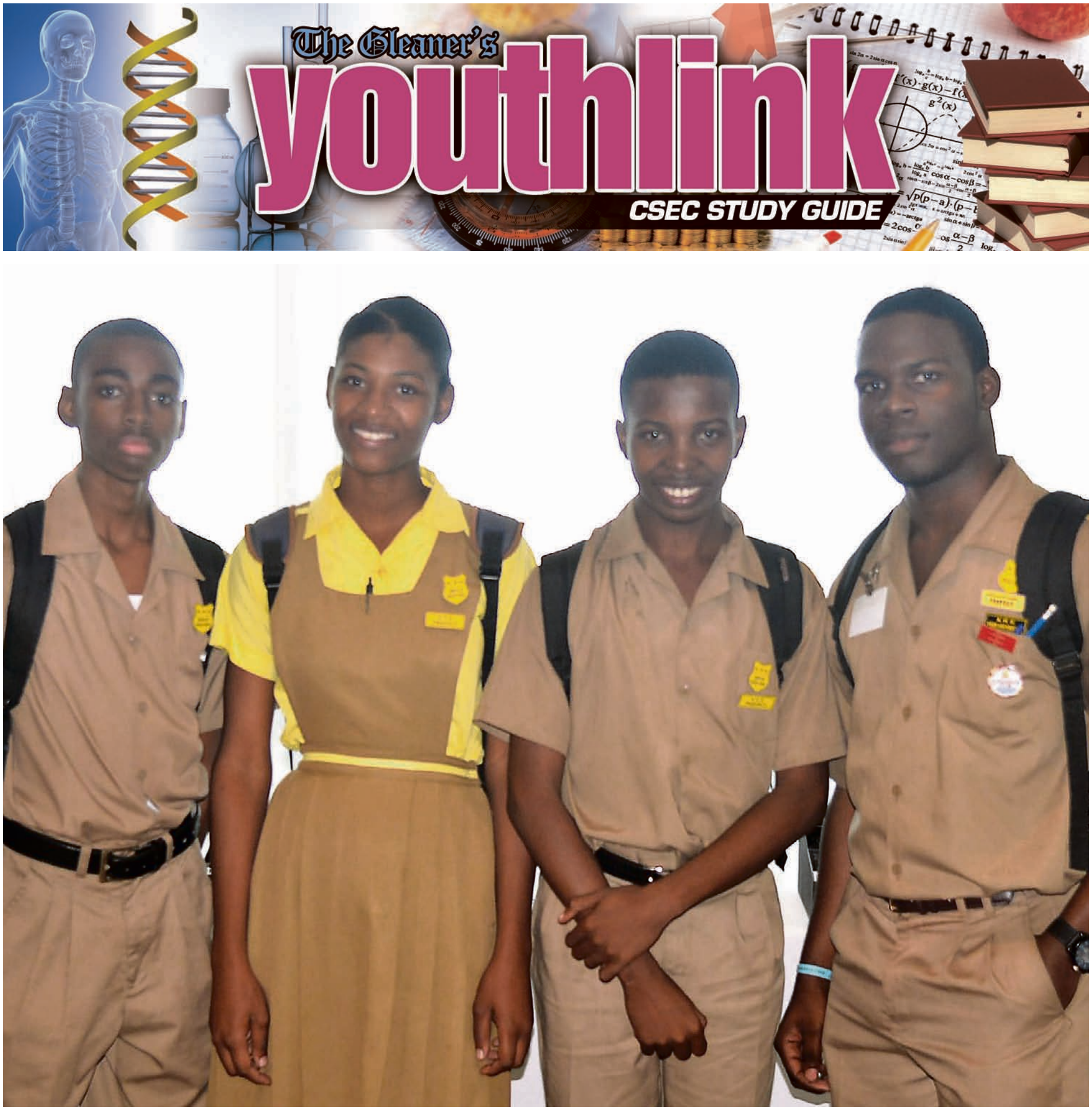

Christopher Thomas Vijay Steadman (left), head boy of Anchovy High School in St James, stands with his schoolmates, deputy head boy Cornell Barrett (second right), deputy head girl Suze Crew, and deputy head boy Devron Sanderson. The four were among the attendees at St James High School's inaugural Grade 11 Empowerment Seminar, held at the Hilton Rose Hall Hotel in Montego Bay on Wednesday, January 31.

The human resources office

HYACINTH TUGMAN
Contributor

THE HUMAN resources office is the centre of the organisation; it works closely with other departments within the organisation.

The functions of the human resources office include the following:

- Recruiting employees.
- Orienting and training new employees.
- Determining how to compensate employees.
- Providing incentives and benefits.
- Settling complaints and grievances.
- Disciplinary procedures.
- Appraising performance.

RECRUITMENT AND SELECTION OF NEW EMPLOYEES

RECRUITMENT

- Advertising post
- Shortlisting
- Interviewing
- Testing
- Selecting

EMPLOYMENT

- Letter of contract
- Promotion
- Transfer
- Layoff
- Dismissal

TRAINING

- Induction
- Orientation
- In-house
- Special programmes for individuals

EVALUATION

- Performance/appraisal
- Reports

WELFARE

- Pension schemes
- Superannuation schemes
- Insurance
- Canteen

The recruitment of employees can be done either internally or externally. Internal sources consist of employee referrals and promotions from within, whereas external sources are more varied and consist of the following: unsolicited applications, advertising, employment agencies, grapevine and electronic media.

The selection process usually involves:

a) Processing of applications.

b) Shortlisting (selection of an approved number of applicants for interviewing).

c) Interviewing (by one or more persons).

d) Testing (if necessary).

e) Notifying successful applicants by telephone and a follow-up letter.

A contract of employment is prepared for the successful applicant. It sets out the terms and conditions of employment, and so a personal file should be prepared with the following records – application letter/form, letter of appointment, contract of employment, performance evaluation, periods of absences/vacation/sick leave, medical certificates, records of transfers/promotion, copies of certificates/transcripts, reference/testimonials, and résumé.

ORIENTATION

Orientation is usually undertaken by the human resources office to help the employee adjust to his/her new environment within the shortest possible time, and provides information on the following:

- The structure of the organisation.
- Policies
- Services
- Wages and salaries
- Working hours
- Benefit plans
- Training opportunities
- Appraisal system

The newly hired employee will be asked to submit:

- National Insurance Number (NIS)
- Tax Registration Number (TRN)
- Medical record
- References

INDUCTION

The induction programme is planned by the department in which the new employee will actually commence work so that the employee can adjust to his new job as quickly as possible. During the induction programme, the employee is provided with information on:

- Responsibilities of the job.
- Specific duties.
- The department in which he/she will be employed.
- Facilities available.
- Promotional opportunities.
- Operation of basic equipment.

The aim of this training is to familiarise the employee with the important aspects of the job and safety precautions to follow.

TRAINING

Organising training programmes is an essential feature of the work of the human resources department. The programme may be an 'in-house', one that is done by selected staff, or it may be one in which persons from outside the organisation are recruited to undertake the training programme. The period of training depends upon the complexity of the training involved.

Training is beneficial to both the employer and the employee. Some of the benefits of training include:

- Better understanding of the organisation and its goals.
- Improved performance and morale.
- Improved problem-solving techniques.
- Introduction of ideas which can save time and money.

EVALUATION OF EMPLOYEES

In evaluating an employee, the following factors are considered:

- Scholastic background
- Attendance/punctuality
- Job knowledge
- Attitude
- Quantity and quality of work performance
- Reliability
- Initiative
- Adaptability
- Decision-making ability

Evaluation techniques may vary in different organisations.

Be good, and see you.

Hyacinth Tugman is an independent contributor. Send questions and comments to
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Short-term and long-term financing

YVONNE HARVEY
Contributor

GREETINGS. ONCE again, it is time to focus on another aspect of principles of business. This week, we will discuss short-term and long-term financing.

Different forms of businesses raise their capital in different ways. Many businesses raise their capital through loans. They may raise this loan capital on a short-term basis or on a long-term basis by borrowing from the financial market. The money market and the capital market are under the financial market.

THE MONEY MARKET

The money market is a market where firms, individuals or the government can get money to borrow on a short-term basis. Short term refers to up to one year. Medium term is two to five years. Although the money market is used mainly by everyday consumers who want to buy consumer durables such as furniture and cars, businesses also want short-term financing. These short-term funds are usually for businesses to run their day-to-day operations, including payment of wages to employees, inventory ordering and supplies. For example, a firm may place an order for raw materials, pay for it with finance and anticipate covering this finance by selling these goods over the period of a year.

