

NATALEE A. JOHNSON  
Contributor

Hello, students. In this week's lesson, I will be looking at system and application software. The term software is used to refer to the computer programs used in a computer system. Software can be divided into two main categories:

- a) Application programs
- b) System programs

APPLICATION SOFTWARE

Application programs are written to solve end-user problems. These include:

- **payroll programs** - used to generate the payroll of many businesses
- **stock control programs** - used by businesses to help manage their stock efficiency
- **accounting programs** - used by businesses to help manage their financial affairs
- **educational programs** - used in schools for teaching various subjects
- **administration programs** - used by many organisations for maintaining records of employees, customers, clients, students, creditors, members etc.
- **computer-aided design programs** - used by engineers, scientists, architects and others to speed up the designs of buildings. Aero-nautical engineers may use one to determine how a different tail design may affect the performance of an aircraft
- **graphics programs** - used, for instance, by an advertising agency for creating advertisements for television
- **library control programs** - used by libraries for maintaining records of books and borrowers in order to provide faster, more efficient service
- **word processing programs** - used by all kinds of people for the efficient preparation of letters, documents and reports

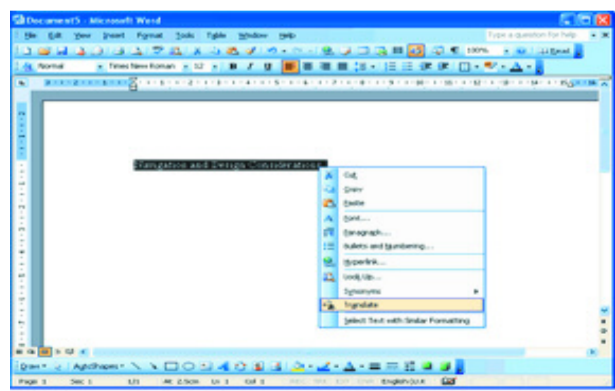
CATEGORIES:

- General purpose
- Custom written
- Customisation of general purpose
- Specialised software packages

GENERAL PURPOSE APPLICATION SOFTWARE

General purpose application software is used by a large number of people in a variety of jobs and personal situations. The five main types of general purpose application softwares are:

- Word Processing
- Spreadsheet
- Database Management
- Communication
- Graphics/Presentation



ADVANTAGES OF USING GENERAL PURPOSE SOFTWARE

- You can install it yourself by following the easy instructions in the installation manual that comes with the software
- It is cheaper than employing a programmer to write the software for
- Easy updating and revising since each new version can be had at a reduced price, if the owner can show proof of purchase of a previous version
- Most users may already be familiar with previous versions of the

# System and application software

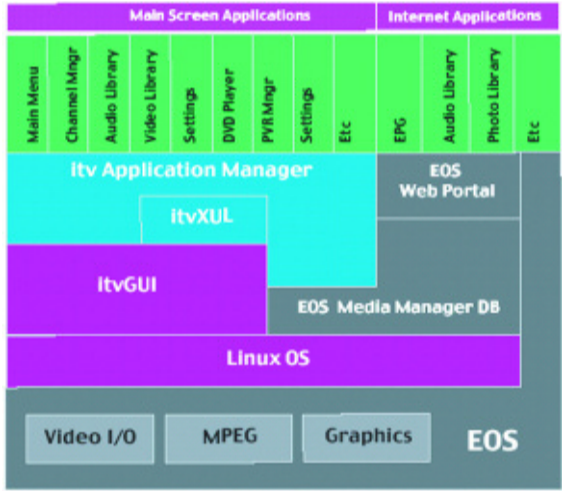
software so no intensive training programme is required  
■ Several persons use the software, therefore, help is easy to find

DISADVANTAGES OF GENERAL PURPOSE SOFTWARE

- The package may:
- Be poorly documented
  - Have hidden problems
  - Not fit the user's need exactly
  - Not be user-friendly

CUSTOM WRITTEN SOFTWARE

If you need a new outfit, you can buy the fabric and take it to a tailor, allow the tailor to take your measurements and then make an outfit that fits you. Custom written software is one that has been designed or created by a programmer to meet the unique need of a user or organisation. For example, you could hire a system analyst to look at the accounting principles employed by your company and then set a team of programmers to write a program to meet the requirements. This program would be custom written software.



ADVANTAGES OF CUSTOM WRITTEN SOFTWARE

- The software meets the need of the user specifically
- The software can grow with the company
- Business owners can relieve the stress placed on overburdened employees and save money from hiring additional staff

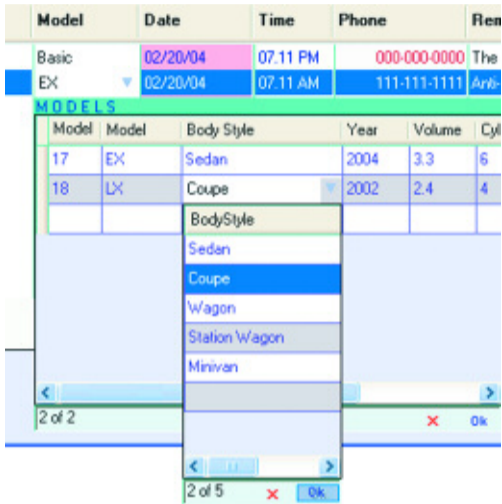
DISADVANTAGES OF CUSTOM WRITTEN SOFTWARE

- Expectations can change midstream when developing custom written software, making a realistic budget difficult to project. As a result, businesses often run out of money before the project is completed.
- An experienced software team is needed and acquiring the right team can be costly.
- If the people who are trained to use the program resign, then it will be some time before new persons are trained, slowing down the business functions.

CUSTOMISATION OF GENERAL PURPOSE SOFTWARE PACKAGES

Imagine buying an outfit in a department store that you like, but it's not exactly your fit. What do you do?  
Find a tailor or fashion designer who can adjust it to your size! Similarly, if you find general purpose software in a software house that you like but it needs some adjustments to meet your specific need, you can get a programmer to modify the program to meet your specific need. A customised general purpose software package is a generalised software package that has been tailored to meet a user or firm's specific need.

