

Name: _____ Date: _____ Block: _____

The Big Picture: A Review of Biology

Questions

1. Define biology
2. What is the difference between a unicellular & a multicellular organism?
3. What is homeostasis and give an example?
4. What is an organic compound?
5. List the 4 types of organic compounds and what they are composed of?
6. What are the two types of cells and how do they differ?
7. A hypotonic solution causes a cell to _____? Why?
8. A hypertonic solution causes a cell to _____? Why?
9. An isotonic solution causes a cell to _____? Why?
10. Draw a diagram of an animal cell and label the following organelles and list their function. Nucleus, cell membrane, ER, Golgi body, Ribosomes, Mitochondria, Lysosome, Cytoplasm, Vacuole, Centrioles.
11. Draw a Venn diagram to compare and contrast plant and animal cells.
12. What are the 2 ways things are transported across the cell membrane? Give 2 examples of both.
13. What is the process by which organisms use energy from sunlight to make their own food (glucose)?
14. What is the process that breaks down glucose in order to make energy for an organism? And give the two types
15. Compare and Contrast the equation for cellular respiration and photosynthesis
16. What determines the sequence and arrangement of amino acids in a protein?
17. What type of cellular transport requires a cell to use energy?
18. What is the term that describes the movement of water through a cell?
19. If one side of the DNA molecule reads ATGCCGT, what would the complementary side read?

20. Draw and label the parts of a nucleotide
21. What did the original DNA that produced an mRNA strand with a sequence of AGUACA look like?
22. Transcription is the process of DNA acting as a template for creating an mRNA molecule. Where does this occur?
23. What are different versions of a gene for the same trait called?
24. What is the difference between a genotype and phenotype? And give an example of both
25. The Diagram below shows a cross between 2 individuals
What are the genotypes of the parents for this punnett square?

BB	Bb
Bb	bb

26. What is the difference between co-dominance and incomplete dominance?
27. What cells are formed during meiosis?
28. Compare and Contrast Mitosis and Meiosis. Draw the steps of both
29. What are the essential raw materials for photosynthesis?
30. Glycolysis occurs in which part of the cell?
31. What level of classification includes the fewest organisms?
32. What is the name of the symbiotic relationship where both organisms benefit?
33. What is carrying capacity?
34. What trophic level provides nourishment for the most organisms in the ecosystem?
35. What is the definition of an ecosystem?
36. Compare and contrast Biotic and Abiotic factors and give an example of both.
37. What are homologous structures?
38. What is the theory of evolution and who stated it?

39. The food chain always begins with photosynthesis which is done by the _____ and ends with a _____.
40. What is the difference between a haploid and diploid cell?