Learning Brain

Let us now explore the multiple dimensions of the learning brain so that we can learn to appreciate and utilize it to the best of our ability.

Making a good choice requires that you have a fair amount of knowledge. Even if you were the wealthiest person in the world, your life satisfaction would be limited if you had the IQ and knowledge of a five-year old child. Of course, you might be very happy using your limited intelligence to buy everything that you desire. However, it would be difficult to envy a mentally challenged but wealthy person because he/she would miss many things in life. Indeed, good mental health improves the quality and richness of life. Mental capacities in addition to knowledge provides access to different dimensions of reality. Thus, we can enjoy our life more through learning. For instance, an ignorant person with no knowledge of science could only enjoy the external beauty of a flower, whereas a knowledgeable person could reflect on its other dimensions and derive more joy and benefit from it.

If you were given a choice between two ways of life, which of the following would you choose?

Would you choose to be:

a) A rich person, but with limited intelligence?

b) Rich in knowledge and highly intelligent, but very poor?

First Dimension : Analytical Thinking

SCIENTIFIC UNDERSTANDING OF THE LEARNING BRAIN

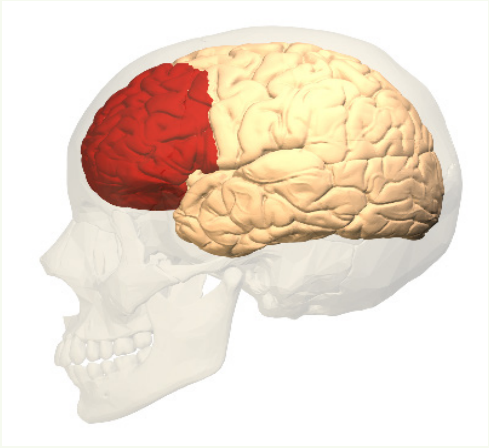
When you were born in this world you didn't know much, did you? As a baby, you soaked up the world around you as soon as you took your first breath. You learned to associate your mother's scent with comfort, milk and rest. If you were separated from your mother, you learned to cry- to demand to be immediately returned to your secure haven. How did you learn that? How does a newborn baby learn? Who makes the baby experience the feelings of hunger, discomfort and pain? Who teaches the baby to cry to express her needs? What happens if the baby never learned how to cry? Would her caregiver be given the chance to know that something is wrong? How would that baby survive if she were unable to learn the right behaviour for survival? Is it possible to survive in this world without learning? Let us now see how we are made to learn through this precious gift called the "brain".

As you remember from previous chapters, the brain consists of three main parts – the brain stem, cerebellum and cerebrum. The cerebrum plays the most important role in learning. It is designed to house complicated functions like memory and reasoning. The cerebrum has several specialized areas, each connected to a function, such as sight, hearing, speech, touch, short-term memory and long-term memory. All of these functions are important for learning, but language skills and reasoning abilities are by far the most essential for learning. The parts of the brain that are equipped with the capacity for learning are:

1. The Prefrontal Cortex

This is the largest part of the brain! It is significantly more advanced in humans than in animals. It is found at the back of the brain and makes up about one third of the total volume of the brain. The prefrontal cortex is part of the frontal lobe that is responsible for interpersonal thinking skills and emotional regulation.

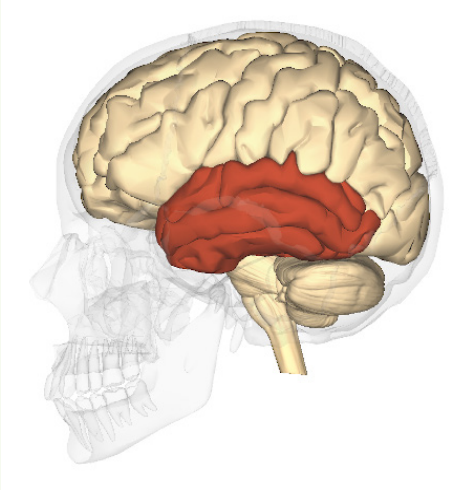
Brain damage to the prefrontal cortex due to head injuries, strokes and dementia (a disease that affects aging adults) results in changes in social behaviour. People with a dysfunctional prefrontal cortex may behave in unusual ways and say inappropriate things.

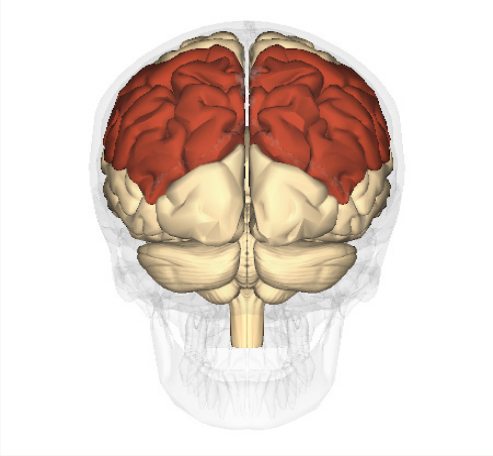


2. The Temporal Lobe

The temporal lobe is involved in reasoning and reading. You are using this part of your brain to understand the letters of this page right now. This part of the brain is also designed to process your understanding of sounds and images. In other words, it is a tool that allows you to assign names to the sounds that you hear and comprehend the images that you see.

Damage to parts of the temporal lobe may result in speech disorders, seizures and memory problems.



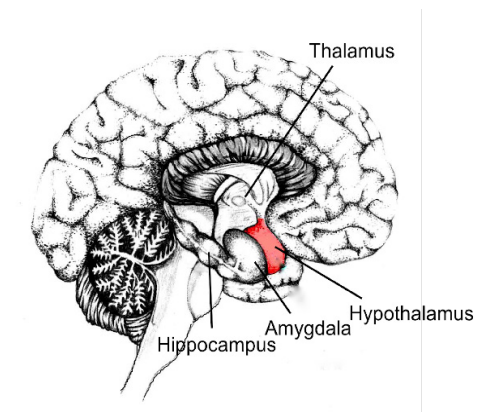


3. The Parietal Lobe

This is the part of the brain that you use when you do mathematical calculations. So, the next time you are completing an algebra or geometry problem, remember that this part of your brain is very active!

4. The Limbic system

This is the part of the brain that is made of the hippocampus, amygdala, thalamus and hypothalamus. Do any of these organs sound familiar? Through the limbic system, emotions such as fear and anger are regulated. Contrary to what most people think, emotions need advanced cognitive (thinking) skills in order to assess situations, understand them and respond accordingly.



"A bad car accident that prompted intense emotion is difficult to forget."

According to research , when learning occurs, the structure of your brain changes. Neuroscientists- scientists who study the brain and nervous system- think that experience causes brain structure modification. Research also shows that practice increases learning. This means that the more frequently you choose to do an activity, the better you become at doing it.

