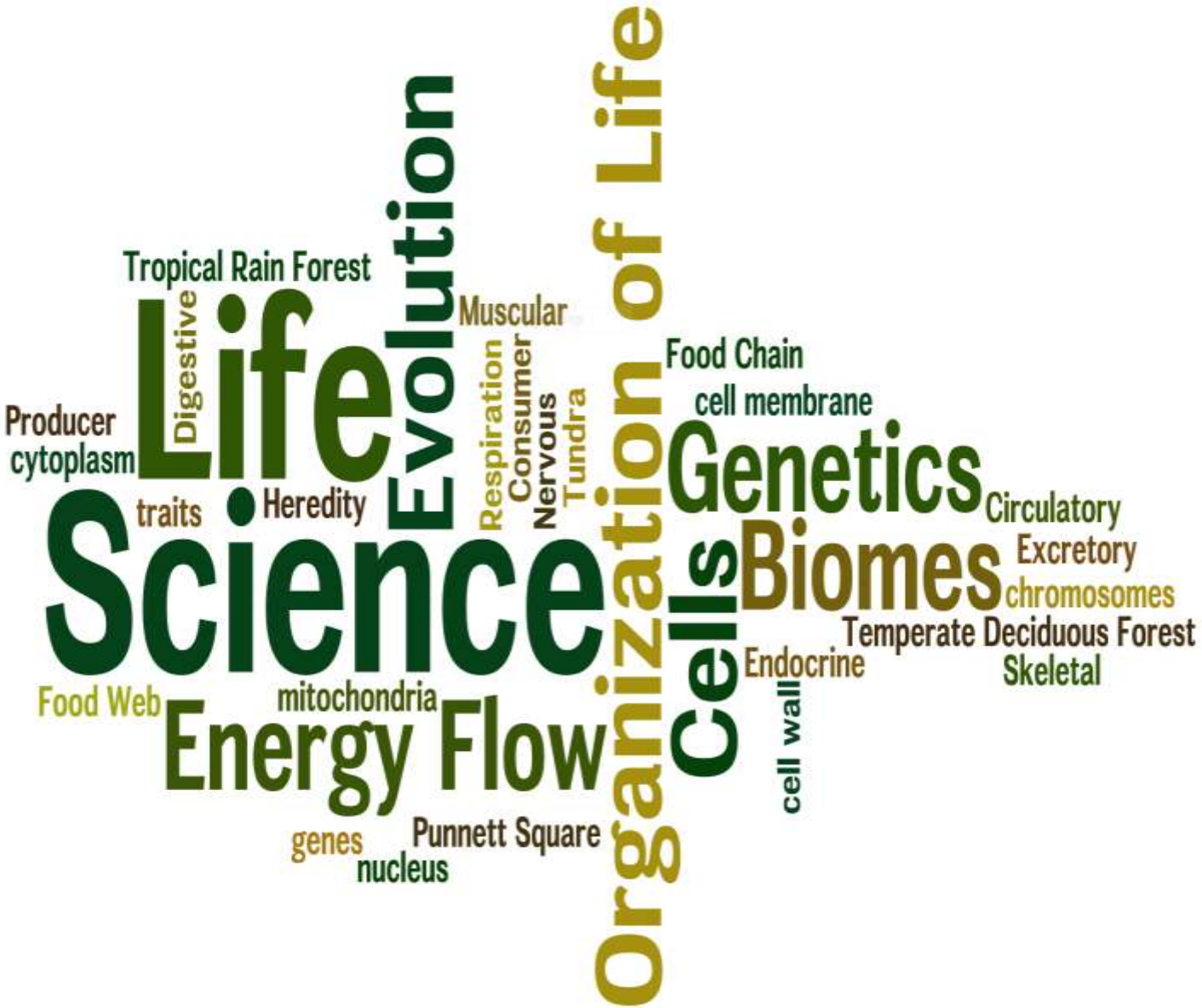
Tropical Rain Forest
Digestive
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Muscular
Organization of Life
Food Chain
Producer
cytoplasm
Respiration
Consumer
Nervous
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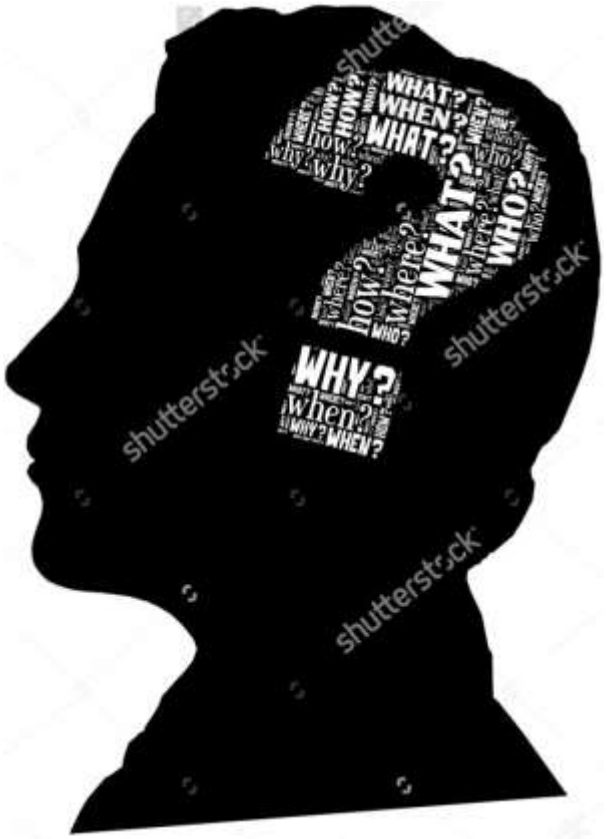
cell membrane
Genetics
traits
Heredity
Science
Cells
Biomes
Circulatory
Excretory
chromosomes
Temperate Deciduous Forest
Endocrine
Skeletal
Food Web
mitochondria
Energy Flow
cell wall
genes
Punnett Square
nucleus

