**Zoology Notes**

**Chordata –**

**Traits -**

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**Prevertebrates –**

 **e.g. –**

**Vertebrates –**

 **Agnatha –**

 **e.g. –**

 **Chondrichthyes –**

 **e.g. –**

 **Osteichthyes –**

 **e.g. –**

 **Amphibia –**

 **Reptiles –**

 **Aves –**

 **Mammalia -**

**Advantages of the vertebrates –**

**Vertebrate behavior**

 **Innate –**

 **Reflex –**

 **Instinct –**

 **Self preservation –**

 **e.g. –**

 **Species preservation –**

 **e.g. –**

**Learned behavior –**

 **Conditioned response –**

 **e.g. –**

 **higher intelligence –**

**Class Agnatha –**

 **Examples –**

 **Traits**

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**Lampreys –**

 **Lesson from problem –**

 **Lamprey life cycle –**

 **Cure? –**

**Hagfish –**

 **Slime!!! -**

**Class Chondrichthyes –**

 **Examples –**

 **Traits**

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 **Shark Structure**

 **Skin –**

 **Fins –**

 **Dorsal –**

 **Caudal –**

 **Pelvic –**

 **Claspers –**

 **Pectoral –**

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 **Liver –**

 **Spiral valve –**

 **Cloaca –**

 **Vent –**

 **Sensory organs**

 **Nostrils –**

 **Eyes –**

 **Lateral line –**

 **Ampullae of Lorenzini –**

 **Teeth –**

 **Spiracles –**

 **Feeding methods –**

 **Whale shark -**

 **Skates –**

 **Rays -**

**Class Osteichthyes –**

 **Examples:**

 **Success –**

 **Ichthyology –**

 **Traits**

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**Spawning –**

 **Roe –**

 **Milt –**

 **Fry -**

**Fish Structure**

 **Nostrils –**

 **Eyes –**

 **Lateral line –**

 **Operculum –**

 **Fins –**

 **Dorsal –**

 **Caudal –**

 **Pectoral –**

 **Pelvic –**

 **Anal –**

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 **Scales –**

 **Mucus –**

 **Swim bladder –**

**Class Amphibia –**

 **Examples –**

 **Herpetology -**

 **Traits**

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**Typical vertebrates –**

**Amphibian heart –**

**Problems with terrestrial environment**

 **Respiration –**

 **Support and movement –**

 **Dehydration –**

 **Temperature –**

 **Reproduction –**

**Amphibian reproduction**

 **Amplexus –**

**Amphibian metamorphosis –**

**Hibernation –**

**Estivation –**

**Amphibian defenses**

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**Orders of Amphibia**

 **Anura –**

 **Examples –**

 **Knowing the difference**

 **Frogs Toads**

 **Caudata –**

 **Examples –**

 **Apoda –**

 **Examples –**

**Indicator species -**

**Frog structure**

 **Eyes –**

 **Nictitating membrane –**

 **Tympanum –**

 **Nares –**

 **Frog gender**

 **Male –**

 **Female –**

 **Mouth cavity**

 **Gullet –**

 **Glottis –**

 **Teeth –**

 **Tongue –**

 **Vocal sac opening –**

 **Eustachian tube opening –**

 **Internal structure**

 **Esophagus –**

 **Stomach –**

 **Small intestines –**

 **Large intestines –**

 **Cloaca –**

 **Vent –**

 **Liver –**

 **Bile -**

 **Gall bladder –**

 **Pancreas –**

 **Mesentery –**

 **Spleen –**

 **Lungs –**

 **Heart –**

 **Kidneys –**

 **Urinary bladder –**

 **Fat bodies –**

 **Gonads –**

 **Oviducts –**

**Class Reptilia –**

**Examples –**

**Traits**

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**Reptilian heart –**

**Reptilian adaptations for terrestrial environment**

 **To avoid dehydration –**

 **Reproduction –**

 **Copulation -**

**Amniotic egg –**

 **Amnion –**

 **Albumen –**

 **Yolk sac –**

 **Shell and chorion –**

 **Allantosis –**

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 **Orders of Reptiles**

 **Squamata –**

 **E.g. –**

 **Tesudinata -**

 **Knowing the difference**

 **Turtle Tortoise**

 **Crocodilia –**

 **Knowing the difference**

 **Alligator Crocodile**

 **Rhynchocephalia –**

 **Tuatara -**

 **Snakes –**

 **Methods of capturing food**

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 **Venomous snakes in the U.S. –**

