Contest 1

1. I am a type of tissue, present in some organs in plants
2. I am one of the twin products of the double fertilization event, which evolved to support and nourish the embryo.
3. In cereals, I store the seed reserves and represent a major source of food and industrial raw materials for mankind.
4. As a result, most early research about my development was focused on cereals.
5. I am the most important economic part of the coconut fruit, and provide a refreshing drink during the immature stage and edible grade oil during the mature stage

WHO AM I? **Endosperm**

……

Contest 2

1. We are microscopic cellular membrane protrusions
2. We are involved in a wide variety of functions, including absorption, secretion and cellular adhesion,
3. We are bundles of protrusions loosely arranged on the surface of the cell with little or no cellular organelles
4. We exist either on our own or in conjunction with villi
5. We form a structure called the brush border that is found on the apical surface of some epithelial cells, such as the small intestines.
6. Our membranes are packed with enzymes that allow the breakdown of larger molecules into smaller ones allowing more effective absorption.

WHO ARE WE? **Microvilli**

Contest 3

1. We are microscopic channels which traverse the cell walls of plant cells and
2. some algal cells
3. We evolved independently in several lineages
4. There are two forms of us, primary which are formed during cell division, and secondary, which can form between mature cells
5. We are formed when fractions of the endoplasmic reticulum are trapped across the middle lamella as new cell walls are synthesized between two newly divided plant cells.
6. We are tiny passages or channels that allow the transfer of materials and communication between different cells.

WHO ARE WE? **Plasmodesmata**

……..

Contest 4

1. We are a phylum of Gram-negative bacteria
2. We appear to have originated in freshwater or a terrestrial environment
3. We live in a wide variety of moist soils and water either freely or in a symbiotic relationship with plants or lichen-forming fungi
4. We obtain energy via photosynthesis
5. Our name comes from our color
6. We produce a range of toxins known as cyanotoxins

WHO ARE WE? **Cyanobacteria**/**Cyanophyta**,

Contest 5

1. We are sticky little crustaceans related to crabs, lobsters, and shrimps.
2. Although we may look like mollusks with our shell-like covering, we are actually crustaceans, related to lobsters, crabs and shrimp.
3. We look like tiny shrimps in our larval stage, where we swim as members of zooplankton in the ocean.
4. At the adult stage, we are covered with calcareous plates and are cemented, head down, to rocks, pilings, ships driftwood, or seaweed, or to the bodies of larger sea creatures,
5. We are suspension feeders; dwelling continually in our shells, which are usually constructed of six plates

WHO ARE WE? **Barnacles**

…….

Contest 6

1. I am the most superior portion of the vertebral column,
2. I lie between the cranium and the thoracic vertebrae.
3. I consist of seven distinct vertebrae,
4. Two of my vertebrae are given unique names
5. By convention, vertebrae are numbered, with the first one (C1) closest to the skull and higher numbered vertebrae (C2–C7) proceeding away from the skull and down the spine

WHO AM I? **Cervical Vertebrae**

Contest 7

1. I am a type of insect belonging to the order Hemiptera.
2. I spend portions of my life in the water, on land and in the air.
3. To the untrained eye, I look like any ordinary beetle.
4. At closer inspection, one can see that I possess a pair of long paddle-like legs
5. My name sounds like a man who works on, deals in, or operates boats

WHO AM I? **Water boatman**

……..

Contest 8

1. I am a key concept in Mendelian inheritance and classical genetics
2. I am not inherent to an allele or its traits (phenotype).
3. I do not determine whether an allele is deleterious, neutral or advantageous.
4. I am a strictly relative effect between two alleles of a given gene of any function
5. I am the phenomenon of one variant (allele) of a gene on a chromosome masking or overriding the effect of a different variant of the same gene on the other copy of the chromosome

WHO AM I? **Dominance**

Contest 9

1. I am an important mechanism for transferring genetic diversity among populations
2. My level among populations can be estimated by observing the dispersal of individuals and recording their reproductive success
3. I can be measured by using the effective population size and the net migration rate per generation
4. I can be used to assist species which are threatened with extinction.
5. I am the transfer of genetic material from one population to another.

WHO AM I? **Gene flow/ Gene migration**

…….

Contest 10

1. I am the part of the cell division process
2. In a typical cell, I accompany every mitosis
3. I am a mechanical process during which a cell undergoes major mechanical deformation
4. I am the final step of cell division in which the cytoplasm of a mother cell is partitioned into two daughter cells.
5. I am the process of constricting the cytoplasm between the two forming daughter nuclei resulting in the formation of two cells.