Many methods (sources) are open to firms to seek short-term financing. These include:

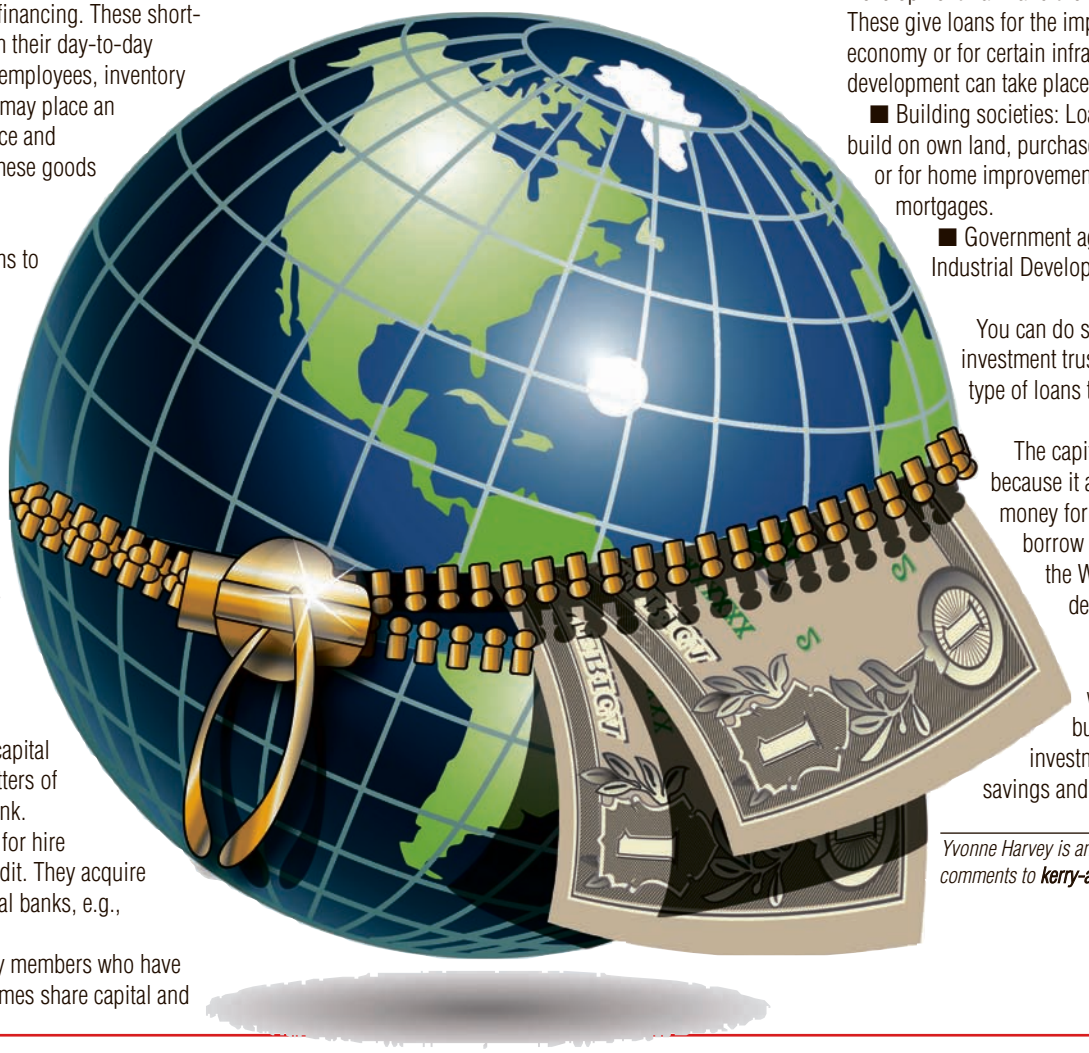
- Overdrafts
- Short-term loans
- Bills of exchange
- Promissory notes
- Letters of credit
- Inventory loan
- Treasury bills
- Commercial paper

The institutions involved in giving short-term loans include:

- Commercial banks: Give loans to purchase assets such as cars, household appliances, vacations, etc.
- Merchant banks: Provide short-term capital to importers and exporters in the form of letters of credit, e.g., Capital and Credit Merchant Bank.
- Finance houses: These provide credit for hire purchase and other kinds of installment credit. They acquire funds from shareholders or from commercial banks, e.g., Industrial Finance Company.
- Credit unions: Loans are given to only members who have share capital. Loans are given up to three times share capital and interest on loans is relatively low.
- Partner hand: An individual receives a loan or advance when he receives the entire 'hand' or 'draw', unless he receives the final or last 'hand' or 'draw'.
- Discount houses: Treasury bills, bills of exchange and other short-term securities are bought and sold by discount houses, e.g., The Warehouse. A security is discounted when it is bought for less than its face value. When the security matures, the face value is given to the new owner of the security who will make interest, which is the total of the difference between the buying and selling price of the security.

THE CAPITAL MARKET

When a loan is repayable between five and 30 or so years, it is obtained under the capital market. The rate of interest in the capital market is much lower than in the money market. The capital market trades in securities with a lifespan of more than one year. These include:



- Bonds
- Stocks
- Shares
- Fixed deposits
- Term deposits

The institutions involved in giving loans on a long-term basis include:

- Commercial banks
- Merchant banks

You will notice that commercial banks and merchant banks are involved in both short-term and long-term financing.

- Insurance companies: Lend money to their clients directly and have policies wherein their clients can borrow money from these policies and pay back over a long period of time.
- Unit trusts
- Investment trusts
- Development banks. For example, the Caribbean Development Bank and the Inter-American Development Bank. These give loans for the improvement of particular sectors of an economy or for certain infrastructure so that economic development can take place.
- Building societies: Loans are available for up to 30 years to build on own land, purchase home on the open market, buy land or for home improvement. These loans are referred to as mortgages.
- Government agencies. For example, the Jamaica Industrial Development Corporation.

You can do some research on unit trusts and investment trusts so that you can have an idea of the type of loans they give.

The capital market is used by governments because it allows them to borrow large sums of money for long periods of time. Governments borrow from the International Monetary Fund, the World Bank, the European Union and developments banks.

We considered personal savings when we looked at personal budgeting. Next week, we will look at investment and the connection between savings and investment. Do take care until then.

Yvonne Harvey is an independent contributor.Send questions and comments to ***kerry-ann.hepburn@gleanerjm.com***

Theory of double entry

ROXANNE WRIGHT
Contributor

WELCOME BACk. As we continue to complete the external examination syllabus, we make a presentation in the form of a worked example of a question that covers a host of principles relevant to your course of study. It is supported with a pointer, identified as 'reasoning', and workings to help you fully understand some crucial points. Follow the steps and endeavour to retain them.

WORKED EXAMPLE

Question:
Janice started a business on October 1, 2016, with a motor van, $9,000, shop fixtures, $1,500, and cash of $3,000. To start the business, she had borrowed $3,600 from Patrick.

You are required to:
a. Complete the following trial balance showing clearly the value of the capital. [>1]
Janice Trial Balance as at October 1, 2016

	Dr.	Cr
	$	$
Motor van		
Shop fixtures		
Cash		
Patrick– loan		
Capital		

b. Janice buys and sells goods on credit. She maintains a full set of accounts. The table below contains a list of transactions carried out in the first week of trading. Complete the table below for EACH transaction, stating clearly the amount, if any, of increase or decrease in the value of capital.

The first transaction has been completed as an example. [>2]

Transactions	Book of Original Entry	Account to be Debited	Account to be Credited	Effect on Capital $
Example: Purchased goods, $3600 on credit from Patricia.	*Purchase Journal*	*Purchase*	*Patricia*	*No Effect*
Sold goods for $4500 (cost $1800) on credit to Yandi.				
Sold all the shop fixtures for cash $1200				
Paid wages for cash $900				
Yandi returned goods, valued at $600				

REASONING

1. Capital = Total assets - total liabilities
2. Capital is effected by the following:
i. Additional investment
ii. Net profit or loss
iii. Drawings

WORKINGS

1. $4,500 - $3,600 = $2,700 profit
2. $2,700 x 100 = 60% margin
Returned goods:
$600 x 60% =$360 profit. Therefore, the decrease in profit is $360.

SOLUTION

WORKED EXAMPLE

a) Janice Trial Balance as at October 1, 2016

	Dr.	Cr
	$	$
Motor van	9000	
Shop fixtures	1500	
Cash	3000	
Patrick – loan		3600
Capital		9900
	13500	13500

b) The first transaction has been completed as an example. [>2].

Transactions	Book of Original Entry	Account to be Debited	Account to be Credited	Effect on Capital $
Example: Purchased goods, $3600 on credit from Patricia.	*Purchase Journal*	*Purchase*	*Patricia*	*No Effect*
Sold goods for $4500 (cost $1800) on credit to Yandi.	Sales Journal	Yandi	Sales	+ $2700 [w>1]
Sold all the shop fixtures for cash $1200	Cash Book	Cash	Fixtures	-$300
Paid wages for cash $900	Cash Book	Wages	Cash	-$900
Yandi returned goods, valued at $600	Sales returns Journal	Sales Returns	Yandi	-$360 [w>1]

This is where we will end for this week. Join me next week as we continue to complete the syllabus. Grasp the concepts and retain them. You will need them as you progress to excellence. See you next week.

Roxanne Wright teaches at Immaculate Academy. Send questions and comments to ***kerry-ann.hepburn@gleanerjm.com***

Chemical test

FRANCINE TAYLOR-CAMPBELL
Contributor

NON-METALLIC IONS (anions) can be identified based on the identification of the gases produced when the compounds are heated or reacted with acids. The colour of precipitates formed on reaction with barium and silver ions, and the solubility of the ions in ammonia (for the halide ions), are also used.

The anions we are concerned with are CO_3^{2-}, SO_4^{2-}, SO_3^{2-}, NO_3^-, Br^-, Cl^- and I^-.

