

## 2017/2018 Reading to Learn English Articles for Senior Forms

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\* Form teachers please remind students:

1. to finish related questions after reading
2. to write down the reading record in the Student Handbook

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : English

Related Core Values :

Title : **Walking for organ donation**

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	✓

**Source of article: The Standard**

### Walking for organ donation

Some 300 people signed up for an Organ Donation Promotion Walk that aimed to encourage families to support the cause.

The organisers – the Hong Kong Medical Association and Hong Kong Society of Transplantation – invited 100 primary and secondary school students to join.

Entitled ‘Spring Sowers’, the walk took place on 12 March 2017 in Sai Kung Country Park. Each participant was required to mobilise five family members or friends to register with the Centralised Organ Donation Register.

The event raised public awareness on organ donation and encouraged people to discuss with their family about their decision on the issue.

Poor communication with family members is one of the main reasons behind the low organ donation rate in Hong Kong. Family members of registered donors may withdraw the decision if they were not informed about the intention to donate.

There has been a serious shortage of transplantable organs in Hong Kong since the 1990s, with more than 2,000 patients waiting desperately for a transplant.

Conservative attitudes and misconceptions by Hongkongers towards organ donation need to change, said the organisers.

The younger generation should be educated on organ donation as they can persuade their parents and relatives to register for organ donation.

### **Critical Thinking:**

1. Are you a registered organ donor? Why or why not?
2. Why do you think some people are reluctant to donate their organs?
3. Would you try to convince your friends and family members to register for organ donation?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Mathematics

Related Core Values :

Title : Why Learn Algebra?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	<input type="checkbox"/>
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	✓

### Why Learn Algebra?

By Jason Gibson

"Why study algebra?" If you're a parent, it's a question that you will no doubt hear as your children study the subject. If you're a student, it is a very natural question to ask, "What's the point of learning algebra in the first place?"

After all, all of the math leading up to algebra that we learned growing up such as addition, multiplication, decimals, fractions, and the like, seem to have a concrete meaning. These concepts all deal with numbers in some way or another and because of this we can wrap our brains more easily around the concepts. After all, I can pick up six pencils and give two to a friend and by using math I can figure out how many pencils I am left holding in my hand. We can all imagine situations where basic math serves us well - calculating your change in the grocery store for instance.

In short, basic math deals with numbers. Since we are all taught how to count at a young age the concepts of basic math, even though challenging at first, seem to have a practical value - even to children.

Enter Algebra. Suddenly, we are asked to deal not only with our comfortable numbers but with letters. And it doesn't stop with this. You start seeing parenthesis and exponents, and a whole potpourri of other symbols that seem to make no sense at all. This single fact more than any other turns many people off to learning algebra. At the very beginning you are asked to learn certain rules on how to calculate things in algebra. You must learn which steps are legal to do before others, and if you do them in the reverse order you get the wrong answer!

This leads to frustration. With frustration, despair follows in short order. And so the thoughts begin:

"Why do I need to learn this?"

"When would I ever use Algebra in real life?"

What you have to remember, though, is that basic math is riddled with special rules and symbols as well. For example, the symbols "+" and "=" were at one time foreign to us all. In addition the concept of adding fractions, as a single example, is filled with special rules that we must learn. When adding  $1/3$  to  $1/3$ , for example, you keep the common denominator and add the numerators, so that  $1/3 + 1/3 = 2/3$ . The point here is that when you begin to learn algebra it may seem overwhelming with the rules that you must learn, but this is no different from the multitude of rules that you had to learn that dealt with basic math such as addition and subtraction.

Learning Algebra is achievable for all, you just need to take things one step at a time and learn the basic rules before moving on to more advanced topics.

But this does not answer the question of "Why should I learn Algebra?" This is a difficult question, but the simplest answer is that Algebra is the beginning of a journey that gives you the skills to solve more complex problems.

What types of problems can you solve using only the skills you learned in Algebra? I invite you to take a journey with me back to your childhood. We've all been to the playground and had a great time on the see-saw, the merry-go-round, and the slide. At one time all of us were completely fascinated with these trips to the playground, but Algebra can help you understand them. The physics of all of these playground toys can be completely understood using only Algebra. No Calculus required. For example, if you knew the weight of a person at the top of the slide and you knew the height of the slide you could roughly calculate how fast you would be traveling as you exited the bottom of the slide.

On the see-saw, let's say that a person was sitting at one end and you knew that person's weight. You'd like to sit on the other side of the see-saw, but not at the very end - you'd like to sit opposite your partner in the middle between the seat and the pivot point. Using algebra, you could calculate how heavy you'd have to be to exactly balance the see-saw.

Moving away from playground equipment, as children we were all fascinated with the magical way that magnets attract each other. Using algebra, you could calculate how much force a given magnet would pull on another magnet.

There are examples all around us of things in the everyday world that you could fully understand using only the tools in algebra. If you drop a rock off of the roof of a house, how long would it take to hit the ground? If you dropped a second rock 100 times as heavy off of the roof of the same house, how long would it take to hit the ground? If you somehow brought a bulldozer up to the roof of the house and dropped it, how long would it take for the bulldozer to hit the ground? The answer in all three cases it takes the same amount of time to hit the ground! The time of free-fall depends only on the Earth's gravitational field (which is the same for us all) and the height of the roof you drop from. Even though the bulldozer is "heavier" than the rocks, they all fall at the same rate to the ground.

Most people would assume that learning about more "advanced" topics such as rocket propulsion and Einstein's theory of Relativity would require much more advanced math than Algebra. It is true that more advanced math is necessary to understand every facet of these and other advanced topics. However, many of the fundamental principles can be understood using only the tools in algebra. For example, the equations that describe how a spacecraft orbits the Earth only involve algebra.

Moreover, many of the central topics in Einstein's theory of special relativity can be understood only using algebra. For example, it turns out if you are traveling on a spaceship near the speed of light time actually slows down for you relative to your friends back on Earth. In other words, if you were to fly in a spaceship near the speed of light for some time and then you returned to Earth, you would find that you had aged very little while your friends on Earth have aged a great deal! Albert Einstein coined this phenomenon "time dilation" and it can easily be calculated using only Algebra. This effect is not a theoretical effect - it has actually been measured many times. In fact, the GPS system of satellites in the sky that the military and police forces depend on must take into account the effects of time dilation or else the system would not work at all! Because the satellites are moving in orbit around the Earth at speeds much smaller than the speed of light, the time dilation involved is very small - but it must be accounted for or the system would not function.

Now, you might be thinking, "I never learned how to calculate things such as this in my algebra class!" This is in fact true. All of the applications we have been talking about here are known as the study of Physics. If you had to boil the word Physics down to one sentence it would be: "Physics is all about studying the world around us using math as a tool."

Simply put all the math that you ever learn is really a tool for understanding the world around us. And believe me, we have only begun to scratch the surface of understanding how the world works. Algebra is a stepping stone to learning about this wonderful universe that we live in. With it you have the tools to understand a great many things and you also have the skills needed to continue on and learn Trigonometry and Calculus which are essential for exploring other types of problems and phenomena around us.

So, try not to think of Algebra as a boring list of rules and procedures to memorize. Consider algebra as a gateway to exploring the world around us all.

**Question:**

Think of two examples where algebra is used in daily life.

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : LS

Related Core Values :

Title : How Can Society Influences Health?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	<input type="checkbox"/>
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	✓
g To strengthen positive values and their daily application to analyse personal and social issues	✓

If you want to be healthier; you cannot avoid other people -like it or not; the human body is built to be part of a society; and putting time and effort into positively interacting with others, will inevitably bring you many health benefits, if nothing else.

People who fit into society are likely to be more content and as a result healthier; both physically and mentally.

Poor social and economic circumstances affect health throughout life. People further down the social ladder usually run at least twice the risk of serious illness and premature death as those near the top. Nor are the effects confined to the poor: the social gradient in health runs right across society, so that even among middle-class office workers, lower ranking staff suffer much more disease and earlier death than higher ranking staff.



Stressful circumstances, making people feel worried, anxious and unable to cope, are damaging to health and may lead to premature death. Social and psychological circumstances can cause long-term stress. Continuing anxiety, insecurity, low self-esteem, social isolation and lack of control over work and home life, have powerful effects on health. Such psychosocial risks accumulate during life and increase the chances of poor mental health and premature death. Long periods of anxiety and insecurity and the lack of supportive friendships are damaging in whatever area of life they arise. The lower people are in the social hierarchy of industrialized countries, the more common these problems become.

There are quite a few social or societal factors that can affect the status of a person's level of both health and fitness. Health is a state of wellbeing and freedom from disease that is perceived by a person. Fitness can be seen as the relative ability of an individual or population to survive and reproduce in a given environment.



Some cultures or societies view body types and images in certain ways – for instance weight is seen as a positive thing in cultures where food is scarce and some countries and societies weight and especially obesity is not only seen as something that is undesirable, but also a threat to the health of an individual. Also some countries view fitness or the level of reproduction, in different ways. Some cultures encourage and respect higher birth amounts in families and other cultures do not feel this way.

Also the types of food that are consumed in different cultures and societies can affect the health and wellbeing of an individual. Eating junk food which can be seen as status in some societies can be detrimental for the health of the individual and society. Just look at all the children who think it is great to super size that meal. Obesity can be looked at like a social factor in health and wellbeing when it comes to eating what is being viewed as being positive or that shows affluence.

A good start in life means supporting mothers and young children: the health impact of early development and education lasts a lifetime. Observational research and intervention studies show that the foundations of adult health are laid in early childhood and before birth. Slow growth and poor emotional support raise the lifetime risk of poor physical health and reduce physical, cognitive and emotional functioning in adulthood. Poor early experience and slow growth become embedded in biology during the processes of development, and form the basis of the individual's biological and human capital, which affects health throughout life.



In general, having a job is better for health than having no job. But the social organisation of work, management styles and social relationships in the workplace all matter for health. Evidence shows that stress at work plays an important role in contributing to the large social status differences in health, sickness absence and premature death. Several European workplace studies show that health suffers when people have little opportunity to use their skills and low decision-making authority.



Having little control over one's work is particularly strongly related to an increased risk of low back pain, sickness absence and cardiovascular disease. These risks have been found to be independent of the psychological characteristics of the people studied. In short, they seem to be related to the work environment. Studies have also examined the role of work demands. Some show an interaction between demands and control. Jobs with both high demand and low control carry special risk. Some evidence indicates that social support in the workplace may be protective.

