A Children's Magazine

Get, Set, KNOW!

Issue 3, January 2016

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Dear Readers,

Presenting the third issue of Get, Set, KNOW! It still feels like yesterday when I collected material for the first issue. Anyway, this time there are many special things. Yes, the GSK toons are off to prehistory! There are numerous amazing related facts scattered over all the issue! Wait, before you start exploring, I want to give you some quick tips to realize what you read or heard. The first and most important is that you must think whenever or wherever you find it right to do so (mind you, not every time). Numerous thoughtful questions will come to your mind and you become impatient to ask someone. You would be eager to know 'why is it so?' and be willing to gather all the information you can grab from the ever expanding world of knowledge. I hadn't enough time in my vacations so it had become a fuss. So gear up and set your mind and clutch whatever you can because you are going on a tour to the ever existing, world of knowledge!

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Warren

The wisest member of the GSK team, he is a product of the Oxford University and is found to use 11% of his brain, almost equal to Einstein. Pencil-Mind is one of his greatest creations. He writes the 'I Wonder Why?' section

Nigel

The most curious and impatient, has borrowed a time machine from Warren which he uses to interview famous personalities of our past and sometimes behaves strangely. Writes the 'Great Lives' section

Craig

Claims himself to be one of the greatest mystery-solvers of all-time, he can be said as an adventure or mystery liker. Hates to sit idle and is super-determined. Writes the 'Mystery Talk' section

Wayne

An outer space alien who has settled in Pluto but birthplace is unknown. Has a special interest in Earth and its flora and fauna. Writes the 'Space Science' section.

Pencil Mind

Warren's greatest creation, is a replica of the human brain and can write anything, anywhere. Writes the 'Train Your Brain' section.

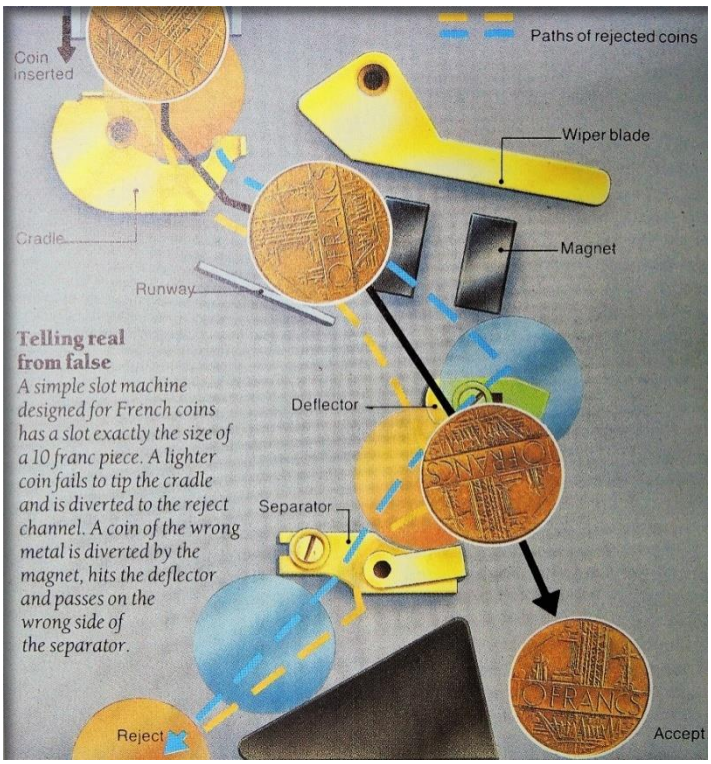
Now writes the whole puzzle section

I WONDER WHY?

How does a slot machine buy us goods? And, How does it identify things other than a coin?

Sometimes we drop a coin into a slot machine and select our choice. The machine gives us the item, if the money is enough and returns the change. However, if we drop a foreign or fake coin or a washer, it returns it to us. How?

Each coin, throughout the world has its own characteristics in weight, diameter, thickness and composition. The machines are programmed differently for different coins throughout the world. The checking system starts with the slot itself. A too wide, too thick or too bent object will not go in. The coin falls in a balanced cradle and topples to the runaway. Lighter objects fail to topple the cradle and fall in the reject channel. The approved coin travels through the runaway past a magnet. The magnet slows down the coin due to tiny electrical charges set inside it. The coin with the correct composition slows down the right amount allowing it to miss the next obstacle- the Deflector. Instead it hits the separator present below at the correct angle into the Accept channel. Overweight objects rebound the deflector into the wrong channel. Its value is also identified and in the last, a microchip releases the appropriate change from tubes filled with smaller value coins. So you see, your inserted coin undergoes a lot of checking before it gives you the cola can!



A GOOD NEIGHBOR- *Really?*

Dr. Kamil Ashraf; Assistant Professor, Department of Medicine, JNMC A.M.U

"Choose your neighbor before choosing your residence," is a widespread Arabic proverb that means that it is according to the value and merit of the neighbor that one should evaluate the residence.

Has this image of a neighbor lost its relevance in today's world: a world where people are busy night and day to make their ends meet; where children seldom get any time out of their competitive life, academic or extracurricular; or where even the retired grandparents don't have time for the neighbors because they are busy taking care of the children even as their parents are busy working? If these are genuine reasons for us becoming indifferent towards our neighbors, can we justify, with the same arguments, the situations where people seem to have lost the family values, where the love, bonding and respect between family members have deteriorated, especially towards the elderly members? The queries need to be analyzed. With these questions in mind I recall my childhood, memories of which are full of my neighborhood as much as those of my home and school. To date some of my neighbors in my native town are no less than a blood relative. Their views and opinions on many of my family's private matters are respectfully invited and considered. Neither we need to take permission to enter their house nor do they. The small children and even the toddlers would spend the whole day in the neighborhood without the parents becoming anxious. Any special food cooked in one house would surely be sent to other household in the neighborhood. People coming from distant places would bring gifts for their neighbors as they would for their family. Safety of the house when one went out for vacations was never a big concern because the neighbors were there to look after that. And at times of sickness or grief there was whole of the locality to share the burden.

What has gone wrong over the years? People hardly ever exchange greetings with their neighbors, barring on some occasional events, when it is more of a formality than a true wish. Leave aside gifts, which would bear some cost, people don't even exchange smile which comes for free, yet it's priceless. We don't even want our neighbors to invite us for an informal dinner for the fear that we will have to reciprocate. Today, we like to leave our small children at a crèche with unknown people at some distant place rather than leaving them with the known people residing nearby.

It is the trust in the neighbors which has got lost. So we try to keep ourselves to our home. Neither we discuss our problems with the neighbors nor do we want them to discuss any of theirs with us. Actually, the fear is not baseless. If we generalize the scenario, it is actually the overall falling human values which have contributed towards the distance created between neighbors in the process of so-called socio-economic development. We have started aping the culture of the west which was never ours. With frequent reports of children suffering abuse at the hands of persons residing nearby, which parent would dare to leave their child alone with the neighbors? With cases of property dispute with the neighbors becoming common news we hear these days, who would leave their vacant houses on the trust of the neighbors when they go out?

This is high time we realize that we have entered into a very grave situation where we are running for an economic security but in the process are leaving behind the social security, of which the neighborhood is an indispensable component. The situation must improve for humans to keep themselves being called as humans. Even the animals maintain some degree of respect for their community which is same as our neighbors for all practical purposes. The above discussion would appear as a document on the duties a good neighbor has towards us. No expectation from others is justified without an act of service to them. So it's a give-and-take scenario where one has to be a good neighbor before having one of the same kind. Neighbors have important rights over another. Different religions of the world have also described the importance of neighbors.