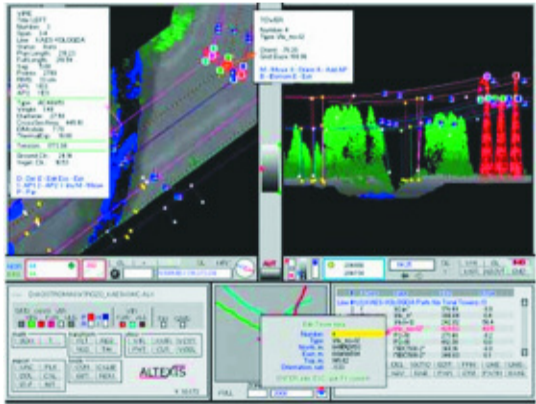
- Areas of the software that can be customised include:
- Screen colour
- Page size and arrangement on the desktop
- Navigation to available menus



SPECIALISED SOFTWARE PACKAGES

Specialised software packages are written for a specific discipline. An example of such packages is expert systems. An expert system is a type of computer application program that makes decisions or solves problems in particular fields, such as banking or architecture, by using knowledge and analytical rules defined by experts in the field. For example, a doctor could employ an expert system that asks a patient a series of questions then make a diagnosis. The software falls into two main categories:

- Business application programs, which are programs that perform the information processing tasks of important business functions or industry requirements.
- Scientific application programs, which are programs that perform information processing tasks for the natural, physical, social and behavioural sciences.



SYSTEM SOFTWARE

Systems programs do not solve end-user problems. Rather, they enable users to make efficient use of the computing facilities for solving their problems. These programs manage the resources of a computer system, automate its operations and make easier the writing, testing and debugging of users' programs.

We have come to the end of the lesson. See you next week when we will continue to look at system software and begin to look at operating systems. Remember, if you fail to prepare you should prepare to fail.

Natalee A. Johnson teaches at Ardenne High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)

# Sample questions

**MONACIA WILLIAMS**

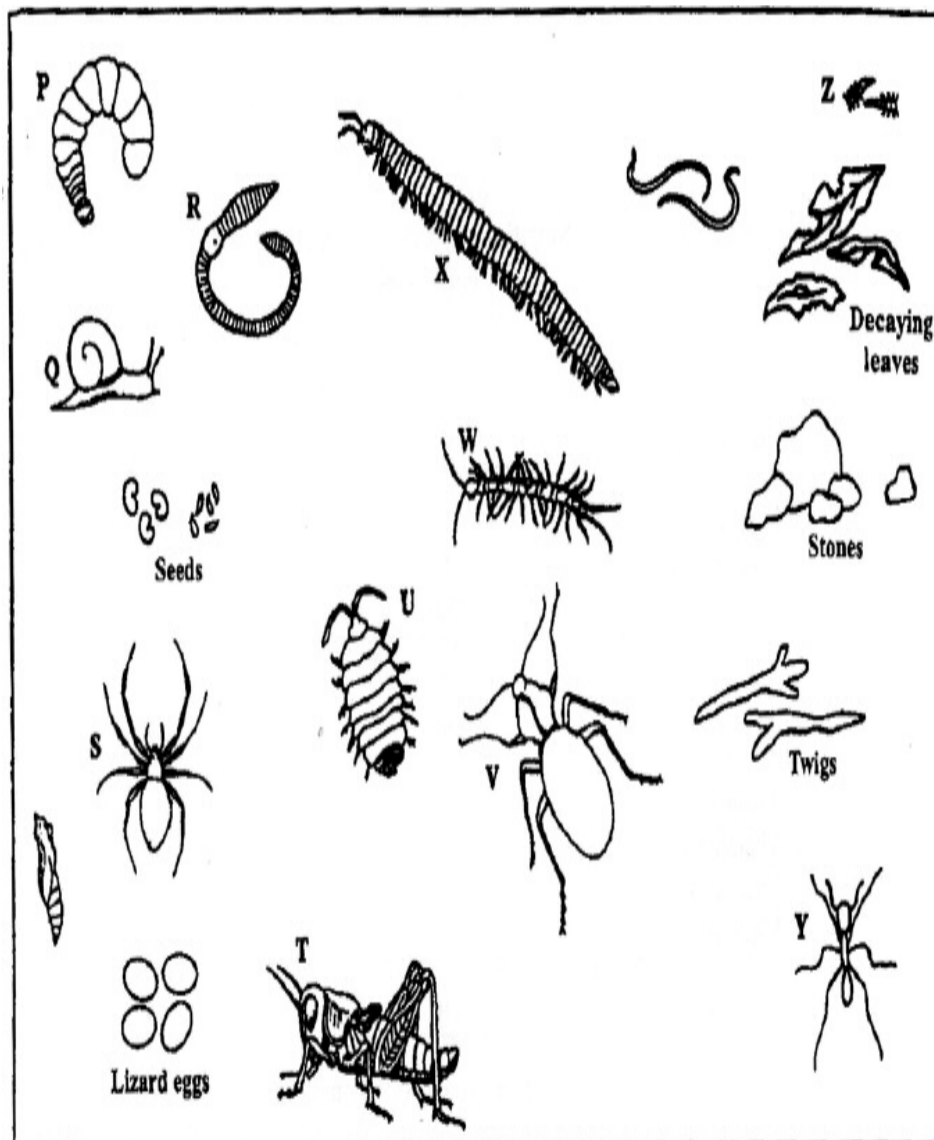
Contributor

**H**OW ARE you this week? Did you do the revision that I asked you to do? I hope you did, because if you have not done so yet, you will need to do so before the end of the course. So, why not get it over and done with now?

Let us look at a typical question for this section of the course. It is taken from a CXC biology specimen Paper 02.

## QUESTION

A sample of soil was collected from under a tree in a backyard where chickens used to be seen pecking at the dirt. The soil sample was sifted through a very fine sieve. Figure 1 below shows a sample of what remained in the sieve afterwards.



**Figure 1. Organisms and materials found in a soil sample**

(a)(i) Identify three organisms that belong to the same group. **(1 mark)**

How can we arrive at an answer?

In order to answer this question you will need to draw on your knowledge of classification. What are the features that can be used to group these organisms? First, do you recognise any of them? Of course you do! 'T' is a grasshopper. What else do you know? Grasshoppers are insects and insects have three pairs of legs. Do any of the other organisms have three pairs of legs? Look carefully at the diagram. 'V' and 'Y' also have three pairs of legs! The more knowledgeable student will also recognise 'P' as a beetle larva; larval forms of organisms belong to the same group as the adult. This places the larva among the insects.

## ANSWER

Three organisms belonging to the same group are V, Y and T or P.