Question:

1. How is people's understanding of health affected by social factors?

## 2017-2018 Reading to Learn

Form	Junior	
	Senior	✓

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : LS

Related Core Values :

Title : Planning advisers reject proposal to call time on tram services in core of Hong Kong's central business district

Truth	<input type="checkbox"/>	Justice	<input checked="" type="checkbox"/>	Love	<input checked="" type="checkbox"/>	Life	<input checked="" type="checkbox"/>	Family	<input type="checkbox"/>
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Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
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c To enrich world knowledge	
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	✓
g To strengthen positive values and their daily application to analyse personal and social issues	✓

Planning advisers for the government rejected a controversial proposal to remove trams from a key section of Hong Kong's central business district during a meeting of the city's Town Planning Board on Friday.

Former local town planner Sit Kwok-keung had submitted an application to do away with trams between the downtown districts of Central and Wan Chai on Hong Kong Island due to traffic congestion concerns, despite the board already having rejected a similar submission in 2015.



The plan stirred up much public debate two years ago, with a majority coming out against disposing of the city's oldest and cheapest form of public transport, which has a history stretching back 113 years.

Sit justified his proposal by saying the trams occupied valuable road space in the busiest part of Hong Kong Island.

"About two-thirds of the road surface occupied by trams [in the area] is wasted, as the number of tram passengers is only 4.65 per cent of that for franchised buses and 3.82 per cent of that for the MTR," the proposal read.

"Deletion of the tramway would not necessarily release more road space. Instead it may have a significant impact on public transport users. The affected passengers might turn to other road-based transport ... [which] would in turn generate new vehicular trips at the congested road sections," transport minister Frank Chan Fan had said.

Discontinuation of tram services, which are known affectionately in Hong Kong as "ding dings" for the sound of their bells, would affect 110,000 passengers a day, he added.



Removing the section of track in Central and Wan Chai would undermine the seamless service between Kennedy Town on the western tip of the island and Shau Kei Wan in the east, he said.

The double-decker vehicles have a daily average patronage of about 200,000 passengers.

The Planning Department had said the removal proposal was “inappropriate” and would “set an undesirable precedent”.

Hong Kong Tramways, which runs the fleet of 164 cars, earlier said it “strongly objected” to the application to remove services, which it said were part of the city’s heritage.

“The tram is the most affordable, convenient and environmentally friendly mode of public transport in Hong Kong,” it said.



Naomi Ng

Question:

1. Comparing the economic and culture perspective, which aspects of the quality of life are seen to be more important in tram transport in HK?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject: Biology

Related Core Values :

Title: Does drinking hot liquids on a hot day actually cool you off?

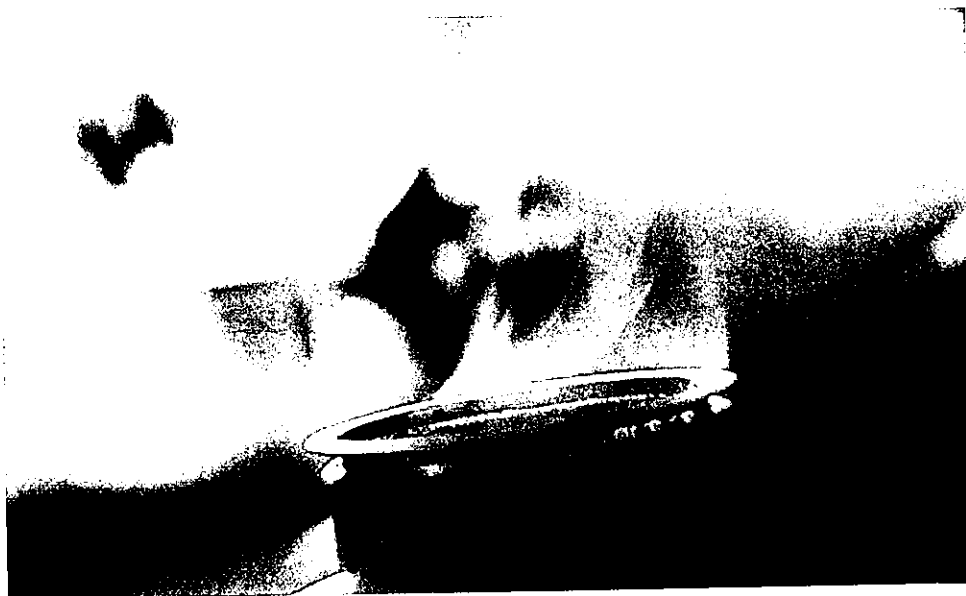
Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
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g To strengthen positive values and their daily application to analyse personal and social issues	

By Marissa Shieh August 10, 2017

<http://www.popsoci.com/does-drinking-hot-liquids-cool-you-off>

Every summer, reporters from around the world call Ollie Jay to ask one question: Does consuming hot liquids in the summer really cool you off?



“I think the old wives’ tale of drinking a hot drink on a hot day really resonates,” Jay says. He now heads the Thermal Ergonomics Laboratory at the University of Sydney. But back in 2012, while at the University of Ottawa’s School of Human Kinetics, he published a paper which found that hot drinks can cool you down, at least to a certain degree.

Jay and his team had nine men cycle for 75 minutes with a fan blowing at them, evaporating any sweat. The volunteers drank water ranging in temperature from an icy cold 35°F to a hot 122°F. The researchers found that when the men cycled and drank hot water, they lost 56 kilojoules more of energy in the form of heat compared to when they drank room temperature water. But when the volunteers drank the chilly liquid, they actually gained 21 kilojoules compared to the same situation.

“It’s kind of this paradoxical idea,” says Jay. “A cold fluid feels cooler when it goes inside of you, but it doesn’t really make you cooler because you reduce your sweating.”

The key to this energy exchange is good ol' sweat. For every gram of perspiration which evaporates from your skin, you lose approximately 2.43 kilojoules of energy. The men who drank hot water gained 52 extra kilojoules of heat from the water. But when the sweat started pouring off their bodies, the men also lost 108 kilojoules of heat from sweat evaporation. When it came to chilly drinks, the opposite happened. The men produced much less sweat, and therefore experienced less evaporation. While the cold water cooled them down by 138 kilojoules, that wasn't enough to counteract the 159 kilojoules retained from decreased evaporation on their skin. When the cyclists drank room temperature water, the amount of heat they gained versus the amount they lost stayed the same.

Okay, so drinking hotter drinks makes you sweat more and lose more heat, whereas colder drinks cool you down, but not quite enough. So should everyone start downing hot tea in the middle of a scorching August afternoon? Probably not.

"I never really advocate people drinking hot fluids on a hot day," Jay emphasizes. For one, he says, the heat lost from evaporation isn't actually all that substantial. For another, the experiment also took place in front of a fan. That ensured that every drop of sweat the cyclist produced was evaporated and contributed to the overall heat lost. If the sweat drips off your face or you wipe it off with a towel, that means that bead of sweat didn't evaporate from your skin and you didn't experience the benefits of the heat loss through sweat evaporation.

But, what was the connection between the water's temperature and the men's sweat levels? The experiment didn't change the volunteers' internal body temperatures. So how could the body have known whether to turn down or up the sweat production?

Jay hypothesized that it must have happened somewhere along the water's path. There were nerve endings in either the men's stomachs or mouths called thermoreceptors which could sense temperatures and exerted much of the control over sweat rates. So in 2014, he ran a new experiment. Volunteers either rinsed their mouths out with water of varying temperatures, or directly injected the water into their stomachs through a nasogastric tube in order to completely bypass the mouth.

It turned out that gargling water didn't change sweat levels. However, the water pumped directly into their stomachs did. Cold water made the volunteers sweat less while hot water made the volunteers sweat more. But these receptors in the stomach are hardly the only temperature receptors in your body. As you may know, after an intense workout, many people put ice packs on the back of their necks to cool down. "That feels really good, right?" says Jay. "But that's not cooling your brain down."

Blood might be rushing by just underneath the skin, but there's not a lot of heat being exchanged between the ice and your blood. Instead the nerve endings there act as temperature receptors, just like in the stomach, and make you feel cooler even if you aren't.

You might have experienced something similar at night if you woke up feeling too warm. Your feet have nerves with a similar function. "In bed, one of the first things you'll try to do to feel cool is to pop your feet out from under the bottom of the sheet," says Jay. "The amount of extra cooling you get is obviously not going to be that much, but it has a disproportional influence on how cool or how hot you feel."

So now you know that you can thank the temperature receptors in your stomach for the relief you feel after a giant slushie and for the sweat you create when you gingerly sip a steaming cup of coffee. But if you are looking for the best way to cool down on a hot summer day, you should probably just head indoors or at least out of direct sunlight.

Question:

1. What kind of drinks will you drink after doing sports?
2. What is the critical process that is for heat lost?
3. What kind of organ involve in this process?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Chemistry

Related Core Values :

Title : Green Chemistry and Education

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	✓

### Green Chemistry and Education

by Dennis L. Hjeresen, David L. Schutt, and Janet M. Boese

Many students today are profoundly interested in the sustainability of their world. With growing public concern over global warming and greenhouse gases, students want to understand how human actions affect the health of our planet.

Students are deeply concerned about pollution. They practice recycling. Moreover, they want to secure a healthy Earth for future generations. As students of chemistry, they have a unique opportunity to start at the ground floor of the exciting and expanding field of green chemistry.

#### The Emergence of Green Chemistry

Green Chemistry has evolved from its roots in academic research to become a mainstream practice supported by academia, industry, and government. While Green Chemistry encompasses human health and the environment, it is guided by very specific principles of chemical practice. These principles are summarized as the Twelve Principles of Green Chemistry. The interest in using green chemistry and its practices has extended internationally to become an alternative to traditional pollute-and-then-clean-up industrial practice in developing countries. This evolution is marked by significant contributions from institutions with different goals that are being satisfied through a common mechanism.

Green chemistry is the use of chemistry for pollution prevention. More specifically, it is the design of chemical products and processes that are environmentally benign. Green chemistry encompasses all aspects and types of chemical processes that reduce negative impacts to human health and the environment. At its best, green chemistry is environmentally benign, linking the design of chemical products and processes with their impacts on human health and the environment.