Islam pays attention to the issue of neighbors, whether they are Muslim or not, because of the interests served by that in making the nation like one body. The Prophet (peace and blessings of Allah be upon him) said: "Jib reel kept on enjoining the good treatment of neighbors to the extent

that I thought that he would include neighbors as heirs." (Agreed upon. Narrated by Muslim, 2625)

Among the rights of one neighbor over another as affirmed by Islam are the initiation of greetings, visiting him if he is sick, offering condolences if calamity befalls him, congratulating him at times of joy, overlooking his mistakes, concealing his faults, bearing his annoyance with patience, giving him gifts, lending him money if he needs it, lowering one's gaze from looking at his womenfolk, and guiding him to that which will benefit him in his religious and worldly affairs. The Prophet (peace and blessings of Allah be upon him) said:

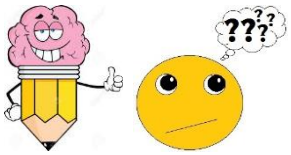
"The best of companions with Allah is the one who is best to his companion, and the best of neighbors with Him is the one who is best to his neighbor."(Narrated by al-Bukhara in *al-Adab al-Mufrad*, 115)

Concerning neighbors' rights, Allah says (interpretation of the meaning):

"Worship Allah and join none with him (in worship); and do good to parents, kinsfolk, orphans, Al-Masaakeen (the poor), the neighbor who is near of kin, the neighbor who is a stranger, the companion by your side…"[al-Nisaa' 4:36]

Islam warns against annoying one's neighbors or treating them badly. The Messenger (peace and blessings of Allah be upon him) explained that this would lead to being deprived of Paradise: "He will not enter Paradise from whose harm his neighbor is not safe." (Agreed upon. Narrated by Muslim, 64).

Thus, we should be aware that happiness, unity and the spread of love among the members of a society cannot be accomplished without observing the rights of a neighbor and thereby becoming a good neighbor.



Puzzle

Email your answers to getsetknowmagazine@gmail.com with 'Word Rip' /'What will he say' as subject.

NOTE: The winners will be decided only on correct entries.

Muhammed Muaaz; Class VI-C, The Blossoms School, Aligarh

WORD RIP- *Ripped Apart!*

Try and make as many smaller words from the word-**ESTABLISHED**

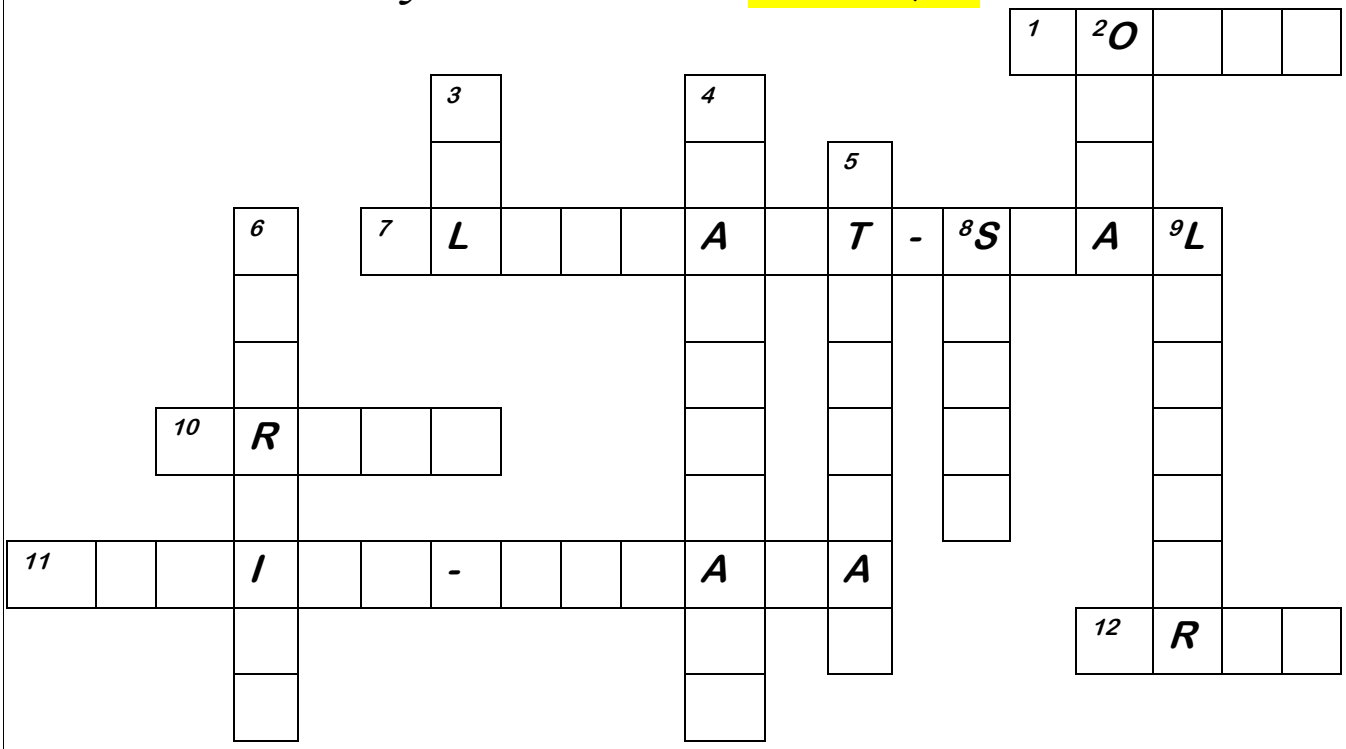
The maximum number of words will be featured as winners in the next issue.

Winner of 2nd issue- **M. Nabeel;** Class V, The Blossoms School, Aligarh

WHAT WILL HE SAY? - *Triple Triplet Trouble!*

WORD PUZZLE- *Life Underwater*

Answers on p. 20



Across

1. It is a mineral, plant and animal that grows in shallow waters.
10. It is a small pinkish crustacean, eaten as food.
11. It is the only sea dwelling lizard.
12. It is a crustacean, and has small pincers usually found at the beach.

Down

2. It is the largest dolphin.
3. It is a long, slimy fish that resembles a snake.
4. It is the largest fish.
5. It is a type of ray which has powerful sting in its tail.
6. It is a fish that has no eyes and resembles a star.
7. It is the largest seal.
8. It is a mollusc which is a deadly predator of the deep waters which is food for the sperm whale.
9. It is a crustacean which has its teeth in its stomach and is eaten in many parts of the world.

Our Environment

GLOBAL WARMING- *Is the Apocalypse ahead?*

TARUN KUNDU; Kesoram Rayon, Nayasarai, Hooghly, West Bengal; tarunkundu@kesoramrayon.com

Global warming is a long heard word. Numerous discussions, hundreds of action plans have been framed on the issue in different forums over the last two decades all around the world. But the awareness of the profound threat that the global warming bears, seems very poor among the common people. Then what is this global warming and how this is caused? We know the concept of

green houses in cold regions where temperature sensitive plants are enclosed in a glass house. Sun rays of shorter wavelength can penetrate through the glass and come upon the plants but reflected rays of longer wavelengths cannot go out of the house. Thus the house or the enclosure becomes warm.