WHO AM I? **Cytokinesis**

Contest 11

1. In botany, I am type of simple dry fruit
2. I am composed of three main parts – bran, endosperm and germ
3. My ovary wall is united with my seed coat, making it difficult to separate the two
4. I am popularly called a grain
5. I am found among the cereal grasses, such as corn.

WHO AM I? **Caryopsis**

…….

Contest 12

1. I am a type of soil
2. I am known to have much smaller particles compared to sandy soil
3. Soils with a lot of me make excellent farm land, but erode easily.
4. I am commonly found in floodplains and am the soil component that makes mud.
5. I am easily transported by moving currents and am mainly found near the river, lake and other water bodies
6. I am more fertile compared to the other three types of soil.

WHO AM I? **Silt soil**

Contest 13

1. In anatomy, I am a flexible rod formed of a material similar to cartilage.
2. I lie along the anteroposterior ("front to back") axis,
3. I am usually closer to the dorsal than the ventral surface of the animal
4. I am the defining structure of the chordates, and have essential roles in vertebrate development.
5. If a species possesses me at any stage of its life cycle, it is, by definition, a chordate

WHO AM I **Notochord**

……..

Contest 14

1. I am a distinct ecosystem
2. I am considered the most biologically diverse of all ecosystems, serving as home to a wide range of plant and animal life.
3. I am flooded by water, either permanently or seasonally, where oxygen-free processes prevail
4. The primary factor that distinguishes me from other land forms or water bodies is the characteristic vegetation of aquatic plants
5. I play a number of functions, including water purification, water storage, processing of carbon and other nutrients, stabilization of shorelines, and support of plants and animals

WHO AM I? **Wetland**

Contest 15

1. I am a biological phenomenon that occurs in plants and animals
2. I am essential for the maintenance of plant and animal fitness in temperate and arctic climates
3. My phenomenon is not as drastic and evident in animals as much as it is in plants
4. Many animals, especially those living at higher latitudes, use my phenomenon to adjust themselves to the seasonally behavioural and developmental strategies
5. I am the functional or behavioral response of an organism to changes of duration in daily, seasonal, or yearly cycles of light and darkness.

WHO AM I? **Photoperiodism**

……..

Contest 16

1. I am a biological process that has fascinated scientists and philosophers from ancient culture to the present day
2. Aristotle (384–22 BCE) was among the first to describe my process in detail
3. I am a very complex process which includes a number of coordinated complex processes in several stages.
4. I begin with an egg or ovum being fertilized by a sperm cell to form a zygote.
5. I am the process by which an embryo develops into a foetus.

WHO AM I? **Embryogenesis**

Contest 17

1. We are a group of arthropods
2. Some of our members resemble miniature adults from the moment they hatch,
3. But many species have larval forms with little or no resemblance to the adult.
4. Our members are characterized by having mandibles and compound eyes and living in mostly aquatic habitats,
5. We are named for our hard, crusty exoskeletons, well known to anyone who has dined on lobster or crab

WHO ARE WE? **Crustaceans**

……..

Contest 18

1. We are highly complex physical and biological systems.
2. We are important landscape elements by virtue of our spatial location in catchments.
3. We support a wide range of important ecological functions
4. Because we lie at the interface between terrestrial and aquatic ecosystems, we can strongly influence flows of energy and matter between them
5. Typically, we are left somewhat intact after nearby management actions or disturbances have occurred.
6. We are strips of vegetation that border water bodies such as rivers, streams, ponds, and lakes.

WHO ARE WE? **Riparian zones**

Contest 19

1. I am a genus of unicellular eukaryotes that are obligate parasites of vertebrates and insects
2. My life cycle involves development in a blood-feeding insect host
3. I require two different hosts in order to complete my life cycle
4. In vertebrates, I multiply within liver cells and red blood cells
5. I am commonly known as malaria parasite

WHO AM I? **Plasmodium**

.....

Contest 20

1. We are infectious agents that replicate as obligate intracellular parasites
2. We are found in soils, plants, rivers, and also as human microbiome.
3. We are the powerful regulators of bacterial populations in natural ecosystems
4. We colonize all body niches, including the skin, oral cavity, lungs, gut, and urinary tract.
5. Our name literally means "bacteria eaters"

WHO ARE WE **Bacteriophages**

Contest 21

1. I am a specialized parenchyma cell
2. I am derived by mitosis from the same parent cell and remain connected with each other.
3. I am absent in the sieve cells of non angiospermous vascular plants
4. I apparently function with the enucleate sieve-tube elements and die when they break down
5. Photosynthetic products are actively secreted into, and actively removed from, sieve-tube members by me.