A simply way to identify anions is to heat the compound and identify the gas produced. Remember, most gases are formed from non-metallic compounds. Therefore, CO_2 gas is produced from the carbonate ion (CO_3^{2-}), NO_2 gas is produced from the nitrate ion (NO_3^-), and SO_2 is formed from the sulphite ion (SO_3^{2-}).

CO_3^{2-} ➤ (heat) produces the gas CO_2
NO_3^- ➤ (heat) gives off O_2 and/or NO_2
SO_3^{2-} ➤ (heat) gives off SO_2

These gases can then be identified by their characteristic tests. All acidic gases can be tested with damp blue litmus paper, which should change to red. An alkaline gas should be tested with damp red litmus, which should change to blue.

CO_2 is weakly acidic and turns lime water ($Ca(OH)_2$) milky.
O_2 is neutral and relights a glowing splint.
NO_2 is a red-brown/yellow-brown acidic gas.
SO_2 is an acidic gas which turns acidified potassium manganate (VII) solution from purple to colourless and changes acidified potassium dichromate (VI) from orange to green.
NH_3 is an alkaline gas which forms dense white fumes with hydrogen chloride gas.
Cl_2 will bleach damp litmus paper.

Some anions react with dilute and concentrated acids (if they are added to the solid).
CO_3^{2-} reacts with dilute and concentrated acid to release CO_2.
SO_3^{2-} forms SO_2 gas on reaction with dilute and concentrated acid.

When concentrated H_2SO_4 acid is added to a solid containing the halide ions (I^-, Cl^-, and Br^-), the following gases can be formed: HI(g), which decomposes to I_2, HCl(g), and HBr, which decomposes to Br_2. In the case of iodide ions, the sulphuric acid will further break down to produce hydrogen sulphide gas, H_2S, which smells like rotten eggs.

The halide ions, in solution, can be identified differently based on their reaction with silver nitrate solution ($AgNO_3$) and the solubility of the precipitate formed in ammonia.

Cl- forms a white precipitate with $AgNO_3$ solution, which is soluble in aq NH_3.
Equation: Ag^+ (aq) + Cl^- (aq) AgCl (s) white ppt.

Br^- forms a cream precipitate with $AgNO_3$, which is partially soluble in aq NH_3.
Equation: Ag+ (aq) + Br^- (aq) AgBr (s) cream ppt.

I^- forms a light-yellow precipitate, which is insoluble in aqueous NH_3.
Equation: Ag^+ (aq) + I^- (aq) AgI (s) yellow ppt.

The halide ions can also be differentiated by reaction with aqueous Pb^{2+} ions.
Pb^{2+} (aq) + $2Cl^-$ (aq) ➤ $PbCl_2$ (s) white ppt.
Pb^{2+} (aq) + $2Br^-$ (aq) ➤ $PbBr_2$ (s) cream ppt.
Pb^{2+} (aq) + $2I^-$ (aq) ➤ PbI_2 (s) yellow ppt.

Nitrate test - To test for nitrate (NO_3^-) ions, dilute sodium hydroxide is first added, after which aluminium is added and the mixture heated. The presence of ammonia gas is tested by using damp red litmus, which changes to blue.

Finally, some anions form precipitates with a solution of Ba^{2+} ions and Pb^{2+} ions.
CO_3^{2-} forms a white precipitate, which dissolves on addition of acid to form CO_2.
Ba^{2+} (aq) + CO_3^{2-} (aq) $BaCO_3$ (s)

SO_3^{2-} forms a white precipitate, which dissolves on addition of acid to give SO_2.
Ba^{2+} (aq) + SO_3^{2-} (aq) $BaSO_3$ (s)

SO_4^{2-} forms a white precipitate, which is insoluble in dilute acid.
Ba^{2+} (aq) + SO_4^{2-} (aq) $BaSO_4$ (s) white ppt.

Francine Taylor-Campbell is an independent contributor. Send questions and comments to ***kerry-ann.hepburn@gleanerjm.com***

KENYON HEMANS/ PHOTOGRAPHER

AaLiyah Wilson and Teka Williams poses for a selfie with 'Captain Tecki' at the Safer Internet Programme, held at Merl Grove High School on Tuesday, February 06.

Exploring the environment – Cont'd

MONACIA WILLIAMS
Contributor

"If you can't clean your surroundings, then don't make it dirty."

– The Fresh Quotes

HELLO, STUDENTS. How are you this week? Are you ready for another biology lesson? Well, I am, so let us get cracking! I hope you have found our lessons on the environment interesting and that they have been prompting you to go out and explore while, at the same time, causing you to develop an appreciation for the world around you, its intricacies and its beauty. This week, we will be looking at how the different elements interact together to create a unit.

LIVING ORGANISMS IN THE ENVIRONMENT

Living organisms depend on each other for survival. In order to survive, organisms need energy. This energy is released from food, but organisms do not all get their food in the same way. Plants produce their own food using the sun's energy, while animals obtain food that is already manufactured. Plants are known as producers because they have the ability to produce their own food, and animals are known as consumers because they feed on already manufactured food. Consumers can feed directly or indirectly on the food produced by plants. Those animals that feed directly on plants are known as herbivores or first-order/primary consumers. All other animals are carnivores, feeding on the animals only, or omnivores, feeding on both plants and animals. Those that feed directly on the herbivores are known as second-order/secondary consumers, e.g., praying mantis. Those that feed on the animals that have eaten animals are known as third-order/tertiary consumers, e.g., lizards.

FEEDING RELATIONSHIPS

The feeding relationships of animals follow a particular order. It is important for you to remember that this is so. This relationship forms what is known as a food chain. Food chains occur wherever plants and animals are found, i.e., both on land – these are terrestrial (arboreal/trees and edaphic/soil), and in water (fresh water and marine) – these are aquatic.

DEFINITION OF FOOD CHAIN

A food chain is the sequence of organisms through which energy passes, after entering the ecosystem, until it reaches the highest trophic level.

In simple terms, the food chain shows what eats what in a community.

I have just introduced a new concept, did you notice? The trophic level; what is this?

Trophic level

This is the level of the food chain at which an organism feeds.

The plant forms the first trophic level.

EXAMPLES OF FOOD CHAINS

TERRESTRIAL

- Leaf – aphid – praying mantis – lizard
- Grass – cricket – toad – snake
- Gras – grasshopper – insect-eating bird – hawk

AQUATIC

- Algae – snail – small fish – large fish
- Pondweed – mosquito larva – small fish – large fish
- Water weed – tadpole – guppy – large fish

Notice the following important points about food chains:

- The food chains all begin with a plant. This has to be so because the plants are the producers. Only plants are capable of trapping the energy from the sun and converting it to chemical energy stored in food.
- The producer can be the entire plant or parts of the plant, such as seeds, flowers or even leaves which can be dead or decaying.
- The arrows point in the direction in which the energy flows, i.e., all arrows point from the producer towards the consumer.
- These food chains all have four trophic levels but there are times when food chains have only three levels; they rarely have more than four. Why is this so? As energy flows from the producer to the first-order/primary consumer, up to 90% of it is lost, so only 10% is transferred to the primary consumer. Some secondary consumers are able to transfer 20% of the energy consumed to the next level. This is because the digestion of proteins is more efficient than the digestion of carbohydrates, and animals have a lot more proteins than plants.

Dutty Berry poses with a Merl Grove High School student.

HOW IS THE ENERGY LOST?

Energy is lost as it flows from one trophic level to the next (see below):

- As heat from the respiration of both plants and animals.
- Remains unused when parts of plants and animals remain uneaten.
- As urine in the excretion of animals.
- As indigestible parts, e.g., nails, bones, teeth, hair, cellulose fibres, which are passed out in faeces.

This means that less energy is available at each trophic level in the food chain and, hence, only fewer organisms can exist at the next level. As the organisms consume the available energy at a particular trophic level, most of it is used and only 10% or 20% is passed on, hence the next level will only be able to accommodate fewer organisms. This means that there is rarely enough energy to support more than four levels.

Do you realise that if we were all to become vegetarians, more people could be fed? This would cut down on the number of links in the food chain and, in essence, the amount of energy that is lost at the different trophic levels.

You would appreciate that there is no community that is so simple that only one type of organism feeds on any plant or is the food for one type of animal. Therefore, single food chains cannot be used to describe the feeding relationships in a community. Many interconnected food chains are found in a habitat. These are best described using not food chains, but what are known as food webs.

HOW DO WE DEFINE A FOOD WEB?

A food web shows the feeding (energy) relationships between all the organisms in a community. It is made up of many interlinked food chains.

Next week, we will look more closely at the food web. Until then, have a good week!

Monacia Williams is an independent contributor. Send questions and comments to
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Coral reef

FOCUS QUESTIONS

- What are coral reefs?
- List and examine the types of coral reefs?
- How are coral reefs formed?
- Where are coral reefs located?
- Does the coral reef eat?

CORALS ARE related to sea anemones and they all share the same simple structure, the polyp. The polyp is like a tin can opened at just one end: the open end has a mouth surrounded by a ring of tentacles. The tentacles have stinging cells, called nematocysts, that allow the coral polyp to capture small organisms that swim too close.