Likewise on Earth, there are some gases like **water vapor**, **carbon-dioxide**, **methane**, **ozone**, **nitrous-oxide** and **chloro-fluoro carbon**(CFC) which absorb the reflected infra-red radiations from earth are called greenhouse gases. So what happens? The solar energy in form of heat come to our earth but a large part of it cannot go back to the universe. Thus the earth becomes warmer. We call it global warming.

- An Antarctic ice shelf of 1260 square miles area and 650 feet thick believed to exist over the last 12000 years, disintegrated recently.
- Intense draught caused loss of 1.5 million acres of forest in Spain, Greece and Italy.
- Malaria was detected first time at a height of 6900 feet in Indonesia.
- Mosquitoes carrying Dengue viruses are spreading at height of 7000 ft. in Andes Mountains.
- Hundreds of people in Kenyan highlands died in 1997 due to Malaria.

There are many instances as above the world has come across during past few decades especially the extreme climatic debacle like unpredictable **catastrophic storms**, **drought**, **forest fires**, **heavy or scare rainfall**, **extreme hot or extreme cold conditions** etc. The most threatening aspect has been the human health. Every year some new diseases breakout; viruses, bacteria and parasites change their genetic form to combat with the adverse changing climate and become unpredictable, challenging human lives. The disaster that the human civilization is going to face is the **atmospheric temperature**. It has already risen by 0.45 – 0.60 ^0C during the last century and this rate is much higher now. 1998 was the hottest year since 1861. Many may ignore this small amount of increase in temperature but it has to be kept in mind that there is only 1^0C temperature rise since the inception of human civilization. Sea level has gone up about 15 – 20 cm during the last century. This has indeed endangered the costal life across the counties.

We don't know how much we have endangered ourselves. It is the **industrial revolution** and world's non harmonic **economic growth** compelling the nations indulging in ruthlessly violating and damaging the environment. Since the beginning of the industrial revolution the atmospheric concentration of CO_2 has increased by 30%, Methane concentration by 100% and if this continues the CO_2 emission may rise from **7 billion tons carbon** per year in 1990 to 20 billion tons in the year 2100.

There are many global initiatives in controlling the global warming such as **IPCC** (Intergovernmental Panel on Climate Change) which was established in 1988 under UNO and is working seriously on the matter. The Nobel Prize was awarded in recognition of the same. It is the high time for us, the common people, keeping aside the barriers of cast, creed and country to come forward and fight against the causes. We can start simply by close watch on energy saving and saying **NO** to emissions. We do not need wealth rather we need a safer place to live in. Isn't it?

THE PLASTIC AGE- *Is the worst still ahead?*

TARUN KUNDU, Kesoram Rayon, Nayasarai, Hooghly; West Bengal; PH. NO. 8584071372/ 9231883781

Since the inception, the Human civilization has crossed from **Stone Age** to today's **Steel age**. But now, most probably the steel has even been outdated. It won't be any exaggeration if we call the present as the **'Age of Plastic'**. Plastic is a common terminology covering innumerous varieties of material but they have a common feature of same origin i.e. **petroleum** or derived naphtha and of course of the polymeric nature. Plastic has the versatile capability of exhibiting any kind of property desired out of it. It may be soft or hard, tough or elastic, foam or spongy, thread or

sheet, hollow or solid, tube or bar and products can be tailored of any shape and utility. This magical quality has promoted plastic to permeate every facet of human life. A few elaborations may tell us not only how aggressively plastic is pushing off traditional materials like wood , stone, metal or natural fiber but also how it is helping in improving our living and lifestyle. We may take the instances in healthcare sector where ailing heart valve or hip joints are replaced by plastic ones. Blood bag, syringes, surgical instruments and gloves, artificial limbs, catheter, artificial skin and all sterile products used in medical fields find no alternative than plastic. With the advent of plastic, the whole definition of packaging has been changed. Packaging design is now as per the delivery condition required for the product; be it rigid for protection, flexible for convenience, opaque or transparent. Wide variety of shapes and sizes with amazing look excellent printability for necessary product information. Earlier, huge amount of crops were reported to be wasted for want of adequate packaging and storage. Plastic packaging is now an answer to it. About one billion of world population is devoid of adequate potable water and 35 % of death in the developing countries is due to water borne diseases. Plastic pipes filters, containers are now contributing in a large way by providing these basic amenities. Plastic has now made itself indispensable in automobile sectors and land, water and forest conservation, energy saving by light weight and even in space technology. This is an endless story. The essence lies in its contribution in economic growth of the country.

Probably the great threat to human civilization lies in the fact of excellence that plastic bears on itself. Plastic by nature is **non- bio-degradable**. The plastic waste or disposed plastic after utility is terminated can retain its material characteristics for hundreds of years. The huge accumulation of plastic wastes over the years, especially in an unorganized fashion is now posing challenge to our environment. The indiscriminate littering of plastic waste is making the land unavailable for meaningful uses. Waste disposed to water is putting the aquatic life in danger, and then what is the way out? Recycling of waste may be one of them. But all plastics are not recyclable. Even segregation of recyclable parts of the waste material is not mostly viable. Making plastic biodegradable by addition of additive is one of the solutions. But this phenomenon is not common for all resins of the polymers and needs. Wide research on this is ongoing to attract the optimum efficiency. Incineration of plastics generates toxic gases. Now time has come when a national policy is required for controlling the plastic waste. Integrated waste management, recycling of plastic by adopting latest technology may alleviate the situation. Converting the waste tor fuel for energy, **depolymerization**, using as **highway fillers** and more innovations are coming up to save the situation. Governments of every country are putting up regulations in disposal of plastics. A plastic carry packet **below 20 microns** is banned. An awareness program by the municipals and panchayats and use of plastic litter bins to collect and segregation at source is the need of the hour. After all, a cohesive effort at all levels is required for proper disposal of plastic waste to make plastic an integral part of sustainable development.

HISTORY - *The Babylonian and Assyrian Empires of Mesopotamia*

Dr. Ghulam Nadri; Assoc. Prof. History Department, Georgia State University, Atlanta, GA

Mesopotamia (the land between the **Euphrates** and Tigris rivers in what is present-day Iraq) was the cradle of one of the world's oldest civilizations. The Mesopotamian civilization flourished for several millennia during which it progressed from pre- and proto-historic periods to the Bronze and Iron Ages. It was, however, in the Bronze Age (about 2900–1100 BC) that the civilization went

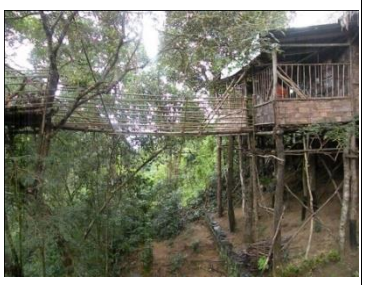
through the most dynamic phase. First the **Babylonian Empire** and then the **Assyrian Empire** ruled the region during 1800-500 BC. Babylon rose to prominence as a cultural and political center of the Mesopotamian civilization during the reign of the Amorite king **Hammurabi**, who ruled from 1792 to 1750. He transformed the city and the region around it from a small kingdom to a center of the world's most powerful empire known in history as the Babylonian Empire. Hammurabi is best known for his law codes that he established in his empire. The '**codes of Hammurabi**' were carved on large stone pieces and installed in different parts of the empire. This was a model that the **Mauryan** emperor **Ashoka** would follow in India in the second century BC. After Hammurabi, the Babylonian Empire became weak and the capital was attacked several times by other aspiring ruling tribes and empire builders, The Assyrians being one of them.

