**BIO CHECKLIST**

**CELLS**

Organelle, Cell,

Tissue, Organ, System

Nucleus

Mitochondrion

Chloroplast

Cell Wall

Cytoplasm

Cell Membrane

Starch

Glycogen

Vacuole

Specialization

**TRANSPORT**

Osmosis

Diffusion

Concentration Gradient  
Semi-Permeable

Active Transport

**DIET**

Micro/Macronutrient

Carbohydrate/Glucose (Benedict’s sol’n)

Protein (Biuret sol’n)

Fat (Ethanol)

Starch (Iodine)

Glycogen

Vitamin A, B, C, D

Water/Fat Soluble

Iron, Calcium

Roughage/Fibre

Balanced diet

Malnutrition

Anorexia, Bulimia

**DIGESTION**

Enzyme/Substrate

Denaturation, Active site

pH, acid, alkaline

Amylase

Pepsin, Trypsin

Lipase

Polypeptide, Amino acid

Fatty acid, Glycerol

Mouth/Ingestion

Oesophagus, Peristalsis

Stomach/Chyme/HCl

Duodenum

Liver, Bile, Emulsification

Pancreas, Pancreatic Juices

Ileum, Absorption, Villi

Assimilation

Large Intestine/Colon

Rectum, Egestion

Enamel, Dentine, Pulp

Incisor, Canine, (Pre)molar

**RESPIRATION**

Aerobic and Anaerobic

ATP and ADP

Lactic acid

Trachea, Epiglottis

Cilia, Mucus, Goblet cells

Bronchi, Bronchioles

Alveoli, Epithelial cells

Intercostal muscles

Diaphragm

Oxygen debt

Vital capacity

**PLANT NUTRITION**

Photosynthesis

Palisade mesophyll

Spongy mesophyll

Epidermal layer

Stomata, Guard cell

Transpiration

Vascular bundle

Xylem, Lignin

Phloem, Companion cell

Sink and Source

Capillarity, Root Pressure

Chlorosis, Plasmolysis

**PLANT GROWTH**

Stamen, Anther, Filament

Pistil, Stigma, Style, Ovary

Pollination

Double fertilisation

Ovule, Pericarp

Phototropism

Gravitropism

Auxin and Gibberelin

Radicle and Plumule

Endosperm, Testa

Mono/Dicotyledon

Succulent

**CIRCULATION**

Red and White blood cells

Lymphocyte, Phagocytosis

Haemoglobin

Plasma

Platelet

Artery, vein, capillary

Pulmonary artery/vein

Aorta and Vena Cava

Ventricle and atrium

Semilunar valves

Coronary arteries

Atherosclerosis

Coronary thrombosis

Fibrinogen and Fibrin

Lymph/Tissue fluid

**NERVOUS SYSTEM**

Sensory/motor/relay nerve

Synapse, Neurotransmitter

Central/Peripheral

Axon, dendrite, myelin

Cranial/Spinal reflex arc

Cerebrum

Cerebellum

Medulla

Hypothalamus

Stimulant, Depressant

**SKIN/SKELETON**

Epidermis and Dermis

Fatty/Adipose tissue

Hair follicle/Piloerection

(Vaso)dilation/constriction

Compact and Spongy bone

Bone marrow

Cartilage, Synovial fluid

Tendon and Ligament

Humerus/Radius/Ulna

Femur/Tibia/Fibula

Antagonistic muscles

Skeletal/Smooth muscles

Hinge Joint

Ball and socket joint

Point of origin/insertion

Ribcage, Sternum

**HORMONES**

Oestrogen, Progesterone

Testosterone

Pituitary gland (ADH, FSH, LH)

Adrenal gland (Adrenalin)

Pancreas (Insulin)

Thyroid gland (Thyroxine)

Endocrine / Exocrine

**THE EYE**

Pupil

Iris (Circular, Radial)

Retina

Optic nerve

Sclera, Choroid, Cornea

Aqueous/Vitreous humour

Ciliary muscle

Suspensory ligament

Lens, Accomodation

Short/Longsightedness

Concave and Convex

Astigmatism

Glaucoma, Cataract

**EXCRETION**

Deamination

Afferent and Efferent

Nephron, Filtrate

Bowman’s capsule

Ultrafiltration

Proximal and Distal convoluted tubules

Selective reabsorption

ADH/Collecting Duct

Ureter, Bladder, Urethra

Homeostasis

Negative feedback

Osmoregulation

**REPRODUCTION**

Gamete, Zygote

Sperm, Ovum

Testes, Ovaries

Uterus, Endometrium

Sperm duct/Vas deferens

Fallopian tube/Oviduct  
Vasectomy/Tubal ligation

Ovulation

Fertilisation

Menstruation

Corpus luteum

Rhythm method

Barrier method

Birth control pill

Embryo, Fetus

Placenta, Umbilical cord

Amniotic sac/fluid

**DIVISION / GENETICS**

Gene and Allele

Chromosome, Chromatid

Homologous

Dominant and Recessive

F1 and F2 Generation

Codominance

Incomplete dominance

Homo/Heterozygous

Genotype and Phenotype

Diploid/Haploid/Polyploid

Mitosis/Meiosis/Synapsis

Spindle fibre/Centromere

Reduction division

Continuous/Discontinuous

Variation

Test Cross/Punnett Square

Blood Type Alleles

Sex-Linked Disease

Genetic engineering

Recombinant DNA

Natural/Artificial Selection

**DISEASE**

(Non-)Communicable

Chronic/Acute

Virus and Bacteria

Pathogen and Vector

Passive and Active Immunity, Vaccination

Antiseptic, Antibiotic

**Deficiency** (Anaemia, Rickets, Scurvy, Beri-Beri)

**Pathogenic** (Cholera, Syphilis, Typhoid, Malaria, Dengue, Leptospirosis, etc.)

**Lifestyle** (Diabetes, Obesity, Hypertension)

**Hereditary** (Haemophilia, Sickle cell anaemia, albinism, Down syndrome)

**ECOLOGY**

Ecosystem/Habitat/Niche

Population/Community

Food chain/Food Web

Autotroph and Heterotroph

Producer and Consumer

Predator and Prey

Symbiosis (Parasitism

Mutualism,Commensalism)

Decomposer/Detrivore

Pyramids of Numbers, Energy and Biomass

Energy Flow vs. Cycle

Bioaccumulation/Mercury

(De)Nitrification

Nitrogen fixation

Haber Process, Ammonia

Pollutant/Pollution

Eutrophication

(Non) biodegradable

Species Density/Frequency

Quadrat, Line Transect

Pitfall trap