WAYGROUND formerly Quizizz **Worksheets**

Name

Macronutrients

Class

Total questions: 75

Worksheet time: 38mins

Date

1. 

The protein inside the egg undergoes changes due to the exposure to heat , this process is called

a) denaturation
b) The physical changes
c) fertilization
d) manufacture

2. Which of the following functions is associated with nucleic acids ?

a) Energy storage
b) Genetic information storage
c) Structural support
d) Enzyme activity

3. What are nutrients that must be consumed in large amounts called?

a) Micronutrients
b) Macronutrients
c) Kilocalories
d) Vitamins

4. Which unit is used in the United States to measure the energy content of food?

a) Kilocalories
b) Joules
c) Calories
d) Watts

5. What are the three macronutrients that provide energy to the body?

a) Vitamins, minerals, and water
b) Carbohydrates, fats, and proteins
c) Fiber, sugar, and starch
d) Micronutrients, calories, and kilocalories

6. What nutrient is primarily associated with providing energy to the body according to the guide?

a) Carbohydrates
b) Minerals
c) Water
d) Fats

7. Which nutrient is essential for building and repairing tissues in the body?

a) Proteins
b) Fats
c) Water
d) Vitamins

8. Which nutrient is crucial for maintaining hydration in the body?

a) Water
b) Minerals
c) Fats
d) Carbohydrates

9. What are the three main types of macronutrients?

a) Vitamins, minerals, organic acids
b) Protein, carbs, fats
c) Water, fiber, minerals
d) Protein, vitamins, organic acids

10. Which of the following is an example of a micronutrient?

a) Protein
b) Carbs
c) Vitamins
d) Fats

11. What is the primary difference between macronutrients and micronutrients?

a) Macronutrients are required in smaller amounts, while micronutrients are required in larger amounts.
b) Macronutrients provide energy, while micronutrients support bodily functions.
c) Macronutrients include vitamins and minerals, while micronutrients include protein and fats.
d) Macronutrients are organic acids, while micronutrients are carbs.

12. What is the primary function of carbohydrates in the human body?

a) Energy storage and insulation
b) Primary fuel source
c) Body structure and repair
d) Immune support and antioxidant

13. Which macronutrient provides the highest energy per gram?

a) Carbohydrates
b) Proteins
c) Fats
d) Vitamins

14. What is a calorie, as defined in the learning material?

a) A unit of temperature measurement
b) A measure of energy
c) A measure of weight
d) A unit of water volume

15. How much energy is required to raise the temperature of 1 gram of water by 1°C?

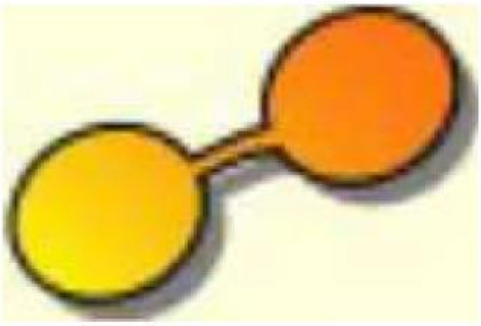
a) 1 calorie
b) 10 calories
c) 100 calories
d) 0.1 calorie

16. 1 kilocalories (kcal) = ... kilojoules (kJ)?

a) 4.184
b) 3.141
c) 2.718
d) 1.618

17. If you have 10 kilocalories (kcal), how many kilojoules (kJ) would that be after conversion?

a) 41.84 kJ
b) 4.184 kJ
c) 418.4 kJ
d) 0.4184 kJ

18. 

Which type of carbohydrate consists of only one saccharide molecule?

a) Mono-saccharide
b) Di-saccharide
c) Poly-saccharide
d) Oligo-saccharide

19. What is the defining characteristic of a di-saccharide?

a) Contains one saccharide molecule
b) Contains two saccharide molecules
c) Contains many saccharide molecules
d) Contains no saccharide molecules