In the United States, the focus on Green Chemistry began in earnest after the passage of the Pollution Prevention Act of 1990. The U.S. Environmental Protection Agency established the Office of Pollution Prevention and Toxics (OPPT) to explore the idea of developing new or improving existing chemical products and processes to make them less hazardous to human health and the environment. The Office launched a

research program called “Alternative Synthetic Pathways for Pollution Prevention”. This program provided unprecedented grants for research projects that include pollution prevention in the design and synthesis of chemicals.

### Why Green Chemistry?

There is no doubt that our lives have been enhanced by chemistry. That is something chemists and students need to celebrate. However, environmental problems such as DDT, ozone depletion, the Love Canal, Bhopal, and the Cuyahoga River are all too familiar examples of chemistry gone wrong. In responding to the growing concern, governments introduced regulations to limit pollution and exposure to hazardous chemical and materials. Green chemistry represents a fundamental shift from this model toward a pollution prevention paradigm. Its premise is that a benign process and product presents no risk.

The importance of green chemistry as an alternative in the developing world cannot be overstressed. Sustainable development depends on providing goods and services for a growing population without sacrificing environmental quality. Estimates from the United Nations put the world population as high as 10.7 billion people by 2050 and this nearly doubled population creates a huge demand for chemical goods and services in the near future. Much of the growth of the chemical industry is likely to take place in the developing world, coincident with the rising population. However, many of the global environmental impacts attributable to this population growth have ties to chemical processes or products:

- loss of biological species in forests and in waters
- ozone depletion
- downstream pollution from unsustainable agricultural practices
- the pollution of fresh and marine waters, further depleting food sources
- the introduction of persistent organic pollutants into the ecosystem
- changing climate, causing as yet unpredictable changes in the hydrologic cycle with manifestations in flood, drought, sea-level change, and the spread of infectious diseases

### The Future

There is no doubt that the emerging area of green chemistry has identified scientific principles, approaches, and methodologies that have demonstrated the most positive aspects of chemistry. While the successes of green chemistry thus far seem quite large in terms of quantitative benefit to human health and the environment, they are merely the tip of the iceberg when compared to the potential. To reach this full potential, greater awareness, adoption, and development of green chemistry practices are necessary.

Sustainable economic development depends on the chemical industry to produce a vast array of products and processes.

### Q1

Why there is a need of Green chemistry?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

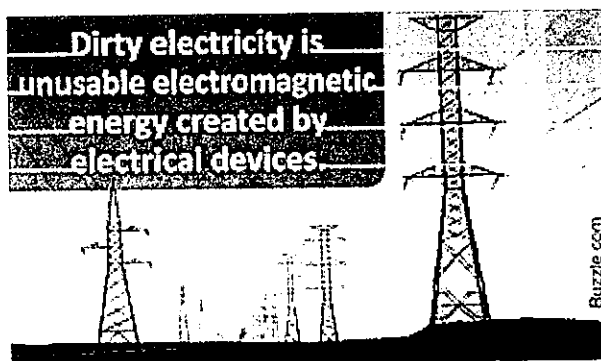
Learning Area / Subject : Physics

Related Core Values :

Title : What is Dirty Electricity and Why Is It So Dangerous?

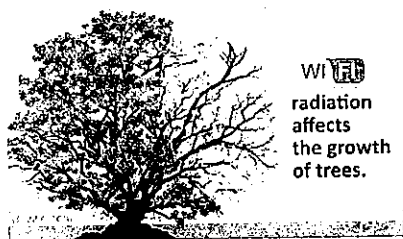
Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
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g To strengthen positive values and their daily application to analyse personal and social issues	✓



Electricity has become such an integral part of our lives that it is hard to imagine life without it. For years, we never thought electricity could have a 'dirty side' to it, but after studying many electrical pollution facts, it is being proposed that unused and corrupted electricity can be extremely dangerous for our health.

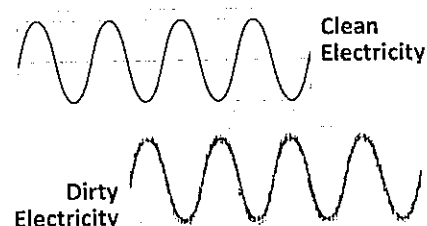
### *They Don't Want Wi-Fi!*



A Dutch study led by Dr. A.A.M. van Lammeren has proposed that exposure to radiation from Wi-Fi networks can affect tree growth or even damage them.

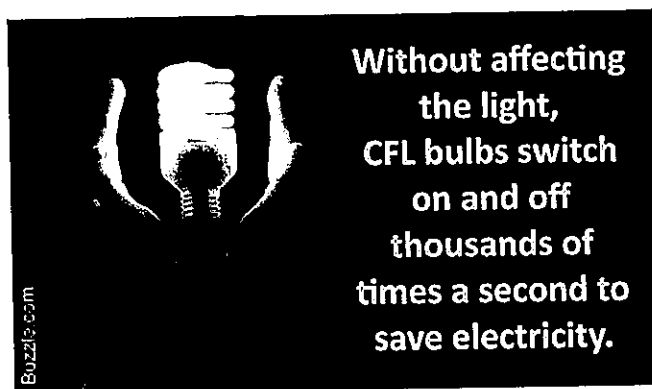
Our brains won't work without electricity, nor would our hearts. Our body can generate electricity, since we are made up of atoms. Atoms have negatively-charged electrons and positively-charged protons. When the charge is not balanced, electrons flow from one atom to another. Electricity is nothing but this flow of electrons. When our brain is telling us to run fast or hide, it means it has sensed danger, and is sending electric impulses to protect us. Our body functions because of these impulses. That is why our cells get affected by the electromagnetic field around us.

Most modern electronic appliances generate 'dirty' electricity, which interferes with our system and disturbs the working of the body. You must be wondering what makes this electricity dirty, and how it is produced.



Electricity flowing in steady 60-Hertz AC does not harm the body, but modern appliances use the stop and start method to save electricity. This results in sudden fluctuation of speed and sporadic flow of electricity. These voltage transients lead to the formation of harmful electromagnetic fields called 'dirty electricity'. In simplest terms, dirty electricity can be defined as 'unused electromagnetic energy'.

### What is Dirty Electricity?



Dr. Magda Havas, Associate Professor of Environmental & Resource Studies at Trent University, writes that:

*'Dirty Electricity' can ... be used to describe electric power that has become corrupted by our use of modern appliances.*

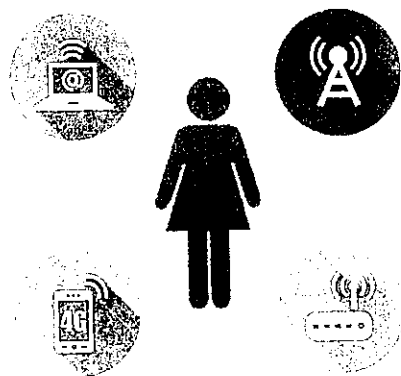
*Items such as CFL bulbs, cell phone transmission antennas, power supplies for portable computers, cell phone chargers, dimmer switches, variable speed fans, and many other electronic devices that require a transformer to convert the voltage will 'dirty' the electricity that enters your home.*

*This form of dirty electromagnetic fields (EMF) is invisible to the eye, but has a biological effect on the human body, and has been associated with a wide variety of illnesses.*

Exposure to high frequency voltage transients can lead to cardiovascular disease, cancer, diabetes, or suicide. In fact, it is believed that dirty electricity, also called electrosmog, may be the underlying root cause of many diseases. Dirty electricity exists everywhere; in schools, colleges, offices, and our homes, and is affecting kids and adults alike. Once created, it can spread easily in the neighborhood.

- Computers
- Compact Fluorescent Light (CFL) Bulbs
- Low-voltage Lighting
- Dimmer Switches
- Wi-Fi Systems
- Broadband Internet
- Cell Phone Chargers Cordless Telephones
- Hair dryers

### Sources of Dirty Electricity

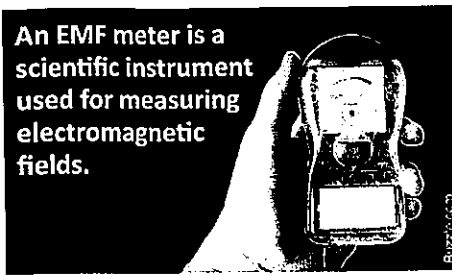


Endotox.com

### Electromagnetic Hypersensitivity:

Many individuals claim to experience symptoms like headaches, muscle pain, sleep disturbances, and other health problems when exposed to an electromagnetic field (EMF). Such individuals are said to be sensitive to electromagnetic fields. There have been cases where reducing EMF exposure has shown improvement in their condition. Grounding techniques have also helped many people sleep better. Electromagnetic filters can be used to reduce dirty electricity in the house or office.

## *Electromagnetic Field Detector:*



Dirty electricity levels above 50 mV can be extremely dangerous. Ideally, they should be less than 25 mV, but measures between 25 mV - 50 mV are permissible. If the levels are too high, filters can be used to reduce them. While measuring dirty electricity, it is crucial to check the levels in the entire building for an accurate reading. Special EMF meters are available to measure dirty electricity. These are called EMI meters, as they measure the electrical interference in the area. Different companies have EMI meters with different ranges. You can rent or buy one that suits

your needs to check the electrical interference in your home, office, or building.

### *Why is Dirty Electricity Dangerous?*

Our cells consider EMF as an invader, as it interferes with the millions of electrical impulses that the body uses to regulate cellular activity. Dirty electricity is like unnecessary noise disturbing the cells.

In 2007, an international group of scientists released a report called The Bioinitiative Report. After more than 2,000 research studies, they established a link between exposure to electromagnetic field and various diseases. Dirty electricity, a form of EMF, is associated with cancer, heart disease, low immunity, and various other problems.

Attention Deficit Disorder (ADD), concentration issues, depression, muscle pain, asthma, behavioral problems, etc., can also be linked to dirty electricity. Dr. Samuel Milham, physician-epidemiologist, has established a link between twentieth-century diseases and dirty electricity in his book 'Dirty Electricity: Electrification and Diseases of the Civilization'.

Dr. Milham has also pointed out that urban areas with electrification have more disease than areas without electrification. He says, "The explosive recent increase in radio-frequency radiation and high frequency transients sources, from cell phones and towers, terrestrial antennas, Wi-Fi and Wi-Max telecommunication systems, broadband internet over power lines, and personal electronic equipment may be leading to a new 21st Century epidemic much like the 20th Century electromagnetic field epidemic."

The dangers of dirty electricity are not restricted just to humans. Studies have shown that plants in the vicinity of strong electrical networks are affected negatively too. Differences have also been observed in animal behavior when exposed to high level of electrosmog.