(ii) State one characteristic that the three organisms have in common. **(1 mark)**

## ARRIVING AT AN ANSWER

We have already mentioned one feature in the previous question, so we can write that now. We also know that they are insects so we can add any other feature that is used to classify insects.

## ANSWER

All three animals have three pairs of legs

Their bodies are divided into three parts - head, thorax and abdomen

They all have antennae

Any one of the above responses will get you the mark.

(iii) Although organisms P and R look somewhat similar, they have several differences. Identify two differences shown in the diagrams. **(2 marks)**

## ARRIVING AT AN ANSWER

Well, if you are one of the more knowledgeable students, then you would already know that P is a beetle larva and, hence, an insect. Do you recognise R? Of course you do, it is an earthworm. Here you can do one of two things or a combination of both to help you to answer the question. You can look at the diagrams and arrive at your answer or you can look and also use your theoretical knowledge to assist you.

## ANSWER

R does not have a definite head while P has one

R has a smooth area, the clitellum, where there are no segments

The segments of P are much wider than those of R and increase in size towards the rear of the organism

Any two of the three answers given above would earn you the full two marks.

(b)(i) What type of organisms found in the soil would have passed through the holes of the sieve even if the holes were extremely small? **(1 mark)**

## ARRIVING AT AN ANSWER

Since the holes of the sieve were very fine, it means that only extremely small or microscopic organisms would have been able to pass through them. What organisms do you know about that could be put in this group?

## ANSWER

Microorganisms/Bacteria

(ii) What role do the organisms identified in (b)(i) play in the life of the tree?

## ARRIVING AT AN ANSWER

This requires you to draw on your theory. What processes involve microorganisms? That's right, breakdown of organic matter, recycling of nutrients. You have drawn on your resources; now you can answer the question!

## ANSWER

Bacteria/microorganisms help to breakdown the leaf litter produced by the tree.

They help in the recycling of the nutrients between the animals and the tree.

I hope that the time we spent in going through the questions has given you an understanding of the information that you will need going into the examination. Good luck and best wishes as you study. Remember to also enjoy yourselves.

*Monacia Williams teaches at Glenmuir High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*

yl:principles of accounts

# Trading, profit and loss account

ROXANNE WRIGHT  
Contributor

RECAP: FINAL ACCOUNTS

Final accounts are financial statements describing the results of operating a business at the end on an accounting period.

Some final accounts are:

- Trading account
- Profit & loss account
- Balance sheet

The heading must answer three simple questions, as given below:

The headings ask the questions:	Answer to questions:	Example of answer:
i. Who?	Name of the business.	Sharp & Porter Enterprise Ltd.
ii. What	Name of the account.	Trading Account
iii. When?	Period for which the account is computed.	Year ended Dec. 31, 2009

COMBINED TRADING & PROFIT AND LOSS ACCOUNT

It is possible to combine the trading account and profit and loss account to form one account called trading & profit and loss account.

Nearly all the information needed to draw up the Trading & Profit and Loss Account is in the content of the trial balance with other information given in additional notes.

WORKED EXAMPLE:

The trial balance below is for Beverly Saunders, extract a trading and profit & loss account for the year ended December 31, 2009.

Trial Balance as at December 31, 2009		
	Dr. \$	Cr. \$
Sales		36 924
Purchases	29 258	
Wages	4 300	
Motor expenses	1 040	
Rent and rates	1 340	
Insurance	222	
General expense	210	
Premises	3 000	
Motor vehicles	2 400	
Debtors	3 900	
Creditors		3 076
Cash -at-bank	3 308	
Cash-in-hand	80	
Drawings	1 790	
Capital		10 848
	50 848	50 848

ADDITIONAL INFORMATION:

Stock at December 31, 2009 was \$5 096  
Solution to worked example:

Beverly Saunders

Trading & Profit and Loss Account for the year ended December 31, 2009

	\$	\$
Sales		36 924
Less cost of goods sold:		
Purchases	29 258	
Less closing stock	5 096	24 162
Gross profit		12 762
Less expenses:		
Wages	4 300	
Motor expenses	1 040	
Rent and rates	1 340	
Insurance	222	
General expense	210	7 112
Net Profit		5 650



From the following trial balance of Cavell Walters, draw up a trading and profit & loss account for the year ended July 31, 2009:

TRIAL BALANCE AS AT JULY 31, 2009

	Dr. \$	Cr. \$
Sales		57 588
Purchases	47 606	
Rent and rates	1 708	
Lighting expenses	844	
Wages	6 328	
Insurance	210	
Shop buildings	100 000	
Shop fixtures	2 000	
Debtors	6 332	
Trade expenses	1 012	
Creditors		2 412
Cash at bank	7 694	
Drawings	4 800	
Motor vans	11 000	
Motor running expenses	2 266	
Capital		131 800
	191 800	191 800

ADDITIONAL INFORMATION:

Stock at July 31, 2009 was \$ 9,920.  
Get your copy of **Youthlink** next week for the solution to this question and another weekly presentation on the balance sheet. See you then.

Roxanne Wright teaches at Immaculate Academy. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)



Reginald Stewart of Herbert Morrison Technical High School, Serena Virgo (centre) of Muschett High, Khin Aung (second right) of Mount Alvernia, and Martina Frankson of Maldon High School have much to smile about after receiving Youthlink goodies from Gleaner Corporate Affairs officer Terry-Ann Wilson.

# Quadratic equations

CLEMENT RADCLIFFE  
Contributed

This week, we will continue with the review of algebra. Let us solve together the following quadratic equations.

Solve the following:

- $x^2 - 3x - 4 = 0$ . Factorising the left-hand Side  
 $x^2 - 3x - 4 = (x - 4)(x + 1)$   
 $\therefore (x - 4)(x + 1) = 0$   
 $\therefore x - 4 = 0$ , that is,  $x = 4$  **OR**  $x + 1 = 0$ , that is,  $x = -1$

**Answer:  $x = 4$  and  $-1$**

- $6x^2 - x - 15 = 0$   
 $\therefore (2x + 3)(3x - 5) = 0$   
 $\therefore 2x + 3 = 0$ , that is,  $x = -\frac{3}{2}$  **OR**  $3x - 5 = 0$ , that is,  $x = \frac{5}{3}$

**Answer:  $x = -\frac{3}{2}$  and  $\frac{5}{3}$**

- $x^2 + x = 6$   
 $\therefore x^2 + x - 6 = 0$   
 $\therefore (x + 3)(x - 2) = 0$   
 $\therefore x = -3$  **and**  $2$ .