WHO AM I? **Companion cell**

……

Contest 22

1. I am one of two long bones in the human body
2. My shaft is approximately triangular in cross section
3. My markings are influenced by the strength of the attached muscles.
4. I am the main weight-bearing bone of the two.
5. I am commonly referred to as shinbone.

WHO AMI? **Tibia**

Contest 23

1. I am a genetic method that searches for chromosomal segments
2. The first experiment to demonstrate my existence was carried out in 1905.
3. I play an important role in determining the nature of scope of hybridization and selection programmes
4. I am the most prominent exception to Gregor Mendel's Law of Independent Assortment
5. I am the tendency of DNA sequences that are close together on a chromosome to be inherited together during the meiosis phase of sexual reproduction.

WHO AM I? **(Genetic) Linkage**

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Contest 1

1. I am one of two processes required for the proper functioning of the body or organisms
2. Many pathways in my process have similar versions in the other process
3. Our concept has been adopted in the fitness industry, where we are employed to achieve two different goals.
4. I provide the chemical energy necessary for the maintenance and growth of cells.
5. I am the set of metabolic pathways that breaks down molecules into smaller units that are either oxidized to release energy or used in other anabolic reactions.

WHO AM I? **Catabolism**

……..

Contest 2

1. I am a layer of tissue that can be found in plants and animals
2. In some plants, I am a layer of cells immediately below the epidermis of leaves.
3. In animals, I am home to most of the fat that concerns people when they are trying to keep their weight under control
4. I am not strictly a part of the skin of animals, although the border between the dermis and I can be difficult to distinguish
5. I am the layer directly below the dermis and serves to connect the skin to the underlying fascia (fibrous tissue) of the bones and muscles.

WHO AM I? **Hypodermis**

Contest 3

1. I am one of the orders of the class insecta
2. I contain several families that can be considered beneficial to humans and their environment.
3. First, and most important, is the role of all my members in food chains in nature.
4. For example, larval Chironomidae occur in large numbers and provide a major prey base for many other invertebrates as well as for vertebrates such as fish, birds, bats, and amphibians.
5. My members are known by entomologists as “true flies” and possess a pair of wings on the mesothorax and a pair of halteres (modified, tiny wings), derived from the hind wings.

WHO AM I? **The Diptera**

……

Contest 4

1. I am a term that has existed for many years and am used in many fields of study
2. For example I am used to refer to a piece of land shaped like a triangle that is formed when a river splits into smaller rivers before it flows into an ocean
3. Thanks to covid 19 pandemic, I have become a household name
4. I am one of the variants of the covid 19 virus.
5. My strain is known to be more contagious than the other virus strains
6. I am the 4th letter of the Greek alphabet

WHO AM I? **Delta**.

Contest 5

1. I am a long bone vital in the formation of both the wrist and elbow joints
2. I am one of the two primary bones forming the forearms in humans,
3. I can be divided into three parts – the proximal or upper end, shaft, and the distal or lower end
4. I am a corresponding part of the forelimb of vertebrates above fishes
5. I am the bone on the little-finger side of the human forearm

WHO AM I? **Ulna**

……..

Contest 6

1. I am a long-term biological interaction
2. My name literally means, "eating at the same table"
3. At the Universities of Oxford and Cambridge, I am used to refer to professors eating at the same table as students (as they live in the same "college").
4. Like all ecological interactions, I vary in strength and duration
5. In my interaction, members of one species gain benefits while those of the other species neither benefit nor are harmed

WHO AM I? **Commensalism**

Contest 7

1. I am a clear to slightly yellow fluid
2. I am not unique to human beings or even mammals.
3. I am present from the formation of the gestational sac
4. My composition changes as pregnancy progresses
5. I am the liquid that surrounds the unborn baby (fetus) during pregnancy.

WHO AM I? **Amniotic fluid**

.....

Contest 8

1. I am an ubiquitous, low-molecular-weight protein
2. Despite being one of the most studied proteins in biology, my physiological function is not yet conclusively established
3. I am a sensitive marker for muscle injury, making me a potential marker for heart attack in patients with chest pain
4. Diving mammals such as whales are able to remain submerged for long periods because they have greater amounts of me in their muscles than other animals do
5. I am the oxygen-binding protein located mainly in muscles.

WHO AM I? **Myoglobin**

Contest 9

1. We are one of the four basic types of animal tissue,
2. We are uniquely positioned at the interface where self and non-self meets.
3. We are known to be activated by cigarette smoke to produce inflammatory mediators
4. We are the first tissue type to come into contact with external stimuli, such as chemicals and particulate material
5. We line the outer surfaces of organs and blood vessels throughout the body, as well as the inner surfaces of cavities in many internal organs.
6. In the lung, we separate the airways, and potential harmful materials within them, from the blood stream while allowing the free diffusion of oxygen and carbon dioxide

WHO ARE WE? **Epithelial tissue**

…….

