

- at are 3 types of passive, with the characteristics of each.
- Diffusion, moves from high to low concentration
 - osmosis, - transport of **water** through a membrane
 - facilitated diffusion- movement of a large molecule with the use of a carrier protein
40. What are 3 types of active transport, with the characteristics of each.
- Endocytosis- **taking in of material that is too large to pass through the membrane**
 - exocytosis-**ridding a cell of material by discharging it in sacs at cell surface,**
 - NA/K pump- **Na in , k out**
41. Active transport requires input of energy from the cell to move molecules through membrane.
42. When the concentration of molecules on both sides of a membrane is the same, the molecules will move continuously across the membrane in both directions.
43. When the concentration of molecules on the outside side of a membrane is greater than the molecules on the inside, the molecules will move into the cell.

Cellular Respiration

44. Write the chemical equation for respiration.
45. Cellular respiration changes the chemical energy stored in organic molecules into ATP
46. the three parts of an ATP molecule are adenine, ribose, triphosphate
47. sequence of events in aerobic cellular respiration are
glycolysis → Krebs cycle → electron transport
48. Energy, carbon dioxide is released during cellular respiration
49. Glucose and oxygen are needed to start respiration. Water and carbon dioxide is a product of respiration.
50. Aerobic means with the use of oxygen
51. Lactic acid fermentation causes muscle soreness.
52. Fermentation produces energy with out oxygen
53. The oxygen used in cellular respiration ends up in H₂O.

Photosynthesis

54. Write the chemical equation for photosynthesis
55. Light, carbon dioxide, water are the reactants needed, oxygen, glucose(sugar) are the products.
56. Light-absorbing molecules that collect the sun's energy are called chlorophyll.
57. Organisms that make their own food are called autotrophs
58. Organisms that cannot make their own food and must obtain energy from the foods they eat are called heterotrophs.

Cell Division

59. Mitosis is when the cell's nucleus divides into two new nuclei.
60. During cytokinesis two new daughter cells are formed.
61. Cancer is a disease in which cells grow and divide uncontrollably.
62. Replication occurs during interphase
63. Chromatids are identical strands of chromosomes
64. During Meiosis chromosome pairs separate to form new sex cells.
65. When sex cells combine to produce offspring, each parent contributes half the normal number of chromosomes.
66. Draw a cell in each stage of mitosis and meiosis.
67. When are tetrads formed? Prophase I
68. X and Y chromosomes are called sex chromosomes.
69. What is crossing over? Segments of DNA are exchanged
70. Explain how a cell's diploid and haploid number are related. Example diploid=8 haploid=4
71. When do homologous chromosomes line up next to each other? Metaphase I