Another important discovery is that emotions affect the process of learning. So, if we feel anger, fear or laughter while we experience something, that emotion we feel becomes connected to the memory of that experience, making the experience more memorable. This is why some memories are stronger than others. A bad car accident for example is more memorable than being introduced by a friend to a random stranger. The accident that once prompted an intense emotion such as fear, is difficult to forget. How can we use these facts to improve our learning? Obviously, if we can ensure that our learning experiences engage our senses and stimulate our emotions, then our learning experiences become more memorable. Have you ever noticed how your most memorable lessons were taught by teachers who were great storytellers, or told the funniest jokes? They were able to appeal to your emotions, which became associated to those lessons in your memory, thus making the lessons memorable.

Amazing Scientific Facts
-The learning Brain-

1.

Research shows that the brain has a face recognition system called the fusiform gyrus. Brain imaging studies consistently find that this region of the temporal lobe becomes active when people look at faces.

2.

Research shows that multitasking is a myth for any task that requires significant attention and memory. For instance, once you start checking your emails, you are no longer doing your homework. You get distracted. At best, you can shift back and forth between those two tasks.

3.

Research also shows that we are born to read. Like face recognition, we recognize words through a tiny area of the brain known as the visual word form area (VWFA), found on the surface of the brain, behind the left ear.

4. Research shows that some people have different pathways for learning. Thus, it is wrong to use a one-size-fit-all approach in education.

5. Researchers are still exploring how the brain filters the information it receives to decide which sounds, sights, and sensations are important.

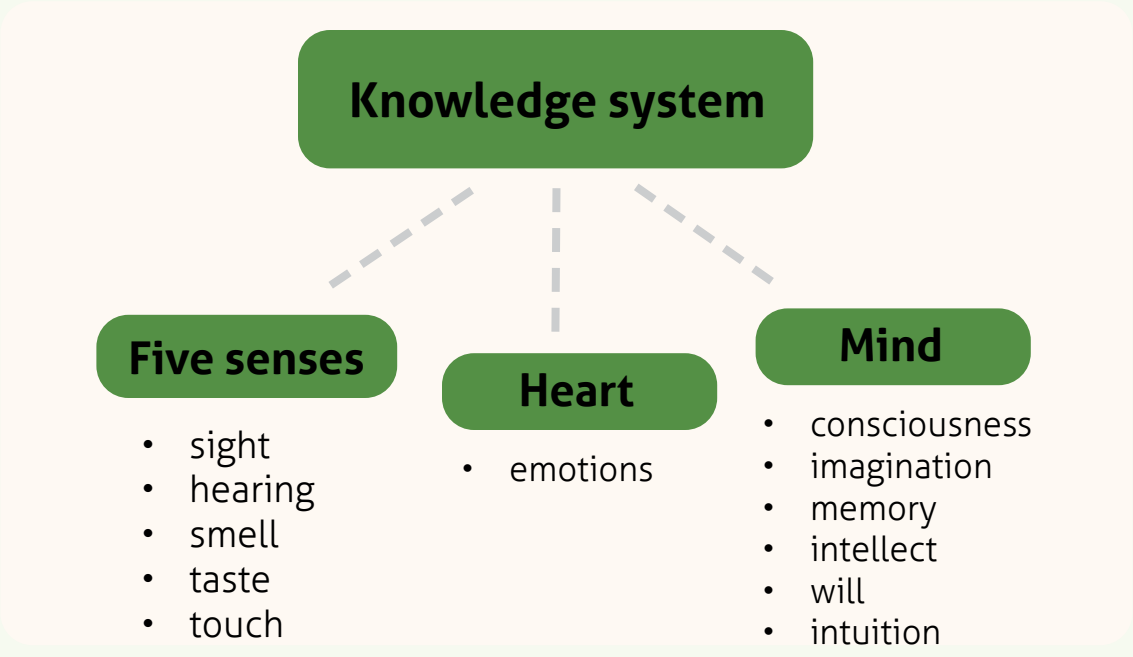
6. New research reveals that we produce new neurons in the parts of the brain associated with learning, memory, and emotion throughout adulthood.

7. Research shows that forgetting plays a positive role in learning because when we forget a piece of information and are forced to go back and retrieve that information, it will be more strongly imprinted on our memories.

Learning is more than just a brain activity. For this reason, it has been studied in relation to other disciplines including biology, cognitive science, development, and education. There is even a branch of philosophy called "epistemology" that is concerned with the study of how we learn and gain knowledge. In some ways, epistemology resembles anatomy which is the study of our bodily systems such as the digestive system and the nervous system. Epistemology is like the anatomy of our "knowledge system" and of the mind, which is related to our brain activity. It tries to explain how learning, i.e. the activity of gaining knowledge takes place. Most learning activities cannot be explained on the basis of the physical activities involving our body alone.

Remember-in the second chapter, we said: "The brain, spinal cord and the millions of nerves found in our body make up what is called the nervous system". In the same way, our knowledge system is also constituted of three parts: The five senses as external faculties, the heart as an internal, spiritual faculty, and the mind with its intellectual faculties. The five senses are already well established: they are the faculties of sight, hearing, smell, taste and touch. The heart, as an internal faculty, is considered the center of emotions through which external reality can be perceived in depth.. The mind comprises the faculties of consciousness, imagination, memory, intellect, will and intuition. All of these work together to process our learning activities. Learning and therefore knowledge involve all these processes as well other physical processes that take place within our brain and soul.

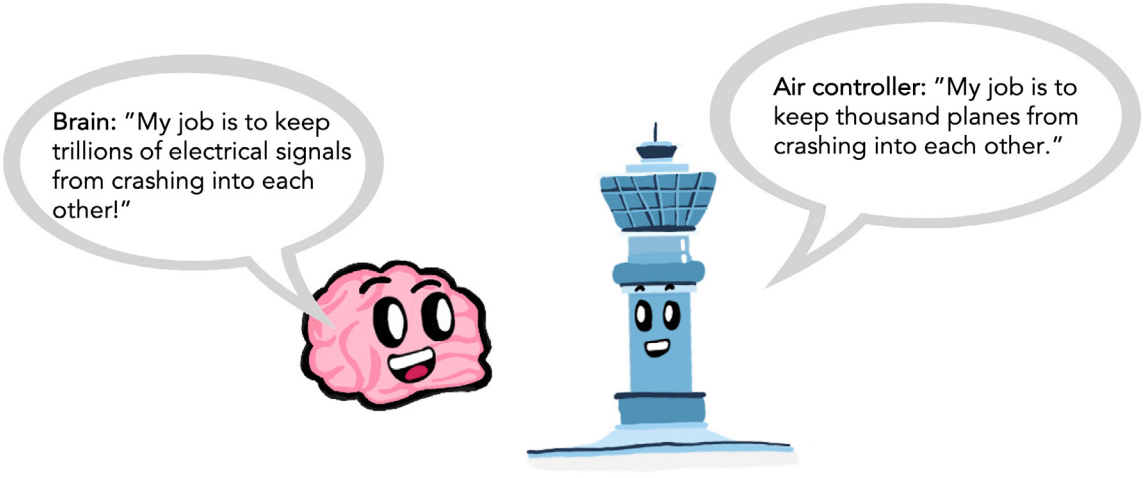
Now, you will hopefully appreciate the complexity of our learning process. Each faculty listed here was discovered throughout the history of human civilization. However, this list is still not complete and the function of each of these faculties has not yet been explained conclusively. In other words, we still have a lot more to learn about our knowledge system. In fact, we know much more about the physical systems within our body than we know about our knowledge system.