- Solve:  $y = 2x^2 - 3x - 2$  when  $y = 0$ .  
 $\therefore y = 2x^2 - 3x - 2 = 0$ .  
**Factorising**  
 $(2x + 1)(x - 2) = 0$

$\therefore x = -\frac{1}{2}$  **and**  $2$

- **Solve the equations:**

$$\begin{aligned} 3a - \frac{1}{2}b &= 4 & (1) \\ 9a + 2b &= -2 & (2) \end{aligned}$$

$$\begin{aligned} &\text{Multiply equation (1) by 4} \\ 12a - 2b &= 16 & (3) \\ &\text{Add equations (2) and (3)} \\ 21a &= 14 \\ a &= \frac{14}{21} = \frac{2}{3} \end{aligned}$$

Substitute into equation (2)

$$\begin{aligned} 9 \times \frac{2}{3} + 2b &= -2 \\ 6 + 2b &= -2 \\ 2b &= -8 \\ b &= -4 \end{aligned}$$

**Ans :  $a = \frac{2}{3}$  and  $b = -4$**

Most quadratic equations cannot be solved by factorisation. Alternatively, the **FORMULA METHOD** is used. Please be reminded that given the quadratic equation  $ax^2 + bx + c = 0$ , where **a**, **b** and **c** are constants, then it can be shown that  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ .

This is the basis of the formula method as  $x$  is found by substituting the values of **a**, **b** and **c** into the formula.

**Examples:**

- Express  $2x^2 = 3x + 1$  in the form  $ax^2 + bx + c = 0$  and find the values of **a**, **b** and **c**.

Given that  $2x^2 = 3x + 1$ , then  $2x^2 - 3x - 1 = 0$ .

By comparing this equation with the required form  $ax^2 + bx + c = 0$   
 $\therefore a = 2$ ,  $b = -3$  and  $c = -1$ .

**Please be careful not to omit the negative sign.**

**Answer:  $a = 2$ ,  $b = -3$  and  $c = -1$ .**

- Solve  $2x^2 - 3x - 7 = 0$ . Using the formula method:

From the equation,  $a = 2$ ,  $b = -3$  and  $c = -7$ .

(Note that the zero must be on the right-hand side).

Given the formula:  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ , then substituting

$$\therefore x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4 \times 2 \times (-7)}}{2 \times 2}$$

$$\therefore x = \frac{3 \pm \sqrt{9 + 56}}{4}$$

$$= \frac{3 \pm \sqrt{65}}{4} = \frac{3 \pm 8.063}{4}$$

$$\therefore \text{Either } x = \frac{11.063}{4} \quad \text{OR} \quad x = \frac{-5.063}{4}$$

**$\therefore x = 2.766$  OR  $-1.266$**

Let us try another example.

Solve the following equation using the quadratic formula:  $2x^2 + 2x - 8 = 3x - 6$ .

$$2x^2 + 2x - 8 = 3x - 6$$

$$2x^2 + 2x - 3x - 8 + 6 = 0$$

$$2x^2 - x - 2 = 0$$

Having expressed the equation into the appropriate form, then  $a = 2$ ,  $b = -1$  and  $c = -2$ .

Using the formula:  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Substituting the values above,

$$\therefore x = \frac{1 \pm \sqrt{1 - 4 \times 2 \times -2}}{4} = \frac{1 \pm \sqrt{1 + 16}}{4}$$

$$\therefore x = \frac{1 \pm \sqrt{17}}{4} = \frac{1 \pm 4.12}{4}$$

$$\therefore x = \frac{1 + 4.12}{4} = \frac{5.12}{4} = 1.28$$

$$\text{And } x = \frac{1 - 4.12}{4} = \frac{-3.12}{4} = -0.78$$

**Answer is  $x = 1.28$  and  $-0.78$**

Unless you are specifically directed, you should attempt to use the factorisation method before the formula method.

## POINTS TO NOTE

- Care should always be taken in manipulating the negative signs as this provides the greatest challenge in this method.
- The  $\pm$  enables you to obtain two roots.
- The entire numerator is over **2a**. A common error is to use  $\sqrt{b^2 - 4ac}$  over  $2a$ , separating  $-b$ . In other words, the **incorrect formula**  $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$  is sometimes used.
- The value within the square root should always be positive. When this is not so, it usually implies an error in calculation. **PLEASE CHECK YOUR WORKING.**
- If the value within the square root is negative, then the equation has no real roots.

Please be sure to reflect the above in your work in this topic in the future.

For homework please find the solution of the quadratic equations.

$$(1) x^2 + 3x + 1 = 0$$

$$(3) 7x^2 + 8x - 2 = 10$$

$$(2) 2x^2 - 6x - 1 = 0$$

$$(4) 2x^2 - 3x - 4 = 2 - 4x$$

*Clement Radcliffe is an independent contributor. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*

# ‘The Merchant of Venice’ (part 2)

**BERYL CLARKE**  
Contributor

Shy: A Daniel come to judgement: yea a Daniel!  
O wise young judge how I do honour thee!

.....  
Gra: A second Daniel, a Daniel, Jew!-  
Now infidel I have you on the hip.

In our previous lesson, we began to consider the play, ‘The Merchant of Venice’, from which the extracts above are taken. You were asked to examine Portia’s speech on the quality of mercy and I hope you enjoyed doing so. Discussions on this play tend to be very lively as there has always been some disagreement surrounding Portia’s role and the judgement against Shylock on the one hand, and Shylock’s determination to have his pound of flesh on the other.

In the speeches above we have both speakers lauding Portia for her skill, but not at the same time nor for the same arguments that she advances. When she points out the legality of Shylock’s demand for the pound of flesh, Shylock praises her. Later, when she makes it clear that Shylock has no right under the bond to shed blood or to cut more of Antonio’s flesh than is specified, she receives Gratiano’s commendation.

One of Shakespeare’s best-known dramatic speeches is the one made by Portia on the quality of mercy in this play. In it, she extols the virtues of forgiveness as she seeks to change Shylock’s attitude. What I would like you to bear in mind at this point is that the duke has failed to convince the Jew to have compassion on Antonio. Bassanio has also failed, despite offering to pay twice that which was owed, so when Portia speaks she does so from the position that the person to whom she is appealing is very, very determined to stand on the law under which he has a right to the pound of flesh.