Contest 10

1. I am a type of reaction that is initiated or sustained by the absorption of electromagnetic radiation.
2. I am an important process for the turnover of colored, photolabile compounds in ecosystems
3. I occur in the atmosphere as part of a series of reactions by which primary pollutants such as hydrocarbons and nitrogen oxides react to form secondary pollutants such as peroxyacyl nitrates
4. In aquatic systems, I have a major impact on the penetration depth of damaging UV-A and UV-B irradiation
5. In Photosynthesis, I am part of the light-dependent reaction

WHO AM I? **Photolysis, Photodissociation, , or Photodecomposition**

Contest 11

1. I am one of the crucial events in the life cycle of many flowering plants
2. I contribute to genetic recombination and survival of plant species in heterogeneous environments
3. I contribute to production of fruits and seeds that support associated food webs.
4. I am therefore, an important input in the production of the marketable goods of many crops and can have a substantial impact on production
5. I am the transfer of a pollen grain (male gametophyte) to a flower's stigma (receptive surface of the female reproductive organ),

WHO AM I? **Pollination**

……..

Contest 12

1. I am an elongated appendage from the head of an animal, either a vertebrate or an invertebrate.
2. I am also used to refer to an abnormal facial appendage that sometimes accompanies ocular and nasal abnormalities in humans
3. In vertebrates, I am an elongated nose or snout
4. In invertebrates, I am the tubular mouthparts used for feeding and sucking
5. I am an essential head appendage in insects that processes gustatory code during food intake
6. In butterflies, in particular, I am connected to the oral region where I serve as a feeding or a sucking organ.

WHO AM I? A **proboscis**

Contest 13

1. I am a stable dispersion (emulsion) of polymer microparticles in water.
2. I am found in nature, but my synthetic ones are common as well.
3. I am found in nature as a milky fluid in some flowering plants (angiosperms)
4. In many plant species, I can be processed to produce many materials
5. Natural rubber is the most important product obtained from me
6. I am used to make many other products including mattresses, gloves, swim caps, catheters and balloons

WHO AM I? **Latex**

……..

Contest 14

1. We are an important resource that plants may compete over.
2. Whether plants compete for us, or not, is determined by the factors that limit seed production
3. We have been classified as endangered, and recent extinctions have been documented for some of our members.
4. Thus, we are just as susceptible to the current human-induced mass extinction as any other group of organisms.
5. We are responsible for assisting over 80% of the world's flowering plants to reproduce.
6. We are organisms that move pollen from the male anther of a flower to the female stigma of a flower

WHO ARE WE? **Pollinators**

Contest 28

1. I am a sheet of internal skeletal muscle in humans and other mammals
2. I am an upward curved, C-shaped structure of muscle and fibrous tissue
3. I act as the floor of the thoracic cavity and the roof of the abdominal cavity
4. I am the most important muscle of respiration
5. I separate the thoracic cavity, from the abdominal cavity.

WHO AM I? **Diaphragm**

…….

Contest 29

1. We are one of the verities of floral patterns displayed by some animal-pollinated plants
2. We are sometimes visible to humans
3. However in some plants, such as sunflowers, we are visible only when viewed in ultraviolet light
4. We may be mutually beneficial, if we reduce pollinators' handling time, leading to an increased visitation rate and promoting pollen transfer.
5. We are patterns seen in flowers of some angiosperm species that guide pollinators to their rewards, that commonly take the form of nectar, pollen or both,

WHO ARE WE? **Nectar guides / pollen guides / honey guides/ floral guides**

Contest 30

1. We are important part of the immune response.
2. We can be classified as exogenous or endogenous according to our source.
3. Some of us start out as exogenous and later become endogenous (for example, intracellular viruses)
4. We are "targeted" by antibodies
5. We are substances that are capable of stimulating an immune response, specifically activating lymphocytes, which are the body's infection-fighting white blood cells

WHO ARE WE? **Antigens**

…….

Contest 31

1. My name sounds like an implement used for lifting food to the mouth or holding it when cutting.
2. But I am a multiprotein complex with helicase and DNA synthesis activities
3. I am created by helicases, which break the hydrogen bonds holding the two DNA strands together in the helix
4. I am a Y-shaped active region where two strands of DNA are separated and replicated continuously
5. I am called a fork because my structure resembles a two-pronged fork

WHO AM I? **The replication fork**

Contest 32

1. In ecology, I describe one of the five main activities threatening global biodiversity.
2. I am much more difficult to document and no reliable, compiled statistics are available for me.
3. I can lead to resource destruction, including extinctions
4. However, it is also possible for me to be sustainable,
5. I am used to refer to the harvesting of a renewable resource to the point of diminishing return

WHO AM I? Overexploitation / Overharvesting

…….