 **Only venomous snake of this area –**

 **Rattlesnake structure**

 **Scutes –**

 **Eyes –**

 **Nostrils –**

 **Pits –**

 **Tongue –**

 **Jacobson’s organ –**

 **Gullet –**

 **Glottis –**

 **Solid teeth –**

 **Fangs –**

 **Venom gland –**

 **Hemotoxin –**

 **Neurotoxin –**

 **Venom gland muscle –**

 **Rattlesnake strike –**

 **Adaptations for swallowing prey**

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**Snake bite do’s snake bite don’ts**

**Lizards –**

 **Gila monster –**

 **Chameleon adaptations**

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 **Komodo dragon –**

**Turtles and tortoises –**

 **Carapace –**

 **Plastron –**

**Saltwater crocodile –**

**Class Aves –**

 **Ornithology –**

 **Traits**

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 **Classification –**

 **Altricial –**

 **e.g. –**

 **Precocial –**

 **e.g. –**

**General types of birds**

 **Waterfowl –**

 **e.g. –**

 **Raptors –**

 **e.g. –**

 **Shorebirds –**

 **e.g. –**

 **Upland game birds –**

 **e.g. –**

 **Song birds –**

 **e.g. –**

 **Flightless birds –**

 **e.g. –**

**Feathers**

 **Down –**

 **Contour –**

 **Quill –**

 **Feather structure**

 **Shaft –**

 **Barbs –**

 **Barbules and hooks –**

 **Preening –**

 **Preen gland –**

 **Molting –**

**Bird structure**

 **Senses**

 **Eyes –**

 **Ears –**

 **Nares –**

 **Respiratory system**

 **Pharynx –**

 **Trachea –**

 **Syrinx –**

 **Lungs –**

 **Air sacs –**

 **Digestive system**

 **Esophagus –**

 **Crop –**

 **Stomach –**

 **Proventriculus –**

 **Gizzard –**

 **Liver –**

 **Pancreas –**

 **Intestines –**

 **Rectum –**

 **Cloaca –**

 **Vent –**

 **Circulatory system**

 **Heart –**

 **Skeletal system**

 **Orbit –**

 **Keel –**

 **Muscular system –**

 **Excretory system**

 **Kidneys –**

 **Ureters –**

 **Reproductive system –**

**Class Mammalia –**

 **Mammalogy –**

 **Traits**

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 **Advantages of mammals**

 **Temperature regulation –**

 **Intelligence –**

 **Respiration –**

 **Care for young –**

 **Classification –**

 **Teeth –**

 **Canines –**

 **Molars –**

 **Incisors –**

 **Limbs –**

 **Reproduction –**

 **Gestation –**

 **Monotremes –**

 **e.g. –**

 **Marsupials –**

 **e.g. –**

 **Placentals –**

 **Placenta –**

 **e.g. –**

 **Orders of Placental Mammals**

 **Insectivora –**

 **e.g. –**

 **\* Chiroptera –**

 **e.g. –**

 **Edentata –**

 **e.g. –**

 **\* Rodentia –**

 **e.g. –**

 **Lagomorpha –**

 **e.g. –**

 **\* Carnivora –**

 **e.g. –**

 **Pinnipedia –**

 **e.g. –**

 **Sirenia –**

 **e.g. –**

 **\* Cetacea –**

 **Toothed whales –**

 **Baleen whales –**

 **Blue whale –**

 **Proboscidea –**

 **e.g. –**

 **\* Ungulates –**

 **Artiodactyla –**

 **e.g. –**

 **rumen –**

 **Perissodactyla –**

 **e.g. –**

 **\* Primates –**

 **e.g. –**

 **External pig structure**

 **Ears –**

 **Eyes -**

 **Nostrils –**

 **Toes –**

 **Digestive system**

 **Mouth –**

 **Pharynx –**

 **Esophagus –**

 **Stomach –**

 **Small intestines –**

 **Liver –**

 **Gall bladder –**

 **Pancreas –**

 **Large intestines (colon) –**

 **Rectum –**

 **Anus –**

 **Endocrine system**

 **Thyroid –**

 **Thymus –**

 **Pancreas –**

 **Respiratory system**

 **Trachea –**

 **Larynx –**

 **Lungs –**

 **Diaphragm –**

 **Circulatory system**

 **Heart –**

 **Atrium –**

 **Ventricle –**

 **Spleen –**

 **Excretory system**

 **Kidneys –**

 **Ureters –**

 **Urinary bladder –**

 **Urethra –**

 **Reproductive system**

 **Testes –**

 **Ovaries –**