I have often imagined that she begins to speak softly and in a calm and reasonable tone as befits the words she uses. She tells him (and us) that mercy is not strained but is as mild as softly falling rain. As a Jew Shylock would have been familiar with the religious teaching about mercy and, perhaps, that is why she compares it to rain from heaven as she tries to remind him of what should be his own religious beliefs. She then draws his attention to the fact that there is benefit in being merciful, letting him know that he, too, would get something rewarding from being compassionate.

Portia points out that mercy has the greatest effect when used by those who are powerful and drives home the point when she says that mercy is a better attribute in a king (or queen) than the very crown which is worn as a sign of position. As she warms to her theme she informs Shylock that mercy is more important in a ruler than his power and that it is an aspect of God Himself. Clearly, she is putting forward arguments that she expects to carry weight with Shylock. Obviously, he does not

respond as she would like and so she continues on the same line in suggesting that a human being who is merciful is behaving in a similar fashion to God.

She attempts to clinch her argument when she comments that as Shylock appeals for justice, he should remember that salvation comes from God’s mercy and that if that were not so, none of us would be saved. Also, in the same way that we ask for mercy we should be willing to dispense it. Unfortunately, she is speaking as a Christian and Shylock is a Jew, with a different religious view, and so he remains untouched by her eloquence.

We need to consider Shylock’s reasons for behaving in the way he does, although we may not agree with his desire to take Antonio’s life. Let us, therefore, look at his response to Salerio (in Act 111 Scene 1) when he questions whether Shylock would take the pound of flesh from Antonio if he could not repay the loan. It is here that he reveals his pain at the way he had been treated by Antonio. He says:

1. Antonio had caused him to lose money. This suggests that Antonio had probably helped borrowers from Shylock to pay off their loans, thus reducing the amount of interest he should have earned or perhaps Antonio had made loans without interest to persons who used to or would have borrowed from Shylock.

2. Antonio laughed at Shylock when he failed to make profit from usury.

3. He mocked (and this would not have been in a kind way) Shylock when he profited from lending money at interest.

4. Antonio had spat on him, called him dog and “foot (me) him as you spurn a stranger cur”.

5. He belittled Shylock because he was a Jew. In other words, he discriminated against Shylock due to his race.

It is the racial discrimination that seems to enrage Shylock above everything else. Do notice how the greater part of this speech is spent questioning and at the same time pointing out that Jews and Christians are both human with the same emotions and reactions. He then concludes with an ominous statement

The villainy you teach me I will execute, and it shall go hard but I will better the instruction.

This statement prepares us for the obduracy (I chose this word deliberately) with which he faces all those who try to change his mind. Let me remind you that because Shakespeare has created a Jewish antagonist, he cannot have him subscribe to Christian beliefs and practices. The question, therefore, of mercy in the context of his relationship with Antonio would not have been significant to Shylock.

Until next week, please organise your study timetable and work steadily for your success. God bless!

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# Writing in colour (part 2)

**NATASHA THOMAS-FRANCIS**  
Contributor

LAST WEEK, we looked at some figures of speech which will help to make your writing more creative. The week before that, we looked at ways in which you can appeal to the senses. Were you able to identify the senses to which the two closing excerpts (from last week’s lesson) appeal?

In the first excerpt, you should have noted that the main sense to which the passages appeals is sight. Did you picture the caravan of donkeys? Words such as flush, blew and flying suggest life and activity. In the passage you get the sense that there is much excitement as the weekend approaches.

The second excerpt appeals mainly to the senses of taste and smell. Were you able to imagine the various tastes that the writer described? The following words are related to the senses of taste and smell: spicy, peppery, smoked, sweet and sour, fruity, sweet, honeyed.

## DESCRIBING PEOPLE

Now that we have looked at various descriptive words and phrases, you need to know how to use these to describe people and places. We will start with describing people.

In everyday life, we come into contact with all kinds of people; some are friends, relatives, acquaintances or just strangers. We are drawn to people for various reasons. You should, therefore, use your experiences to produce effective descriptions of people. Take the following into consideration:

■ **The physical features** - for example: is the person tall, short, slim, thick-set, light-skinned, dark-skinned etc? What colour is his/her hair? How old is the person and what physical feature depicts the age (wrinkles, grey hair)?

■ **What the person wears** - what type of outfit suits this person? Does the person wear a particular outfit often? What colour clothing does he/she wear?

■ **Mannerisms** - for example, does the person smile all the time or does he/she move his/her hands whenever he/she speaks?

■ **Habits** - for example, does the person blink rapidly when being untruthful? Maybe the person pushes back his/her hair when nervous.

■ **Qualities** - for example, is the person helpful, honest, kind, reliable?

■ **Distinguishing features** - for example, does the person have a scar, tattoo, stammer or a lisp?

## DESCRIBING PLACES/SCENES AND EVENTS

We move to the description of places and events. Events happen in particular places and to describe these effectively you need to include clear details, especially of what can be seen and heard.

Use your imagination; put yourself in the place or event which you want to describe and use the following questions as a guide to writing your scene. When you have finished writing your scene, you should be able to answer all these questions about your descriptive piece:

- What kind of place am I describing?
- What is happening here?
- What makes this place different from all others?
- What impression do I want my readers to have of this place/event?
- What senses have I appealed to?

Take a look at the following scene. It is a description of a fire. To which senses does the description appeal? Does the writer use any figures of speech?

*Smoke was rising here and there among the creepers that festooned the dead or dying trees. As they watched, a flash of fire appeared at the foot of one wisp and then the smoke thickened. Small flames stirred at the hole of a tree and crawled away through leaves and brushwood, dividing and increasing. One patch touched a tree trunk and scrambled up like a bright squirrel. The smoke increased, sifted, rolled outwards. The squirrel leapt on the wings of the wind and clung to another standing tree, eating downwards. Beneath the dark canopy of leaves and smoke the fire laid hold on the forest and began to gnaw. Acres of black-and-yellow smoke rolled steadily towards the sea. At the sight of the flames and the irresistible course of the fire, the boys broke into shrill, excited cheering. The flames, as though they were a kind of wild life, crept as a jaguar creeps on its belly towards a line of birch-like saplings that fledged an outcrop of the pink rock. They flapped at the first of the trees and the branches grew brief foliage of fire. The heart of the flame leapt nimbly across the gap between the trees and then went swinging and flaring along the whole row of them. Beneath the capering boys, a quarter of a mile square forest was savage with smoke and flame. The separate noises of the fire merged into a drum roll that seemed to shake the mountain.*

■ From ‘Lord of the Flies’ by William Golding

For homework, I want you to describe a situation in which there is a fire. Remember that you should appeal to as many senses as possible - what do you see, hear, feel and smell? Also, include some figures of speech to enhance the intensity of the moment.