Contest 33

1. I am the smallest functional unit of striated muscle tissue
2. I am composed of two main protein filaments—actin and myosin
3. Which are the active structures responsible for muscular contraction.
4. I give skeletal and cardiac muscles their striated appearance
5. I am recognizable as the familiar banding pattern observed when striated muscle is seen through the light microscope
6. I am the repeating sub-units that form the myofibrils

WHO AM I? **Sarcomere**

Contest 34

1. I am a borrowed from Latin which literally means 'little ring'
2. To the mycologist, I am a structure on certain species of mushroom
3. To the botanist, I am structure on fern and moss sporangia
4. In Ichthyology I am used to refer to series of concentric rings formed in the scales of bony fishes
5. In mathematics I am the region between two concentric circles
6. In mosses, I am a complete ring of cells around the tip of the sporangium, which dissolve to allow the cap to fall off and the spores to be released.

WHO AM I? **Annulus**

……

Contest 35

1. I am one of the essential components of the life processes of plants
2. For many years, plant physiologists have attempted to attain an understanding of my process
3. In tropical radioecology, I describe the movement and distribution of radionuclides within the plant subsequent to foliar deposition and absorption by the leaves
4. To the soil biologist, I am the movement of soil constituents (organic or mineral) within the profile and/or between horizons
5. To the geneticist, I am the exchange of parts between non homologous chromosomes
6. To the plant phsiologist, I am the conduction of soluble material (such as metabolic products) from one part of a plant to another

WHO AM I? **Translocation**

Contest 36

1. I am one of the most important reaction sequences in biochemistry.
2. My series of reactions are responsible for most of the energy needs in complex organisms,
3. The molecules that are produced in my reactions can be used as building blocks for a large number of important processes
4. In eukaryotic organism, I take place in the matrix of mitochondria and am an integral part for the generation of adenosine triphosphate (ATP).
5. I am a series of chemical reactions used by all aerobic organisms to generate energy through the oxidization of acetate—derived from carbohydrates, fats, and proteins —into carbon dioxide.

WHO AM I? **Krebs cycle / Citric acid cycle/ tricarboxylic acid cycle**

…….

Contest 37

1. We are a group of seed-producing plants
2. Our seeds contain endosperm that stores food for the growth and development of the plant
3. We lack stigma, hence we are pollinated directly by the wind.
4. Though we have vascular tissues which help in the transportation of nutrients and water, our xylem does not have vessels, and our phloem has no companion cells and sieve tubes.
5. Fossil evidence suggests that we originated during the Paleozoic era, about 390 million years ago.
6. Our name comes from the composite word in Greek which literally means 'naked seeds'.

WHO ARE WE? **Gymnosperms**

Contest 38

1. I am a natural aging biological process which occur in terrestrial, freshwater and marine ecosystems
2. I am historically used in reference to the natural aging of lakes.
3. Although I am commonly caused by human activities, I can also be a natural process, particularly in lakes
4. My visible effect is often nuisance algal blooms that can cause substantial ecological degradation in water bodies and associated streams
5. I am simply the production of organic matter in excess of what an ecosystem is normally adapted to processing.

WHO AM I? **Eutrophication**

…….

Contest 39

1. I am a comparatively modern technique, having become an effective technique in pest control only since about 1890.
2. However, there are antecedent historical events without which my discovery and conceptualization would have been much delayed.
3. I am based on the knowledge of inharmonious (negative) ecological interactions between species
4. I present the advantage of substituting the use of pesticides and other toxic chemical products in the control of plagues and diseases.
5. However, I should be employed with caution and with serious prior study to avoid a harmful ecological disequilibrium
6. I am the method of controlling pests such as insects, mites, weeds and plant diseases using other organisms

WHO AM I? **Biological control**

Contest 40

1. We are a wide variety of organisms, ranging from animals to plants and even microorganisms.
2. What constitutes us is not clear and varies widely between countries, international bodies and other communities
3. There has been much debate over us and the potential benefits and risks associated with us.
4. Though the main concern with us is the lack of testing, we are seen as beneficial by many, especially people in the agricultural industry.
5. We are organisms whose genetic materials have been altered using genetic engineering techniques.

WHO ARE WE? **Genetically modified organisms/ Genetically engineered organisms**