Second Dimension : Analogical Thinking

TRAFFIC IN THE BRAIN VS. AT THE AIRPORT

The multi-directional pulses of activity that takes place across our brain during the learning process can be compared to airline traffic. Airplanes cover routes all over the globe. They pick up and drop off passengers at large and small airports around the world. Airlines make this process more efficient by designing hubs, such as those found in large airports in Dubai, Istanbul, London or New York. Through these hubs, connections are made to less accessible (and often smaller) cities or towns. The connections to these smaller, less frequently visited, cities or towns must be conducted quickly and efficiently by the hub, otherwise they would not be profitable to the airline company. In a similar way, the brain has its own hubs. These 'hubs' are known as Connectomes where neural connections converge in a central meeting point. The Connectome, or central hub, then fires signals to remote parts of the brain.

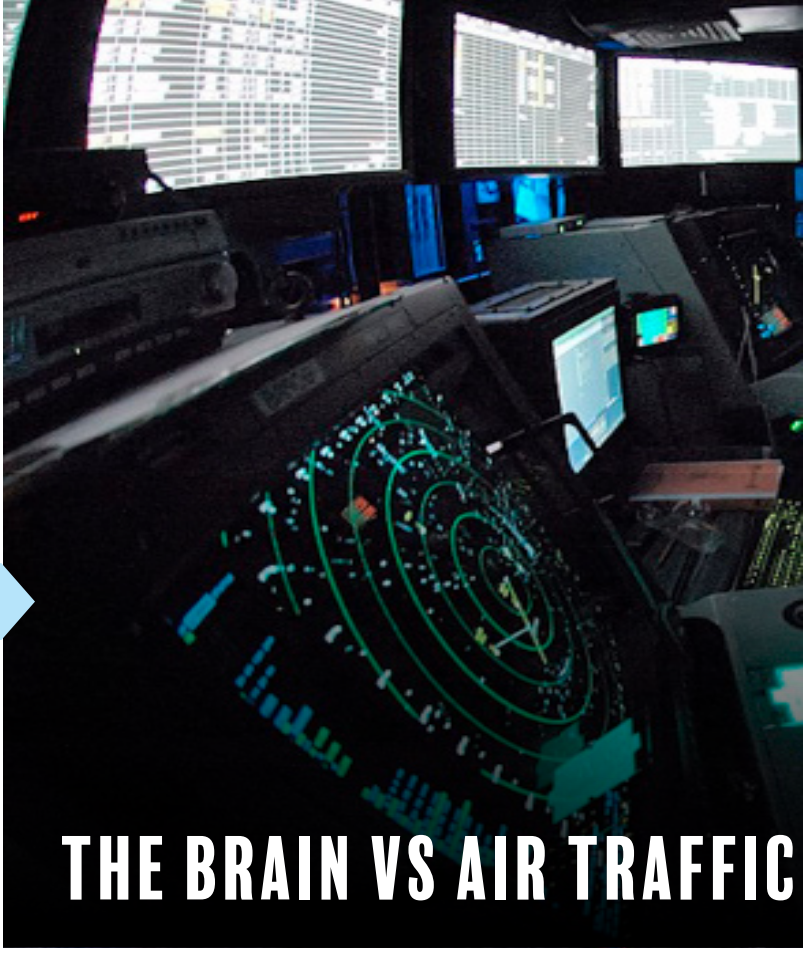


CAREER CORNER

Now, let's think of the brain like an air traffic controller. Do you know what an air traffic controller does? Let us learn more about this incredibly important role.

An air traffic controller has a very important job. When you think of occupations related to flying and planes, pilots first come to mind. True, pilots do have an amazing job -because every time they fly a plane, people trust them with their lives. But while being a pilot is highly respected and valued, most people do not remember the air traffic controller.

An air traffic controller's main job is to keep planes from crashing into each other, or into the ground, or even into other planes parked on the ground. While you may assume this is done automatically, there is much more to the story. It is done by well-trained controllers from the airport control tower. With support of sophisticated technologies, air traffic controllers assure the separation and efficient movement of aircraft and vehicles operating on the taxiways and runways of the airport itself, and keep track of the aircraft in the air near the airport. They generally use a radar system which displays a map of the area, the position of various aircraft, and data tags that include aircraft identification, speed, altitude, and other procedural information.



THE BRAIN VS AIR TRAFFIC

So, for example, as you are reading this page, neurons carrying electrical signals from your eyes converge into a central meeting point or connectome in your braSo, for example, as you are reading this page, neurons carrying electrical signals from your eyes converge into a central meeting point or connectome in your brain, which then sends signals to other parts of the brain. These neural 'connections' work together to make sense of the words you are reading. If there were a delay by the central hub or connectome in sending out the signals, you would struggle to make sense of what you are reading. If you think of the airline analogy, if a central hub like New York for example were disrupted due to bad weather, all the other connections, incoming and outgoing, would be affected.

CONTROLLER

Similarly, the learning brain works to guide, navigate and protect the physical body. One main difference is that your brain does not utilize gadgets like the air traffic controller does. The brain's inborn faculties are much more sophisticated and complex that any 'gadget' or technology used in the process of controlling air traffic. Moreover, these faculties function precisely without electricity and without any operator we can see. And as a result, you are protected from coming into contact with potentially harmful external objects in your environment. Isn't that amazing? Who is behind all these intricate functions and tasks? When you cross the road, how do you estimate the distance between you and approaching cars? The necessary calculations occur in your brain! At an emotional level, your learning brain is designed to provide you with

The brain's inborn faculties are much more sophisticated and complex that any 'gadget' or technology used in the process of controlling air traffic.