All the best for the rest of the week! Blessings!

*Natasha Thomas-Francis teaches at Glenmuir High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*

DEBBION HYMAN  
Contributor

REVOLTS WERE the most daring form of active resistance employed by the slaves. This normally resulted in bloodshed, as slaves and whites died and a large number of properties destroyed. There were four major slave revolts in the Caribbean:

- Berbice/Coffy Revolt (1763)
- Haitian Revolution (1791)
- Barbados/Bussa's Revolt (1816)
- Sam Sharpe/Christmas Rebellion (1831)

The Haitian Revolution will, however, be assessed next week, as this was the most successful slave revolt in the Caribbean and it had far-reaching consequences.

#### BERBICE /COFFY REVOLT (1763)

##### Personality

- Coffy/Cuffy

##### Causes

- Slaves' resentment of the ill-treatment they received from managers/overseers
- The lack of provisions available to the slaves
- Dutch settlement with Djuka in Surinam 1761

##### Revolt

The revolt took place under the leadership of Coffy, an Africa-born slave. It began on the Magdalenburg Plantation on the Conje River and quickly spread to the Berbice River. This revolt was one of the most prolonged battles of enslaved Africans against the whites. It lasted for a full 20 months from the close of February 1763 to December 1764.

The slaves had two major contentions: a) they were being badly treated by the whites, b) they desired a designated area where they could live in freedom. The whites, being unable to suppress the rebellion, solicited the support of the Native Americans, and it is at this point that they began to crush the slaves' resistance. By October 1763, Coffy had committed suicide rather than submit to defeat. Despite their heroic resistance, most of the Africans succumbed to fever. It was not until December 1764 that all remaining Africans were captured. Seven leaders in the revolt were broken at the wheel, two others were severely beaten, branded under the gallows and deported from the colony.

#### BARBADOS/BUSSA'S REVOLT (1816)

##### Personalities

- Bussa
- Jacky
- Franklin

# Major slave revolts



Water and Housing Minister Dr Horace Chang listens carefully as Westwood's future scientists explain all the hard work that had been invested in this project.

##### Causes

- Slaves' belief that emancipation was being withheld
- Activities of non-conformist missionaries
- Barbadian planters' refusal to accept the Slave Registration Bill

##### Revolt

The slave revolt was started by Bussa and Jacky and quickly spread throughout Barbados. Things became quite intense and, a day into the revolt, Martial Law was declared. This, in essence, crushed the rebellion. Bussa died in the fighting. In the end 214 persons were executed, including Franklin, and 100 exiled to Sierra Leone. Missionaries who were in any way sympathetic to the slaves were persecuted. Chapels were damaged and the ministers threatened violently. Some of these missionaries were eventually forced to flee to neighbouring islands. The revolt was quite damaging to the whites as one fifth of the sugar crop was destroyed.

#### SAM SHARPE/CHRISTMAS REBELLION (1831)

##### Personality

- Sam Sharpe

##### Causes

- Slaves' belief that emancipation was being withheld
- Non-conformist missionaries' activities

##### Revolt

The strike began on Kensington Estate in St James under the leadership of Samuel Sharpe. Sharpe believed that the slaves had been freed by England and that the planters were withholding this freedom. He organised a strike for wages - they would not return to work until they were paid. However, this civil disobedience quickly turned into a revolt as slaves began destroying cane fields and damaging other forms of property. The militia was called in and successfully quelled the revolt. During the revolt 400 slaves and 10 whites were killed. In the end 100 slaves were executed, including Sam Sharpe, and another 100 were flogged. The missionaries who were blamed for encouraging the ideas of freedom and equality to the slaves experienced the destruction of chapels. Missionaries such as Knibb, Burchell and Pfeiffer suffered persecution.

##### Next week: The Haitian Revolution

Debbion Hyman teaches at St Hugh's High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)

# Nationalised industries

YVONNE HARVEY  
Contributor

**H**I FRIENDS. This week's lesson will complete our study of nationalised industries. I will begin by giving an overview of the organisational structure of nationalised industries. Following that, I will look at the advantages and disadvantages of such industries. Finally, I will assign your homework.

## THE ORGANISATIONAL STRUCTURE

Nationalised industries are run by boards which are appointed by a member of Parliament who is, in turn, appointed by the government. Each board has a chief executive officer (CEO) who oversees administrative affairs. The CEO reports to a government ministry.

## ADVANTAGES OF NATIONALISATION

1. When nationalisation takes place, profits are transferred from private hands, where only a few benefit, to the country as a whole, where many more persons benefit.
2. Nationalisation often leads to regional economic development, not just development of the country where the nationalisation takes place.
3. Through nationalisation, private monopolies are prevented if they do not yet exist, or they are broken up if they exist. This protects consumers from restricted quantities and high prices.
4. The aim of nationalised industries is social welfare rather than the maximisation of profits. A wider cross section of persons benefit when the aim is social welfare.
5. Economies of scale (that is benefits or advantages of large-scale production) results from nationalisation. These advantages lead to lower average costs of production for the industry. Lower costs can be and often are transferred to consumers in the form of lower prices.

## (part 2)

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6. If it was not for nationalisation, some essential goods and services would not be provided, since it would not be profitable for the private sector to provide them.
7. Nationalisation may result in improved quality and greater efficiency.
8. Increased employment and greater job security is often the result of nationalisation. Also, it sometimes results in improved working conditions.
9. Nationalisation standardises production and, therefore, encourages the use of up-to-date technology which increases output.
10. Industries that are failing are revived through nationalisation. Thus, unemployment that would result from the closure of these industries is prevented.

## DISADVANTAGES OF NATIONALISATION

1. The taxpayer is often burdened with paying more tax to cover losses in these industries when the management is weak.
2. The monopolistic nature of nationalised industries may lead to a take it or leave it attitude towards the consumer.
3. In some instances output quality and variety may actually decline.
4. Many consumers resent the standardised production of nationalised industries.
5. Some ministers and MPs do not exercise effective control over very specialised and complicated operations in some nationalised industries.

6. Governments may have difficulty in maintaining the industry after the initial investment. This may result in the government passing it back to private hands.

