctly by less than 50% of the respondents.

Item No.	Item	% Correct
25	What happens to water during the condensation stage in the water cycle? A. Water changes from solid to liquid state. B. Water changes to vapor and rise to the clouds. C. Water vapour changes to liquid droplets and fall as rain. D. Water vapour changes into liquid droplets and form clouds.	38
26	Students collected pond water in a small container. Which is the best unit for measuring the volume of water collected? A. grammes B. metres C. Cubic meters D. Cubic centimetres	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.

3.5.4 Agriculture

Students performance in this section continues to improve. 69% of the students handled this section with relative ease. All items in this section were answered correctly by over 55% of the students.

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 also 36 or 72%. 4% of the entrants scored 20 or less (40% or less) and 37% 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. 43% of the students were able to answer item 12 correctly. Only 32% were able to give the correct response to item 16 and 46 to item 17.

Item No.	Item	Percent Correct
12	Which of these would be an example of a cooperative? A. A bank set up in a poor village. B. A set of young people in a football club. C. A bank giving out loans to people to build houses. D. A group of fishermen working together to catch and sell their fish.	43
16	Which of these two islands are members of both the OECS and CARICOM? A. St. Lucia and St. Vincent B. St. Kitts and Barbados C. Antigua and Jamaica D. Trinidad and Dominica	32
17	C.S.M.E means A. Commonwealth States Market and Economy B. CARICOM Single Market and Economy C. Common Single Market and Economy D. CARICOM Single Market and Enterprise	46

3.6.2 Location, People and Places

The average for this section of the paper was 74%.

3.6.3 Resources

This section appeared to be the easiest for students. 76% of the students were able to answer the 12 questions with relative ease. Only item 30 was answered incorrectly by less than 50% of the students.

Item No.	Item	Percent Correct
30	Mrs. Joseph <u>IS NOT</u> a civil servant. What work could she be doing? A. a nurse. B. an insurance agent. C. working at the government headquarters. D. a teacher at the Massacre Primary School.	37

3.6.4 Social Issues and Change

This section of the paper proved to be the least challenging. 74% 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 38% of the test was based on Dominica while 40 % was general knowledge. 16% was based on the region while 6% was based on the wider world.

Appendices

Appendix A

Standarized scores

Mean Standardized scores by District

	Number	LA1_Std	LA2_Std	LA_std	MA_std	SCIstd	SOC_std	Totals
West	502	103.43	103.2	103.62	102.71	103.39	103.44	619.79
South	170	97.29	98.74	97.69	99.01	97.48	96.9	587.11
East	141	96.53	98.65	97.17	96.78	96.31	95.52	580.96
North	243	96.65	95.02	95.77	97.017	97.1	97.18	578.737
ALL	1056	98.475	98.9025	98.5625	98.87925	98.57	98.26	591.649

Standardized scores Boys V girls

	Language Arts		Mathematics		Science		Social Science		ALL	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
CBSS	103	88	100	91	99	90	98	89	100	90
ITSS	105	96	100	100	101	102	101	100	102	99
NECS	101	88	101	95	99	93	98	92	100	92
PCSS	103	92	100	98	98	96	99	97	100	96
PSS	101	94	98	96	100	97	100	99	100	96
ROSEAU	106	99	105	99	103	101	104	100	105	100
Nat'l Means	103	93	101	97	100	97	100	96	101	96

Appendix B

Grades received by students (District)

Language Arts

District	A	B	C	D	E	Grand Total
East	6	30	66	17	22	141
North	16	41	103	45	38	243
South	10	29	86	27	18	170
West	59	114	260	47	23	503
Grand Total	91	214	515	136	101	1057

Mathematics

Row Labels	A	B	C	D	E	Grand Total
East	6	25	64	24	21	140
North	19	38	109	36	40	242
South	13	40	64	34	19	170
West	63	126	210	57	47	503
Grand Total	101	229	447	151	127	1055

Science

Row Labels	A	B	C	D	E	Grand Total
East	6	25	67	19	23	140
North	13	50	115	24	39	241
South	1	48	71	31	19	170
West	45	161	223	47	27	503
Grand Total	65	284	476	121	108	1054

Social Science

Row Labels	A	B	C	D	E	Grand Total
East		24	78	19	20	141
North	13	43	114	43	30	243
South	9	16	102	24	19	170
West	39	136	250	48	30	503
Grand Total	61	219	544	134	99	1057

Appendix C

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.
•	<i>A composition, which scores 1 on this scale, may not obtain a total score above 15 marks for the entire composition.</i>

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 efforts 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 D

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	Total
			# of Ques	
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 E

Answer Keys - G6NA 2014 Multiple Choice Papers

Item Number	Mathematics	Language Arts	Science	Social Studies
1				
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APPENDIX F

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

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

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 then 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.