### *Tips to Reduce Electrosmog:*

- Shield phone lines
- Install RF (radio frequency) filters
- Turn off and unplug all electronics when not in use
- Don't sleep with a cell phone under your pillow
- Avoid using a cordless phone

These and many other little habits can help reduce your exposure to EMF. It is impossible to get complete respite from dirty electricity, but we can take simple measures for better health and well-being.

Read more at Buzzle: <http://www.buzzle.com/articles/what-is-dirty-electricity.html>

### *Questions:*

- (1) Do you think that 'dirty electricity' is serious in Hong Kong? Give your reasons.
- (2) Is there any suggestions for us to take action to minimize this kind of problem? State your answers briefly.



## 2017-2018 Reading to Learn

Form	Junior	<input checked="" type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject: Integrated Science

Related Core Values :

Title: Why Do You Get Sleepy After You Eat?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	

Anyone who ever got stood up for a date and soothed themselves by eating a whole basket of breadsticks knows how bad a food coma can be. But why does eating make you so sleepy? It's not exactly a HIIT cardio routine. It's all about the chemicals.



### Tryptophan's Partner In Crime

Food comas don't really make any sense, when you think about it. Eating is supposed to give you energy, so why would you get tired after dinnertime? As it turns out, it all comes down to what and how much of it you're eating. Tryptophan is probably the best-known culprit of post-nummies naps, and its most notorious hang-out is in Thanksgiving turkey. The only thing is, tryptophan on its own is a long way from the complete picture.

Some studies have found that an influx of carbohydrates has a much greater effect on your sleepiness than turkey ever could alone. A plateful of potatoes will cause your blood sugar to spike and then fall, and when it does, you'll crash hard. Moreover, if the meal you're eating has both carbohydrates and tryptophan-rich foods, the effects combine — the carbs essentially clear the path for the tryptophan to reach your brain and slow you down. Turkey sandwich? Good night, amigo. Don't think cutting out turkey will solve the issue, either. A lot of common foods have as much or more tryptophan, including mozzarella, bacon, and soybeans.

## Wakey Wakey, Eggs (No Bakey)

So we've got a recipe for sleepy times. But if you're hungry and you've got to keep your energy up, what should you put on the menu? Rule one is moderation. Big portions inevitably lead to big crashes. But once you've got sensible sizes down, try these snacks for a little boost.

- **Oatmeal:** Yes, it's carbs — that's where moderation comes in. But oatmeal also has the benefit of being slow-burning. Instead of rushing through the peak and crash, it'll keep you rolling all morning long.
- **Beans:** A cup of beans is packed with protein, and will leave you feeling full and satisfied. Better yet, it will stabilize your blood sugar levels so you can keep up a steady pace all day.
- **Almonds:** These nutrient-rich nuts contain both Vitamin B and magnesium — the latter of which has been linked to an improved metabolism while exercising.
- **Eggs:** Also full of protein, eggs give you a jumpstart in the morning with heart-healthy monounsaturated and polyunsaturated fatty acids. But you might want to skip the bacon if you need to stay alert.

Question:

1. What kind of food will make you sleepy?
2. What will you choose for your lunch?
3. Can you think of other factors that will make you sleepy?

## 2017-2018 Reading to Learn

Form	Junior	
	Senior	✓

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Computer

Related Core Values :

Title : **Bitcoin mining**

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

### Bitcoin mining

Bitcoin mining is the processing of transactions on the Bitcoin network and securing them into the blockchain. Each set of transactions that are processed is a block. The block is secured by the miners. Miners do this by creating a hash that is created from the transactions in the block. This cryptographic hash is then added to the block. The next block of transactions will look to the previous block's hash to verify it is legitimate. Then your miner will attempt to create a new block that contains current transactions and new hash before anyone else's miner can do so.

Since the difficulty of Bitcoin mining is very high now people will pool their miners together to have a better chance of creating a block and having it confirmed before other miners for a share of the current mining reward which is 12.5 Bitcoin, plus any transaction fees. We will cover pool mining later in the guide. The series of blocks is called the blockchain. The blockchain is like your checkbook register or a general ledger of transactions. The way that Bitcoin Mining secures the blockchain makes that ledger tamper-proof and immutable.

Each block once made into a block will be verified by nodes on the Bitcoin network. This process is using Proof of Work. Proof of Work covers the Bitcoin transactions in a block and is what your Bitcoin ASIC Miner does.

Proof of Work explained:

“In order for a block to be accepted by network participants, miners must complete a proof of work which covers all of the data in the block. The difficulty of this work is adjusted so as to limit the rate at which new blocks can be generated by the network to one every 10 minutes. Due to the very low probability of successful generation, this makes it unpredictable which worker computer in the network will be able to generate the next block.

For a block to be valid it must hash to a value less than the current target; this means that each block indicates that work has been done generating it. Each block contains the hash of the preceding block, thus each block has a chain of blocks that together contain a large amount of work. Changing a block (which can

only be done by making a new block containing the same predecessor) requires regenerating all successors and redoing the work they contain. This protects the block chain from tampering.”

The process of Bitcoin mining while difficult on the technical side to to fully understand can be easily mined by anyone. Miners secure the network by using Proof of Work and creating a hash for each block that is mined, so the blockchain keeps an immutable record of all transactions taking place on the network.

Bitcoin mining is competitive, you want to solve or “find” a block before anyone else’s miner does. Then you will get the block reward and transaction fees from the block. During the last 3 years we have seen an incredible amount of hashrate coming online which made it harder and harder to have enough hashrate personally to solve a block thus getting the payout. To compensate for this pool mining was developed. Bitcoin.com has launched it’s own mining pool with competitive pricing, which you can register for and begin mining today.

### Reflection:

How do you think about the “bitcoin mining” and the concept of virtual currency?  
Is it appropriate to replace the existing currency in the real world?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : BAFS

Related Core Values :

Title : 12 Ethical Principles for Business  
Executive

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	✓

Source of Information : <http://josephsononbusinessethics.com/2010/12/12-ethical-principles-for-business-executives/>

# 12 Ethical Principles for Business Executives

*Ethical values, translated into active language establishing standards or rules describing the kind of behavior an ethical person should and should not engage in, are ethical principles. The following list of principles incorporate the characteristics and values that most people associate with ethical behavior.*

**1. HONESTY.** Ethical executives are honest and truthful in all their dealings and they do not deliberately mislead or deceive others by misrepresentations, overstatements, partial truths, selective omissions, or any other means.

**2. INTEGRITY.** Ethical executives demonstrate personal integrity and the courage of their convictions by doing what they think is right even when there is great pressure to do otherwise; they are principled, honorable and upright; they will fight for their beliefs. They will not sacrifice principle for expediency, be hypocritical, or unscrupulous.

**3. PROMISE-KEEPING & TRUSTWORTHINESS.** Ethical executives are worthy of trust. They are candid and forthcoming in supplying relevant information and correcting misapprehensions of fact, and they make every reasonable effort to fulfill the letter and spirit of their promises and commitments. They do not interpret

agreements in an unreasonably technical or legalistic manner in order to rationalize non-compliance or create justifications for escaping their commitments.

**4. LOYALTY.** Ethical executives are worthy of trust, demonstrate fidelity and loyalty to persons and institutions by friendship in adversity, support and devotion to duty; they do not use or disclose information learned in confidence for personal advantage. They safeguard the ability to make independent professional judgments by scrupulously avoiding undue influences and conflicts of interest. They are loyal to their companies and colleagues and if they decide to accept other employment, they provide reasonable notice, respect the proprietary information of their former employer, and refuse to engage in any activities that take undue advantage of their previous positions.

**5. FAIRNESS.** Ethical executives are fair and just in all dealings; they do not exercise power arbitrarily, and do not use overreaching nor indecent means to gain or maintain any advantage nor take undue advantage of another's mistakes or difficulties. Fair persons manifest a commitment to justice, the equal treatment of individuals, tolerance for and acceptance of diversity, they are open-minded; they are willing to admit they are wrong and, where appropriate, change their positions and beliefs.

**6. CONCERN FOR OTHERS.** Ethical executives are caring, compassionate, benevolent and kind; they like the Golden Rule, help those in need, and seek to accomplish their business objectives in a manner that causes the least harm and the greatest positive good.

**7. RESPECT FOR OTHERS.** Ethical executives demonstrate respect for the human dignity, autonomy, privacy, rights, and interests of all those who have a stake in their decisions; they are courteous and treat all people with equal respect and dignity regardless of sex, race or national origin.

**8. LAW ABIDING.** Ethical executives abide by laws, rules and regulations relating to their business activities.

**9. COMMITMENT TO EXCELLENCE.** Ethical executives pursue excellence in performing their duties, are well informed and prepared, and constantly endeavor to increase their proficiency in all areas of responsibility.

**10. LEADERSHIP.** Ethical executives are conscious of the responsibilities and opportunities of their position of leadership and seek to be positive ethical role models by their own conduct and by helping to create an environment in which principled reasoning and ethical decision making are highly prized.

**11. REPUTATION AND MORALE.** Ethical executives seek to protect and build the company's good reputation and the morale of its employees by engaging in no conduct that might undermine respect and by taking whatever actions are necessary to correct or prevent inappropriate conduct of others.

**12. ACCOUNTABILITY.** Ethical executives acknowledge and accept personal accountability for the ethical quality of their decisions and omissions to themselves, their colleagues, their companies, and their communities.

*Thinking:*

1. *What is the importance of business ethics for smooth and fair economic activities?*

2. *Which characters, mentioned in the article, that you think is the most critical for being an ethical business executive and why?*

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : History

Related Core Values :

Title : Was it right to bomb Hiroshima?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

### What happened on 6 August 1945?

In the small hours of a warm summer day, the B-29 Superfortress Enola Gay flew from a US base on Tinian over the Japanese mainland. In the hold was an experimental bomb, codenamed Little Boy. The target: Hiroshima.

In Hiroshima the air raid sirens had sounded twice that morning already. On both occasions the all clear followed swiftly. Enola Gay faced no resistance as it dropped the bomb. Forty five seconds later the city was destroyed in a blinding instant. Eighty thousand men, women and children were killed and tens of thousands wounded, disfigured and poisoned by radiation from the bomb.

Three days later, another nuclear bomb was dropped on Nagasaki. A week later, Japan surrendered. The bomb brought World War Two to a sudden end, but was it right to use it?