7. Workers in nationalised industries receive relatively lower wages than workers in private-sector businesses.

OK, assignment time. Use the two lessons on nationalisation (last week's and this week's) to answer the following question:

- (a)(i) Define nationalization.
  - (ii) Give two examples from your own country of industries that are nationalised or have been nationalised in the past. **(4 marks)**
  - (b) Explain three major objectives that governments attempt to achieve through nationalisation. **(6 marks)**
  - (c) Outline the organisational structure of a nationalised industry. **(4 marks)**
  - (d) Give three advantages and three disadvantages of nationalisation. **(6 marks)**
- Total marks: 20**

The other side of the coin is privatisation. You are being encouraged to research this area under the following headings:

- Definition of privatisation
- Reasons for privatisation
- Advantages of privatisation
- Disadvantages of privatisation

As you research this area, it would be wise to make some brief notes on your findings.

Take care until next week when we will consider the concepts of the private and the public sectors. Bye for now.

*Yvonne Harvey teaches at Glenmuir High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*



Sashell Samuels, a fourth-form student at Mile Gully High School, shows Earl Jarrett, chairman of the Mutual Building Societies Foundation (MBSF), how a new learning software donated to the school under the MBSF Centres of Excellence programme helps to improve numeracy skills.





Winner in the high school category of a recent essay competition, Shaquille Brown of St Andrew High School, receives a trophy from Petroleum Corporation of Jamaica's (PCJ) Nigel Logan, and a weekend at Half Moon Rosehall, Jamaica, from J. Simpson-James, a senior legal counsel at PCJ, on behalf of a Half Moon representative.

# Preparing for a meeting

**HYACINTH TUGMAN**  
Contributor

**A** CHAIRPERSON controls every meeting. Before the chairperson declares the meeting open, a quorum of members must be present. This is the minimum number of people who are required to conduct the business of the meeting as outlined in the regulations. If a quorum is not present, the chairperson may wait until sufficient members arrive or he/she may postpone the meeting. If the chairperson is absent, then the vice-chairman or deputy will chair the meeting.

At any time during the meeting, the secretary is the person who must be able to advise the chairperson on points which may arise during discussion. On the day of the meeting, the secretary should check the room or rooms to be used to make sure that everything is in order. The following items should be checked carefully:

## ATMOSPHERE

The temperature of the room should be comfortable and there should be adequate light and ventilation.

## FURNISHINGS

There should be enough tables and chairs and they should be set up so that the participants can see each other.

## EQUIPMENT

Check carefully to ensure that all necessary equipment is in the meeting room and that each piece is working properly. The equipment might include a video recorder, a screen, a tape recorder or a computer.

## SUPPLIES

Any special supplies that the participants might need should be placed in an organised manner on the tables where the participants will be seated. Customary supplies include pens, pencils, paper and folders containing special materials for the meeting. Name tags are often provided with these supplies.

## REFRESHMENTS

Typical refreshments are coffee, tea, juice and soft drinks, along with sandwiches, fruit or light foods. The time of day of the meeting determines the types of refreshments to be served.

## FOLLOW-UP TASKS

A follow-up should be conducted shortly after the meeting has occurred. Common follow-up tasks include completing reports and writing letters or other types of communications determined by what went on at the meeting.

Most meetings involve taking notes and the preparation of a report based on the notes. The report may be in the form of a summary for the participants of an informal meeting, or it may be an official record of the meeting - called the minutes. Minutes of meetings are kept in an organisation's permanent files. Minutes are very important since they are often used for future references. When transcribing notes into minutes, keep in mind that actions should be emphasised rather than what each member said.

An evaluation is another important follow-up task after a meeting. Review your meeting files and consider the points that made the meeting successful or points that might improve another similar

meeting in the future. You might evaluate the speaker/s, the venue or special services used for the meeting.

## I WILL NOW SUMMARISE SOME OF WHAT WE DID IN THIS UNIT.

- Meetings are held primarily to conduct business, to pass on needed information, or to follow up on a particular activity of the business
- Meetings may be formal or informal, depending on the purpose of the meeting
- The three basic types of meetings held in the office are staff meetings, committee meetings and individual meetings
- Reserve the meeting room
- Meeting participants should be notified in advance of the meeting as to the topic being discussed as well as to their role in the meeting
- Agendas must be distributed in advance
- Meeting rooms should be checked carefully for all necessary items including supplies, equipment, refreshments, furniture and atmosphere
- A follow-up should be conducted shortly after the meeting has taken place
- Minutes of the meeting should be distributed to those attending and others who would need to know what had happened

See you next week.

*Hyacinth Tugman teaches at Glenmuir High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*

MARJORIE HENRY  
Contributor

**G**REETINGS! I trust you are working well at your lessons and that all things are favourable with you. With all the distractions around, may I encourage you to remain focused on your lessons. Your aim should be that of acquiring a good education and you must begin that now. As the memory gem goes in part:

*Silver and gold may vanish away, but a good education will never decay.*

Those of you who are in grade 11 (fifth form) and are sitting the external examinations in May/June 2011, I trust that by now you have either completed your field study report, the geography SBA, or you are well on your way in getting it done. Remember to aim at gaining the maximum marks. This you can realise if you simply follow the guidelines given. May I again encourage you to do a good job.

The field study and map reading together comprise section 1 in the geography syllabus. Having gone through aspects of the field study already, I want to spend some time now on map reading. When I gave you an overview of Paper 02, I indicated that the paper had ONE compulsory question, that is, map reading. Practical skills are tested in this question. In fact, all questions given on Paper 02 have a section that tests practical skills. This is found in part (a) of the questions.

For the compulsory map-reading question, Question 1, the only question in section A of the paper, you are given an extract from a topographic map of any Caribbean territory to be used to:

- locate places using grid references
- measure distances
- give directions in terms of compass bearing and the 16 points of the compass
- draw and interpret cross sections
- calculate gradients
- describe such things as drainage, vegetation and land use

Paper 2 is marked out of 100 and this question is allotted 28 marks.

For the other questions on Paper 02, numbers two through 10, practical skills are tested in several ways. Some of these are:

- photographs to interpret geographical data
- drawing diagrams to illustrate geographical features
- constructing bar and line graphs, divided circles and pie charts
- interpret tables, dot, choropleth and isopleths maps, bar and line graphs and divided circles

This part of the question, part (a), is given four marks out of the possible 24 allocated to the entire question.