20. Which type of carbohydrate contains many saccharide molecules?

a) Mono-saccharide
b) Di-saccharide
c) Poly-saccharide
d) Oligo-saccharide

21. What is the general formula for carbohydrates?

a) Cn(H2O)n
b) CH4
c) C6H12O6
d) H2O

22. What does the prefix "mono-" in monosaccharides mean?

a) Two
b) One
c) Many
d) None

23. Which of the following is an example of a monosaccharide?

a) Sucrose
b) Glucose
c) Lactose
d) Maltose

24. What type of sugar is formed from the condensation reaction of two monosaccharides?

a) Monosaccharide
b) Disaccharide
c) Polysaccharide
d) Ketone

25. What is the primary energy source for the human body?

a) Fructose
b) Glucose
c) Sucrose
d) Lactose

26. What is the general formula for most carbohydrates?

a) $Cn(H2O)n$
b) $Cn(H2O)2n$
c) $Cn(H2O)n+1$
d) $Cn(H2O)n-1$

27. What functional group does glucose contain?

a) Ketone group
b) Aldehyde group
c) Hydroxyl group
d) Carboxyl group

28. What is formed from the condensation reaction of two monosaccharides?

a) Polysaccharide
b) Disaccharide
c) Monosaccharide
d) Protein

29. What is an example of a disaccharide formed from glucose and fructose?

a) Maltose
b) Lactose
c) Sucrose
d) Cellulose

30. What is the molecular formula shared by glucose and fructose?

a) $C6H12O6$
b) $C5H10O5$
c) $C7H14O7$
d) $C8H16O8$

31. What is the primary role of carbohydrates in the body?

a) Building muscle
b) Providing energy
c) Storing fat
d) Regulating hormones

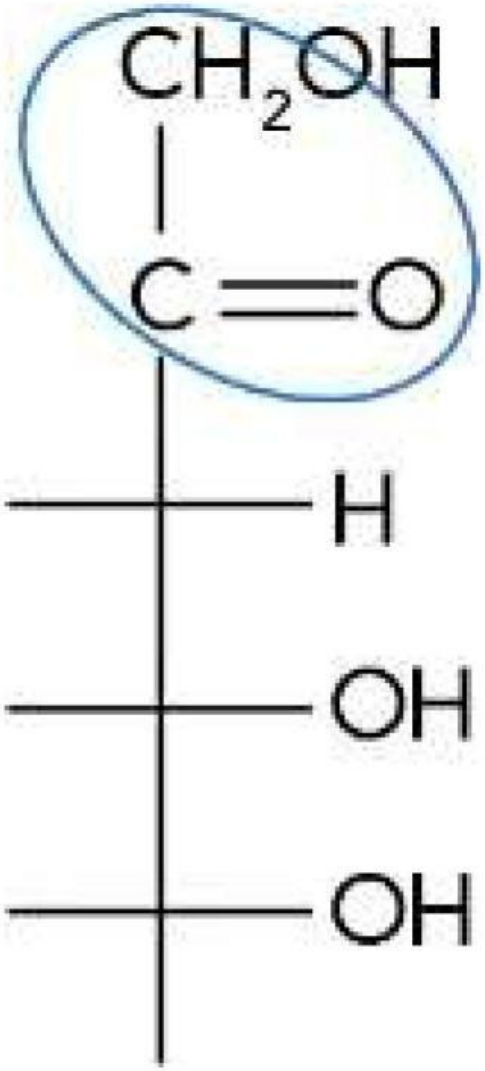
32. What is the main source of energy for humans?

a) Proteins
b) Carbohydrates
c) Fats
d) Vitamins

33. Which functional group is present in glucose?

a) Ketone
b) Aldehyde
c) Hydroxyl
d) Carboxyl

34.



Which of the following carbohydrates is a disaccharide?

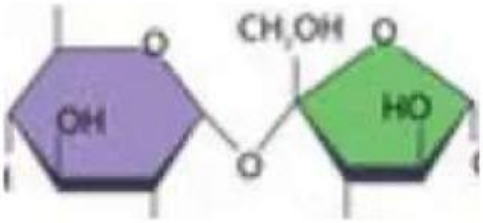
a) Glucose
b) Fructose
c) Sucrose
d) Ketone

35. What type of functional group is present in fructose?

a) Aldehyde
b) Ketone
c) Hydroxyl
d) Carboxyl

36. Which of the following is a monosaccharide?

a) Maltose
b) Sucrose
c) Glucose
d) Lactose

37. 

What is the main difference between monosaccharides and disaccharides?

a) Monosaccharides are composed of two sugar units, while disaccharides are composed of one sugar unit.
b) Monosaccharides are single sugar molecules, while disaccharides are composed of two sugar molecules bonded together.
c) Monosaccharides are complex carbohydrates, while disaccharides are simple carbohydrates.
d) Monosaccharides are found only in plants, while disaccharides are found only in animals.

38. Which of the following is a disaccharide?

a) Fructose
b) Galactose
c) Sucrose
d) Glucose

39. Which monosaccharide is commonly found in fruits and is known for its sweetness?

a) Glucose
b) Fructose
c) Galactose
d) Maltose

40. Which disaccharide is formed from glucose and galactose?

a) Maltose
b) Sucrose
c) Lactose
d) Fructose

41. What are disaccharides formed by?

a) The combination of three monosaccharides
b) The combination of two monosaccharides
c) The combination of four monosaccharides
d) The combination of one monosaccharide

42. Which two monosaccharides combine to form sucrose?

a) Glucose and galactose
b) Fructose and lactose
c) Glucose and fructose
d) Galactose and maltose

43. 