Like the Amorites of Babylon, the Assyrians were **Semitic** tribesmen settled in upper Mesopotamia since around 2000 BC. Through a long process of military conquests, they expanded their kingdom and established a powerful empire. They captured Babylon and controlled most of Mesopotamia and extended their political control over territories on the **Mediterranean** and the **Red Sea** coasts including **Syria** and **Egypt**. The Assyrian Empire was the most powerful in the region during the second half of the first millennium BC. An Assyrian king created the world's first zoo at Nimrud, the capital of the empire in the 9th century BC. Another Assyrian king built the world's first known library at Nineveh in the 7th century BC. They built stone palaces and gardens. The Assyrian Empire declined after 600 BC. Both the Babylonian and Assyrian Empires contributed immensely to the Mesopotamian civilization. Their rulers were also knows for their encouragement to art and architecture and for their interest is flora and fauna. They are known for their accomplishments in the fields of science, art and architecture, and literature.

Travel & Leisure

ASIA'S CLEANEST VILLAGE- *Really clean!*

Dr. M. A. Laskar, Assistant Professor, Department of Chemistry, Saudi Arabia



In 2003, India's Discovery Magazine declared "**Mawlynnong**" as the cleanest village in Asia. This village is situated in Meghalaya along the Indo-Bangladesh Border. As of June 2015, around 500 people are residing in the village. The main occupation of the villagers is agriculture, with betel nut as the major crop. The villagers belong to the **Khasi** community, which follows the **matrilineal descent** system. The rate of literacy is maintained at 100%, with a total of three schools situated within the village. Baskets, made of bamboo, are placed frequently, after regular distance, along the road for disposal of waste, which is then used as manure in agriculture.

Under the program, namely '**Nirmal Bharat Abhiyan**', the practice of open defecation was eradicated successfully by 2007. Today, every house has its own toilet. People participate actively in maintaining individual flower gardens.

They religiously take part in the cleaning drive, on certain pre-declared days, to clean the common streets and surroundings. Notice boards with stern warnings against littering are placed at various locations. The village welcomes around **200 tourists** every day.

GREAT LIVES

Muhammed Muaaz; Class VI-C, The Blossoms School, Aligarh

Great Scientists

Developing a time machine today is nearly impossible as a calculating device was in the 1600's. The inventor of the calculating device even got it named after him. We are talking about **Blaise Pascal**, a French scientist also famous for his '**Theory of Possibilities**'.

This 1623 born thinker and inventor was considered a genius by a young age because of his remarkable treatises made on sound communications and conic sections at the age of 12 and 16 respectively, and finally invented the unimaginable '**Pascaline**' to help his father as he was a tax collector.

Pascal was the first to be reported wearing a wristwatch. He had simply tied his pocket watch to his wrist by a string.

Because of his significant atmospheric knowledge, the unit of atmospheric pressure is named in his honour.

Pascal was also credited for constructed a **mercury barometer** to prove the covert theories of Galileo and Torricelli. These brilliant tests paved the way for modern hydrodynamics and hydrostatics.

While engrossed deeply in his experiments, he invented the **hydraulic press** and **syringe**.

The hydraulic press expresses his theory; **The Pascal Law**-

"Pressure applied to confined liquid is transmitted through the liquid in all directions regardless of the area to which pressure is applied."

Great Explorers

Can you guess who the first European to discover Australia and Hawaii was? It was **Captain James Cook**, whose voyages led to the setting up of several European colonies in the Pacific islands.

The Royal Society hired him for his extraordinary talent for **Cartography** (study of maps).

His task was to go in the Pacific and to observe and record the movements of Venus across the sun (Mind you, it occurs after each 105 years!) and to discover the mysterious place called **New Holland** which the Dutch claimed to have visited.

He was the first European to make contact with the Pacific islands (Polynesia). (They were tribal mysterious people from the Americas!)

He discovered the cure for scurvy (lime juice), which the oarsmen usually suffered.

His journey started from England in 1768 and he rounded Cape Horn by sailing through the Atlantic and halted in **Tahiti**, where he made his observations.

Cook's knowledge of the Southern Pacific and Western North American coast was than any other person of that time. His accurate mapping of large areas of the Pacific was a major achievement.

His crew contained people who steered the ship scientists and researchers. Cook was also the first one to sail the world twice.

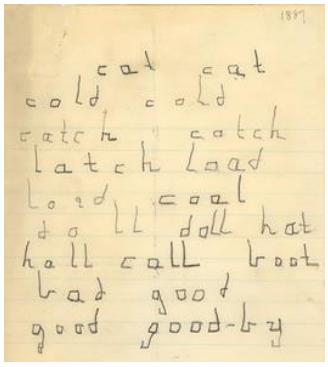
Great Women

We all know the famous blind-deaf woman – **Helen Keller**. A lot of credit goes to her but some of us may overlook her teacher's dedication.

Johanna Anne Mansfield Sullivan Macy or **Anne Sullivan**, as we know her, spent **49 years** of her life with Helen Keller.

Sullivan was born on 1866 in **Massachusetts, U.S.A.** She lost her eyesight due to **trachoma** at the age of 8, and she persuaded for admission in **'The Perkin's School for the Blind'** to an inspector at her alms-house. She graduated from there at the age of 20 as the topper of her class. She was invited to become Helen's teacher and she did, when Helen was only seven years old. Sullivan evolved from a teacher to governesses, and then from a companion to a friend. Since she had her own eye defect, she could understand the loneliness, fear, frustration and her isolated world of darkness. Helen couldn't understand teachings, if done as to any other child. Anne didn't give up; she tried teaching Helen with on her own; and it worked. Ignoring the advices that her doctor gave in taking care of her eyes, Anne kept reading various books for Helen despite the harm caused to her eyes. Anne felt that teaching Helen was a type of second chance to replenish her own childhood and the chances she missed. In fact, Helen and Anne were children, growing up together.

Sullivan's parents were uneducated, unskilled and impoverished immigrants from Ireland to escape from The Great potato famine.



The word which drew the connection between the locked cell of Helen and with the outer world was **'water'** which became a symbol of **rebirth** for her. All this happened in a cottage, a bit far from Helen's house. A month later after Anne's arrival, Helen had a sudden confusion between 'mug' and 'milk' which she related with 'drink'. Anne took Helen to the water pump and pumped water over her hand (Pic-1). Helen's writing seven days before she turned seven (Pic-2). And Sullivan became Helen's companion and friend for the next 50 years.