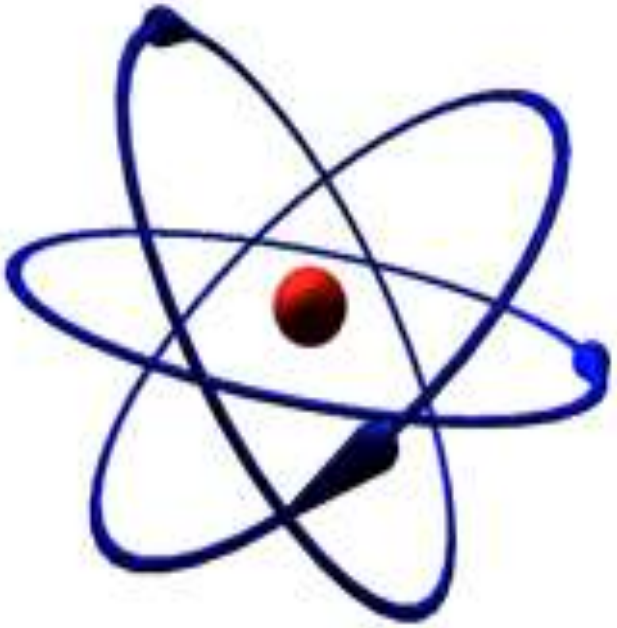
What is Science?

Science is the accumulation of independently verifiable facts about the world, connected and arranged into a body of credible knowledge.



Science

- The word science comes from the Latin "scientia," meaning knowledge.
- Science is the concerted human effort to understand, or to understand better, the history of the natural world and how the natural world works, with observable physical evidence as the basis of that understanding.



Life Science

- Life science is the branch of natural science dealing with the structure and behaviour of living organisms (microorganisms, plants, animals).
- There are a lot of new emerging streams in the life science field like environmental biology, biotechnology, microbiology, bioinformatics, bio medical engineering etc.

Life Science

- They have all have great applications in various industries and will help in betterment of humans.

- The various aspects of living organisms and their relationship with their surrounding and the environment is one of the many interesting topics coming under life science.

What is Data, Information and Knowledge?

What is Data, Information and Knowledge

Data, Information and Knowledge

Data is unprocessed facts and figures without any added interpretation or analysis. For eg.-"The price of crude oil is $80 per barrel."