Shallow-water corals that live in warm water often have another source of food, the zooxanthellae. These single-celled algae photosynthesize and pass some of the food they make from the sun's energy to their hosts and, in exchange, the coral animal gives nutrients to the algae. Coral reefs are some of the most diverse ecosystems in the world, housing tens of thousands of marine species. About one-third of all marine fish species live part of their lives on coral reefs. The total area of the world's coral reefs amounts to less than one-quarter of 1% of the entire marine environment.

Coral reefs can be found around the world, and even in some places that you would not expect. In recent years, scientists have discovered cold-water coral reefs off the coast of Norway and deep underwater in the Mediterranean Sea.

WHERE ARE CORAL REEFS LOCATED?

Coral reefs need warm, shallow water to form.

They form close to the equator, near coastlines and around islands throughout the world.

A significant portion of the world's coral reefs is located in Southeast Asia and near Australia.

The largest coral reef is the Great Barrier Reef, located off the coast of Queensland, Australia. The Great Barrier Reef stretches for 2,600 miles.

ZONES OF THE CORAL REEF

After a period of time, coral reefs develop zones.

Each zone is inhabited by different kinds of corals, fish and ocean life.

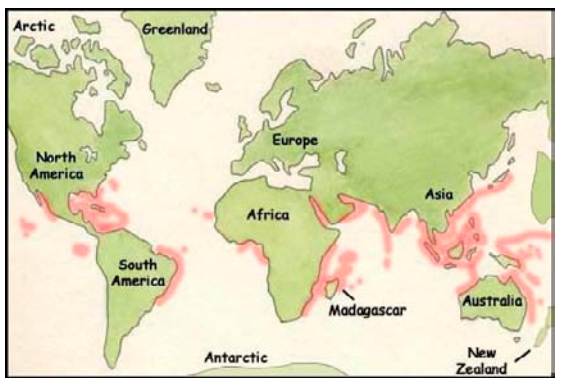
- Shore or inner reef zone – This area is between the crest and the shoreline. Depending on the shape of the reef, this area can be full of life, including fishes, sea cucumbers, starfish and anemones.
- Crest reef zone – This is the highest point of the reef and where the waves break over the reef.
- Fore or outer reef zone – As the reef wall falls off, the waters get calmer. Around 30 feet deep, one will generally find the most populated part of the reef along with lots of different types of coral species.

DOES THE CORAL REEF EAT?

Since polyps need to eat to stay alive, you can think of the coral reef as eating too.

- They eat small animals, called plankton, as well as algae.
- The algae get their food from the sun by using photosynthesis.

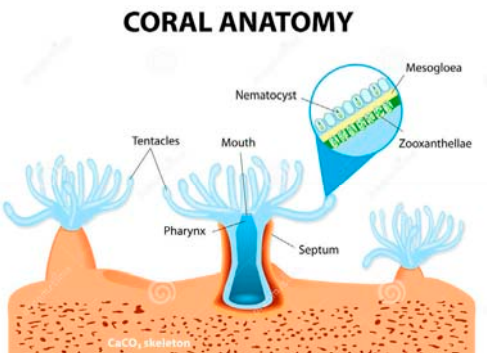
This is why coral reefs form close to the surface of the water and in clear water where the sun can feed the algae.



Most reef scientists generally recognise three MAJOR types of coral reefs.

- Fringing reefs
- Reefs that grow directly from a shore.
- Grow near the coastline around islands and continents.

They are separated from the shore by narrow, shallow lagoons. Fringing reefs are the most common type of reefs that we see.



A fringing reef runs as a narrow belt [1-2 km wide]. This type of reef grows from the deep sea bottom, with the seaward side sloping steeply into the deep sea. Coral polyps do not extend outwards because of the sudden and large increase in depth.

BARRIER REEFS

This type of reef resembles a fringing reef, but is located further from the shore and can be much bigger than fringing reefs.

Barrier reefs are extensive linear reef complexes that parallel a shore, and are separated from it by lagoon.

A lagoon – as used in the context of coral reef typology – refers to a comparatively wide band of water that lies between the shore and the main area of reef development, and contains at least some deep portions.

- Atolls
- These circular or horseshoe-shaped reefs encircle a lagoon.
- No apparent landmass is normally associated with an atoll.
- The lagoon has a depth of between 80 and 150 metres and may be joined with sea water through a number of channels cutting across the reef.
- Atolls are located at great distances from deep-sea platforms, where the submarine features may help in formation of atolls, such as a submerged island or a volcanic cone, which may reach a level suitable for coral growth.
- An atoll may have any one of the following three forms.

1. True atoll – a circular reef enclosing a lagoon with no island.
2. An atoll surrounding a lagoon with an island.
3. A coral island or an atoll island which is, in fact, an atoll reef, built by the process of erosion and deposition of waves with island crowns formed on them.

The reef types are differentiated based on large-scale reef morphology, the size and shape of a reef, and its relation to nearby land (if any).

- Patch reef – these outcrops of coral usually lie within a lagoon.

Fringing reefs, barrier reefs and atolls are thought to represent stages in coral reef formation. Charles Darwin first proposed this theory of coral reef formation in 1842.

Step 1: A fringing reef forms first, and starts growing in the shallow waters close to a tropical island.

Step 2: Over time, the island subsides and the reef grows outwards, and the distance between the land and the reef increases. The fringing reef develops into a barrier reef.

Step 3: If the island completely subsides, all that is left is the reef. The reef retains the approximate shape of the island it grew around, forming a ring enclosing a lagoon. Darwin speculated that underneath each lagoon should be a bed rock base – the remains of the original island. Subsequent drilling into atolls proved this prediction true.

CONTINUED ON PAGE 24

Government systems in the Commonwealth Caribbean

MAUREEN CAMPBELL
Contributor

OBJECTIVE

■ Differentiate between the types of government systems in the Commonwealth Caribbean.

"Writing laws is easy, but governing is difficult."
– Leo Tolstoy

COMMONWEALTH CARIBBEAN

This is a term used to refer to the independent English-speaking countries of the Caribbean region. Upon a country's full independence from the United Kingdom, anglophone Caribbean, or Commonwealth Caribbean, has become the preferred term to describe the region. It may be seen as a replacement to the traditional term, the British West Indies.

TYPES OF GOVERNMENTS

There are many types of government to be found in the world. Governments can be classified into several types. Some of the more common types of governments are:

1. DEMOCRACY

The word 'democracy' literally means 'rule by the people'. In a democracy, the people govern. They help in decision-making and usually elect their political representatives.

2. REPUBLIC

All 'democracies' are really republics. In a republic, the people elect representatives to make and enforce laws.

3. MONARCHY

A monarchy consists of rule by a king or queen. The United Kingdom, which has a queen, is really a republic because the queen has virtually no political power.

4. ARISTOCRACY

An aristocracy is rule by the aristocrats. Aristocrats are typically wealthy, educated people.

5. DICTATORSHIP

A dictatorship consists of rule by one person or a group of people. Very few dictators admit they are dictators; they almost always claim to be leaders of democracies.

TYPES OF GOVERNMENT SYSTEM IN THE CARIBBEAN REGION

CROWN COLONY

This is a British colony in which the Crown has the entire control of legislation and administration, as distinguished from one having a constitution and representative government. Crown Colonies are administered by a crown-appointed governor, or by elected or nominated legislative and executive councils with an official majority. Usually, the Crown retains rights of veto and of direct legislation by orders in council.

This is a system of British colonial administration under which Britain retains control over defence, foreign affairs, internal security, and various administrative and budget matters. Crown Colonies are governed internally by a British-appointed governor and a locally elected assembly. In late 1987, the British Crown colonies in the Caribbean consisted of the British Virgin Islands, the Cayman Islands, Montserrat, and the Turks and Caicos Islands.

Prior to the Morant Bay Rebellion in Jamaica in 1865, Crown Colony government was limited to Trinidad and St Lucia. Over the next 35 years, however, Britain abolished the old representative system with its menacing assemblies that had flourished on many of the islands. Crown Colonies were governed directly by the Colonial Office in Britain and by a British-appointed governor on each island, who was assisted by a local council, most of whose members were appointed by the governor. As the 19th century progressed, however, an increasing number of officials were locally elected rather than appointed.

This system of modified Crown Colony rule began in Jamaica and was emulated in other West Indian colonies in the 1920s and 1930s. In 1940, the Crown Colony system was further tailored to make local councils even more representative and to give local officials more administrative responsibility. Nevertheless, defence, foreign affairs, and internal security remained the prerogatives of the Crown.

CONSTITUTIONAL MONARCHY

This is a system of government in which a monarch shares power with a constitutionally organised government. The monarch may be the *de facto* head of state or purely a ceremonial leader. The constitution assigns the rest of the government's power to the legislature and judiciary. It is seen as a form of government in which a monarch acts as head of state within the guidelines of a constitution. This form of government differs from absolute monarchy in which an absolute monarch serves as the source of power in the state and is not legally guided by a constitution and has the powers to regulate his or her personal government.

Like Jamaica, most constitutional monarchies employ a parliamentary system in which the monarch may have strictly ceremonial duties or may have reserve powers, depending on the constitution. (Carried out by the governor general in Jamaica, the queen's representative.) Embedded in the constitutional monarchy is a prime minister, who is the head of government and exercises political power. Election for prime minister and other members of parliament is carried out every five years.

