K/H Level-Invertebrate, Vertebrate and Body Systems Review Sheet

1. List the characteristic for Kingdom Animalia Eukaryotic, multicellular, heterotrophic, no cell wall
2. What is the difference between an open and closed circulatory system? In general, which organisms would have an open system or a closed system? Open system blood collects in an area of the body, closed system blood is contained within vessels (arteries and veins), fast moving predators
3. What type of feeding habit do sponges have? Filter feeder
4. What is the main function of the excretory system? To filter blood and eliminate nitrogenous waste in the body
5. Is an endoskeleton internal or external? Internal structure Does it provide more or less support for an organism? More support
6. Explain the difference between endotherms and ectotherms. Ectotherms mainly use the environment to regulate body heat (reptiles basking in the sun) , endotherms can generate and regulate body temperature internally
7. How do sponges benefit other organisms? Protect coral reefs from wave action, used for commercial products, by providing shelter and habitat for other organisms
8. Explain what a nerve net is. Organized network of nerve cells that detect changes in environment, around mouth between inner and outer body wall
9. What are eyespots? Cells that can detect light
10. What are nematocysts? Stinging cells in a Cnidarian
11. What is a primitive brain referred to as? Ganglia
12. Why do parasitic worms lack a digestive tract? (Hint: think about what they need in order to obtain energy.) they obtain nutrients already digested by the host organism
13. What structure do segmented worms use for excretion? Nephridia
14. What evidence do we have that mollusks and annelids are closely related? They both have trochophore larvae indicating common ancestry
15. Explain the difference between a gastrovascular cavity and a digestive tract. GC has only one opening that is used for BOTH mouth & anus and the DT has 2 separate openings (1 for mouth and 1 for anus)
16. Which group of organisms have the most complex nervous system? Least complex? Humans, birds, worms, cnidarians
17. Aquatic organisms use _Gills___ to respire, while land organisms use _lungs_____ to respire.
18. Reptiles were the first types of animals to do what? Reproduce away from water
19. List characteristics of amphibians. Larval stage in water and breather through gills/skin, live on land as adults breathing through lungs/skin, has moist skin that contains mucus glands to prevent water loss
20. List characteristics of mammals. Hair, mammary glands
21. Reproduction in mammals involves internal or external fertilization? Internal
22. Is mammalian embryo development oviparous, ovoviviparous, or viviparous? Viviparous Describe each one. Oviparous – egg layer, ovoviviparous – eggs in mom, hatch and come out alive, viviparous – live birth
23. What is a notochord? Long supporting rod that runs through the body
24. What does the swim/air bladder do for bony fish? Maintain/ adjusts the buoyancy
25. What are (two) structures that help mammals maintain their body heat? Body fat, hair (fur)
26. Monotremes are unique from other mammals because they can do what? (Hint: Think about a Platypus.) lay eggs
27. What does the placenta do for some mammals? Exchanges materials between mother and embryo

28. Name 3 ways water can be lost in the body. Sweating, urinating, breathing
29. Which 3 systems remove waste products from the body? Excretory, respiratory, integumentary, digestive
30. What is convergent evolution? convergent evolution is when unrelated species encountered similar environments and evolved similar adaptations (shark, dolphin) What is divergent evolution? divergent evolution aka adaptive radiation is rapid species diversity as they adapt to new conditions
31. Review over all body systems including functions, names of systems, and organs involved.