Data, Information and Knowledge

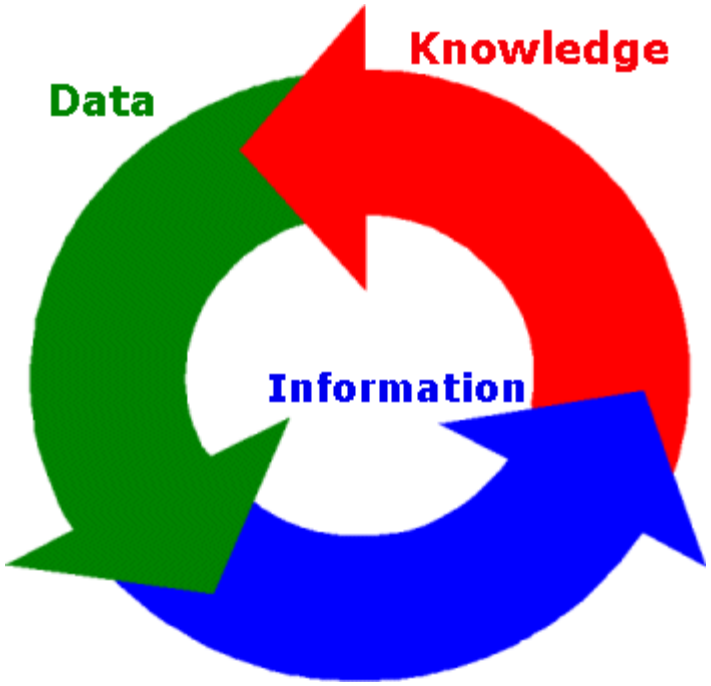
Information- Data that has been interpreted so that it has meaning for the user. "The price of crude oil has risen from $70 to $80 per barrel" gives meaning to the data and so is said to be information to someone who tracks oil prices.

Data, Information and Knowledge

Knowledge is a combination of information, experience and insight that may benefit the individual or the organisation. "When crude oil prices go up by $10 per barrel, it's likely that petrol prices will rise by 2$ per litre" is knowledge.

Data, Information and Knowledge

- The boundaries between the three terms are not always clear. What is data to one person is information to someone else.
- To a commodities trader for example, slight changes in the sea of numbers on a computer screen convey messages which act as information that enables a trader to take action. To almost anyone else they would look like raw data.
- What matters are the concepts and your ability to use data to build meaningful information and knowledge.



What is Pseudoscience?

pseu·do·sci·ence

/ˌsōdōˈsīəns/

noun

a collection of beliefs or practices mistakenly regarded as being based on scientific method.

Pseudoscience

- A pseudoscience is a set of ideas put forth as scientific when they are not scientific.

- Pseudoscience does not adhere to the scientific method.

Orgone Energy

- Personally, an example of pseudoscience is Wilhelm Reich's discovery of the Orgone Energy.
- Reich defined Orgone as an omnipresent, "life positive" energy he claimed to have discovered in 1939.
- Reich often used ‘Orgone energy' as a catch-all to explain every natural phenomenon for which there was no conventional explanation. His intentions were good, but his methods were not.
- -putative energy-

Scientific Temper

- **Scientific temper** is a way of life an individual and social process of thinking and acting which uses a scientific method, which may include questioning, observing physical reality, testing, hypothesizing, analysing, and communicating (not necessarily in that order).
- Scientific temper describes an attitude which involves the application of logic. Discussion, argument and analysis are vital parts of scientific temper. Elements of fairness, equality and democracy are built into it. Jawaharlal Nehru was the first to use the phrase in 1946.

Empiricism

- **Empiricism** is a theory that states that knowledge comes only or primarily from sensory experience.
- Empiricism in the philosophy of science emphasizes evidence, especially as discovered in experiments. It is a fundamental part of the scientific method that all hypotheses and theories must be tested against observations of the natural world rather than resting solely on a priori (something that can be known without experience or sense data- opp. a posteriori- with factuals) reasoning, intuition, or revelation.

Rationalism

- In epistemology(the theory of knowledge), **rationalism** is the view that regards reason as the chief source and test of knowledge or any view appealing to reason as a source of knowledge or justification. More formally, rationalism is defined as a methodology or a theory "in which the criterion of the truth is not sensory but intellectual and deductive".

Units of Measurements

- A **unit of measurement** is a definite magnitude of a quantity, defined and adopted by convention or by law, that is used as a standard for measurement of the same quantity.
- Any other value of that quantity can be expressed as a simple multiple of the unit of measurement.
- For example, length is a physical quantity. The metre is a unit of length that represents a definite predetermined length. When we say 10 metres (or 10 m), we actually mean 10 times the definite predetermined length called "metre".

Units of Measurements

- The definition, agreement, and practical use of units of measurement have played a crucial role in human endeavour from early ages up to this day.
- Different systems of units used to be very common. Now there is a global standard, the International System of Units(SI), the modern form of the metric system.
- In trade, **weights and measures** is often a subject of governmental regulation, to ensure fairness and transparency.
- The International Bureau of Weights and Measures (BIPM) is tasked with ensuring worldwide uniformity of measurements and their traceability to the International System of Units (SI).