DID YOU KNOW?

■ Constitutional monarchy is a form of government in which a king or queen acts as head of state.

■ The ability to make and pass legislation resides with an elected parliament, not solely with the monarch's representative.

■ As a system of government, constitutional monarchy separates the head of state's ceremonial and official duties from party politics.

■ A constitutional monarchy also provides stability, continuity and a national focus, as the head of state remains the same even as governments change.

■ As a constitutional monarch, the sovereign must, therefore, remain politically neutral.

On almost all matters, the sovereign acts on the advice of the prime minister and his advisers. However, the sovereign retains an important political role as head of state, formally appointing prime ministers, approving certain legislation and bestowing honours. The sovereign has other official roles to play, such as head of the armed forces.

REPUBLICANISM

Republicanism is the ideology embraced by members of a republic: a state in which supreme power is held by the people and their elected representatives, and which has an elected or nominated president. In this form of government, leaders are elected for a specific period.

Trinidad and Tobago is a republic with a two-party system and a bicameral parliamentary system based on the Westminster system. The head of state of Trinidad and Tobago is the president. The head of government is the prime minister. The president, who is the head of state, is elected by an electoral college consisting of the full membership of both houses of parliament. The prime minister is elected from the results of a general election which takes place every five years. The president is required to appoint the leader of the party who, in his or her opinion, has the most support of the members of the House of Representatives to this post. This has generally been the leader of the party which won the most seats in the election.

In Trinidad and Tobago, the president is a titular head and not an executive head. He is the head of state, but is only a ceremonial leader. A titular head is someone who is the official leader or ruler of a country without enjoying the power or the authority of the leader or the ruler.

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Major revolts by enslaved Africans

DEBBION HYMAN
Contributor

KENYON HEMANS/PHOTOGRAPHER

Immaculate High School girls at the Safer Internet Programme, held at Merl Grove High School on Tuesday, February 6.

OBJECTIVES

At the end of the lesson, you should be able to:

a) Identify the key personalities in the Berbice (1763), Barbados (1816), Demerara (1823) and Jamaica (1831) revolts.

b) Explain TWO causes for the revolts identified in 'a' above.

c) Describe the nature and consequences of the revolts named in 'a' above.

BERBICE, 1763

CAUSES

The Berbice Revolt was as a result of the mistreatment of the enslaved population, primarily the harsh punishments and meagre allocation of provisions. The enslaved population had meagre rations and whenever there were shortages, they would be adversely affected.

NATURE AND CONSEQUENCES

The revolt began on Plantation Magdalenburg on the Conje River on February 23, 1763. By March 1763, the revolt had spread to the Berbice River. The enslaved peoples were able to capture several plantations along the river, and Coffy played an instrumental role in this area. Though Coffy committed suicide, the enslaved peoples were still committed to the cause of freedom. The colony was controlled by blacks for 10 months, showing the active thrust by enslaved peoples to end the system of chattel slavery.

BARBADOS, 1816

CAUSES

The revolt began as the enslaved population believed that emancipation was being withheld by the local establishment. In actuality, they had misinterpreted information that they had heard on the Slave Registration Bill with emancipation. The activities of the nonconformist missionaries among the enslaved population was also another cause of the Barbados Revolt.

NATURE AND CONSEQUENCES

Bussa and Jackey started the Barbados Revolt in April 1816. The revolt would then quickly spread to areas such as St Philip, St John and St George. Within days, martial law was declared and Bussa killed. Almost 200 enslaved Africans were killed, 200 executed, and another 100 enslaved peoples exiled to Sierra Leone. The colony would suffer economically as, with the damage or total destruction of sugar estates, the sugar industry was impacted.

DEMERARA, 1823

CAUSES

The underlying cause of the revolt was that the enslaved peoples believed that their 'free paper' was being withheld by the island's governor.

NATURE AND CONSEQUENCES

Enslaved Africans refused to return to work until verification of claims of a 'free paper'. In the ensuing violence, more than 100 slaves were killed; several others were executed after holding court martials.

JAMAICA, 1831

CAUSES

The underlying cause of the rebellion was the widespread belief that freedom was being withheld by the local authorities. The activities of nonconformist missionaries among the enslaved population was also a factor.

NATURE AND CONSEQUENCES

Sam Sharpe's civil disobedience quickly evolved from a general strike on the Kensington estate (St James) into an open revolt. It would quickly spread to several parishes, such as Trelawny, Hanover, Westmoreland and St Elizabeth. The 1831 Rebellion is symbolic as it was the largest and most widespread of rebellions in the British Caribbean, and it was the last major revolt in British Caribbean before emancipation. It resulted in over 100 enslaved persons being executed, including Sharpe, and 100 flogged. Several Baptist and Moravian missionaries were persecuted as well as their churches/chapels destroyed.

SOURCES

1. **Liberties Lost: Caribbean Indigenous Societies and Slave Systems** – Hilary Beckles & Verene Shepherd

2. **Caribbean Story, Bk 1** – William Claypole & John Robottom

3. **Caribbean Revision History for CXC** – Peter Ashdown & Francis Humphreys

Debbion Hyman is an independent contributor. Send questions and comments to ***kerry-ann.hepburn@gleanerjm.com***

Multiple-choice practice

MELISSA MCKENZIE
Contributor

WELCOME TO another lesson in the series. This week, you will be given additional multiple-choice practice using extracts that are typical features of Paper 01. Read the given extracts carefully so you can select the correct answer to each item. All the best.

Directions: Read the following extract carefully, then answer the questions that follow on the basis of what is implied or stated.

We had come upon this manta ray by chance. Underwater photographers Stan Waterman and Howard Hall and I were filming the rich varied life around one of the seamounts (submerged volcanic peaks) in the Gulf of California, locally called the Sea of Cortes. Mantas may frequent such areas in search of macropantkon, a major part of their diet. But generally, they permit no contact by humans.

One day we spotted a particularly large manta – between 18 and 20 feet wide – moving peculiarly slow: A closer looked revealed that it had been fouled in a fisherman's net, and the ropes had slashed deep wounds. Pieces of rope were still festering in the wounds and trailing off behind the ray.

Later that day a young woman in our crew, Michele Binder, dropped into the water and let herself drift down on top of the manta. Michele carefully pulled the ropes from the manta's wounds and packed the shredded flesh together. Still the manta did not try to flee once free of the ropes. In fact, it seemed to perk up, and it carried the amazed woman on its back until she ran out of air.

For three days the manta gave rides to all comers. Only twice did it demur. Once, Stan accidentally touched the manta's eye. The fish shrugged its wing and slapped Stan hard enough to bloody his lips. The other time it seemed simply moody. It rolled over on its back, like a dog longing to have its belly scratched, but wouldn't let anyone approach.

The other mantas of the seamount remained shy and exclusive - until our last day. Then one appeared with a remora fastened to each lobe. On a whim, Stan's son, Gordy, grabbed the fish, expecting them to pull free. They didn't, so gripping the remoras like the handlebars of a motorcycle, Gordy rode off into the darkness.

We speculated for days about why the mantas had permitted us this rare and splendid contact. Perhaps, we thought, they regarded us as they do remoras and other parasites - as harmless nuisances to be tolerated stoically until, inevitably, we departed.

PHOTO BY KAVARLY ARNOLD

Members of Herbert Morrison Technical High School's Under-16 and Under-19 teams, which won the 2018 ISSA /Western Conference Basketball Championships on Friday, pose with their trophies at the MoBay Cricket Club. Both teams won the best-of-three series 2-0. The U-16 team beat William Knibb while the U-19 team beat Spot Valley.

1. The manta was moving slowly (paragraph 2) because it was:
   a. Hampered by its injuries.
   b. Tied up with rope.
   c. Suspicious.
   d. Particularly tired.

2. Michele Binder let herself drift down on top of the manta to:
   a. Take some close-up pictures of it.
   b. Untie the rope that held it.
   c. Ride around on its back for a while.
   d. Try to tend to its wounds.

3. According to the passage, Michele Binder was "amazed" (paragraph 3) because the manta ray:
   a. Had survived the ordeal.
   b. Was huge.
   c. Was swift despite the wounds.
   d. Gave her a ride.

4. Over the three days referred to in paragraph four, the behaviour of the manta on the whole could BEST be described as:
   a. Predictable
   b. Elusive
   c. Friendly
   d. Moody

5. 'Demur' in paragraph 4 is closest in meaning to:
   a. Decline
   b. Become angry
   c. React
   d. Become timid

6. From the last TWO paragraphs we can conclude that a remora is a:
   a. Part of the ear of the manta ray.
   b. Fish which lives off other fish.
   c. Small insect which clings to mantas.
   d. Part of a fisherman's net.

7. According to the passage, the MAIN intention of the underwater team was to:
   a. Film life around the volcanic peaks.
   b. Study the habits of manta rays.
   c. Seek treasure in the Sea of Cortes.
   d. Photograph the manta rays.

8. According to the passage, how many days did the crew spend in the Gulf of California?
   a. One day
   b. Three days
   c. Four days
   d. The passage does not provide this information.

Direction: Read the poem below and answer the questions based on what is implied or stated.