### Why did America use the bomb?

#### Conclusion of the war

The bomb was dropped to force a quick Japanese surrender. American commanders said it would save money and the lives of American servicemen and Japanese soldiers and civilians too. They said that to continue the war for weeks or months with conventional bombing and a US land invasion could have caused millions of Japanese deaths.

#### Retribution against the Japanese

President Truman justified his decision by pointing to the unprovoked Japanese attack on Pearl Harbour and the murder of American prisoners. A few days after the bombing he wrote: "When you have to deal with a beast you have to treat him as a beast."

#### Demonstration of power

The development of the bomb cost billions of dollars, and American leaders wanted to justify the expense. They wanted to demonstrate to the Japanese that they faced overwhelmingly superior forces. They also wanted their new rivals, the Soviet Union, to see their powerful new weapon in action.



## **Was it a just decision?**

In 1945, the idea of just war was firmly established in international law. In a just war, only combatants may be specifically targeted. Harm caused to civilians must be proportional to military ends and any harm caused must be necessary for the achievement of military goals. However, some argue that all citizens contribute to the war effort and can be a legitimate target in some cases.

Was it right to use the bomb?

One argument supporting the case that dropping the nuclear bomb was the right thing to do, is that the immediate deaths that it caused are outweighed by lives potentially saved in the long run by the quick end of the war. An argument against using the bomb is that the deliberate killing of civilians on this scale violates the principles of just war.

Question:

What would you have done?

From: <http://www.bbc.co.uk/guides/zq7yg82#zwtc82p>

## 2017-2018 Reading to Learn

Form	Junior	✓
	Senior	✓

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : History and Culture

Related Core Values :

Title : Who were the pyramid builders?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
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f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

After comparing DNA samples taken from the workers' bones with samples taken from modern Egyptians, Dr Moamina Kamal of Cairo University Medical School has suggested that Khufu's pyramid was a truly nationwide project, with workers drawn to Giza from all over Egypt. She has discovered no trace of any alien race; human or intergalactic, as suggested in some of the more imaginative 'pyramid theories'.

**It is a truly nationwide project, with workers drawn to Giza from all over Egypt.**

Effectively, it seems, the pyramid served both as a gigantic training project and - deliberately or not - as a source of 'Egyptianisation'. The workers who left their communities of maybe 50 or 100 people, to live in a town of 15,000 or more strangers, returned to the provinces with new skills, a wider outlook and a renewed sense of national unity that balanced the loss of loyalty to local traditions. The use of shifts of workers spread the burden and brought about a thorough redistribution of pharaoh's wealth in the form of rations.

Almost every family in Egypt was either directly or indirectly involved in pyramid building. The pyramid labourers were clearly not slaves. They may well have been the unwilling victims of the corvée or compulsory labour system, the system that allowed the pharaoh to compel his people to work for three or four month shifts on state projects. If this is the case, we may imagine that they were selected at random from local registers.

**Almost every family in Egypt was either directly or indirectly involved in pyramid building.**

But, in a complete reversal of the story of oppression told by Herodotus, Lehner and Hawass have suggested that the labourers may have been volunteers. Zahi Hawass believes that the symbolism of the pyramid was already strong enough to encourage people to volunteer for the supreme national project. Mark Lehner has gone further, comparing pyramid building to American Amish barn raising, which is done on a volunteer basis. He might equally well have compared it to the staffing of archaeological digs, which tend to be manned by enthusiastic, unpaid volunteers supervised by a few paid professionals.

From: [http://www.bbc.co.uk/history/ancient/egyptians/pyramid\\_builders\\_01.shtml](http://www.bbc.co.uk/history/ancient/egyptians/pyramid_builders_01.shtml)

Question: If slaves didn't build the pyramids in Egypt, who did? Why would the ancient Egyptians like to build the pyramids?

## 2017-2018 Reading to Learn

Put a tick  in the appropriate box (can be more than one)

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Learning Area / Subject : THS

Related Core Values :

Title : Exploring the prospect of low-cost carriers  
in Hong Kong

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	<input type="checkbox"/>

Source of Information : <https://www.polyu.edu.hk/cpa/excel/en/201407/viewpoint/V1/index.html>

### Exploring the prospect of low-cost carriers in Hong Kong

#### What is the current operating status of low-cost carriers?

Aircraft is a common medium to long-distance transportation nowadays. Passengers will mostly put punctuality and safety before extravagant services in airline selection. This tendency has thus opened up the market for low-cost airlines.

Reports released in 2013 indicated there are approximately 47 low-cost airlines in the Asia-Pacific region with about 1,000 airplanes. South Asia and Singapore take the highest market share at 27% and 25 % respectively. North Asia follows with a market share at 10% and Hong Kong at only 5%. According to the Transport and Housing Bureau, there are 16 low-cost carriers operating locally, among which only one is based in Hong Kong.

#### What are the differences in operation between ordinary airlines and low-cost carriers?

Adopting a "hub and spoke" model in setting up aviation network, ordinary airlines designate certain areas in various continents as transit points travelling to and from other regions. Offering mainly international flights, this approach stabilizes cost control and allows systematic monitoring of the aviation network.

On the other hand, the aviation network of low-cost airlines is mainly on "point-to-point" basis in which direct flights from one region to another are offered. As these airlines selectively offer flights in regions with higher profit ratio, local short to medium-haul flights are mostly offered. Due to its flexibility in flight deployment depending on the demand and outsourcing strategies, operating costs of these airlines are relatively lower and their air tickets can thus be priced lower. As such, low-cost carriers have competitive advantages in the market.

Low-cost airlines can further reduce their operating costs by purchasing a single type of aircraft for easy maintenance and crewing issues, offering mainly short to medium haul flight routes, replacing passenger boarding bridge by shuttles, streamlining aircraft cleaning and in-flight catering services, and lowering ticketing costs by offering a single class of service and promoting online ticketing and e-boarding etc.

### **How is the prospect of low-cost carriers in Asia including Hong Kong?**

Since 2000, different low-cost carriers started to establish in the Asia-Pacific region. Regulated by the governments, these airlines are allotted flights according to bi-/multi-lateral agreements made by their own countries. In recent years, governments of Asian countries have progressively released air traffic rights and adopted the open sky policy; thereby creating more room for low-cost carriers' development.

We will take the following three areas into consideration when exploring the prospect of low-cost carriers:

- **Society structure:** With the increase of middle-class in many developing countries, airport usage also increases. Also, diminished cultural difference facilitates travels, especially for young tourists. Rising demand for low-cost airlines can be expected.
- **Travelling culture:** People nowadays enjoy more frequent travels and treat flight experience as merely a means of transportation. A survey found that Hongkongers prefer to save up from less expensive air ticket for spending more on hotel accommodation and activities during vacation. Low-cost carriers can definitely fill the gap in the market.
- **Economic contributions:** Low-cost carriers help generate human flow and job openings, as well as produce new momentum for tourism. They also create opportunities for tourism-related industries, thus contributing to economic development.

In summary, low-cost carriers have considerable potentials as long as the carriers attend to the operational models with effective costing control.

### **Question**

**Why do the low-cost carriers become so popular among Hong Kong people ?**

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : GEOGRAPHY  
 Title: Smartphones could help beat traffic in congested cities

Related Core Values :

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	✓

Source of the article: <http://www.nationalgeographic.com/environment/urban-expeditions/transportation/traffic-cities-smartphones-apps-startups-congestion-commute-india/>

# Smartphones Could Help Beat Traffic in Congested Cities

**Public transit hasn't kept pace with urban growth in India, but innovative apps and start-ups are filling in the gaps.**



During rush hour at Kurla station, on Mumbai's suburban rail line, passengers struggle to find space and face delays—and sometimes harassment. The city's commuter trains feature cars dedicated to women, like this one. Following several incidents of rape on buses, new efforts address the security of female transit passengers. Earlier this year, Delhi approved a measure to add cameras in its public buses.

PHOTOGRAPH BY DHIRAJ SINGH. BLOOMBERG VIA GETTY IMAGES

By Niloufer Venkatraman

UPDATED JULY 11, 2017

When it comes to transportation, India's cities are synonymous with traffic-choked arteries and packed buses and rail cars. Government efforts, focused on widening highways and building massive interchanges, have done little to ease congestion or to stem the tide of a car culture that's exploded in the wake of economic growth. Meanwhile, mass transit networks haven't kept pace with the country's rising urban population. Problems associated with the sector extend well beyond gridlock, such as poor air quality, staggering accident rates, and the safety of female transit passengers.

Yet there are bright spots. In Gujarat state's largest city, Ahmadabad, the bus rapid transit (BRT) system—the country's first—has been hailed for its innovative stations and its reach into lower-income neighborhoods. The success of the Delhi Metro has spurred other cities; a dozen subway systems are under way. Most recently launched is a 25-kilometer line in Kochi, a city that built the world's first airport completely run by solar energy. Its metro will also draw power from the sun—at least 20 percent of its electricity needs.

Even auto-rickshaws, a quintessential part of India's urban landscape, have been swept up in the winds of change. Over the past decade—along with buses and taxis—most have been converted to run on less polluting compressed natural gas.

Now India is tapping another source of power—technology, which is poised to transform how its citizens get around their cities. India is a center of tech-driven start-ups, and over 200 entrepreneurs are venturing to create more accessible, sustainable mobility models—and a more user-friendly experience. While services are often niche, some are scalable and offer the potential to reduce traffic and emissions and expand commuting options.

National Geographic spoke with Jyot Chadha, who heads the urban innovation initiative at the World Resources Institute's Ross Center for Sustainable Cities in Mumbai, about solutions for developing mass transit in India.

## **What's your view of urban transit priorities?**

With the government's smart city movement and the road safety bill, we've seen many new initiatives. We have a lot of work to do and it's slow going. We need to design cities where pedestrians can walk more and cycle more. That is the future. Beyond walking and cycling, one should be able to access public transport within 10 minutes of walking from a destination. We need an integrated schedule, so I know when the bus is coming, and integrated transfers so that I'm not double-paying. Once you have these core blocks in place—walking and cycling, public transport, interconnectedness of payment, information, and infrastructure—technologies can then be used to create better utilization of vehicles.

## **How has technology changed commuting?**

New technologies are reinventing the ecosystem. Not only are they changing how we access transport—often through apps—but those apps are in turn providing data, allowing us to learn more about our cities and see trends. Innovations focus not just on building sustainable cities by reducing emissions, but also by improving access for women and low-income communities, and increasing the synergy between different modes of transport, which allows a commuter to transfer.

