**Zoology Notes**

**Taxonomy –**

**Aristotle –**

**Carolus Linnaeus –**

**Hierarchical System –**

**Binomial nomenclature –**

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**-**

**-**

**R.H. Whittaker –**

**Kingdom Monera**

**Cell type –**

**Cell number –**

**Feeding type –**

**Example –**

**Kingdom Protista**

**Cell type –**

**Cell number –**

**Feeding type –**

**Example –**

**Kingdom Fungi**

**Cell type –**

**Cell number –**

**Feeding type –**

**Example –**

**Kingdom Plantae**

**Cell type –**

**Cell number –**

**Feeding type –**

**Example –**

**Kingdom Animalia**

**Cell type –**

**Cell number –**

**Feeding type –**

**Example –**

**Zoology –**

**Symmetry –**

**Asymmetry –**

**e.g.**

**Radial symmetry –**

**e.g.**

**Bilateral symmetry –**

**e.g.**

**Direction and position in bilateral animals**

**Anterior –**

**Posterior –**

**Ventral –**

**Dorsal –**

**Classification –**

**Vertebrates –**

**Invertebrates –**

**Phylum Porifera –**

**Traits**



**Water circulation –**

**Structure**

**Ostia –**

**Spongocoel –**

**Osculum –**

**Epidermis –**

**Collar cells –**

**Amebocytes –**

**Spicules –**

**Reproduction**

**Asexual –**



**Sexual –**

**Monoecious –**

**Dioecious –**

**Classification –**

**4 main types**











**Phylum: Cnidaria –**

**Examples:**

**Traits**



**Body forms**

**Polyp –**

**Medusa –**

**Hydra structure**

**Ectoderm –**

**Endoderm –**

**Mesoglea –**

**Mouth –**

**Gastrovascular cavity –**

**Tentacles –**

**Nematocysts –**

**Basal disk –**

**Gonads –**

**Testes –**

**Ovary –**

**Reproduction**

**Asexual –**

**Sexual –**

**Hermaphrodite –**

**Jelly fish –**

**Box jelly –**

**Anemones and coral –**

**Reefs –**

**Barrier reefs –**



**Marginal reefs –**

**Atolls –**

**Economic effects**

**Negative –**

**Benefits -**

**Phylum: Platyhelminthes –**

**Examples:**

**Traits**



**Types -**

**Planarian structure**

**Ectoderm (epidermis) –**

**Endoderm –**

**Mesoderm –**

**Advantage –**

**Disadvantage –**

**Eyespot –**

**Flame cells –**

**Digestive system –**

**Movement -**

**Reproduction**

**Asexual –**

**Binary fission –**

**Sexual –**

**Tapeworms –**

**Advantages of parasitism –**

**Disadvantages of parasitism –**

**Tapeworm structure**

**Scolex –**

**Hooks and suckers –**

**Neck –**

**Proglottids –**

**Cuticle –**

**Tapeworm infestations**

**Symptoms –**

**Cure –**

**Life cycle –**

**Prevention –**

**Flukes –**

**Endoparasites –**

**Cure? –**

**Sheep liver fluke –**

**Alternation of hosts –**

**Life cycle –**

**Prevention –**

**Chinese liver fluke –**

**Life cycle –**

**Prevention –**

**Phylum: Nematoda -**

**Examples:**

**Traits**



**Advantages of a complete digestive system –**

**Why are worms long?**

**Excretory system –**

**Reproduction –**

**Freeliving –**

**Parasites –**

***Ascaris* –**

**Life cycle –**

**Pinworms –**

**Life cycle –**

**Cure –**

**Prevention –**

**Hookworms –**

**Life cycle –**

**Symptoms –**

**Prevention –**

**Trichina worms –**

**Life cycle –**

**Prevention –**

**Filarial worms –**

**Life cycle -**

**Prevention –**

**Phylum: Annelida –**

**Examples:**

**Traits**



**Typical invertebrates –**

**Classes**

**Oligocheata –**

**e.g. –**

**Polychaeta –**

**e.g. –**

**parapodia –**

**Hirudinea –**

**e.g. –**

**removal –**

**medicinal uses**

**past –**

**present –**

**Earthworm structure**

**Prostomium –**

**Clitellum –**

**Setae –**

**Mouth –**

**Pharynx –**

**Esophagus –**

**Crop –**

**Gizzard –**