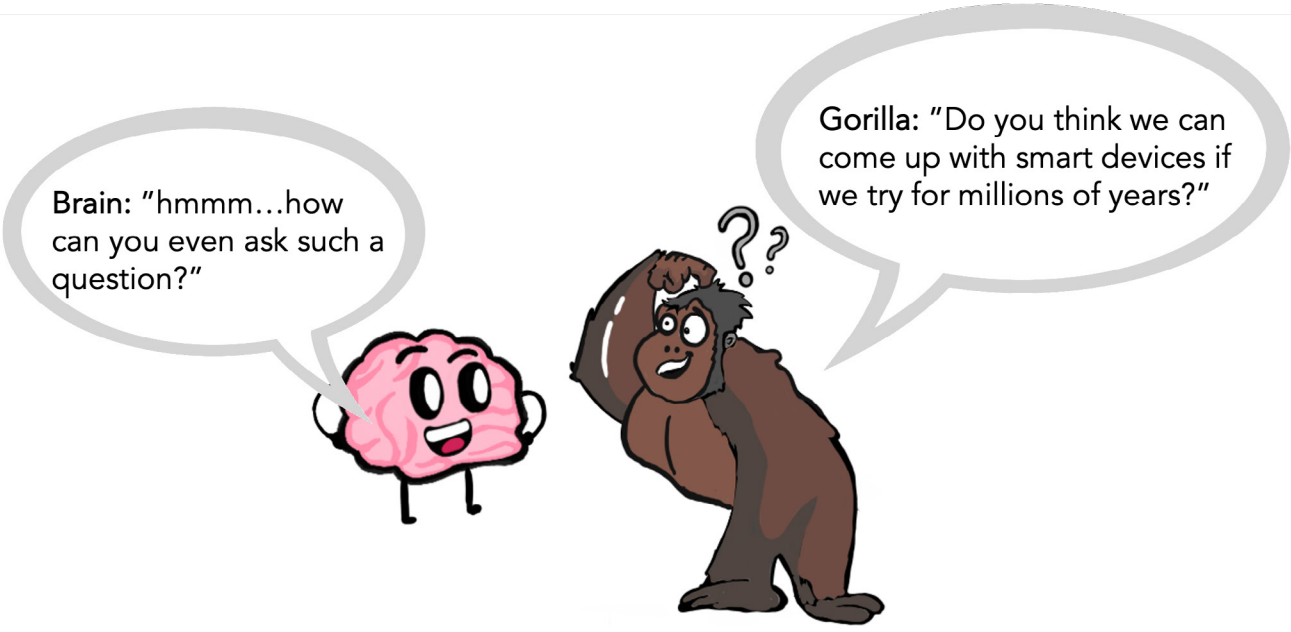
signals to do necessary things for your survival. For instance, the brain makes you feel hunger so that you can decide to eat. It makes you feel cold so that you can decide to wear a sweater. It makes you feel tired to know it is time for sleep. Your brain is also designed to provide you with various feedback regarding your social environment. For example, you can sense how your friend feels in response to certain words through various clues: visual, intuition, understanding and remembering past experiences with your friend. Based on these signals, you may decide to refrain from saying words that can potentially hurt her feelings. How do you know the right thing to say at the right time? You do this through the feedback you receive from your brain- such as seeing the situation, assessing it and understanding what's going on based on your accumulated knowledge and experience. In sum, the learning brain is a marvellous gift. It functions in ways that much more amazing than any airline hub and air traffic controller out there. So, how do such incredible and beneficial functions occur in the brain?

Third Dimension : Critical Thinking

EXPLORING THE MAKER OF THE LEARNING BRAIN

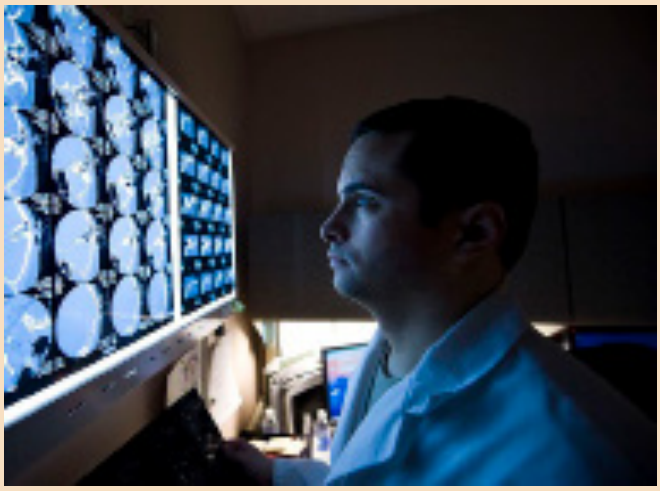
In order to understand and appreciate how amazing the functioning of the learning brain is, let us reflect on the technology an air traffic controller uses. How was this technology developed? Certainly, the people who developed it must have been experts in I.T. and they also must be aware of how airports function and what they need. They must have studied for long years and worked in teams to help each other develop the required technology for making those 'gadgets.' Do you think that animals could come up with similar devices even if they tried for millions of years? Obviously, that is not possible. Why? Because they do not possess the ability to gain the knowledge and skills to make such devices.

Now think about the amazing inner functioning of the brain as compared to an air traffic controller. Using your brain, imagine how much information is being processed right now to help you see, read, understand and reflect; and in doing so, you may be using your imagination and remembering things you learned previously. Think about how billions of neurons are interconnected and busy working in order for you to make sense of this world. Think about the very complex tools and technology human beings have developed over the centuries by using their brains.



How did we get such an amazing learning brain? Did it come into existence on its own? Do you think it is possible for something like nature, which is lifeless and has no knowledge nor consciousness, to create the billions of connections required for the brain to be the vehicle of your learning? Do you think it is possible that such an amazing thinking tool happened to emerge through the random bonding of cells? Obviously, the creation of such an amazing living brain requires much knowledge, wisdom, and power, including the power to give life. That is why, even if all the skilled scientists on Earth worked together, they would not be able to build a functioning brain.

Indeed, we are still very much ignorant of the inner works of the learning brain. For instance, although we know how certain parts of the brain are activated when we think, we are far from knowing how thinking actually takes place. Our thoughts are invisible, so when scientists want to measure thinking in the brain, they use Magnetic Resonance Imaging (MRI) which scans the brain to measure which parts of it light up during a thought process. However, scientists are still incapable of relating measured electrical signals to the actual mental events they represent. That is how they know that thoughts are happening- but they do not know what those thoughts actually are.



Two things are going on here:

1-Scientists cannot know the content of our thoughts- they can only conclude that thinking is happening.

2- Scientists can measure mental activities, but they cannot understand the process of thinking and reasoning- such as deduction for instance. There are intuitive elements involved that include both the brain and powerful senses of the heart. Indeed, our mind's ability to think and make instant connections and associations between thoughts is incredible. In addition to this, the speed of our brain's thought process is astonishing. It is faster than the speed of light.

Have you heard of artificial intelligence (AI)?

Artificial intelligence is the ability of computers to perform human-like tasks such as adapting to new inputs. Examples of AI in action are Siri, a personal assistant used in iPads, iPhones, laptops, and self-driving cars.