## **Until public transit networks catch up, what's filling in the gaps?**

One of the exciting things is the growth of private, on-demand bus service aggregators. Shuttl, Cityflo, ZipGo, and Ola Shuttle operate in big cities like Delhi, Mumbai, Hyderabad, and Bangalore. Apps allow passengers to book a ride and be assured of a seat and of timely arrival and departure. The services go where good public transport does not exist. These aggregators are seeing 30 to 50 percent of the commuters leaving their cars and motorbikes at home in favor of the bus. Models like this have the ability to keep people from shifting to cars, even as their incomes rise.

## **You analyzed on-demand bus services. What did you find?**

Our study of Commut in Hyderabad uncovered something very surprising—60 percent of the customers were women. On public transportation, women account for about 30 percent of riders. The reasons for the uptick: Women found the service to be safer, faster, and hassle free. Commut operates 12- and 18-seat buses, and they're able to pick

up and drop people a lot closer to where they live or work than public buses. We found that 30 percent of these women used to drive or take a taxi to work—a move that’s good for the city.

### **How have you worked with government to improve public transportation?**

We tend to build relationships with city and transit authorities that eventually lead to collaboration. EMBARQ, our urban mobility initiative, helped the Bangalore Metropolitan Transport Corporation (BTMC) restructure its bus network, the largest in India—6,500 vehicles carry five million daily passengers.

It began with a pilot program in one of the city’s major corridors to reduce commute and wait times by increasing the frequency of buses on the most popular routes. This rationalization of routes allowed the city to provide better service for the same assets. We’ve now expanded the project to explore how bus services can be made more appealing, not just for existing riders, but also to draw others who are currently using taxis.

### **The principal agony for a bus commuter is waiting. What can be done?**

In Bangalore, BMTC will soon share its data on routes, schedules, etc. with the public. No transit agency in India has ever done that. Once it does, I have no doubt that entrepreneurs will respond with apps. In Boston, one of the U.S. cities to open up its data, over a dozen apps were developed in just two months to track buses, timetables, alerts. In India we have enough software and start-up talent to make great use of this data. If public transport becomes more convenient, it could lead to more people using it.

### **How do auto-rickshaws fit into the future?**

Auto-rickshaws are important in cities as they often provide that first- and last-mile connectivity to or from bus, train, and metro stations. We’ve worked to make them more viable.

In Chennai auto-rickshaws didn’t have meters; drivers routinely overcharged customers. This led to a downward spiral in which commuters avoided auto-rickshaws, which in turn made drivers more aggressive and more likely to overcharge. We worked with the



government to create a system of setting affordable fares that still allow drivers to earn a decent living.

In 2014 we launched the Rickshaw Rising Challenge to look at how technology-led innovation could transform this sector. Several experiments came out of that: an attempt to create an organized fleet in the city of Rajkot; installing a tracking device for getting auto-rickshaws on-demand through an app; a call center that dispatches drivers; helping drivers with finance so they can own their vehicles, instead of renting them at exorbitant rates for 20 years; recruiting women to become drivers.

### **What's the role for electric vehicles?**

The Indian government has ambitious goals for our transition to electric vehicles. Instead of focusing on individually owned vehicles, we should think about zero-emission vehicles for shared mobility fleets like buses and taxis. Economically, the up-front cost of electric vehicles makes more sense if the vehicle is driving 100 or 150 kilometers a day, rather than 20 kilometers by one commuter. The city of Nagpur recently launched a pilot project with Ola cabs and manufacturer Mahindra to put 200 electric vehicles in circulation.

### **Has crowdsourcing influenced any apps?**

Safetipin is focused on gender safety in public places. But it's not just about pressing a panic button—the app allows people to input how they feel about their well-being in different parts of a city. Users have a few parameters to “audit,” including gender balance, street lighting, and sidewalk quality. These audits are aggregated as red (worrisome) and green (good) dots on a map. For instance, a red area could appear because street lighting is inadequate at a particular bus stop. Safetipin's data leads to targeted interventions by city authorities.

Another is Ridlr, which provides real-time traffic information. The app also allows something previously unavailable in India—buying a ticket for public transit online. That improves the efficiency of the daily commute.

## What about commuting by walking?

Indian cities have been in a phase of narrowing sidewalks to widen roads for cars. The amount of space given to pedestrians is so tiny that they must walk on the road and then take up a whole lane where cars could be driving.

Now an initiative called Raahgiri Day is working to reclaim streets for people. It began in 2013 when Gurgaon, a city just south of New Delhi, allowed us to shut down a five-kilometer stretch on a main road every Sunday morning, making it possible for people to walk or ride a bicycle and for children to play. Raahgiri Day events are now happening in 40 cities in India. It raises the question of what kind of community we want to create—more cars on the street doesn't create a community.

India also dubiously holds the top place in the world for pedestrian deaths in road accidents—about 7,000 in 2015. It's a ridiculous number. This is not about telling someone to look right or left, or fining those who are jaywalking. If you haven't created the right infrastructure for people to pass or cross a street, if someone has to walk one kilometer to get to a crossing, they're not going to do it. The first priority for a city should be to make more walking possible.

*This interview has been edited for length and clarity.*

*Niloufer Venkatraman is the former editor in chief of the India editions of National Geographic and Traveler magazines.*

*This article is part of our Urban Expeditions series, an initiative made possible by a grant from United Technologies to the National Geographic Society.*

*Thinking:*

*1. Which idea impressed you the most and why?*

Form	Junior	
	Senior	✓

## 2017-2018 Reading to Learn

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Religious and Moral Education    Related Core Values :

Title : The Smile

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	
b To provide more background information of a particular topic	
c To enrich world knowledge	
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

Source of article: *Translated from a Vietnamese story in Inspirational Stories*

# The Smile

Hanoch McCarty

*Smile at each other, smile at your wife, smile at your husband, smile at your children, smile at each other – it doesn't matter who it is – and that will help you to grow in greater love for each other.*

*Mother Teresa*

Many Americans are familiar with *The Little Prince*, a wonderful book by Antoine de Saint-Exupery. This is a whimsical and fabulous book and works as a children's story as well as a thought-provoking adult fable. Far fewer are aware of Saint-Exupery's other writings, novels and short stories.

Saint-Exupery was a fighter pilot who fought against the Nazis and was killed in action. Before World War II, he fought in the Spanish Civil War against the fascists. He wrote a fascinating story based on that experience entitled *The Smile (Le Sourire)*. It is this story which I'd like to share with you now. It isn't clear whether or not he meant this to be autobiographical or fiction. I choose to believe it is the former.

He said that he was captured by the enemy and thrown into a jail cell. He was sure that from the contemptuous looks and rough treatment he received from his jailers he would be executed the next day. From here, I'll tell the story as I remember it in my own words.

"I was sure that I was to be killed. I became terribly nervous and distraught. I fumbled in my pockets to see if there were any cigarettes which had escaped their search. I found one and because of my shaking hands, I could barely get it to my lips. But I had no matches, they had taken those.

"I looked through the bars at my jailer. He did not make eye contact with me. After all, one does not make eye contact with a thing, a corpse. I called out to him 'Have you got a light, *por favor?*' He looked at me, shrugged and came over to light my cigarette.

"As he came close and lit the match, his eyes inadvertently locked with mine. At that moment, I smiled. I don't know why I did that. Perhaps it was nervousness, perhaps it was because, when you get very

close, one to another, it is very hard not to smile. In any case, I smiled. In that instant, it was as though a spark jumped across the gap between our two hearts, our two human souls. I know he didn't want to, but my smile leaped through the bars and generated a smile on his lips, too. He lit my cigarette but stayed near, looking at me directly in the eyes and continuing to smile.

"I kept smiling at him, now aware of him as a person and not just a jailer. And his looking at me seemed to have a new dimension, too. 'Do you have kids?' he asked.

"Yes, here, here.' I took out my wallet and nervously fumbled for the pictures of my family. He, too, took out the pictures of his *ninos* and began to talk about his plans and hopes for them. My eyes filled with tears. I said that I feared that I'd never see my family again, never have the chance to see them grow up. Tears came to his eyes, too.

"Suddenly, without another word, he unlocked my cell and silently led me out. Out of the jail, quietly and by back routes, out of the town. There, at the edge of town, he released me. And without another word, he turned back toward the town.

"My life was saved by a smile."

Yes, the smile – the unaffected, unplanned, natural connection between people. I tell this story in my work because I'd like people to consider that underneath all the layers we construct to protect ourselves, our dignity, our titles, our degrees, our status and our need to be seen in certain ways – underneath all that remains the authentic, essential self. I'm not afraid to call it the soul. I really believe that if that part of you and that part of me could recognize each other, we wouldn't be enemies. We couldn't have hate or envy or fear. I sadly conclude that all those other layers, which we so carefully construct through our lives, distance and insulate us from truly contacting others. Saint-Exupery's story speaks of that magic moment when two souls recognize each other.

I've had just a few moments like that. Falling in love is one example. And looking at a baby. Why do we smile when we see a baby? Perhaps it's because we see someone without all the defensive layers, someone whose smile for us we know to be fully genuine and without guile. And that baby-soul inside us smiles wistfully in recognition.

- 
- 1 Do you find it difficult to smile at others? Why or why not?
  - 2 Suggest THREE ways to improve your interpersonal relationship?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Visual Arts

Related Core Values :

Title : A New Definition Of Creativity

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	<input type="checkbox"/>
d To develop deeper level of appreciation towards art work	✓
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	<input type="checkbox"/>

**Source of article:** What Is Creativity? Creativity Explained by Silvia Hartmann

### A New Definition Of Creativity

First of all, let's remember that although we use the word "creativity" all the time, it is not something you can put in the boot of your car or sell in a can - it is a nominalisation, and that means it was taken from a verb which describes an activity and frozen into this nebulous noun.

The verb at the bottom of the well is, "to create".

In essence, this means "to make something", and that's our first stop on re-defining creativity.

1. You can't be "creative" unless you are DOING SOMETHING - CREATIVELY.  
This is really important to understand because the word is so terribly misused all the time.

People will say, "Hey look, there's Bob. He's a creative genius!"

What they mean by that is that Bob is creating all the time, but that's totally untrue.

Right now, Bob is sitting on a park bench, eating a hamburger and thinking about his shopping.

He is no more "creative" here than you or me at this time.