I SHALL RETURN

I shall go back yes, I shall
To stroll and laugh again along the avenues
Watch the golden sunset unfold
Its flaming light through the mango trees.
I shall go back to wander by the garden lawns,
And admire once more the Victoria Lily pond
Watch the manatee come to feed when called.
Dreams of yesterday that seem so very long.
I shall go back to hear distant Indian drums
Calling the guest to the marriage feast.
Indian songs of native life love and peace
Intoxicating hidden thoughts so deep.
I shall go back again yes, I shall
To quiet this longing which in my heart abides.

– Wilmot Sanowar

9. Why does the speaker repeat the line "I shall go back" throughout the poem?
   a. To emphasise his love for his country.
   b. To show his intense longing for his homeland.
   c. To express his wish to return home.
   d. To express his dislike of his present situation.

CONTINUED ON PAGE 24

Short stories – Cont'd

BERYL CLARKE
Contributor

WELCOME TO this week's lesson. While we will be returning to further discussion of **The Two Grandmothers** as planned, right now we are going to take a detour. In previous lessons we have explored the CXC syllabus. However, we did not cover all the bases, as no mention was made of the fact that a portion of the marks assigned for each question comes from:

a) The candidate's use of the language.
b) How the response is structured.
c) The manner in which the ideas are expressed.

Literature is an excellent tool for widening one's vocabulary and improving one's level of expression. It does not need to be said that as students of this subject, you have a distinct advantage, if you just take the time to learn not only the 'facts' of the work you are studying, but also pay attention to correct spelling, sentence construction, subject and verb agreement and the way in which ideas are communicated and linked.

Remember, too, that in answering a question you are required to write an essay. Some students seem to be unaware that 'a', 'b', and 'c' used in the question are there to assist you in organising the response in appropriate paragraphs. You are expected to answer in the same way that you would write an essay on, say, 'Jamaica's Tourist Attractions', or 'Education and My Future', starting with an introduction, paragraphs in which you deal with the different aspects of the question, and a conclusion. Please, there is no need for you to skip lines when you begin a new paragraph – you can just indent. Do not write each paragraph on a separate page! It is a useful habit to practise writing your essays (those your teacher will give you to do) in this way during the year.

Back we now go to our short story. What changes have you recognised so far in this teenager?

1. That she has lost interest in attending church. In earlier years, she had walked to and from church and thought it was 'nice'. Then she also felt 'special' in the dresses that her Grandma made for her. Now she finds it 'boring' and has difficulty walking the miles in her heels.
2. Her class prejudice emerges when she says that she would die "If a parent passed and saw me there among the country bumpkins".
3. She no longer feels sympathy for Pearlie, and she now understands and despises the behaviour of Eulalie and Ermandine.
4. She does not enjoy her visits to Grandma Del and has decided to visit her only for a few hours each year.

5. She has become conscious that her father is not as close to his family as she had thought.
6. Her hair has become a source of dissatisfaction.
7. She has become interested in her physical appearance – wanting to use make-up and being concerned with her skin colour to the point where she wonders how she could be considered beautiful with her dark skin.
8. She is now close to Melody-Ann, or at least more accepting of her.
9. Clearly, she has become selfish and uncaring, particularly towards Grandma Del.

As she loses touch with Grandma Del and the life she represents, she becomes more like Towser. This is not surprising. Many Jamaicans have always found the colour of their skin and their unprocessed hair a reason for shame and embarrassment. Her exposure to Towser and Melody-Ann and Maureen causes her to yearn for what would have been seen as beautiful. Her discomfort is increased when her cousin Maureen calls her a 'nigger'. Apparently, while she had known before this about class differences, with money being at the root of the disparity, she had not realised that there was another barrier between people. This one is based on race/colour. Although her father is a black man, he has a university education and, obviously, a job which pays well. He can, therefore, provide his family with a comfortable, no ... more-than-comfortable way of living.

This is what has protected her from the other reality in her society. Set in a time when two basic concepts of beauty were the fairness of one's skin and the straightness of one's hair, this story informs us of the dilemma that many girls and young women faced, and, may I add, still do. Do you think that she is stifling some concern for her Grandma Del when she mentions that she is 'getting old and she is all alone'? Hmm. Yet, she has the visit to her all mapped out so that she can get back home in time to watch the soap opera **Dallas**. Ask yourself whether watching **Dallas**, which portrayed rich, powerful, white men and 'beautiful', white women, would have made an impact on this girl.

Do pay attention to the writer's style. The vocabulary is simple, as befitting that of a child, and the use of irony is clear. Notice how the story is structured to give the impression that there are two persons having a conversation through a question-and-answer routine?

In our next lesson, we will return to the novel **To Kill a Mockingbird.** Do have fun reading another short story. God bless!

Beryl Clarke is an independent contributor. Send questions and comments to ***kerry-ann.hepburn@gleanerjm.com***

Problem-solving and program design

NATALEE A. JOHNSON
Contributor

GOOD DAY, students. This is lesson 18 in our series of lessons. In this week's lesson, we will continue to look at problem-solving and program design.

In the previous lesson, you were introduced to the defining diagram and the column headings of the diagram. Let us now determine what goes into each column. A reminder of the table structure is shown below.

INPUT	PROCESSING	OUTPUT

The input is the source data provided. You can identify what is the input in a given problem by the following keywords: given, get, read or accept.

THE OUTPUT

The output is the end result required. You can identify what is the output in a given problem by the following keywords: print, display and output.

THE PROCESSING

The processing column is a list of what actions are to be performed to achieve the required output.

Let us look first at a real-world scenario. You are learning to bake a cake for the first time. How would you represent this problem using the defining diagram concept? See the example below.

Defining Diagram:

INPUT	PROCESSING	OUTPUT
The Ingredients such as eggs, butter, flour etc. 	1. Get the ingredients 2. Combine the ingredients 3. Preheat oven 4. Place the combine ingredients in baking tin 5. Place baking tin in the preheated oven 6. Leave cake to bake at the desired temperature 	The Cake 

Let us now look at a computer related problem.

EXAMPLE 1

A program is required to read two numbers, calculate and print their difference.

Steps in drawing the defining diagram using the example above.

1. Identify the input (that is, the data that is given). The keyword, read, identifies the input as two numbers, that is, any two numbers.

2. Identify the output. The keyword, print, identifies the output as the difference of the two numbers.

3. List the processing steps. Here, we list all the actions that must be performed in order to get the desired results. For example: What do we have to do to the two numbers in order to print their difference?

1. We must first get the numbers.
2. We must then calculate their difference.
3. We must then print the difference.

See the defining diagram below.

INPUT	PROCESSING	OUTPUT
2 Numbers	1. Read/get 2 numbers 2. Subtract the numbers 3. Print the difference	Difference

KEY THINGS TO NOTE

1. In the defining diagram, the actions must be in a logical sequential order.

2. All the necessary actions must be explicitly stated. For example, the read action and the print action must not be assumed.

3. The processing section is NOT the solution to the problem. It is simply a list of the things that must be done in order to solve the problem.

EXAMPLE 2

PROBLEM 2

A program is required to read three numbers, calculate and print their product.

INPUT	PROCESSING	OUTPUT
Three numbers	1. Accept 3 numbers 2. Find the product of the three numbers 3. Print the product of the three numbers	Product

PRACTICE QUESTIONS

Use a defining diagram to answer the following:

1. A program is required to read the unit cost and quantity of an item. Calculate and print the total cost of the item.

2. A program is required to accept a number and to find the square of the number. The program should also output the square of the number.

PROGRAM DESIGN

When we are solving problems on the computer, this is done by representing the most efficient solution as an algorithm. This can be done after you have constructed the defining diagram. Before we look at the term algorithm, there are some key terms with which you must first be familiar – they are 'variables', 'constant' and 'data types'.

You ask the computer to read two numbers, find the sum of the two numbers then output the sum. When the computer reads the two values, it has to store the values somewhere in memory. Similarly, it will have to store the value of the sum somewhere in order to provide an output to you, the user. These values are normally stored in what we call variables or identifiers.

1. A variable is a named location in memory that stores a particular value. This value may be changed during the execution of a program. Examples of variable names include: 'number', 'age', 'name', 'length', and so on. You can have several different names, numbers, ages, etc.

2. A constant provides locations for storing data which do not change value during the execution of a program. For example, if you are calculating the total price of an item which included general consumption tax (GCT), which is, for example, 17.1 per cent, then the 17.1 would be treated as a constant value in the calculation.

We have come to the end of this lesson. See you next week when we will continue to look at problem-solving and program design. Remember, if you fail to prepare, you prepare to fail.

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Reviewing algebra

CLEMENT RADCLIFFE
Contributor

WE COMPLETED, last week, the review of algebra. Much time was spent on this and I do recommend mastery in all areas. Again, I am urging you to proceed to study with systematic and ongoing practice. Let us now continue the review of graphs.

GRAPHS

We will now complete the review of graphs with an illustration of the concepts which we reviewed.

1. Given the graph of the function $f(x) = 2x^2 - 9x - 5$, solve:

ii) $2x^2 - 9x - 5 = 0$

iii) $2x^2 - 10x - 7 = 0$

SOLUTION

$y = 2x^2 - 9x - 5$

x	– 1	0	1	2	3	4	5	6
y	6	– 5	– 12	–15	–14	–9	0	13

$y = x + 2$

x	0	1	2
y	2	3	4

GRAPH 1

From the graph:

(ii) If $2x^2 - 9x - 5 = 0$, then x = - 1 or 5 (Points where the curve cuts the x axis).