From my own experience in the classroom, I am fully aware that for some unknown reason many students develop a phobia for map reading. This is totally unwarranted. Once you have been taught these practical skills, what you need to do is to practise them as much as you can. When you practise, you are not only preparing yourself well for the examinations, but you are also building up your self-confidence in doing the particular skill. Let me caution you and say that if you fail to perform well on question one, you are quite likely jeopardising your chance to get a passing grade in the examinations. So, again, practise, practise, practise!

*Marjorie Henry is an independent contributor. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)*

# Looking at paper 1

## (part 3)



The 2010 4-H Boy and Girl of the Year are Manchester High School's Kevaughn Bonner and Natasha Smith.

## WHAT IS COHESIVENESS?

Group cohesiveness is the adhering to or, in simple terms, the cooperation and feeling of togetherness between group members. Cohesiveness is important in group decision making and goal attainment. It is also defined as the degree to which members of the group desire to remain in the group or the result of all the forces acting on the members to remain in the group. It is vital for achieving members' identity and satisfaction.

## KEEPING GROUPS TOGETHER

Group cohesion is an experience which determines how well a group holds together. When group cohesion is strong, a group will remain strong and stable. When it is weak, the group may fall apart.

Groups have to be held together. Some of the factors in group cohesion are social; whatever occurs within a group between its members, helps to encourage people to stay in the group and to stay focused on group goals. Environmental conditions caused by external factors may also make the idea of staying together as a group more or less appealing.

The smaller a group is, the better it is to manage, therefore, more cohesion is possible. The more stable a group is, in terms of member demographics, the better the cohesion as well. People who share characteristics like race, gender, religion, sex and so forth will forge stronger connections in a group, while a group of diverse individuals may have difficulty staying together. Another factor is group success, with people having an incentive to stay in a group which is doing well, with status achieved also playing a role.

## WHY STUDY GROUP COHESION?

This is because it is essential to any group's success. A required degree of agreement between members is highly essential. Cohesion is the individual's attraction to the group. One often finds people joining a group that bestows status or rewards even when they do not like the group members. Group cohesion is the degree to which a group exists and operates as a single, separate entity. Group cohesiveness could result from conveying adequately to members, the necessity of working together, increasing group status and making group members engage in jobs that require cooperation.

Group cohesion may be evident even though there are problems between individuals. Seeing that cohesion implies a feeling of solidarity or

# Group cohesion

oneness, individuals must look beyond their personal feelings. These feelings include the beliefs, feelings and actions of members in a group towards other members. Group efforts required by the member include time, effort, finance, the handling of disagreements and conflicts that occur within the group, and dealing with members whom one dislikes or is uncomfortable with.

## ADVANTAGES OF COHESIVENESS:

- Members can benefit from group resources
- Members gain a certain status from association with some groups
- Opportunity to work with other members and gain from their collective wisdom, this makes individuals want to remain in the group
- Decisions can be easily implemented when there is harmony of efforts
- Group efforts will be reduced as they face less conflict within ranks
- Social and emotional benefits are also gained from working along with other members
- Goals can be achieved more easily when there is cohesiveness within the organisation

## MEASURING GROUP COHESION

This will be evident from the following:

- The rapport that exists between

members

- The number of members present at group meetings
- The appeal the group has for the individual
- The members' opinion of group rewards
- The desire of members to work towards group goals

## WHY COHESION?

What causes groups to remain together:

It is togetherness, cooperation and goal orientation

- The longer a group is together, the stronger the cohesiveness. There are established norms and beliefs holding group members together
- The degree of group cohesiveness is determined by factors such as the size of the group - small groups appear to be more cohesive
- The degree of mutual dependency - do we need others in order to achieve our goals or can we do it alone?
- The incentives attached to successful task completion
- Commonality through gender, faith, skills, experience
- The strength of the leader
- Many groups provide mutual support and social satisfaction and so may be positive in impact and, therefore, hold its members.
- Some groups are protective and pursue their own interests - they may

be closed to new entrants

- The harder it is to get in to a group, the more incentive people have to stay
- If a group has to focus on a task which requires collective effort, members will have an easier time staying together
- There may also be rewards and punishments involved. People could be rewarded for being in a group with benefits which make the group attractive to be in, or they could face punishment for leaving the group, which encourages them to stay in the group
- One major external factor enhancing group cohesion is competition from other groups As soon as a rival team appears, group cohesion will increase radically because group members have an incentive to remain in the group and work together to achieve a common goal, which is the defeat of rivals.

## EXAMPLES OF FACTORS INFLUENCING GROUP COHESIVENESS

The forces that push group members together can be positive, such as rewards, or negative things that individuals will lose upon leaving the group. The main factors that influence group cohesiveness are members' similarity, group size, entry difficulty, group success and external competition and threats. Often, these factors work

through enhancing the identification of the individual with the group she/he belongs to, as well as their beliefs about how the group can fulfil their personal needs.

## MEMBERS' SIMILARITY

The more group members are similar to each other in various characteristics, the easier it is to reach cohesiveness. People feel closer to those whom they perceive as similar to themselves in terms of age, ethnicity, values and attitudes. In addition, similar background makes it more likely that members share similar views on various issues, including group objectives, how to communicate, and the type of desired leadership.

## GROUP SIZE

Since it is easier for fewer people to agree on goals and to co-ordinate their work, smaller groups are more cohesive than larger groups.

## ENTRY DIFFICULTY

Difficult entry criteria to a group tend to present it in a more exclusive light. The more elite the group is perceived to be, the more prestigious it is to be a member in that group and, consequently, the more motivated members are to belong and stay in it.

## GROUP SUCCESS

Group success increases the value of group membership to its members and influences members to identify more strongly with the team and to want to be actively associated with it.

## EXTERNAL COMPETITION AND THREATS

When members perceive active competition with another group, they become more aware of members' similarity within their group as well as seeing their group as a means to overcome the external threat or competition they are facing.

Leaders and social control are essential ingredients in group cohesiveness.

## ACTIVITIES

1. Define the term group cohesion
2. State four ways in which group cohesion may be achieved
3. Explain why group cohesion is necessary in any society.
4. Explain how leadership, social control, cooperation and competition help with group cohesion.



MICHAEL LEE PHOTO

Ms. Valerie Welsh educates her students at Edith Dalton James High on the components of the body, during science class.

Maureen Campbell teaches at St Hugh's High School. Send questions and comments to [kerry-ann.hepburn@gleanerjm.com](mailto:kerry-ann.hepburn@gleanerjm.com)