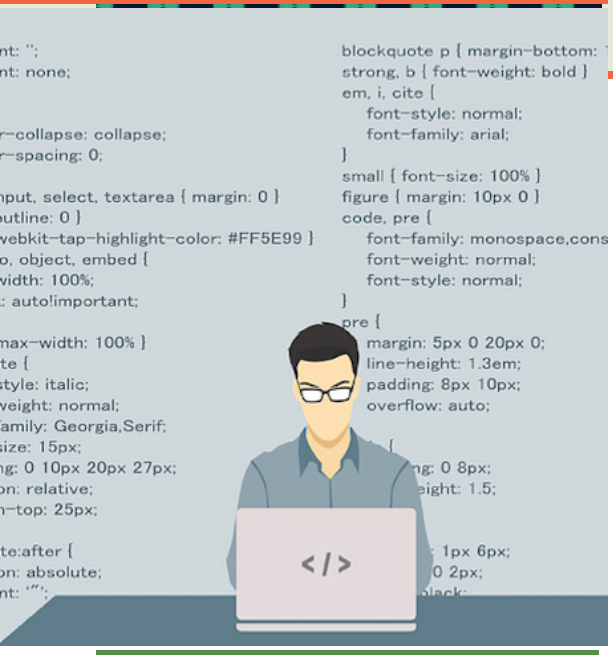
Let us reflect on how artificial intelligence was invented. In the 1960's, the US Department of Defense attempted to train computers to mimic basic human logic. The Defense Advanced Research Projects Agency developed personal assistants long before Siri came into the picture.

What would a two-year-old toddler think of Siri? Do you think he would believe that Siri is a miniature human being living in an iPad, actively listening to and answering his questions? Possibly, if this was the first time he was introduced to such technology. This is because young children are unable to reason in the same way as an older child or an adult. As our brains grow in size and complexity, our ability to use logic and reasoning develops. We learn to ponder on how things come to be and not simply accept them without questioning.

Let us compare artificial intelligence with the human brain, that is infinitely and incredibly more complex. We know that it is not possible to produce artificial intelligence without inventors who possess great knowledge, will and power to execute their projects. In the same way, it is also not possible for a learning brain to come into existence, survive, and function without an Originator who possesses will, knowledge, wisdom and power. Indeed, the functioning of the brain is so breathtaking that it indicates the marvellous knowledge, power, beauty and wisdom of its Maker. Now, we know that we recognize, appreciate and reward inventors of important and useful inventions such as AI. How about the Originator and Maker of our living learning brain?

The learning brain is a tremendously precious gift. We need it to learn how to survive and thrive. Indeed, we were born to learn. However, we cannot learn without a functioning brain. As we study the brain, we will realize that the brain is a meaningful sign pointing to a Hidden Reality. It is a letter bearing an important message from the Hidden Power that sustains it. Let us move on to the next dimension to discover the Hidden Reality and understand the Hidden Messages within the learning brain.

Fourth Dimension:
Meditative Thinking



It is a matter of debate whether AI can eventually control human life on Earth.

However, it is a matter of fact that AI was developed by physically cable, intelligent, and educated people who used their brains to invent it in the first place.

As discussed in the previous dimension, since the learning brain is infinitely more advanced than AI in all its complexity, then it must be the work of an endlessly more powerful, all-encompassing and wise Source. This brings us to our next question: how can we discover the Hidden Power behind the learning brain? Before we uncover the answer, let us first reflect on a well-known example of AI, an iPhone application called Siri.

It is quite easy to "awake" Siri by simply saying "Hey Siri". However, it takes deep programming knowledge to develop such an app. For the Siri app not to give us a silly response to a question, it has to first recognize voice and process sounds into text. Then, it has to search for an answer to the given question. Lastly, it has to deliver the retrieved programme information by converting text into voice. The entire process has to occur seamlessly in order to satisfy our need for a fast response. It was not easy to come up with Siri for the first time. It took years of hard work of an international team and huge financial budgets to design the app. It was integrated into the iPhone 4S in 2011. Since then, it has gone through many updates to become more functional.

Indeed, Siri provides a great service through a wide range of voice commands including:

•Phone and Text actions, such as:
"Call Sarah"
"Read my new messages"
"Set the timer for 10 minutes"
"Send email to mom"

•Checking basic information, including:
"What's the weather like today?"
"How many dollars are in a Euro?"

•Schedule events and reminders:
"Schedule a meeting"
"Remind me to"

Even though Siri is a highly intelligent app that finds what we need hands-free, it is incomparably inferior to human intelligence. Indeed, it delivers very poorly if asked a question that requires an answer beyond pre-programmed responses. It has no life, and no consciousness. Thus, it does not understand what it speaks about as it has no ability to learn language. Actually, Artificial Intelligence is 'artificial' as it is clear from its name. It is limited by its programming. Unlike human learning, AI cannot abstract knowledge and integrate it. It cannot 'understand' and therefore cannot learn from past experience or adapt to new situations. It cannot reason and generalize about the world. It has no intuition or common sense. AI is developed to accomplish specific, limited tasks, within a particular device.

It is important to remember that Siri could not work in isolation. It is built to work within a certain operating system. A well-functioning Apple device is necessary for Siri to function. Similarly, a well-functioning body is needed to maintain all bodily functions. For instance, the lungs work to retrieve oxygen from the air. The stomach works to break down food into energy for the brain. The heart works to supply oxygenated, nutrient-rich blood to the brain. What is more, the human body depends on many things not only on Planet Earth but in the whole planetary system. It relies on plants and animals for food. It relies on the Water Cycle to receive drinking water. It relies on the Sun to receive light and temperature. Likewise, Planet Earth is well connected to the Solar System. It could not function without the Solar System, which is part of the Milky Way galaxy. Indeed, the more we study, the more we understand the interconnectivity of everything in the universe. In this way, we realize that the perfect creation of the brain within the human body exits within the whole world. Therefore, the maker of the brain, can only be the maker of the body and of the whole world, the planets and the galaxies. We can conclude from these facts that none of this, neither the brain nor the human body, nor

A well-functioning body is needed to maintain all bodily functions. For instance, the lungs work to retrieve oxygen from the air. The stomach works to break down food into energy for the brain. The heart works to supply oxygenated, nutrient-rich blood to the brain.

WHAT CAN YOU CONCLUDE ABOUT THE HUMAN BRAIN'S MAKER?

Given our experience of developing AI, we know that it takes an enormous amount of knowledge, wisdom, and power to make the learning brain. Indeed, it requires infinite knowledge and power since the learning brain is connected to the entire universe. Even if we bring together the brains of the world's best scientists, they could not come up with a learning brain similar to the human brain.

anything else could not have happened by chance; nor could it be attributed to material causes or nature. As a matter of fact, since the learning brain is connected to the entire universe, we need the whole universe to exist in order to have a functioning learning brain. Clearly the Maker of our brain is the sustainer of our whole body. He is also the sustainer of the world around us. He also is the Maker of the air we breathe. He alone is the Giver and Sustainer of life and of experience.

