**Unit #3 Review Sheet**

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| 1. What material did Hooke look at under a microscope? What did he name them? Looked at: Named them: | 2. What are the 3 parts to the cell theory? 1. All living… 2. Cells are the… 3. All cells come… | 3. Living things are “organized”. List the level of organization from most simple to complex.***Cells*🡪(A.)🡪*Organs*🡪(B.)🡪(C.)** **A.)****B.)****C.)** |
| 4. Label the microscope diagram using the word bank.microscope_labelling_full_size_landscape**Word Bank**1. Light Source b.) Eyepiece c.) Base

d.) Stage e.) Nosepiece f.) Diaphragmg.) Stage Clips h.) Coarse Adjustment Knob i.) Objective Lenses j.) Fine Adjustment Knob  | 5. Match the function with the word bank. \_\_\_\_\_\_\_\_ Controls the amount of light.\_\_\_\_\_\_\_\_ Focuses while using low power.\_\_\_\_\_\_\_\_ Focuses while using medium & high power.\_\_\_\_\_\_\_\_ Raises and lowers the stage.-----------------------------------------------------------6. Answer the magnification questions below.\_\_\_\_\_\_\_\_ Magnification under low power.\_\_\_\_\_\_\_\_ Magnification under medium power.\_\_\_\_\_\_\_\_ Magnification under high power.\_\_\_\_\_\_\_\_ Total magnification while using a medium power objective. |
| 7. Name each of the three cells pictured below:A. B. C.bacterial-cell-structure PROKARYOTE.jpeg Blank Animal Cell.JPG Plant Cell.JPG |
| 8. How is a ***prokaryote*** different than a ***eukaryote***? | 9. Which of the pictures in question 7 is a prokaryote?Which of the pictures in question 7 are eukaryotes? | 10. List 3 ways that plants cells are different than animal cells.1.2.3. |
| 11. Label the Cells Using the Word Bank**Word Bank**1. Cell Membrane2. Smooth ER3. Nucleolus4. Rough ER5. Lysosome6. Chromatin7. Mitochondria8. Ribosomes 9. Vacuole10. Cytoplasm11. Centrioles12. Cell Wall13. Golgi Bodies14. Chloroplasts15. Nucleus **Function**\_\_\_\_\_ Powers the cell.\_\_\_\_\_ Package & ship protein\_\_\_\_\_ Water & nutrient storage.\_\_\_\_\_ Produces ribosomes\_\_\_\_\_ Fluid of the cell\_\_\_\_\_ Makes protein\_\_\_\_\_ Transports protein & has  ribosomes attached\_\_\_\_\_ Digestive enzymes that break down cell waste.\_\_\_\_\_ Thin threads of chromosomes.\_\_\_\_\_ Controls what enters & leaves a cell. \_\_\_\_\_ Regulates cell activities\_\_\_\_\_ Transports protein & has no ribosomes attach\_\_\_\_\_ Site of photosynthesis\_\_\_\_\_ Helps cell divide\_\_\_\_\_ Rigid structure that offers support & protection Cell Diagram Resized Labeled.JPG |
|  Plant Cell Edited for Review Sheet.JPG | 12. True or False: \_\_\_\_\_\_\_\_The Cell Membrane and the Plasma Membrane are the same structure. |
| 13. What term means that the cell is picky about what enters and leaves? | 14. How many layers thick is the Plasma membrane? | 15. What are the 2 components that make up the Cell Membrane? 1. 2.  |
| 16. Define the terms ***hydrophilic***and ***hydrophobic.******Hydrophilic:******Hydrophobic:*** | 17. Define the terms ***polar*** and ***nonpolar***.***Polar:******Nonpolar:*** |
| 18. What term means that the cell is in “balance”? Explain how this term relates to the Cell Membrane. | 19. Define ***dynamic equilibrium***. |
| 20. Plasma Membrane.JPG | Label the Plasma Membrane using the following terms:***Protein, Phospholipid, Polar, Nonpolar, Hydrophilic, Hydrophobic*** |
| 21. How is **Passive Transport** different than **Active Transport?** | 22. Give 3 examples of Passive Transport:1.2.3. | 23. Define ***osmosis***. |
| 24. Define ***concentration gradient***: | 25. Explain how water moves in regards to the cell in each of the following solutions. Label each cell picture as ***hypertonic, hypotonic, & isotonic.******Hypotonic Solution.JPGIsotonic Solution.JPG Hypertonic Solution.JPG*** |
| 26. How does water move in each of these solutions? Label each as ***hypotonic, Isotonic, or hypertonic***.Beakers.JPG |
| 27. Draw ATP | 28. Draw ADP | 29. Where is energy stored in an ATP molecule? |
| 30. Write the equation for cellular respiration using words | Write the equation for cellular respiration using molecules. |
| 31. Write the equation for photosynthesis using words. | Write the equation for photosynthesis using molecules |
| 32. List the reactants of cellular respiration. | 33. List the products of cellular respiration. | 34. List the reactants of photosynthesis. | 35. List the products of photosynthesis. |
| 36. In what organelle does cellular respiration occur in? | 37. In what organelle does photosynthesis occur in? |
| 38. What is the Cell Cycle? | 39. What are the 2 phases that make up the cell cycle? |
| 40. What are the 3 divisions of interphase and describe what the cell is doing in each of the 3 phases: | 41. What are the 4 divisions of Mitosis listed in the order in which they occur? |
| 42. Label the following stages of the cell cycle and put them in the correct order:Anaphase good.JPGInterphase good.JPGMetaphase good.JPGProphase good.JPGTelophase good.JPG |
| 43. What are stem cells? | 44. How are embryonic stem cells different than adult stem cells? |
| 45. Give examples of specialized cells in the body: |