However, later on, Bob might go into his studio or his office, his lab or his bedroom and there he might work on his latest "creation" - and only when he does THAT, is he actually "being creative".

So remember this one:

Being creative is something THAT YOU DO when you engage in the act of MAKING SOME THING.

This brings us to the next step, namely that to ...

2. CREATE SOME THING with a purpose is what it means to be creative.  
That's another place where people really lose it on this topic.

Rolling around and spouting nonsense insanely is really not what creativity is about - it is about creating SOME THING.

That could be some thing that solves a problem, has an effect on society or on reality in some way, or on yourself.

This "act of creation" is the reason why people get creativity confused with "innovation", "originality" or "inventions".

These things may or may not happen; they are an after the fact judgement on the product or process that came about as some person created some THING.

So that gives us Creativity Rule No. 3:

3. In order to be creative, you do NOT have to "invent something new".

Imagine this. There are two geniuses, on the opposite side of the world, and BOTH AT THE SAME TIME have a creative breakthrough on some thing that affects reality.

One may be a millisecond behind the other - does that mean one is creative and a genius, and the other isn't?

Of course not!

You can re-invent the wheel as many times as you like and you can really be completely creative in doing so - if your society didn't know about wheels, what else would that be?!

Creativity and innovation are TWO SEPARATE TOPICS, that's very important to understand.

A lot of people mistakenly think that when they explore their creativity, they WILL have to come up with something no-one, out of all the billions upon billions of people on this planet in all the hundreds of thousands of years of human history has EVER thought of.

That's NOT creativity!

Creativity is when a little kid works out for themselves how to get at a toy on a high shelf with a stick.

Happens to virtually EVERY kid, ever - but each time, it is THEIR CREATIVITY, their marvellous experience and their REWARD.

Reflective question:

1. What is Creativity? Do you have any experience that you or anyone show creativity?

## 2017-2018 Reading to Learn

Form	Junior	
	Senior	✓

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Music

Related Core Values :

Title : The 8 Most Important Open Guitar  
Chords For Beginners

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

**Source of article:**

<http://www.guitarhabits.com/the-8-most-important-open-guitar-chords-for-beginners/>

# The 8 Most Important Open Guitar Chords For Beginners



Where do you start when you want to learn to play guitar?

Well learning chords and strumming songs is the first thing you want to work on.

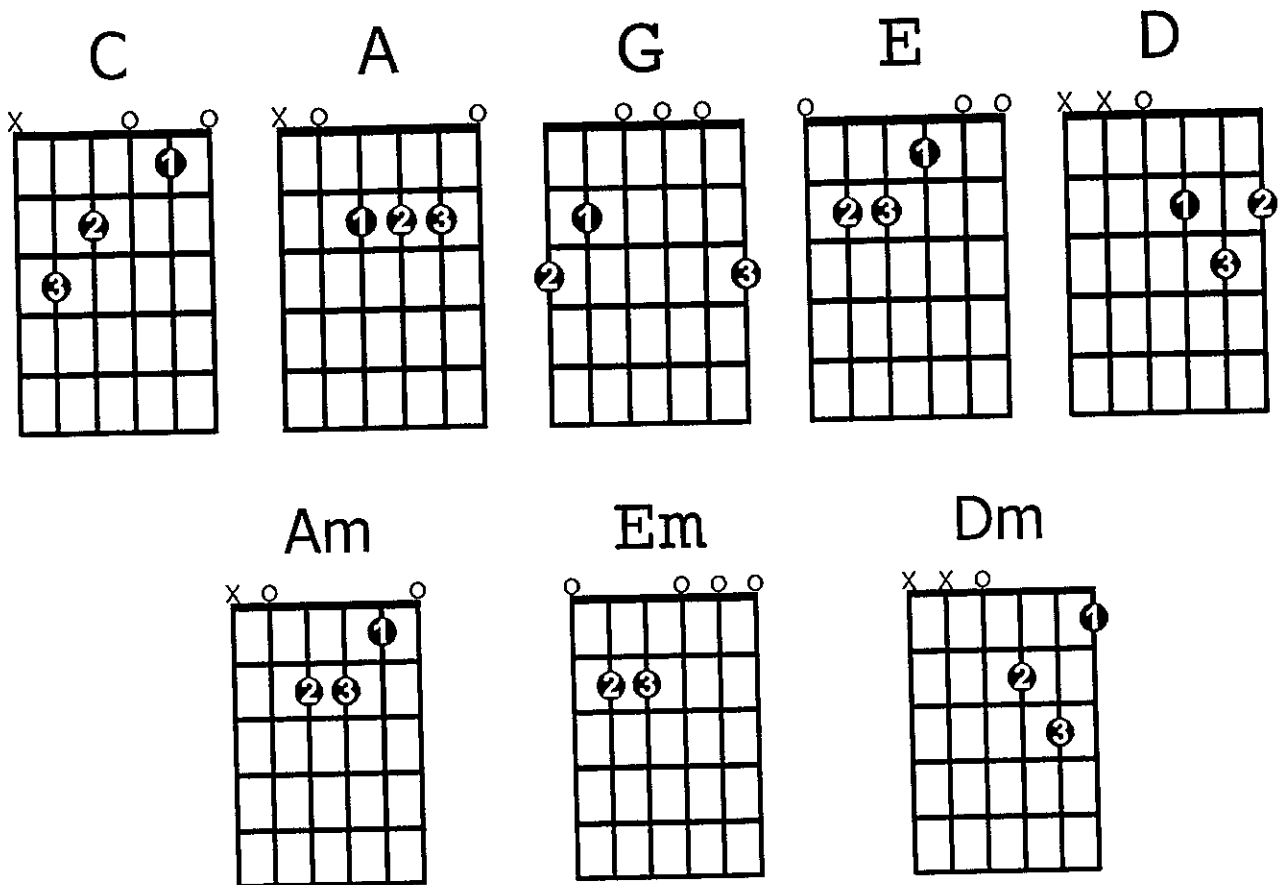
The chords are the building blocks for your songs, they give you the harmony. The strumming delivers the rhythm and together they are the accompaniment for your or someone else's singing voice which in turn provides the melody.

The 8 chords every beginner guitar player should learn first are: C – A – G – E – D – Am – Em – Dm. (you can memorize the first 5 open major chords by the word CAGED)  
With these chords alone you can play an endless amount of songs. For example there are about a zillion songs that use this chord progression: G – D – Em – C (also called the I – V – vi – IV progression).

Songs like "You're beautiful" by James Blunt, "With or without you" by U2 and "She will be loved" by Maroon 5 can all be played with just these 4 chords. Not all of these songs are originally in the key of G but you could easily fix that with the help of a capo and play it in the appropriate key.

The open chords are also the starting point and components for the more advanced chords that follow like barre chords. All barre chords are derived from open chords. But that is for another post.

For now check out the 8 chord diagrams below. Learn the chords thoroughly and memorise them to build your most important chord vocabulary:



The numbers on the dots in the chord diagrams above indicate the finger positioning:  
 1 = index finger, 2 = middle finger, 3 = ring finger, 4 = pinky

The best way to learn these chords is to apply them to songs to get you all fired up. Start with three chord songs to begin with and later when you feel more comfortable playing and switching between chords you can try some four chord songs. Here are some pointers to focus on when practicing chords:

**Tips:**

- Press the strings with the very tips of your fingers.
- Bend all three knuckles.
- press the strings hard enough.
- Make sure your fingers are as close to the fret as possible.
- If you press a string make sure your finger isn't touching and muting the string below.
- Rest your thumb on the back of the guitar neck, not on top of it.
- Check each string to see if all the notes sound clean and clear.
- Learn to switch between chords.
- Start practicing three chords songs (G – C – D). and later four chord songs.
- Practice your chords daily.

1. What is the best way to learn guitar chords?
2. Which chords should the beginners learn first?



## 2017-2018 Reading to Learn

Put a tick  in the appropriate box ( can be more than one )

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Learning Area / Subject : PE

Related Core Values :

Title : Introduction to Rugby Sevens

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	✓
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	

### Source of Information:

<https://www.realbuzz.com/articles-interests/sports-activities/article/an-introduction-to-rugby-sevens>

## Introduction to Rugby Sevens

Rugby sevens is a seven-a-side variant of rugby union. Played on the standard rugby pitch, but with far less than the usual 15 players in a full union match, sevens rugby is a free-flowing game based on pace and power over the course of its short matches.

The game has grown in popularity to the extent that it now has been granted full Olympic status. It has also had a presence at Commonwealth Games since 1998, and there are several big international competitions including the IRB Sevens World Series and the Rugby World Cup Sevens to place it in the public eye.

## Playing rugby sevens

A regular sevens match usually consists of two halves of seven minutes with a one-minute halftime break (this is sometimes changed to two 10-minute halves with a 2-minute break for finals). The shortness of games enables plenty of matches to be played during the course of a tournament so that it can usually be completed in a day or a weekend.

Teams consist of three forwards and four backs (including one scrum-half), meaning that there is plenty of opportunity for the ball runners and play makers to really to show off their skills. Five substitutes are named although only three subs are allowed to be made during the course of the game.

Rugby sevens is a full contact sport, although the players have their work cut out to try and cover the ground and keep putting in those tackles. Good sevens players are often backs or loose forwards in 15s rugby because they need to be extremely mobile to keep up with the end-to-end attacking nature of the game.

The scoring system remains the same as the standard 15-a-side game, with 5 points for a try, 3 for both penalties and drop goals and 2 for a conversion.

## Rugby sevens rules

The rules of the sevens are very similar to the full rugby union game aside from some of the following:

- There are no drawn matches. Matches that finish all-square go into extra time, with 5-minute played until one of the teams scores a try.
- Only three players from each side contest the scrum. Lineouts take place involving two and sometimes three players.
- All conversion attempts must be drop-kicked (not place-kicked) and taken within 40 seconds of the try being scored.
- Unlike 15-a-side, the team that has just scored kicks off, rather than the conceding team. This gives the side that has just conceded opportunity to gain possession of the ball and start an attack.
- A yellow card results in a 2-minute suspension.

All these changes are intended to make the game fast moving and freer flowing than the 15-a-side game. Players barely have time to catch their breath between attacks so it would be fair to say that sevens players need a higher level of fitness than most rugby players.