Furthermore, it is important to know that Siri could not work without electrical power. Indeed, an entire computer device with its embedded software can only function if we provide the necessary power supply. Similarly, the well-connected brain is just a platform through which the Hidden Power does the work. It does not make sense to attribute the great learning ability of the brain to its components like neurons or electrical signals. Yes, it is necessary to have neurons and electrical flow in the brain for learning to occur. However, that is not sufficient. After all, neurons are nothing but the rearrangement of the basic nutrients we receive through eating and drinking. They have no knowledge, no wisdom, and no power. How reasonable would it be to attribute the well-thought code of Siri to the material components of its device? Moreover, ewe shouldn't think that once an application like Siri is installed, it will work completely on its own. This is because Siri would not work without its programmers' proper commands.

Similarly, it would be totally unreasonable to claim that the learning capacities of the brain stem from its biological ingredients. After all, the brain stops functioning immediately after we die even when it is still intact and even if it is provided with nutrients and oxygen. Obviously, the miraculous learning attributes of the brain could not be ascribed to its ignorant, blind cells and molecules or to the unconscious atoms and subatomic particles. Just as Siri is the work of someone who knows our needs and desires for a virtual assistant, the learning brain is the work of The One who knows our needs and desires to

understand, learn and thrive. It is the work of the One who creates and controls the entire universe since our learning brain is a built-in living organ within the inter-connected universe.

Furthermore, the brain is not just a tool for learning. It is also designed to enable you to experience intense emotions such as happiness, anger, grief, excitement, jealousy and joy. It is designed to enable you to empathize with your fellow human beings and other creatures on this planet. It is designed to decipher factors in your surroundings that are dangerous and alert your body to take appropriate action. When your senses alert you to the presence of possible danger, such as a wild animal or a fire, your brain is the organ that puts your body into fight or flight mode. In other words, it is designed to help you not only survive in the world but also to thrive.

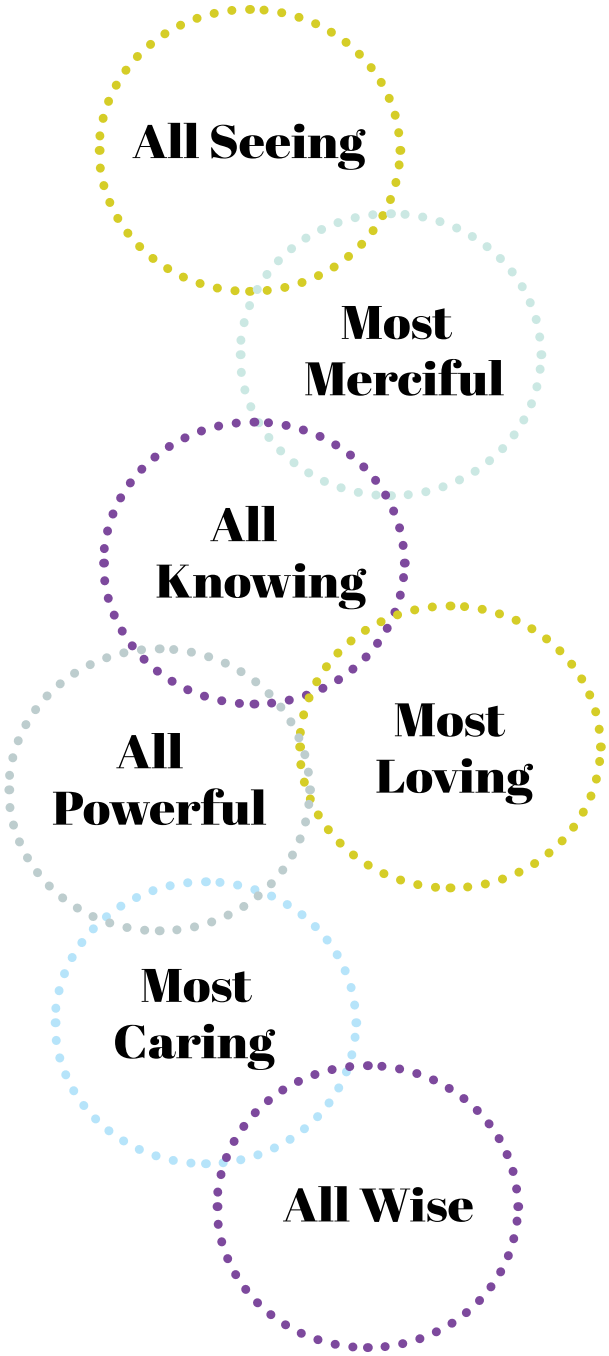
Now that you learned how the brain's learning center works, what can you conclude about its Maker?

Given our experience of developing AI, we know that it takes an enormous amount of knowledge, wisdom, and power to make the learning brain. Indeed, it requires infinite knowledge and power since the learning brain is connected to the entire universe. Even if we bring together the brains of the world's best scientists, they could not come up with a learning brain similar to the human brain. Actually, we are still far from completely understanding the inner works of the brain. But one thing we understand is that, the more we study the learning brain, the

"The brain is not just a tool for learning. It is also designed to enable you to experience intense emotions such as happiness, anger, grief, excitement, jealousy and joy."

more we realize that its Maker must have infinite knowledge, wisdom and power. He must be very wise because He uses an extremely sophisticated and elegant system to allow us to think and learn. The learning brain is an elegant sample of His infinite knowledge and wisdom. It is a mark of wisdom that the learning brain interacts in perfect harmony with its surroundings to allow us to perceive, understand and retain information.

Using our learning brain and heart, we can understand that our Maker must know our needs for learning, thinking, and logic. He must be very kind and generous in giving us such a precious gift at no charge. We completely depend on His creating power and mercy to sustain our life at all times. Indeed, since no power can be above His Infinite Power, He is under no constraint to make our brains. He creates brains for living beings purely out of mercy and munificence, just as He creates all the things and supplies what we need for life. Can you imagine if we were bodies ran on autopilot with no active, thinking, learning brains? We would simply be machines, unable to use our previous learning experiences to make decisions or make changes to our external environment. Clearly, our learning brain is evidence that our Maker is All-Seeing, All-Knowing, All-Powerful, All-Wise, Most-Merciful, Most Loving, Most Caring, and Most-Kind. This evidence then must be part of the hidden messages embedded within the wonders of the learning brain. Now, we will explore the attributes of The Maker of our brain and learn to become aware of the greatness of the gift we have been given.