NUTRITION BITES...A. B. C.....Z- *Crunchy Carrots*

Dr. Kamil Ashraf; Assistant Professor, Department of Medicine, JNMC A.M.U

Forget about vitamin A pills. With this orange crunchy power food, you get **vitamin A** and a host of other powerful health benefits including **beautiful skin**, **cancer prevention**, and **anti-aging**. Carrots are rich in **beta-carotene**, which is converted into vitamin A in the liver. Vitamin A is transformed in the retina, to **rhodopsin**, a purple pigment necessary for night vision. The high level of beta-carotene acts as an **antioxidant** to cell damage done to the body through regular metabolism. It help slows down the aging of cells. Vitamin A and antioxidants protects the skin from sun damage. Studies show that diets high in carotenoids are associated with a **lower risk of heart disease**. Vitamin A assists the liver in flushing out the toxins from the body. **It reduces the bile and fat in the liver**. The fibers present in carrots help clean out the colon and hasten waste movement. Carrots even protect teeth and gums. It's all in the crunch! Carrots clean your teeth and mouth. They scrape off plaque and food particles just like toothbrushes or toothpaste. Carrots stimulate gums and trigger a lot of saliva, which being alkaline, balances out the acid-forming, cavity-forming bacteria. The minerals in carrots prevent tooth damage.

Fun Facts on Carrots

1. Rabbits love to eat carrots.
2. Carrots are the second most popular type of vegetable after potatoes.
3. The biggest carrot recorded is more than 19 pounds and the longest are over 19 feet!
4. There are over 100 species of carrots. Some are big. Some are small and they come in a variety of colours including: orange, purple, white, yellow, and red.

5. English women in the 1600's often wore carrot leaves in their hats in place of flowers or feathers.
6. The name "carrot" comes from the Greek word "**karoton**". The beta-carotene that is found in carrots was actually named for the carrot itself.

COVER STORY

THE GEOLOGICAL ADVENTURE

Muhammed Muaaz; Class VI-C, The Blossoms School

It's a foggy December morning and our mystery hunter is constantly staring at his mystery travelogue totally in deep thought. Warren took a long sip of his tea and whispers something into Nigel's ear and he nods in agreement. Our Alien friend is currently on his return from The 'Helix Nebula, the last stop on his research tour after visiting countless nebulae and stars. Suddenly Craig's eyes light up-

Craig: Why don't we go to any ancient time and explore its mysteries and personalities that have been completely forgotten in your time machine which Nigel uses?

Nigel: In which year are we going?

Warren: It would be more appropriate if you ask the period instead of the date.

Craig and Nigel were taken aback of the unexpected compliment until Warren spoke again-

Warren: I mean it would be better if we explore earth before human development which we call 'Prehistory'.

Craig & Nigel: Whoa!

Warren: Don't consider history to be nothing before humans. There's much we can acquire in Prehistory since human history which you learnt in school covers a very infinitesimal extent of earth history.

Nigel: So at what time do I set the machine?

Wayne: (coming out of his spaceship) at 4.6 billion years ago at the time of earth's formation.

Nigel: (with dizziness) so……many…years!

We went 4.6 billion years back and saw the earth and rest of the solar system forming out of a large cloud of gas, a nebula, as Wayne told me later. We were in Wayne's spacecraft since earth was still a ball of dense gas.

Warren: The time covering the physical formation and changes is acknowledged as geological time. In other words, time on earth since its formation is called geological time. Its largest unit is the Super-eon which is divided into eons and further into eras.

Wayne: This is the **Hadean** eon. The gas is slowly cooling and the outermost layer is developing into hard rock which is the earth's crust.

Warren: The Hadean eon is a part of the **Precambrian** Super eon which covers almost 90% of earth history. It is total of 4 billion years.

Nigel: I didn't know that!

Warren: We will now advance to the next eon, the **Archean**.

Craig: This place is completely mysteryless!

Warren: Of course not! We are currently reconnoitering the most perplexing mystery ever. Scientific origin of life is still in complete darkness.

Wayne: If this is solved, it will also solve other mysteries such as alien existence.

A theory says that life didn't originate, it came from somewhere else through a comet or meteorite. We can approve this since comets contain billions of liters of water which itself is large amount; and hundreds of those firing at earth can easily reach the amount of water which our hydrosphere holds. Since bacteria and algae grow on the surface of water and can reside in a comet and can even survive the blast and even regrow on sterilized water, if the conditions are all right, which earth seemed to possess.

If this is possible, some people raise another question. If it did come, where did it come from? It may be another earth like planet with some intelligent life trying to send life to different ideal planets just like humans on earth try to communicate with aliens.
This is also disapproved by the fact the comets are produced naturally and can originate in any part of the universe. (Mind you, it has nothing to do with religious purposes. These are simply mere theories presented by people and backed by science)
Warren: Another theory states that smoke from numerous volcanoes (Which were omnipresent at that time) formed clouds (very silly, indeed) and it started to rain which formed the Hydrosphere. Atmospheric carbon components washed by rain, mixed with other minerals in the water. Lightning, heat and radioactivity reacted and the first primitive cells were generated.
Warren: You will get bored in this eon because you will see only bacteria here.
Craig was deeply immersed in the mystery till we proceeded.
Nigel: The next eon is…I guess……Proz……prozot……no.
Warren: It is the **Proterozoic**. Sometimes the **Vendian** eon is also counted. Photosynthetic plants, jellyfish, worms etc. appeared. Many exiting events of life occurred in this eon.
Me: The creatures of this eon were blind, brainless, soft bodied creatures!
Nigel: I'm going out of here! NOW!
Warren: The next era is the Phanerozoic. It is divided into the **Paleozoic**, **Mesozoic** and **Cenozoic** periods. The Paleozoic started with the greatest burst of life in which almost all the groups of the animal kingdom appeared in only a few million years. The breakup of the supercontinent Pannotia and its reform which came to known as **Pangaea** also occurred at this time. It is sub- divided into six geological periods called epochs.

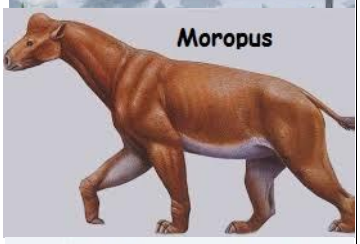
Nigel: What are these divisions called?
Warren: The first is the **Cambrian**. First unicellular land plants appeared called mosses. And in this period sponges, seaweed, hydras and jellyfish were abundant in the seas.
The next is the **Ordovician**. Squids, octopuses, **Cephalopods** and other invertebrates ruled the seas and the first invertebrate appeared. Almost all the continents were in the Southern hemisphere. Millipede like insects roamed on the beaches and tiny plants along with the mosses.

The third epoch, the **Silurian**, appeared with the abundance of jawless fish and the appearance of jawed fish. The arrival of colonizing plants such as Lichens and the first plant with an upright stalk, the **Cooksonia** were the most significant developments. The earliest Arthropods also appeared. The **Devonian** also acknowledged as 'The Age of Fishes' was identified by the abundance of fish with scales and plates made of bony tissue called **Ostracoderms**. **Placoderms** also appeared which had all of the three characteristics- jaws gills and paired fins. Placoderms, which are now extinct, these fish had a true jaw and instead of true teeth, they had sharpened piece of bone emerging from the head. They became the largest fish of the seas and larger than any previous animal too. Arthodites, the largest of these **Chrondrichites** or **Cladoselaches** (sharks) and bony fish also developed. Corals and sponges appeared and built the largest reefs existing today. Another major development was that of a small eel like fish which lived in the sea and instead of a backbone, they had a pencil thin rod of nerves called a **Notochord**. This little fish was called the amphioxus, and it was special because we can call it the link between invertebrates and vertebrates. The earliest known amphibian, the **Itchyostega** also developed in the late Devonian.

Nigel: Wow! I just spotted a large shark!
Of course we would because we are underwater and just moving to land like an amphibian.

