**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**

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 **Water circulation –**

 **Structure**

 **Ostia –**

 **Spongocoel –**

 **Osculum –**

 **Epidermis –**

 **Collar cells –**

 **Amebocytes –**

 **Spicules –**

 **Reproduction**

 **Asexual –**

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 **Sexual –**

 **Monoecious –**

 **Dioecious –**

 **Classification –**

 **4 main types**

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**Phylum: Cnidaria –**

 **Examples:**

 **Traits**

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**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 –**

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**Marginal reefs –**

**Atolls –**

**Economic effects**

 **Negative –**

 **Benefits -**

**Phylum: Platyhelminthes –**

 **Examples:**

 **Traits**

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**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**

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**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**

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**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**

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**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**

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**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**

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**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**

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**Exoskeleton –**

 **Advantages –**

 **Disadvantages –**

**Classes of Arthropods**

 **Name Body Regions Legs Respiration Examples**

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**Biological success –**

 **Indications of success**

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**Reasons for arthropod success**

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**Chilopoda –**

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**Dipopoda –**

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**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**

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**e.g.**

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**e.g.**

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**e.g.**

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**e.g.**

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**e.g.**

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**e.g.**

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**Harmful to man**

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**e.g.**

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**e.g.**

 **e.g.**

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**e.g.**

**Insect control –**

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**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 -**