YOUTUBE CORNER

Structure Of The Brain VS. The Universe - Actual Similarities Found

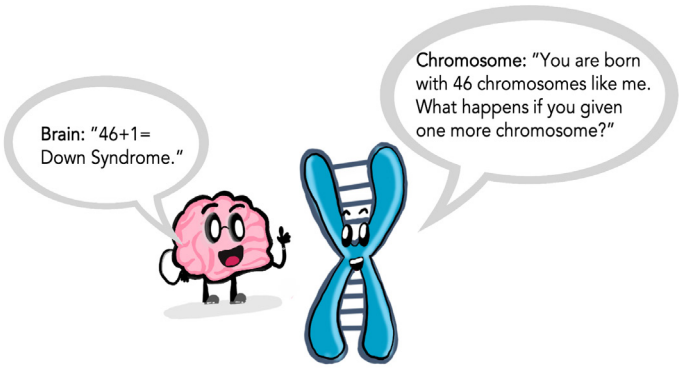
https://youtu.be/97V8jw7rc9I

Fifth Dimension : Moral Thinking

RESPONDING WITH BETTER CHARACTER

Like many things in our life, we often take the learning brain for granted. However, when we reflect on the huge capacities of our brain and take into consideration those who have learning difficulties, we are able to better appreciate the tremendous value of our brain's ability to learn.

Did you know that an estimated six million people around the world live with Down Syndrome? Down Syndrome is a genetic condition characterized by having an extra chromosome at birth.



Chromosomes are thread-like structures found in each of our cells and are made up of genes. Genes make up the blueprint that is used to construct everything in our bodies, from our eye colour to whether we are boys or girls. People are normally born with 46 chromosomes, but children with Down Syndrome are born with 47. This extra chromosome ends up causing reduced mental capabilities to a great extent. While the average/median IQ score is around 100 for the average person, it could be as low as 20-30 for an individual with Down Syndrome. A person with Down Syndrome will have some degree of learning disability depending on the severity of the case. They might need lifelong support to maintain their daily life. This condition provides clear evidence that our experience of life depends on an extremely delicate balance and order of multi-layered biological structures. Even a simple disruption in the development of our genes could end up costing us much of our thinking and learning abilities.

Another example of a learning disability is called prosopagnosia or "face blindness". A person with such a cognitive disorder has difficulty recognising faces including one's own face.

A brain area, the fusiform gyrus, is said to be in charge of face recognition. This part of the brain is designed to allow people to recognize faces in more detail than other complex non-living objects. When this part of the brain is damaged, a person will not be able to recognize faces.

As we admire human devices with face recognition, we should also appreciate our innate ability of face recognition. Imagine life without face recognition; how challenging would it be to live without this ability? The capacity of the brain to recognize different faces is clearly a very precious gift. It is a most valuable gift of the One who creates each face differently. That is, He gives us the ability to recognize faces and accordingly He also makes each face unique enough for us to be able to differentiate it from others. In this way, He fulfills our need for facial recognition to maintain our personal and social life. Imagine how our life would look like if everyone had identical faces or if we had no ability to recognize the differences in faces? How would you recognize your family and friends? How would you know who your parents were?

Interestingly, there is also a dedicated place in the brain to recognize words. In other words, we were created with the ability to read text and symbols. Some people lose their ability to read fluently after having an injury in the rear part of the left hemisphere of their brain. This is known as alexia or "word blindness". Interestingly, they can still walk, talk, and think as they did before the injury. However, they can't read. Then cannot even recognize their own handwriting. Thus, we should also be very thankful for this innate ability to recognize words.

Similarly, the brain has a dedicated location for speech. The Broca area of the frontal lobe of the brain is in charge of speech production. When this part of the brain is damaged, people lose their ability to speak. In short, it is increasingly evident that the human brain was created with particular abilities to allow people to learn, think, read, and speak.

Interestingly, in this age of information, as we decode more knowledge about the universe, it is easier to take our thinking abilities for granted and become more arrogant- acting as if we were self-sufficient. The fact is, we can lose our thinking abilities any time- either through an accident or illness, such as Alzheimer's disease. It is unfortunate that there is now a higher occurrence of Alzheimer's Disease- a form of dementia that affects millions of people around the world and causes a gradual decline in the ability to think and remember. In short, it is important to recognize and appreciate the tremendous value of the learning brain that was granted to us at the birth.

What did you do to get such a valuable gift? Did you buy your brain? How much did you pay for it? Of course, it is not available for sale. Neurologists (brain surgeons) have studied the brain and nervous system for decades to achieve what they call 'mastery' of the human brain. What they call mastery is only a superficial understanding of how the brain works. Moreover, just consider the more complicated operations of the abstract mind that work within our brain. In a sense, the brain is a tool of the conscious mind. In fact, there is an incredible depth to the brain that no human can understand. Even if all the neurologists in the world pooled their resources and knowledge together, they would not be able to recreate a fraction of the living, learning brain in its glorious perfection.

Indeed, Artificial Intelligence (AI) is an attempt to mimic the learning mind by coded instruction to come up with specific and limited learning structures in the computer's 'brain' or Central Processing Unit. The AI is the science of teaching or programming computers to perform tasks that normally require human intelligence such as decision-making. What is often overlooked is that even with the latest technological advances and ground-breaking innovation, humans are simply incapable of achieving anything that remotely competes with the learning brain.

Do you think that your brain is hard-wired like a computer? It is not. Your brain has neuroplasticity. This means that it is designed to readjust in response to changes in its environment. What does this mean? This means that your brain's size, density and strength change based on the daily choices you make. What you choose to do with your brain allows it to change its structure to serve you better.

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"DO YOU KNOW WHY TNT, THE EXPLOSIVE SUBSTANCE USED TO MAKE BOMBS AND MILITARY WEAPONS, WAS FIRST INVENTED?"

WHY DO WE LEARN?

Learning and knowledge can be used for both good and evil. Do you know why TNT, the explosive substance used to make bombs and military weapons, was first invented? The maker of TNT, German chemist Joseph Wilbrand, first intended to make a honey-coloured yellow dye to be used in clothing. To think that a chemical used to dye clothes yellow was used to make weapons responsible for the deaths of millions of people is mind-boggling. This shows that while the human brain is designed for learning, it can be also used for evil gains as well.

Google Earth is another example of an invention that is used for both good and evil. This incredible satellite-view map app can be used to view spectacular images of Earth's beautiful landscapes (or to simply find your way home!). It can also be used to commit crimes such as murder and theft. An example of using Google Earth for malicious purposes is when thieves in the UK mapped out where the lead-roofed churches were and then proceeded to steal and sell the valuable lead.

This means that although the brain is a precious gift, its value increases when we use it for good and beneficial purposes. However, if it is used for evil objectives, it is a form of destroying this beautiful gift. Thus, we should use it to the best of our ability in accordance to the purpose of its creation. Indeed, the One who created us gave us a learning brain to experience and learn about the wonders of the world and the Hidden Reality within it. Each one of us was given a unique brain. Indeed, no two brains in the world are identical. Thus, our brain was especially made for us. It is truly a special gift from the Most-Kind and Most-Merciful.