Warren: The next is the **Carboniferous**, also known as the 'Age of Amphibians'. Huge swamps and forests covered the land providing excellent environment for amphibians. This epoch gets its name from the huge amount of coal deposits formed in this period. Because of the rich oxygen, and the adequate amount of leaves allowed insects to grow into enormous sizes such as the armored millipede-like **Arthopleura** which grew to almost two meters long and the dragonfly like **Meganura** which reached upto75 cm and some scorpions reached 70cm. The oldest mountains of the world also formed.

And the last is the **Permian.** Pine trees became abundant and dinosaurs spread. As you already know much about dinosaurs I would like to skip the Mesozoic era, also known as the 'Age of reptiles'.



Craig: Isn't there a mystery between all this?

Warren: Why not? We are in Prehistory and it has a lot of gaps in it. The end of the Paleozoic was the most deadly catastrophe ever, even deadlier than the on which wiped the dinosaurs! And yes, all the Paleozoic periods we discussed ended with catastrophes.

The Cenozoic era started with the time after the catastrophe and extends to today. The continents were drifting apart, into their current positions. Although mammals had appeared in the **Jurassic**, it is thought that they laid eggs.

The **Paleocene** began with the extinction of the dinosaurs and nocturnal animals took a variety of forms.

The first grasses and the oldest known fossils of the modern mammals traces back to the **Eocene** epoch. All these mammals were less than 10 kg. Whales and dolphins returned to the seas and bats took to the air. Early **ungulates** (hoofed animals), bats, rodents, and **proboscides** (elephants) also appeared.

In the **Oligocene**, modern mammal representatives were dominant. Because of adequate temperature forests dwindle, grassland expanded and most of the regions were tropical. Squirrels, mice beavers, rabbits, camels, giant hogs, highly developed horse species, the earliest elephant carnivorous primitives of cats and dogs were the prominent developments. The **Miocene** epoch marks the states in which the animals took a drastic change in appearance and wolves horses started to resemble that of today

And in the **Pliocene** the climate became cool and most animals had already come to be modern.

Lastly, the **Quaternary** starts with the appearance of humans.

Nigel: Can you give examples of some amazing creatures existing in the Cenozoic?

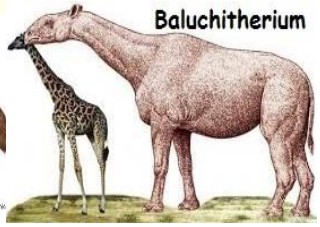
Warren: Here you go! (I've mentioned only some of the uncommon creatures here)

Moropus: Its name means awkward foot; it has a massive and heavy body, front legs longer than the rear ones, claws instead of hoofs and horse like head and teeth

Hyracotherium: A tiny deer resembling herbivore and the ancestor of modern horses. Later, a more developed and heavier version, the Epihippus appeared, and had excellent grinding teeth.

Diatryma: A huge, heavily built seven foot tall bird with little wings incapable of flying instead had powerful legs and sharp clawed feet and was a swift runner. Its prominent feature was its parrot like beak. This indicates that this bird was the dominant predator during the Paleocene and Eocene epoch.

Megatherium: A huge bulky elephant sized slow moving mammal which was the largest of sloths and ate leaves roots shoots and fruit from the top of trees. In fact its name itself means 'Great beast'.



Miacis: This small mammal was the ancestor of dogs, wolves, jackals and foxes. This small creature lived in open plains crisscrossed by rivers.

Moeritherium: The earliest known elephant looked like a tapir and was only a meter tall.

Triconodon: Was the ancestor of cats and one of the earliest mammals.

Baluchitherium: An extinct rhinoceros and the largest mammal ever with height of 18 feet and 27 feet in length; enough to leave a giraffe amazed.

Nigel: Now can we return?

Me: Why? What is the need? We've already reached at the 'Age of Humans'! And at last, we all burst into laughter.

By Human Brain a.k.a. pencil mind

(NOTE: I had to work a lot to simplify Professor's dialogues)

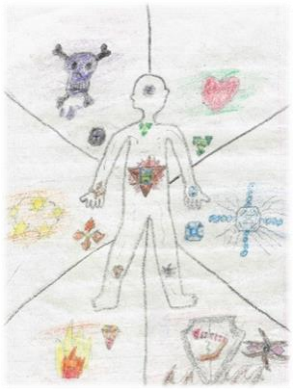
MYSTERY OF THE DIAMOND RING- *Final Edition!*

Continued from Issue 1 and 2

Muhammed Muaaz; written when in Class IV, The Blossoms School

Recap: I am Jim Morgan and along with Professor Stein saw a meteorite through his telescope which has crashed in Queensland peninsula. We are going there along with a few professors to take a sample of the meteorite. I find a century old castle in which I found a map leading to the topmost room of the castle in the bottom of a chair. There I found a diamond ring in a rusted metal cage and found the meteorite also. I was teleported to profess just as I picked up the ring. A crow snatched it from me and dropped it in front of a cave where we set up our camp. We set sail for Egypt and halted in India where we resided for the rest of the day.

The scientists were feeling homesick. I told them to go back and I must continue my journey alone to Egypt. Because of the ring I can also research about the meteorite that how and from where the meteor had fallen so I set to Egypt in my ship and reached in the 'Valley of the Kings' and found the lost treasure of an Egyptian pharaoh buried deep under the sand. Then I went to the pyramid of Khufu, and started to find any opening to enter the pyramid. While I was facing the west, a trapdoor opened beneath my feet and I feel into a dark and long corridor. I lit a candle and lit all the torches, put on the crevices, used once to light the corridor. I observed paintings of many Egyptian gods, and at the end of the corridor, I saw a huge human picture carved on the ceiling. At the front I saw a very big door that lead me to a big room on which a big puzzle board was kept. A huge terrifying skull came and asked me to remove twenty pairs of different pictures.

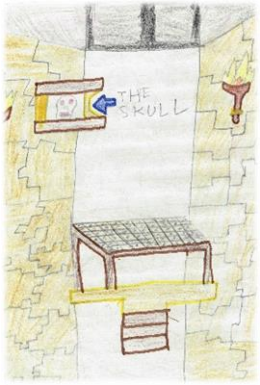


"You cannot do any mistake or else you will be vaporized inside the core of the earth or freezed in the pole of the Arctic. Since you have entered this pyramid which is under a curse in the greed of the Diamond ring."

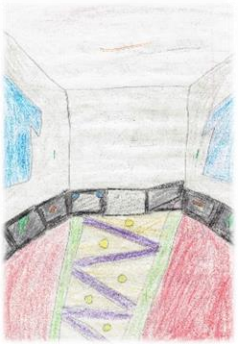
I confidently replied "That is my ring because I found it and you must not have any attempt to steal it". It screamed and started telling an old story.

"The story goes about me, when I was alive and built a very huge castle in Queensland. You must have obtained the ring from there. I made a strange chemical by mixing many types

of acids and filled it inside the gem of the ring. Because of the diamond emits a strange gaseous substance, the chemical will not decompose. In turn, the chemical had the power to destroy all the electrical objects in the world. But your ancestor spoiled my plans and hid it in the castle in Queensland."
"So let's make a deal, if you are able to solve the puzzle, the ring is yours. But if you lose, I will have the ring & you will be freezed to death."