(iii) If $2x^2 - 10x - 7 = 0$, then you reorganise this equation so that the expression,

$2x^2 - 9x - 5$ is on one side, that is:

$2x^2 - 10x - 7 = 2x2 - 9x - x - 5 - 2 = 0$

(- 10x = - 9x - x and - 7 = -5 - 2)

$2x^2 - 9x - x - 5 - 2 = 2x^2 - 9x - 5 - x - 2 = 0$

$2x^2 - 9x - 5 = x + 2$

The solution of the equation $2x^2 - 10x - 7 = 0$ is the same as that of the equation $2x^2 - 9x - 5 = x + 2$

By plotting the line y = x + 2, and read off the coordinates of the points of intersection with the curve, then:

x = - 0.6 Or 5.7

2. Given that $h(x) = 4x^2 - 8x - 1$

By plotting the function h(x), find :

- Its minimum value.
- The value of x for which h(x) is a minimum.
- The equation of the axis of symmetry.

SOLUTION

$y = 4x^2 - 8x - 1$

x	– 2	– 1	0	1	2	3	4
y	31	11	– 1	– 5	– 1	11	31

GRAPH 2

- The minimum value is - 5
- The minimum value is at x = 1
- The equation of the axis of symmetry is: x = 1.

We will now begin to review coordinate geometry by considering straight lines on the Cartesian plane with respect to:

Exploring the following aspects of a straight line:

- Gradient
- Intercept
- Midpoint
- Length
- Equation

Again, let me remind you of the importance of the theory of graphs, as it is very important to this topic.

The Cartesian plane consists of the perpendicular *x* and *y* axes.

REMINDERS

- The axes must be properly labelled.
- Appropriate scales should be accurately used.
- If the scales, with respect to the axes are given, then they must be used as given.
- The axes usually cross at the point (0 , 0).
- The coordinates of a point are always expressed in the form: (x , y).
- Points are usually named with capital letters, for example, P(x , y).
- Three points are required to draw a straight line. A ruler must always be used to join the points.

GRADIENT

The gradient of a line is a measure of its slope.

The value is denoted by m and given two points on the slope, it is defined as:

m = Increase in the *y* coordinates
Increase in the *x* coordinates

Given that the two points are represented by A (x_1 , y_1), and B (x_2, y_2), then the formula is:

$m = y_2 - y_1 / x_2 - x_1$

EXAMPLE

Find the gradient m of the line joining the points A (1 , 2) , B (5 , 4).

Since $m = y_2 - y_1 / x_2 - x_1$, substituting $m = 4 - 2/ 5-1 = 2/4 = 1/2$.

Please be sure to substitute in the correct order.

Answer: m = 1/2.

INTERCEPT

This is the y: coordinate of the point where the line cuts the *y* axis, that is the point (o, y). This y value is denoted as c.

The following is a plot of the points A and B on the Cartesian plane, which will illustrate the concepts.

GRAPH 3

MIDPOINT

Given the points A(x_1, y_1) & B(x_2, y_2), then the midpoint is equal distance from A & B. This point is denoted by M and from the diagram, the coordinates of the midpoint are:

$M = x_2 + x_1 /2, y_2 + y_1/2$

EXAMPLE

Find the coordinates of M, midpoint of AB.

Using the coordinates of A and B given above,

M = 2 + 3/2 , 4 + 5/2
Answer: 5/2, 9/2

IN REVIEW

Given the points A(x1 , y1) and B(x2 , y2), then finding the gradient and midpoint involves substituting into the appropriate formula. This is illustrated as follows:

EXAMPLE

Given the points A(6 , -3) and B(- 4 , 1), find:
(i) the gradient of AB
(ii) the midpoint of AB

SOLUTION

(i) Gradient of AB = $m = y_2 - y_1 / x_2 - x_1$
Substituting the coordinates
m = 1 - -3 /-4 -6 = 1 + 3/-10 = -4/10.
m = -25
(ii) The midpoint of AB =
$M = x_2 + x_1 /2, y_2 + y_1 /2$ Substituting
M = 6 - 4 /2, -3 + 1 /2 = 2 /2 , - 2/2
M =(1 , -1)

HOMEWORK

(1) Given the points A (2 , - 3) and B(4 , - 5), find the values of:
(a) m(Gradient) (b) M(midpoint)

(2) The line K passes through the points A (6, 6) and B (0, - 2).
Find: (i) The midpoint of the AB.
(ii) The gradient of the line K.

(3) The line segment connects the points M (1, 8) and N (r, s). If the midpoint of MN is (4, 5), calculate the values of r and s.

(4) Given the points X (1 , 0) and Y (- 2 , a), if the gradient is 2/3, find a.

Have a good week.

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TRUDI MORRISON-REID
Contributor

Fallacies – Part 2

Players and coaches of the Kingston Hummingbirds team pose with the trophy after winning the Berger Elite League title on Saturday. The Hummingbirds beat the Manchester Spurs in the final.

WE CONTINUE our two-part journey into the world of fallacies. Last week, we looked at fallacies affecting content and logic (logos). This week, we will look at fallacies which involve the emotional appeals (ethos) and fallacies which involve credibility (pathos) as presented by McDermott (2008) in **CAPE Communication Studies**.

FALLACIES INVOLVING EMOTIONAL PERSUASION (PATHOS)

1. BANDWAGON APPEAL

The writer/speaker attempts to validate a point by suggesting or giving the impression that everyone believes in it; the idea is acceptable and sound because it enjoys widespread currency.

Example: Don't tell me you don't have a pair of the new low-rider jeans. Everybody who is anybody is wearing them now. I have three pairs, my dear.

2. SNOB APPEAL

The writer/speaker attempts to convince the audience that by accepting a claim or undertaking an action s/he will be higher or better than others around. This is to pander to people's sense of pride and desire to be considered better than others.

Example: A man of your position and good looks could never want to drive a Corolla when a BMW will put you in the right circle, where you belong.

3. ARGUMENT AD POPULUM ('TO THE PEOPLE')

The writer/speaker links the claim or argument to certain words or objects that are known to have a strong emotional reaction with the audience. In so doing, he/she hopes to influence the audience's opinions and actions.

Example: If you are a God-fearing and patriotic Grenadian, you cannot support that party with a clear conscience.

4. PITY APPEAL

The writer/speaker tries to deflect attention from the relevant issues in the argument by inciting pity for him/herself.

Example: I deserve to keep my job. I need to have a job to support my wife and nine children. It's not my fault that the company is overstaffed. They say they are losing money. I don't know about that. I have school fees to pay and food to put on the table.

FALLACIES INVOLVING CREDIBILITY (ETHOS)

1. APPEAL TO AUTHORITY

This is reference to expert knowledge to support an argument without sufficient acknowledgement that an authority on one subject may be unreliable on another, and that a man who is usually unreliable may occasionally be right. In addition, an expert's authority becomes suspect in a case where he/she has personal reasons for not telling the truth.

Example: I am a parent for 10 years now and, believe me, I know when children are lying.

2. ARGUMENT AD HOMINEN ('TO THE MAN')

The writer/speaker attacks the opponent's character rather than the opponent's argument. This is an attempt to discredit the speaker and, by so doing, deflect attention from the argument.

Example: Be honest with me, how can I take Constable Ralph's instructions seriously when he looks and talks like Charlie Chaplin?

Another very common fallacy which affects reasoning is the Hasty Generalization. This occurs when the writer/speaker draws a conclusion based on insufficient evidence.

Example: My chain was stolen by a Jamaican; therefore, all Jamaicans are thieves.

A misuse of statistics occurs when a statistical argument asserts a falsehood. In some cases, the misuse may be accidental. In others, it is purposeful and for the gain of the

CONTINUED ON PAGE 24

The Caribbean influence on extra-regional countries

GOAL

For students to analyse how the global community and Caribbean society impact each other.

OBJECTIVE

■ Analyse the impact of the Caribbean on extra-regional societies.

Since the arrival of Columbus, the Caribbean region has been interacting with Europe (Spain, England, France, Holland, etc). The United States and Canada later became frequent interactors with the region, even to this day. This earliest form of interaction had many benefits for all who were involved. It is the safe to describe, as Mohammed (2015) agrees, that this interaction was an early form of globalisation, which knitted the economy, culture and society of the Caribbean and Western Europe into a close relationship. This relationship was of superiority and inferiority between the metropole countries, which dominated the means of production, and the Caribbean regions that were exploited for their economic gain. The influence of the society and culture of the Caribbean on extra-regional countries has been identified in a number of areas: politics, economics and culture.

POLITICAL INFLUENCE

Caribbean nationals over the years have migrated to parts of the United States, Canada and Europe. The most organised group of Caribbean nationals in the US are the Cubans, and they have had significant influence on US politics because of their number and economic power. Though illegal immigrants who arrived by boat, they were not repatriated because of their possible fate if they returned home. They represent a major voting bloc in South Florida. They have been credited with:

■ Forcing lawmakers to maintain and strengthen the trade embargo against Cuba (key legislation – the Helms-Burtons Act 1996).