Now that we learned about the value of our brain, we should reflect on how to be thankful for such a special gift. In order to be thankful, we need to reflect on the value of our brain and the hidden messages that it contains. Then, we need to know the Maker of all things who granted us with this precious brain and to thank Him and praise Him. We also need to remember His great kindness and generosity and try not to forget it. Three things are needed: remembrance, reflection, and gratitude.

1

Remembrance is recognizing that the brain bears precious and meaningful messages from our Creator, the Sustainer of all things. The brain is a sign indicating His many beautiful attributes.

2

Reflection is perceiving our priceless, miraculous brain as a gift of our Creator's mercy.

3

Gratitude is being thankful to the Creator for bestowing us with such an astounding brain with amazing learning abilities.

How can we express our gratitude for and appreciation of our learning brain?

The Maker of the learning brain does not need money. Everything belongs to Him. The best price or the best token of gratitude for our brain is to use it for the purpose of its creation- which is related to remembrance, gratitude, and reflection. That is, we need to think creatively and critically and ask effective questions to find solutions for the many problems we face in everyday life. This will allow us to appreciate life and be grateful to the Giver of life. We are also supposed to reflect and deeply focus on the way everything in the universe is created as a sign to its Maker. We should express our gratitude through good words and righteous actions. We should use our gifted brain and senses to witness, experience and actively remember the beauty all around us, offer thanks to our Maker and praise Him. We should be aware that the One who created us with such a marvellous learning brain sees what we choose to learn with it. We should be mindful of Him when using our knowledge and apply it in beautiful and beneficial ways.

In short, the One who grants us a learning brain wants us to learn the cosmic language spoken by all things and beings in order to read their hidden messages sent from the Hidden Power behind everything. Accordingly, we should explore the lasting beautiful meaning of everything, including our life. However, we tend to lose ourselves in the superficial beauties of this world and often we see only what is in front of us rather than reflect upon the deeper meanings that these signs point to. Superficial beauties however do not satisfy us. They leave us feeling empty and miserable and unable to express sincere gratitude for the gifts given to us. When we learn to perceive the lasting and beautiful meanings within things, we will feel more fulfilled and it becomes easier to enjoy the blessings of life and to appreciate and be grateful to our Creator. That is, when we use our brain and other senses in accordance with the guidance of their True Owner, we will be blessed with a good life in this world. More importantly, we can expect to be granted with these precious gift once again after this earthly life to enjoy the splendid bounties of eternal paradise. What a great reward!

TEST YOUR KNOWLEDGE

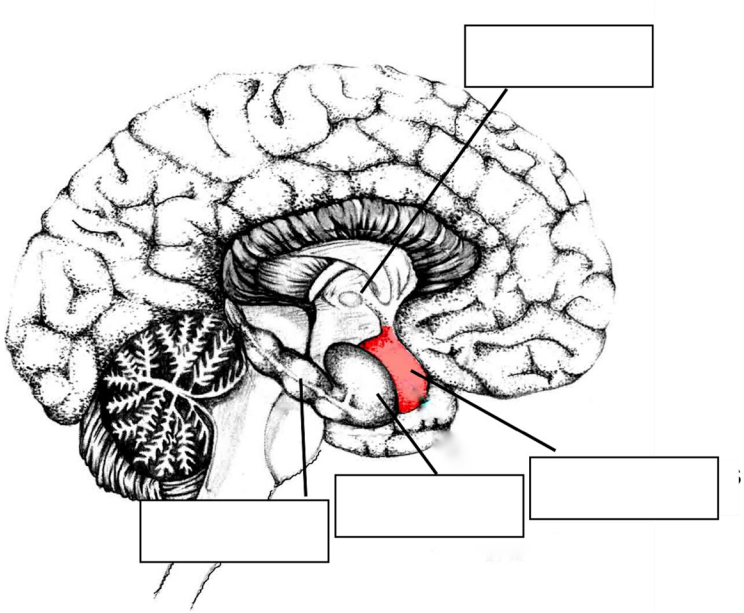
I. UNDERSTANDING SCIENCE TERMS

Complete the following sentences with a word or words from the Science Terms that will make the sentence correct.

Prefrontal Cortex *Parietal Lobe* *Good* *Evil* *Limbic System* *Temporal Lobe*

1. The _____ is the largest part of the brain.
2. The _____ is involved in reasoning and reading.
3. You use the _____ for geometry.
4. Learning and knowledge can be used to spread _____ and _____.
5. The _____ is used to regulate emotions.

Label the following diagram:



II.CHECKING FACTS

Determine whether each of the following is true or false.

1. The learning brain emerged by accident through the random coming together of atoms and molecules._____
2. Learning is the work of neurons in the brain._____
3. The One who bestows the brain's ability to absorb knowledge, is both aware of the brain and aware of what the brain learns._____
4. Our knowledge is not connected to the universe._____
5. Knowledge is the outcome of Creative activities in the universe._____
6. The human species could survive without learning._____

III.UNDERSTANDING CONCEPTS

Write a short answer for each question or statement.

1. What is the intended function of our prefrontal cortex?

_____

_____

2. What is the intended function of our parietal lobe?

_____

_____

3. List two things which make our learning brain superior to artificial intelligence?

4. List two things we learn about the Maker of the brain as we study our brain's learning mechanisms.

IV.APPLYING CONCEPTS

Write a paragraph to answer each question.

1. Why do you think learning is extremely valuable gift? Describe two things which make you appreciate the value of this gift.

2. The One who creates our brain has to be the Creator of the universe. Why?

3. How can you show your gratitude to the One who granted you the gift of learning?

4. What should we choose to learn? Why?

V. THINK-THANK GAME

In this "think-thank" game, we want you to think about your learning brain and give thanks to its Maker. We also call it the "play to praise" game. The goal of this game is to think of at least five things about your learning brain that you are thankful for.

Number of players: At least two.

Directions:

Player 1 repeats an appreciation phrase loudly and quickly. Player 2 responds, without pausing, with something to be thankful for. This is repeated five times.

To win:

Player 2 needs to respond five times (without pausing) with different things about your memory to be thankful for in order to win the game.

Here is an example of two rounds of this game:

1. Player 1 repeats the appreciation phrase loudly and quickly. For example: "Thanks to the Maker of the learning brain."
2. Player 2 responds, without pausing, with something about the eyes to be thankful for. For example: "For making us learn how to recognize words."
3. Player 1 repeats the appreciation phrase again loudly and quickly. For example: "Thanks to the Maker of the learning brain!"
4. Player 2 responds, without pausing, with another thing about the brain's memory to be thankful for. For example: "For making us recognize faces!"

This should be continued for another three rounds until Player 2 wins or loses.