Life and Death

Life is anything that grows and eventually dies. Various forms of life exist, such as plants, animals, fungi, protists, archaea, and bacteria. Biology is the science concerned with the study of life.

What Is Life?

There is currently no consensus regarding the definition of life. One popular definition is that organisms are open systems that are composed of cells, have a life cycle, undergo metabolism, can grow, adapt to their environment, respond to stimuli, reproduce and evolve. There are microbes and non-cellular life forms such as viruses.
The condition that distinguishes animals and plants from inorganic matter, includes the capacity for growth, reproduction, functional activity, and continual change preceding death. There is no precise definition of life, but there are definitions to separate living things from nonliving ones. Life is a physical process. Death is absense of life, when the process stops happening.

Living things

1. Living things are highly organized, and all living organisms are made up of one or more cells, which are considered the fundamental units of life.
2. Metabolism: growing, reproducing, and maintaining the structure of their bodies. Use energy and consume food/water to carry out the chemical reactions that sustain life. Regulated growth
3. Respond to stimuli or changes in their environment.
4. Reproduce themselves to create new organisms by passing their traits (and some information).
5. Evolution: components, organization etc of an organism change or evolve over time.

What is life (from genetic view)?

Living seems to be related to the ability of a group of atoms to reproduce their own structure in new atoms. The most remarkable molecule in life is RNA. DNA seems to be an improvement on that, but RNA's ability to reproduce itself may have been responsible for the early forms of life. But how did the first RNA get formed? Was there something that preceded RNA? No answer so far.
Fire causes more fire, but that is not considered "life" because no (genetic) information is passed on.

Is DNA everything?

Only 10% of our DNA is being used for building proteins. It is this subset of DNA that is of interest to researchers and is being examined and categorized. The other 90% are considered “junk DNA.” Our DNA is not only responsible for the construction of our body but also serves as data storage and in communication. The genetic code, follows the same rules as all our human languages. Living chromosomes function just like solitonic/holographic computers. Some report, "Living DNA substance obseved to react to language-modulated laser rays and even to radio waves". Not widely accepted yet.

Who are we?

We are complex and composite system made up of trillions of individual cells/microbes.
Number of cells in the human body is around 30-40 trillion.
Microbes - 300-400 trillion
Gastrointestinal tract alone comprise at least 10 trillion organisms of more than 1,000 species

Who are we, human?

Let us start with mammals.
Mammals are warm-blooded, have hair, and have mammaries that produce and secrete milk.
Therians are mammals that have their embryos develop in amniotic fluid, and a placenta, and do not lay eggs.
Eurachontids is any mammal that has dexterous hands/limbs to manipulate the fruits and food they ate, and hold on to them. Eurachontids have highly dexterous hands and arms, and a decently sized brain to judge distance and have a good sense of balance.
Primates, have fully enclosed eyeballs, that is, the eye is protected on all sides by bones of the skull, and having opposable thumbs, with a reduced olfactory region, and a more advanced brain.
Humanoid have two major groups: Lesser Apes, which is mostly the gibbons; and the Great Apes.
Great Apes don’t have much hair, a huge brain relative to your body mass, can form complicated social and emotional bonds with others, even outside their species. They have fingerprints, and a distinctive molar unique to the Hominids.
In terms of differences, there’s not much that separates primates, humans, apes, or monkeys.

Humans and pigs

There are a number of similarities between humans and pigs. These include various anatomic and physiologic traits, such as organ placement (and often size and function), skin similarities and some disease progression.
A pig weighing around 60 kilograms will, for example, resemble a human body in many ways, including fat distribution, cover of hair and ability to attract insects. For this reason, pigs have been used in medical research for over 30 years, and are what’s known as a translational research model. This means that if something works in a pig, it has a higher possibility of working in a human.
Dr. Tatsuo Kawai, director of the Legorreta Center for Clinical Transplant Tolerance and the

surgeon who performed the operation, said the pig organ was exactly the same size as a human kidney. When they stitched it in, connecting its blood vessels to Slayman's, Kawai said, it immediately "pinked up" and began to make urine.

Death? Forget it!

No one knows when you are going to die, all doctors have are statistics. The human mind fails to accept that death is the only thing guaranteed in life. So far, there is no eternal being.

We can never know with absolute certainty what happens after you die. You have only this one life. When it ends, you will almost certainly be in the same state you were in prior to your conception: non-existence.

Death Process or event

Science knows more about death than life and can tell what happens after one dies.