■ The creation of Radio Marti, with the expressed intention to undermine the communist system in Cuba through the flow of information.

The political impact of Haitians is limited largely because they are divided along class lines. In Miami, Haitians act as a voting bloc. The Haitian Refugee Center has used the issue of the 'boatpeople' to mobilise the Haitian community and to bring a number of legal actions against the US government.

The increased flow of migrants and the extent of narco-trafficking to North America and Europe from the Caribbean have resulted in the enactment of more stringent immigration and surveillance measures such as:

1. A reversal of a decades-old policy on the repatriation of Cuban asylum seekers.
2. Increased cost to obtain visas or imposing visa requirement on some Caribbean countries (countries that enjoy Canada's visa waiver are Antigua and Barbuda, St Lucia, St Vincent, St Kitts and Nevis, Barbados and The Bahamas).
3. Deportation to home countries of aliens convicted of crimes.
4. The Shiprider Agreement that allows the US Coastguard to pursue suspected drug traffickers in Caribbean waters.
5. Intelligence sharing and the splitting of proceeds from successful indictment of drug traffickers.

ECONOMIC IMPACT

Large populations of Caribbean migrants in New York, Toronto and London have created a tradition of carnival celebrations which are attended by thousands. These festivals boost the local economy in hotel bookings, taxes on entertainment services, the food industry, and provide work in producing costumes and organising aspects of the festivals. In a report published by the London Development Agency 2003, the Notting Hill Carnival was said to contribute £93 million to London's economy and generate 3,000 full-time jobs. The West Indian Day Parade is said to attract two million participants and generate US$70m in revenue (**Caribbean Quarterly** 1985). The **Caribbean Quarterly** (1985) found that Caribana was to be attracting over one million visitors and accounted for CDN$200 million in tourist expenditure.

WORKFORCE

The US government has appointed people of Caribbean origins in high offices in various arms of the government and judiciary. The Canadian and US governments have also allowed temporary migrant workers (farm workers) to pick fruit in Canada and Florida. These economies are very dependent on Caribbean workers to harvest fruits before winter. Increasing from the 1990s, teachers, nurses and other healthcare professionals are actively recruited to fill growing vacancies in these areas to which nationals are not attracted or are in short supply. Caribbean people continue to impact the economy of developed countries by providing an educated and willing workforce.

OFFSHORE BANKING

Countries such as the Cayman Islands, Bahamas, British Virgin Islands, Turks and Caicos, Anguilla, and Antigua and Barbuda are offshore economies catering largely to clients abroad. These clients are mainly interested in tax avoidance in metropolitan countries.

KENYON HEMANS/PHOTOGRAPHER

'Captain Tecki' and a section of the crowd of students at the Safer Internet Programme, held at Merl Grove High School on Tuesday, February 6.

CULTURAL INFLUENCE

Caribbean cultural forms such as music, food, dance, and religion have penetrated the waves of international markets and have gained acceptance. The impact of Caribbean music, largely reggae and to some extent soca, is felt mainly in the urban centres of large cities such as New York and London. Reggae has been used to:

■ Market Levi jeans (**Boombastic**).

■ Create an online course ' The Rhetoric of Reggae' at the University of Vermont.

Reggae music has been the main medium through which Rastafarian beliefs and lifestyle have been introduced to the wider world. Rastafarian communities and reggae are to be found on every continent. The steelpan was also transported to developed countries with the migrants. Currently, in North America, steel band music is part of the curriculum, while the tuning of pan is a growing skill that has the potential to contribute to the economic development of this region. One association, Pan European, is assuming the responsibility for creating a network to promote the development of pan in Europe. The steel pan is also incorporated into forms of music, like rap.

Caribbean cuisine competes with those of other ethnic groups in the urban centres in metropolitan countries. While companies like Golden Crust and Caribbean Food Delight have become big businesses in the US, Caribbean food caters mainly to the taste of Caribbean populations but remains a specialty to native populations, particularly those who have visited the Caribbean or who have close association with Caribbean nationals.

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CAPE Caribbean Studies, Mohammed, Jeneffer.

Caribbean Studies Modules I-III, Reid, Ruel.

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yl:geography

CONTINUED FROM PAGE 15

proved this prediction true.

SUMMARY

■ Coral reefs are built by and made up of thousands of tiny animals – coral 'polyps' – that are related to anemones and jellyfish.

■ Polyps are shallow-water organisms which have a soft body covered by a calcareous skeleton. The polyps extract calcium salts from seawater to form these hard skeletons.

■ The polyps live in colonies fastened to the rocky seafloor.

■ The tubular skeletons grow upwards and outwards as a cemented calcareous rocky mass, collectively called corals.

■ When the coral polyps die, they shed their skeleton [coral] on which new polyps grow.

■ The cycle is repeated for over millions of years, leading to accumulation of layers of corals [shallow rock created by these depositions is called reef].

■ These layers at different stages give rise to various marine landforms. One such important landform is called coral reef.

■ Coral reefs, over a period of time, transform or evolve into coral islands, e.g., Lakshadweep.

■ The corals occur in different forms and colours, depending upon the nature of salts or constituents they are made of.

■ Small marine plants (algae) also deposit calcium carbonate, contributing to coral growth.

The next lesson will be on the conditions necessary for the successful formation of coral reefs: water – depth, salinity, temperature, turbidity, the presence of beneficial algae and fish.

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yl: english language

CONTINUED FROM PAGE 18

10. The BEST meaning of the word 'Intoxicating' in line 12 is:
   a. drowning.
   b. creating.
   c. stimulating.
   d. awakening.

11. The expression 'To quiet this longing' in line 14 suggests that the speaker:
   a. was constantly plagued by his yearning.
   b. rebelled against his wishes.
   c. tried to overcome his desire.
   d. wanted to rid his mind of longing.

12. The mood of the person in the poem may BEST be described as:
   a. sorrowful
   b. nostalgic
   c. pleasant
   d. confused

13. The word 'yes' in lines 1 and 13 reflects the speaker's:
   a. feelings
   b. determination
   c. attitude
   d. intention

14. What figure of speech is used in lines 9-10 in the poem?
   a. onomatopoeia
   b. personification
   c. metaphor
   d. comparison

15. What is the speaker's MAIN desire when he returns to his homeland?
   a. To visit historic sites
   b. To refresh his memory of the past
   c. To visit his friends and family
   d. To enjoy its varied experiences once more

Next week I will provide answers to the items. Take care!

Answers from last week's lesson:

1. B 2. A 3. C 4. C 5. A 6. B. 7. D 8. B 9. B 10. D

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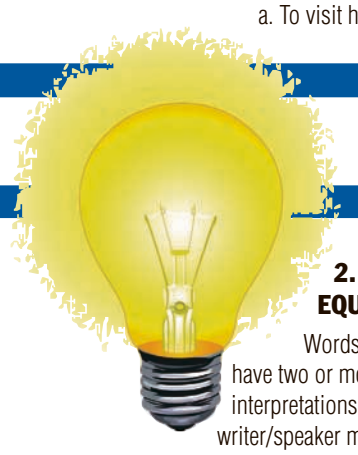
yl: communication studies



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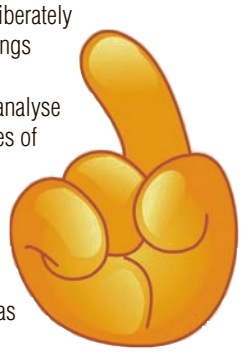
perpetrator. When the statistical reason involved is false or misapplied, this constitutes a statistical fallacy.

Sometimes writers or speakers deliberately use techniques that mask their meanings and which are meant to affect the readers'/listeners' ability to critically analyse the message. Three common examples of this form of manipulation are:



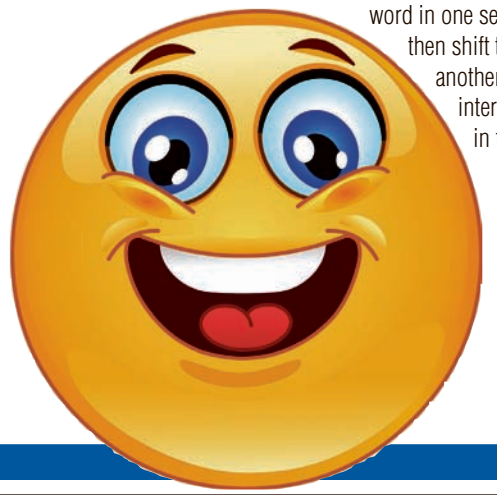
1. VAGUENESS

A writer/speaker uses terms which have not been defined in such a way as to give the impression that they have universally acceptable meanings.

Example: As leader of this gang, I will do my patriotic and humane duty in providing for the needs of my followers.

2. EQUIVOCATION

Words can reasonably have two or more distinct interpretations. Hence, a writer/speaker may start using a word in one sense and then shift to another interpretation in the same argument/discussion.



Example: To be in the right class means social mobility. Monique is in the right class for her age. Therefore, Monique is socially mobile.

3. OBSCURATION

This is the use of technical or specialised jargon to obscure or hide the meaning of a message.

Example: The present programme of rationalisation and termination within the health sector is an undeniable consequence of the structural adjustment imperatives dictated by the effects of globalisation.

There is another way of saying that the firing of doctors and nurses is a result of external economic forces.

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