### **Question**

**Girls should not play rugby. Do you agree? Why?**

## 2017-2018 Reading to Learn

Form	Junior	✓
	Senior	✓

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject: Religious, Moral and Civic Education Committee  
 Title: God’s Justice is Better: The Church and the Death Penalty

Related Core Values :

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	
g To strengthen positive values and their daily application to analyse personal and social issues	✓

God’s Justice is Better: The Church and the Death Penalty  
 by RYAN O’CONNELL

<http://lifeteen.com/blog/gods-justice-is-better-the-church-and-the-death-penalty/>

Three dead. Hundreds wounded. A beautiful celebration of the human spirit turned into a horrific murder scene by a hate-filled terrorist.

When I first heard that Dzhokhar Tsarnaev — one of the Boston Marathon bombers — had been given the death penalty, I have to admit that I felt a small sense of satisfaction. It felt like justice.

But, as often is the case, my emotions have no weight in determining the morality of an action. It doesn’t really matter how I feel.

So I turn to our beautiful lighthouse in a sea of moral darkness — the Church.

Here’s what the Catechism says about capital punishment:

Assuming that the guilty party’s identity and responsibility have been fully determined, the traditional teaching of the Church does not exclude recourse to the death penalty, if this is the only possible way of effectively defending human lives against the unjust aggressor.

If, however, non-lethal means are sufficient to defend and protect people’s safety from the aggressor, authority will limit itself to such means, as these are more in keeping with the concrete conditions of the common good and more in conformity to the dignity of the human person.

Today, in fact, as a consequence of the possibilities which the state has for effectively preventing crime, by rendering one who has committed an offense incapable of doing harm – without definitely taking away from him the possibility of redeeming himself – the cases in which the execution of the offender is an absolute necessity “are very rare, if not practically nonexistent.” (CCC 2267)

I think the Church makes this pretty clear. In modern societies with reliable prison systems (“reliable” meaning there is very low risk of escape), the death penalty is unnecessary. If we didn’t have

reliable prisons, then it would be acceptable and perhaps necessary to take the life of a convicted murder so as to prevent him from killing anyone else. That would be an extension of the basic principle of legitimate self-defense—which is in accord with Catholic teaching (CCC 2265).

So let's say I agree. In America, the death penalty isn't necessary to protect the public.

But what about justice?

I contend that it probably is just take the life of a murder. But it seems God has asked us not to exercise that power unless it's necessary. He is the Lord of life and death. Jesus was never asked about the death penalty directly, but he certainly surprised His fellow devout Jews when they we're about to stone a woman to death and He stopped it:

The teachers of the law and the Pharisees brought in a woman caught in adultery. They made her stand before the group and said to Jesus, "Teacher, this woman was caught in the act of adultery. 5 In the Law Moses commanded us to stone such women. Now what do you say?" ...

He straightened up and said to them, "Let any one of you who is without sin be the first to throw a stone at her."

– John 8 (NIV)

Although the woman was not guilty of murder, in those days it was considered just and good to execute someone for more than a dozen offenses—adultery included. By Jesus' example it seems as if God is saying "I got this. Punishment by death isn't necessary."

Now does that mean a murderer can never receive justice? No.

God's justice is perfect. It just may be delayed for a little while. God cares far more about our eternal souls than our mortal bodies. If a murderer doesn't repent of his sins, eternity in hell is a real possibility — as it is for any of us who turn away from God, and don't turn back (Romans 6:23). But even a murderer can possibly repent in prison and obtain eternal life through the mercy of Jesus Christ (and we should pray for that). If that doesn't seem "fair," it's because it's not. But God's mercy isn't fair. It's scandalously extravagant.

However, justice will still be delivered. A repentant murderer may still face a terrible time in Purgatory for his crime. That is where wrongs will be righted. That is where God's justice will be perfected.

Question:

- (1) What is the justice of God?
- (2) Is there any conflict between mercy and justice?

## 2017-2018 Reading to Learn

Form	Junior	<input type="checkbox"/>
	Senior	<input checked="" type="checkbox"/>

Put a tick  in the appropriate box ( can be more than one )

Learning Area / Subject : Environment & Student Health Committee

Related Core Values :

Title : Why Is Blue Light before Bedtime Bad for Sleep?

Truth  Justice  Love  Life  Family

Reading across the Curriculum (RaC) : Aims	(✓)
a To arouse interest in studying a particular subject	✓
b To provide more background information of a particular topic	✓
c To enrich world knowledge	✓
d To develop deeper level of appreciation towards art work	<input type="checkbox"/>
e To relate school learning with daily life experience	✓
f To develop deeper understanding and appreciation towards Chinese Culture and its core values as well as universal core values	<input type="checkbox"/>
g To strengthen positive values and their daily application to analyse personal and social issues	<input type="checkbox"/>

### Q&A: Why Is Blue Light before Bedtime Bad for Sleep?

Two neuroscientists discuss how blue light negatively affects health and sleep patterns

By Jessica Schmerler on September 1, 2015



In the modern age of technology it is not uncommon to come home after a long day at work or school and blow off steam by reading an e-book or watching television. Lately, however, scientists have been cautioning against using light-emitting devices before bed. Why? The light from our devices is “short-wavelength-enriched,” meaning it has a higher concentration of blue light than natural light—and blue light affects levels of the sleep-inducing hormone melatonin more than any other wavelength.

Changes in sleep patterns can in turn shift the body’s natural clock, known as its circadian rhythm. Recent studies have shown that shifts in this clock can have devastating health effects because it controls not only our wakefulness but also individual clocks that dictate function in the body’s organs. In other words, stressors that affect our circadian clocks, such as blue-light exposure, can have much more serious consequences than originally thought.

To discuss the growing concern *Scientific American MIND* consulted with Thomas Jefferson University neuroscientist George Brainard, who was among the first researchers to investigate how different wavelengths of light affect the release of melatonin, and Harvard University neuroscientist Anne-Marie Chang, who recently discovered that the effects of light-emitting devices on circadian systems extend beyond evening and into the following morning.

*[An edited transcript of the conversation follows]*

### ***How did you become interested in the effects of light on sleep?***

**Brainard:** I was interested in the effects of light on animals as a teenager. I never planned to be a scientist—I wanted to be a writer! So I learned more about the topic out of pure curiosity. When I began my career as a journalist, I interviewed researchers on the topic who encouraged me to pursue a career in science. So I returned to school to get my doctorate and studied the effects of different wavelengths and intensities of light on rodents. I have exclusively studied the effects of light on humans for the past 30 years.

**Chang:** As a graduate student, I researched circadian rhythm disorders resulting from different human sleep patterns, particularly those of early and late sleepers. I became interested in the effects of various aspects of light—such as time of day and duration of exposure—on circadian rhythm, sleep and performance.

### ***How exactly does light affect our circadian rhythms? And how is melatonin involved?***

**Chang:** We have known for quite awhile now that light is the most powerful cue for shifting the phase or resetting the time of the circadian clock. We also know that melatonin is present at low levels during the day, begins being released a few hours before bedtime and peaks in the middle of the night. Past studies have shown that light suppresses melatonin, such that light in the early evening causes a circadian delay, or resets the clock to a later schedule; and light in the early morning causes a circadian advancement, or resets the clock to an earlier schedule.

### ***So how did scientists become interested in blue light in particular?***

**Brainard:** In the 1990s my team performed more than 700 experiments over seven years to measure how different wavelengths of light regulate acute melatonin production. Unexpectedly, we found that humans display a peak sensitivity to light in the blue wavelength region of the spectrum. Rods and cones [photoreceptors in the eye] could not account for this differential regulation of melatonin production, so we postulated another type of photoreceptor was responsible for mediating such physiological responses. These wavelength-sensitive photoreceptors were identified soon after and are known as melanopsin-containing ganglion cells.

### ***What happens in the body when our eyes are exposed to blue light on electronic devices?***

**Chang:** Recent studies have shown that short-wavelength [blue] light has a greater effect on phase shifting the circadian clock and on melatonin suppression. In 2014 my colleagues and I examined the effects of reading on a light-emitting device compared with reading a printed book. Participants who read on light-emitting devices took longer to fall asleep, had less REM sleep [the phase when we dream] and had higher alertness before bedtime [than those people who read printed books]. We also found that after an eight-hour sleep episode, those who read on the light-emitting device were sleepier and took longer to wake up.

In the study all participants had to stop reading and turn off the lights at exactly 10 P.M., even if they did not feel sleepy. At home, I would expect people do not have the motivation to turn off their devices and go to bed, so they would stay up longer and experience even more circadian delay and shorter sleep times. The effects in the real world could actually be even greater.

***What about extreme environments in which the body does not experience a normal daily cycle of sunlight and darkness?***

**Brainard:** My research into the clinical applications of light got NASA interested in applying these findings to spaceflight scenarios. When an astronaut leaves Earth, his or her body is operating on a 24-hour light/dark cycle, but the space station orbits Earth every 90 minutes, and astronauts see the sun rise and set each time. This shift in the lighting environment, known as slam shifting, can have many health consequences and inspired my work with NASA on creating light-exposure schedules specifically for astronauts. [Editors' Note: As a result of this work, NASA will begin implementing a new lighting system onboard the International Space Station next year, designed to improve astronauts' sleep and waking performance.]

***Can the effects of light on melatonin ever benefit the body?***

**Brainard:** My research in the 1980s showed that the effect of light on melatonin secretion has clinical benefits. Since then, light therapy has been shown to be effective in treating several other conditions, including depression, sleep disorders, eating disorders and age-related dementia.

**Chang:** Short-wavelength light can be applied in different circumstances where you actually want to shift the clock. For example, it could help in the mornings when we need to be at peak alertness or in cases of jet lag when we change time zones abruptly and our circadian clocks get thrown off. People with variable sleep patterns, such as shift workers, could also benefit from using a schedule of short-wavelength light exposure to help realign their circadian clocks.

***Finally, the question everyone is wondering about: Do you have any suggestions as to what we can do to reduce our blue-light exposure before bed?***

**Chang:** For those who just cannot turn off digital devices, here are a few suggestions: You can dim the brightness of your devices or you can make use of programs that filter out short-wavelength light in the evening. I've also heard of modern technologies that use different settings, such as reversing the print so the page is dark and the text is light, which, though untested, are probably beneficial if they reduce the amount of emitted light. But the best and least popular answer would be to simply avoid your devices before going to sleep!

Scientific American

<https://www.scientificamerican.com/article/q-a-why-is-blue-light-before-bedtime-bad-for-sleep/>

**Reflective Questions**

Does blue light affect your sleep patterns?

Give TWO suggestions to minimize its negative effects.