

## QUIZ - CLASSIFICATION

1. What is taxonomy and why is it important?

*Taxonomy is the science of classifying living things. It is important in grouping organisms – identifying disease causing agents, studying evolution, etc.*

2. What do the two parts of a scientific name denote?

*First name is Genus name, second is species name*

3. List the levels of classification from the largest group down.

*Kingdom, Phylum, Class, Order, Family, Genus, Species.*

4. Give several examples of common names that might cause confusion if scientists were to use them.

5. Name the 5 kingdoms

*Animal, Plant, Monera, Protista, Fungi*

6. What are the main criteria used to define kingdoms?

*Nutritional requirements, and cell structure.*

7. How are monerans different from all other organisms?

*They are prokaryotic organisms.*

8. What is the primary difference between fungi and plants?

*Plants are autotrophic, fungi are heterotrophic*

9. Why are scientific names important in scientific work?

*Scientific names allow for universal classifications – scientists worldwide can identify a particular organism due to scientific names – it diminishes confusion associated with common names.*

10. What is the second largest level in today's classification system?

*Phylum*

11. Name three things you might learn about an organism by investigating the meaning of its scientific name.

*1. the genus name indicates the type of organism. 2. It also indicates closely related groups of organisms. 3. The species name gives a descriptive term relevant to that organism.*

12. What is the main difference between vascular plants and nonvascular plants?

*Vascular plants have transport systems that carry nutrients and water throughout the plants, non-vascular plants do not.*

13. How are bryophytes different from all other plant divisions

*They are multicellular, and have no vascular tissue, not true roots, stems or leaves.*

14. What is the main difference between gymnosperms and angiosperms?

*Gymnosperms have seed that develop inside cones, where angiosperms have seed that develop inside fruits which forms from flowers.*

15. What are the three differences that distinguish monocots and dicots?

*Leaf structure (veination), number of petals of flowers, arrangement of vascular bundles, root systems.*

16. Define invertebrate

*Organism that do not have backbones*

17. How do radial symmetry and bilateral symmetry differ?

*Radial symmetry – an organism can be divided into similar halves along any longitudinal section. Bilateral symmetry – an organism can be divided into similar halves by only one specific longitudinal axis.*

18. Name 3 characteristics shared by all mollusks

*Soft bodied, shell for protection, muscular foot to help with movement.*

19. How do the annelid and mollusk body plans differ?

*Annelids – segmented body with bilateral symmetry  
Mollusks – non-segmented body plan*

20. What is an exoskeleton?  
*Skeleton on the outside of the body*
21. List 3 characteristics shared by all arthropods.  
*Segmented body, jointed appendages, exoskeleton, bilateral symmetry.*
22. What features distinguish insects from other arthropods?  
*Antennae, 6 legs, 3 body segments.*
23. Name and give examples of 3 chordate classes  
*Class Aves (birds), Class Mammalia, Class Reptilia, Class Amphibia*
24. List four distinguishing features of vertebrates  
*Gill slits, notochord, dorsal cord, tail,*
25. Explain the difference between an autotrophic and heterotrophic cell and give examples of each type.  
*Autotrophs produce their own food via photosynthesis or chemosynthesis. E.g. plants, algae etc. heterotrophs rely on other organism for nutrition and energy requirements.*
26. Why do we need to classify living things?  
*Eliminates confusion, universal naming system, identify dangerous organisms, etc.*
27. Which have more features in common: members of the same kingdom, or members of the same species?  
*Same species*
28. The red iron bark tree is known scientifically as *Eucalyptus sideroxylon*. What is the red iron barks genus and species? Would you expect *Eucalyptus sideroxylon* and *Eucalyptus viminalis* to interbreed? Explain.  
*Genus – Eucalyptus. Species – sideroxylon. No they would not interbreed as they are not members of the same species.*
29. Cnidaria and molluscs are both soft bodied. How can you tell them apart?  
*Cnidarians do not have full digestive cavity – only single opening. Molluscs have a full digestive cavity.*
30. List the main features of chordates.  
*Notochord, dorsal nerve cord, true body cavities, paired gill slits, backbone.*
31. Name the 5 main groups of plants. What features have been used to classify plants into these groups?  
*Algae – contain chlorophyll, simple aquatic organisms. Bryophytes - simple plants, no vascular tissue, no true roots stems or leaves. Pteridophytes – true roots stems leaves, no flowers or seeds. Gymnosperms – seeds inside cones. Angiosperms – seeds inside flowers (fruits).*
32. What are tracheophytes? Name 2 examples.  
*Tracheophytes are plants with true leaves, stems and roots. They are Pteridophytes, Gymnosperms, and Angiosperms.*
33. How could you distinguish between  
a) a conifer and a flowering plant  
b) a liverwort and a fern  
a) *conifers are gymnosperms therefore have seeds in cones, angiosperms have seeds in flowers.*  
b) *Liverworts are bryophytes therefore no true leaves stems or roots, ferns are Pteridophytes and have true leaves, stems and roots.*
34. what characteristics would enable you to distinguish between  
a) A snake and an earthworm?  
b) A bird and a bat  
c) A platypus and a duck?  
a) *snake is a reptile and a vertebrate, earthworms are annelids and are invertebrates. (reptiles are chordates, earthworms are annelids)*  
b) *birds are Aves – feathers covering body, bats are mammals, contain mammary glands have fur covering body.*  
c) *Platypus are mammals – monotremes have fur on body and mammary glands, Ducks are Aves – feathers covering body lay eggs.*
35. Jellyfish are not really fish. To what phylum do they actually belong?  
*Cnidaria*