I confidently picked up two pieces and thank god, it was correct! But at my next chance I failed & a trapdoor opened beneath my feet but I managed to jump at the correct time over the skull and threw it in the trapdoor. But the board was overturned with the pieces,so I arranged the pairs and a door opened on the ceiling I jumped on it and when I reached to the top I saw a magnificent room decorated with jewels on the walls but there was no door or entrance in the room and the entrance from which I came also closed suddenly. I saw a very small opening at the tile in the base of the room. When I tried to open it, the tile came off, revealing a tunnel, small enough that I had to cross it in a sleeping position. At the end there was a locked door. I tried to find the key but couldn't find it. After a while, I found it on the other side of a painting. A map was kind inside. I followed the maps which lead back to the room in which the board was kept I noticed a small unlocked door under the table. I stuffed myself into the tunnel which lead me outside the pyramid. Suddenly the same skull rose from the sand and said



"Don't think that you can go back so easily!" It formed a large, scary body and the invincible gems were fitted in different parts of its body. It attacked furiously which broke the diamond ring. The liquid oozed and coated the diamond. Suddenly the diamond exploded and the mummy was reduced to only bones. The invincible gems glowed and transformed into six different mummies. I wrote the description that they told me in my diary.

Poseidon: Uses the powers of the amethyst gem, he can poison the enemy with 25% damage boost.

Hydra: Uses the powers of the emerald gem, he can regain his and others life by damaging enemy with 35% damage boost.

Safforid: Uses the powers of the sapphire gem, he can freeze the enemy with 45% damage boost.

Jupiter: Uses the power of the garnet gem, he can stun the enemy with 55% damage boost

Infury: Uses the power of the ruby gem, he can burn the enemy with 65% damage boost

Cryscoferus: Uses the power of the topaz gem, he can drown the enemy with 75% damage boost

Me: sing the power of the diamond gem I can blast away the enemy with 100% damage boost.

Finally, I boarded the ship and returned home. Finally, after a tiresome journey, I will be able to complete reading my novel!

QUOTES

Being an intellectual creates a lot of questions and no answers- **Janis Joplin**
Be as smart as you can, but remember that it is always better to be wise than to be smart- **Alan Alda**
Action is the real measure of intelligence- **Napoleon Hill**

GRINDOX DANGER

Muhammed Zaid; Class I-A, The Blossoms School, Aligarh

Hello! I am Rhonda, a scientist at the missile program. I have created a missile named INDOX-DR. A man Mr Madd is breaking the buildings, roads and bridges and all the things using some strange creatures. Again Mr. Madd is successful to break the jail with his new creatures. When I was sleeping this happened. Now you are thinking that how I know about it. I heard the news from

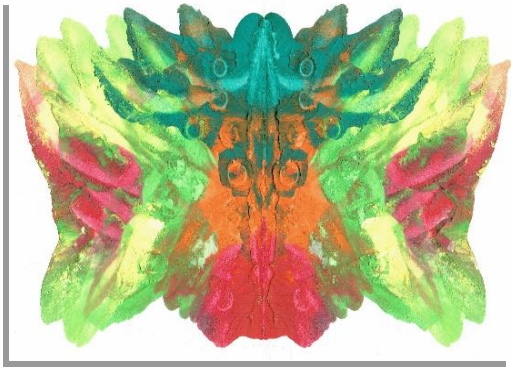
Professor Stein. I used a gadget named Microtony and I identified all of them. They are wild hood beasts Dracula, Chimera and the deadliest one eyed GOLIATH! The Dracula changed into a wolfhound and smashed everything. The Chimera bit the people and the goliath destroyed everything. I ran and ran to the jungle, I crossed it and I ran to my lab and started the missile program. A boy was walking in the city, the chimera bit his cheek and the boy became a Goliath. Then I joined at lilue acid program. When this lilue go inside Goliath's body the Goliath will become normal. Mr. Madd is on his spaceship and he smashed every building and busted all the trucks. I ran back towards the monsters. Mr. Madd joined all the creatures and they formed in a deadly beast that is glaring at me. I pressed the injection filled with lilue and it became and it went inside Goliath's body. All the people became normal. Mr. Madd is under arrest!!! The creatures are handed to police!

DRAWING GALLERY

M. Farhan; VI-B, The Blossoms School

Ishita Dey, V, Vivekanand Mission, Harit, Hooghly

Sidra; VI
The Blossoms



M. Hamza; IV, The Blossoms School, Aligarh

Kalap Sadhu; VIII, Triveni
Tissues Vidyapith, Hooghly

TOP 20 INCREDIBLE ANIMALS

Strongest bite force is expressed here in PSI (Pound per Square Inch) A human has a bite force of 150 PSI. Surprisingly, lion- the king of the jungle (African Lion-16th; 691 PSI) and tiger (Royal Bengal tiger-10th; 1050 PSI) do not find place in this list. Anew study suggests crocs are "force-generating machines" even rivaling mighty T. rex. The strength (strongest) of an animal is based on the times of weight it can carry relative to its body weight.

Strongest bite force

5

Silverback Gorilla-1300 psi

4

Hippopotamus-1821 psi

3

American Alligator-2125 psi

2

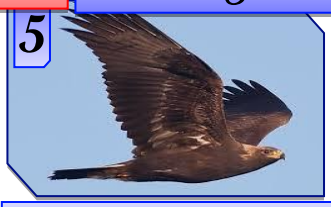
Nile crocodile-5000 psi

1

Saltwater Crocodile-7700 psi

Strongest

5



Eagle

4

Gorilla

3

Leafcutter Ant

2

Rhinoceros Beetle

1

Dung Beetle

Fastest

5

Frigate Bird

4

Eurasian Hobby

3

Needle tail Swift

2

Golden Eagle

1

Perigrine Falcon

Cleverest

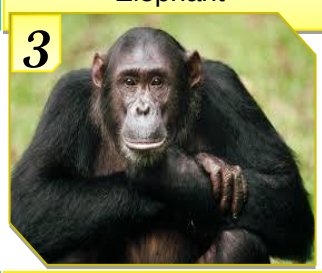
5

Crow

4

Elephant

3



Chimpanzee

2

Dolphin

1

Orangutan

BIOLOGY BASICS

Muhammed Muaaz; Class VI-C, The Blossoms School, Aligarh

⇒ All living organisms are made up of a cell (unicellular) or cells (multicellular).

⇒ Every living organism respires, excretes, reproduces, responds to external stimuli (action), and has a definite lifespan.

⇒ Multicellular organisms show growth by increasing number of cells and unicellular organisms by increasing size.