1. Body starts to cool, roughly two degree per hour til it reaches ambient, called "algor mortis"
2. The heart is no longer pumping so blood settles to the lowest point in the body, which turns purplish or black.
3. Without blood pumping the cells cannot exchange calcium and stiffening occurs.Body loosens up again as the cells decay and are unable to hold the stiffness.
4. As parts of neural net starts to shut down due to oxygen deprivation, some networks resort to emergency prevention formation. Memories and visions, flood the mind in a flood of noise as the last remaining sections attempt to rewire itself. (Near death experience stories). One quickly devolve into a primordial state where only basic senses and perception is present, and when those final flickers dwindle, only small static sparks of circuitry fire with nowhere to connect to. Slowly everything comes to stand still.
5. Then the chemicals begin to break down as decomposition and new microbe life takes over. No longer an organism or a system, but become like the rocks and dirt, and soon rejoin the Earth.
6. The cells are not getting oxygen and other important chemicals and start to die (autolysis). As autolysis takes place the body changes color, from gray to green, to other colors, and shows white veins under the skin, called marbling, from the production of gasses from the dying cells. Chemicals and acids in the body used to digest food start to digest the body.
7. Insects start to appear and start to lay eggs.
8. Putrefaction starts. Food in the stomach, acids, chemicals start to decay and give off gasses and cause bloating and splintering. The eyes and tongues are often pushed out of the body by the gas pressure. Bodies begin to stop resembling the living person.
9. As the body bloats and fills with gas, the dead cells in the skin and flesh no longer have the elasticity they once had and start to blister, peel and split. The body starts to turn into mush sitting in a puddle of chemicals and fluids.

10. Advanced decomposition followed by Skeletonization which can take from one year to 10,000 years or more depending upon the ambient conditions.
11. Strangely, the stain on the ground left by bodily chemicals can remain for several years despite rain and other elements.

One dies and born(changes) many times, constantly, until one turns into dirt. Every cell in human body is replaced every 7 years. That's nearly EVERY atom. Death is not kind, or unkind.
Why not just appreciate the beauty of life for what it is. Like a brush of paint on an epic painting, we started at some point, and ended at some other point. We existed, that is all! Death should remind us that we are not gods. By our definition, a god exists always, eternally. Living a good life to the best of our abilities, is the purpose of living.

Near-death experiences

The cause of near-death experiences is unknown and opinions differ from person to person. Some have a more spiritualistic view and believe that when a person’s soul leaves their physical body and goes on to the afterlife.
Death is defined as the point at which the heart no longer beats, and blood flow to the brain is cut off. But in some cases, there’s a burst of brain (neural) energy as someone dies. Some Dead are aware they’re dead because their consciousness continues to work for some time after the body has stopped. Scientists and psychologists, are searching for a more logical explanation. Some think that the life review could be caused by euphoric endorphins being released or electrical discharges in the hippocampus (the brain area involved with memory); others say this brain activity is due to the brain being deprived of oxygen or glucose. One opinion is that the experience of seeing your life flash before your eyes might be caused by the stress hormone noradrenaline. These suggest that the brain is capable of organized activity during a near-death experience.

Lifespan - Life Expectancy

Life of humans can vary from 1 day to may be 125 years. Across mammals alone, expected lifespan can vary 100-fold, from shrews that live for no longer than 1.5 years to the bowhead whales that can live for more than 200.

For world, life expectancy at birth, both sexes combined is 73.2 years. For elected countries, data for 2020 is presented below:
1 Hong Kong 85.29
2 Japan 85.03
3 Macao 84.68
4 Switzerland 84.25
5 Singapore 84.07
6 Italy 84.01
7 Spain 83.99
8 Australia 83.94

16 Canada 82.96
19 New Zealand 82.80
27 Germany 81.88
29 United Kingdom 81.77
46 United States 79.11
64 China 77.47
136 India 70.42
Source: https://www.worldometers.info/demographics/life-expectancy/

Is there a Limit to The Human Lifespan?

Historically, life expectancy first started to drastically shoot up in the past hundred years or so because of elimination many deaths that occurred early in life. The introduction of antibiotics, aggressive vaccination campaigns, and measures to reduce infant and maternal mortality. Even the healthiest people who seem to have the ideal genes for longevity have not lived longer since then. Many knows that ageing itself is far more complicated and intertwined with humans' basic biology than just being a side effect of the individual diseases

Body-Mind-Spirit

1. Physical: Body including brain.
2. Mental or Mind: Intelligence and emotion;
3. Spiritual - Soul, Spirit, life force, Consciousness

Spiritual is beyond science. Beyond observation, experimentation....

Consciousness

Consciousness is awareness, the ability to experience, wakefulness, having a sense of self hood. Consciousness evolved gradually over the past half billion years and is present in a range of vertebrate species.

We perceive that the Sun is just rising, hear a few birds chirping, and maybe even feel a flash of happiness as the fresh morning air hits our face. In other words, we are conscious.

René Descartes proposed the notion of "cogito ergo sum" ("I think, therefore I am"), the mere act of thinking about one's existence. Descartes also believed the mind was separate from the material body — a concept known as mind-body duality

Integrated information theory starts with consciousness itself, and tries to work backward to understand the physical processes that give rise to the phenomenon. Brain seamlessly weaves together a complex web of information from sensory systems and cognitive processes. Several studies have shown that you can measure the extent of integration using brain stimulation and recording techniques.

The integrated information theory assigns a numerical value, "phi," to the degree of irreducibility. If phi is zero, the system is reducible to its individual parts, but if phi is large, the system is more than just the sum of its parts.

This system explains how consciousness can exist to varying degrees among humans and other animals. The mind is not only present in humans, but in all things.

Consciousness works a bit like computer memory, which can call up and retain an experience even after it has passed.