**Intestines –**

**Anus –**

**Aortic arches –**

**Dorsal blood vessel –**

**Ventral blood vessel –**

**Brain –**

**Ventral nerve cord –**

**Ganglia –**

**Seminal vesicles –**

**Seminal receptacles –**

**Muscles –**

**Cuticle –**

**Nephridia –**

**Earthworm reproduction –**

**Phylum Mollusca –**

**Examples:**

**Traits**



**Classification –**

**Three major classes of Mollusks**

**Gastropoda –**

**e.g. –**

**Bivalvia –**

**e.g. –**

**Cephalopoda –**

**e.g. –**

**Uses humans have for mollusks**

**Cephalopods –**

**Intelligence –**

**Size –**

**Mouth –**

**Siphon –**

**Chambered nautilus –**

**Gastropods –**

**Radula –**

**Pests –**

**Bivalve structure**

**Shell –**

**Layers**



**Pearl formation –**

**Mantle –**

**Adductor muscles –**

**Foot –**

**Incurrent and excurrent siphons –**

**Gills –**

**Palps –**

**Mouth –**

**Esophagus –**

**Stomach –**

**Digestive gland –**

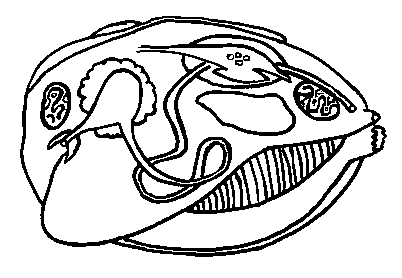
**Intestines –**

**Anus –**

**Heart –**

**Pericardium –**

**Nephridium –**

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**Bivalve reproduction -**

**Phylum Echinodermata –**

**Examples:**

**Traits**



**Relationship to vertebrates –**

**Water vascular system –**

**Tube feet –**

**Madreporite –**

**Sea stars –**

**Feeding method –**

**Regeneration –**

**Reproduction –**

**Brittle stars –**

**Sea urchins and sand dollars –**

**Aristotle’s lantern –**

**Sea cucumbers –**

**Human uses for echinoderms –**

**Echinoderm embryology –**

**Zygote –**

**Cleavage –**

**Morula –**

**Blastula –**

**Gastrula –**

**Bipinnaria -**

**Phylum Arthropoda –**

**Examples:**

**Traits**



**Exoskeleton –**

**Advantages –**

**Disadvantages –**

**Classes of Arthropods**

**Name Body Regions Legs Respiration Examples**

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**Biological success –**

**Indications of success**



**Reasons for arthropod success**



**Chilopoda –**



**Dipopoda –**



**Insecta –**

**Entomology –**

**Classification –**

**Metamorphosis –**

**No –**

**Incomplete –**

**Gradual –**

**Complete –**

**8 Main Orders**

**Odonata –**

**Orthoptera –**

**Hemiptera –**

**Homoptera –**

**Lepidoptera –**

**Diptera –**

**Coleoptera –**

**Hymenoptera -**

**External Grasshopper Structure**

**Head –**

**Mouthparts**

**Labrum –**

**Labium –**

**Palps –**

**Mandibles –**

**Maxillae –**

**Eyes**

**Compound –**

**Simple –**

**Antennae –**

**Thorax –**

**Forewings –**

**Hindwings –**

**Walking legs –**

**Jumping legs –**

**Abdomen –**

**Tympanum –**

**Spiracles –**

**Ovipositor –**

**Insect benefits**



**e.g.**



**e.g.**



**e.g.**



**e.g.**



**e.g.**



**e.g.**



**Harmful to man**



**e.g.**



**e.g.**

**e.g.**



**e.g.**

**Insect control –**







**Arachnida –**

**Spider structure**

**Cephalothorax –**

**Abdomen –**

**Eyes –**

**Pedipalps –**

**Chelicerae –**

**Sucking stomach –**

**Digestive gland –**

**Dorsal heart –**

**Book lungs –**

**Silk glands and spinnerets –**

**Spider reproduction –**

**Spider affects on humans –**

**Positive –**

**Negative –**

**Other arachnids**

**Harvestmen (daddy-long-legs) –**

**Ticks –**

**Diseases –**

**Mites –**

**Diseases –**

**Scorpions –**

**Crustacea –**

**Non-typical crustaceans –**

**Zooplankton –**

**Crayfish structure**

**Cephalothorax –**

**Abdomen –**

**Carapace –**

**Antennae –**

**Antennules –**

**Chelipeds –**

**Green gland –**

**Crayfish respiration –**

**Crayfish circulation –**

**Self amputation & regeneration -**