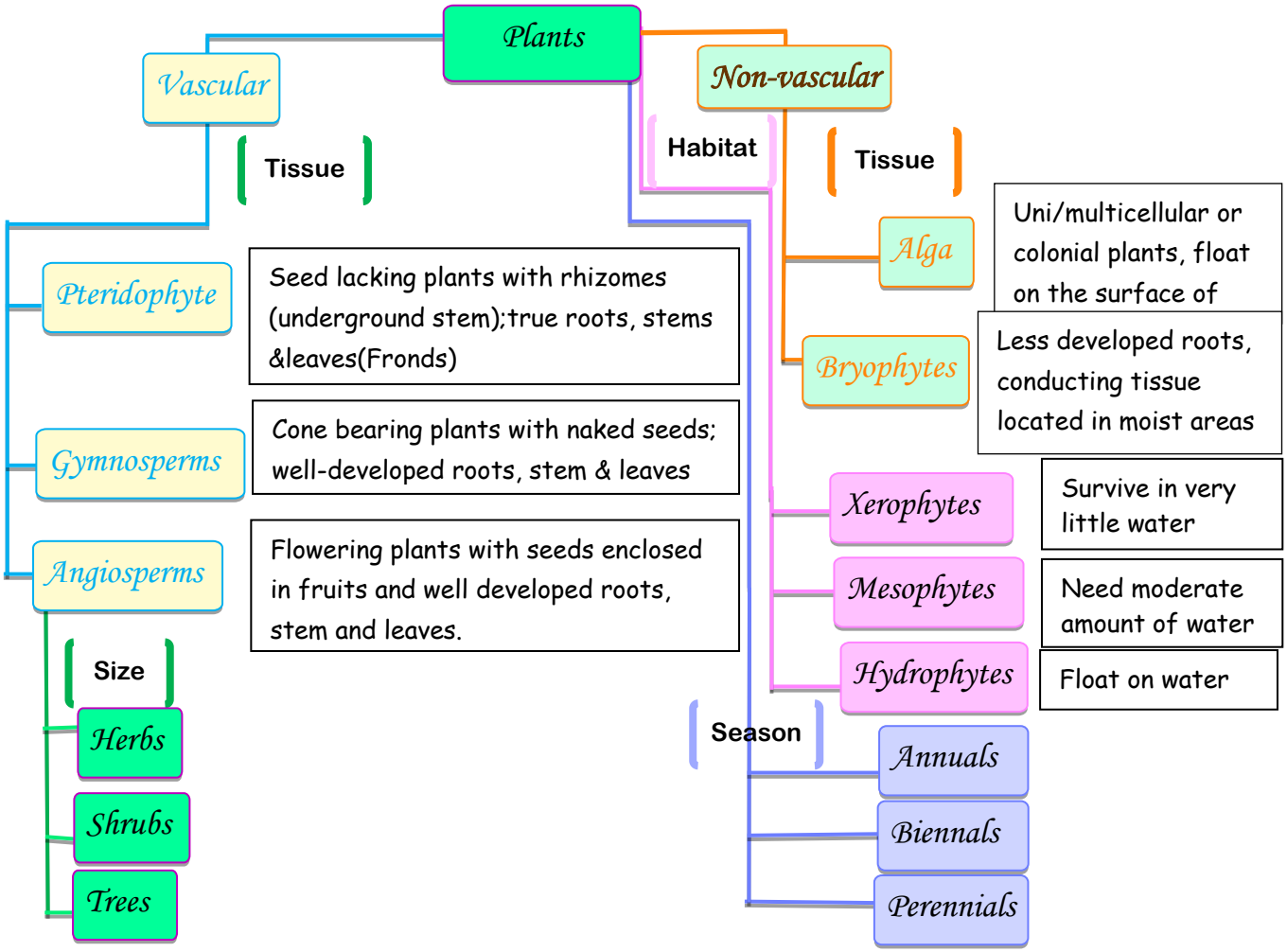
⇒ Autotrophs (chlorophyll present) photosynthesize (make their own food by water, O_2 and sunlight)while Heterotrophs (chlorophyll absent, non-photosynthesizing) depend on autotrophs {Plants (Herbivores) and Animals (Carnivores)}

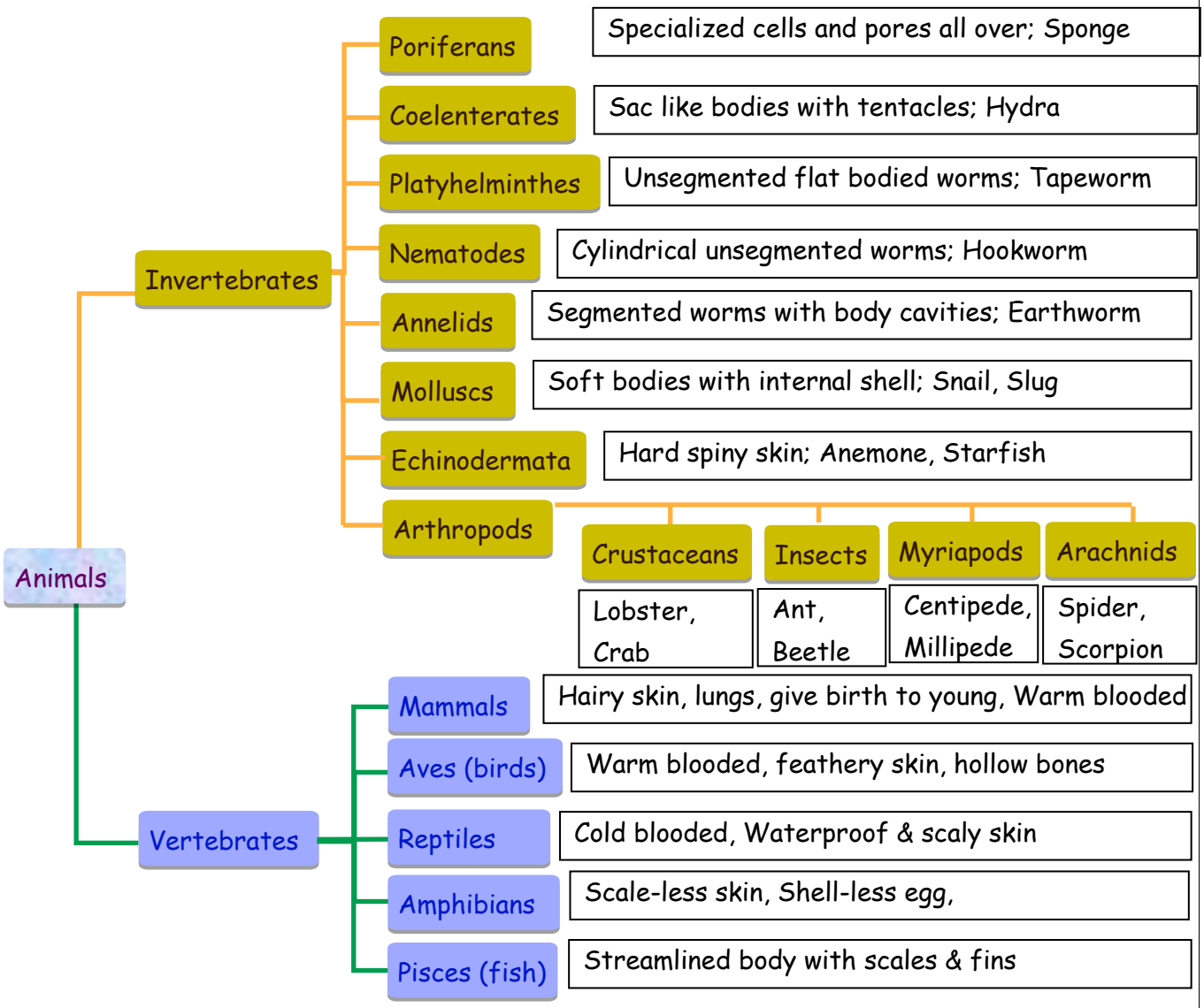
⇒ Living things are classified as-

Monera – Nucleus lacking microscopic unicellular organisms.

Protista– Unicellular/Multicellular algae and unicellular protozoa which have a nucleus.

Fungi – Unicellular/multicellular non- green organisms.





WORD PUZZLE ANSWERS

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