

1. Draw and label a sponge (**structures *and* functions!**) Include words such as choanocyte, osculum, spicule, archaeocyte and more!
2. Draw and label a cnidarian (**structures *and* functions!**)
3. Explain how a stinging cell in a cnidarian fires. Draw and label!
4. Compare Darwin's theory of evolution vs Lamarck's theory.
5. Explain how fossils, homologous structures, embryological relationships and molecular evidence are used as evidence for the theory of evolution.
6. Draw a chart to show major differences and similarities between the organisms in the kingdoms of Archaeobacteria, Eubacteria, Protista, Fungi, Plantae and Animalia
7. Describe the five agents of evolutionary change: mutation, genetic drift, gene flow, non-random mating, and natural selection
8. Compare gradualism vs punctuated equilibrium
9. Identify 6 criteria for classifying organisms as living
10. Draw and explain the lytic and lysogenic cycles of a virus
11. Draw and label an enveloped retrovirus
12. Give examples of the beneficial roles of bacteria as well as the negative effects of bacteria on our lives.

13. Create a chart that shows major advancements within the lower invertebrates.
14. Explain how annelids are more advanced than nematodes
15. Create a chart that shows major characteristics or advancements among the higher invertebrates.
16. Describe how echinoderms have a similar evolutionary history to humans.
17. Draw and label a starfish's internal structures. Include structures such as madreporite, tube feet, ampulla, ambulacral ridge, stone canal, ring canal, ossicles, pyloric caeca (digestive glands) etc.
18. Describe the specialized appendages of a crayfish, then draw and label a crayfish using words such as cheliped, swimmerets, carapace, cephalothorax, telson, uropod, antennule, thorax, rostrum etc.
19. Draw and label the shapes and forms (groupings) of bacteria.
20. Draw and explain the processes of binary fission and conjugation in bacteria.
21. Explain how you could design an experiment to test the effectiveness of various cleaning products (or antibiotics) on bacterial growth.
22. Compare the animal phyla we have learned in terms of cephalization, development of a coelom, symmetry, reproduction, digestion and nervous system

23. Compare convergent evolution and divergent evolution and give examples of each.
24. Draw and label a cell – give names and functions of at least 6 structures.
25. Describe the evolution of plants from unicellular algae to angiosperms. What major advancements occurred at each step?