What is starch primarily used for in plants?

a) Energy storage
b) Protein synthesis
c) Fat storage
d) Water retention

44. What type of carbohydrate is starch classified as?

a) Monosaccharide
b) Disaccharide
c) Polysaccharide
d) Oligosaccharide

45. What are polysaccharides formed by?

a) Linkage of many monosaccharide monomers
b) Combination of disaccharides
c) Condensation of glucose molecules
d) Breakdown of starch molecules

46. What is the major storage form of glucose in plants?

a) Cellulose
b) Starches
c) Disaccharides
d) Polysaccharides

47. What is the main structural component of plant cell walls?

a) Starches
b) Cellulose
c) Polysaccharides
d) Glucose monomers

48. Why is starch digestible while cellulose is not?

a) Starch contains fewer glucose monomers
b) Cellulose is made of disaccharides
c) The bond orientation between glucose monomers differs
d) Starch is a simpler polymer

49. Which of the following is a storage form of glucose in plants?

a) Cellulose
b) Glycogen
c) Starch
d) Sucrose

50. What determines whether a polymer is starch or cellulose?

a) The number of glucose monomers
b) The orientation of hydroxyl (-OH) groups
c) The type of plant producing the polymer
d) The energy content of the polymer

51. What is the key takeaway regarding the roles of starch and cellulose?

a) Starch builds plant cell walls, and cellulose provides energy.
b) Starch provides energy, and cellulose builds plant cell walls.
c) Both starch and cellulose provide energy to plants.
d) Both starch and cellulose are digestible by humans.

52. What is the main structural difference between starch and cellulose?

a) Starch has alternating orientation of -OH groups, while cellulose has the same orientation.
b) Starch has the same orientation of -OH groups, while cellulose has alternating orientation.
c) Both starch and cellulose have alternating orientation of -OH groups.
d) Both starch and cellulose have the same orientation of -OH groups.

53. Why is cellulose not digestible by the human body?

a) It has the same orientation of -OH groups, making it soluble.
b) It has alternating orientation of -OH groups, forming strong hydrogen bonds.
c) It is composed of starch, which is insoluble.
d) It provides energy, making it indigestible.

54. What is the key idea regarding the functions of starch and cellulose?

a) Starch builds structure, while cellulose stores energy.
b) Starch stores energy, while cellulose builds structure.
c) Both starch and cellulose store energy.
d) Both starch and cellulose build structure.

55. Why does apple juice have more calories than an equal mass of apple pulp?

a) Apple juice contains cellulose, which provides calories.
b) Apple juice contains fructose, which provides energy, while cellulose in apple pulp does not.
c) Apple pulp contains fructose, which provides energy, while apple juice does not.
d) Apple juice contains starch, which provides energy, while apple pulp does not.

56. What is the primary function of starch in the body?

a) Energy storage
b) Structural support
c) Digestion aid
d) Protein synthesis

57. Why is cellulose insoluble and indigestible by the human body?

a) It contains glucose molecules in the same orientation.
b) It forms strong hydrogen bonds between chains.
c) It is easily broken down by enzymes.
d) It is used for energy storage.

58. What happens to cellulose when juicing an apple?

a) It is converted into fructose.
b) It is removed as pulp.
c) It is broken down into glucose.
d) It remains in the juice.

59. Which of the following is true about the alternating structure of cellulose?

a) It allows for fewer hydrogen bonds between chains.
b) It results in soluble fibers.
c) It makes cellulose strong and insoluble.
d) It is ideal for energy storage.

60. What is the name of the heavily branched glucose polysaccharide that serves as a store of energy in the body?

a) Starch
b) Glycogen
c) Cellulose
d) Glucose

61. Where in the body are large, heavily branched glucose polysaccharides primarily stored?

a) Brain
b) Liver and skeletal muscles
c) Heart
d) Kidneys

62. Why can glucose undergo condensation reactions to form multiple branches in polymer chains?

a) Because glucose has many hydroxyl groups
b) Because glucose is a simple sugar
c) Because glucose is stored in muscles
d) Because glucose is compact

63. How does the structure of glycogen differ from the starches we eat?

a) Glycogen is less branched and compact than starch
b) Glycogen is more branched and compact than starch
c) Glycogen is identical to starch
d) Glycogen is unbranched and less compact than starch

64. What is the primary function of carbohydrates in the body?

a) To store vitamins
b) To provide energy
c) To build muscle
d) To regulate hormones

65. Where is extra glucose stored in the body?

a) In the kidneys and lungs
b) In the liver and skeletal muscles
c) In the stomach and intestines
d) In the heart and brain

66. What is glycogen?

a) A type of protein used for muscle repair
b) A heavily branched glucose polysaccharide used for energy storage
c) A simple sugar found in fruits
d) A type of fat stored in adipose tissue

67. Why is glycogen considered a quick source of energy?

a) It is stored in the stomach for immediate digestion
b) It allows for rapid access to energy when needed
c) It is converted directly into fat
d) It is stored in the bloodstream

68. What process allows glycogen molecules to have multiple branches?

a) Hydrolysis reactions
b) Condensation reactions
c) Oxidation reactions
d) Reduction reactions

69. What is the primary function of carbohydrates in the human body?

a) Provide structural support to cells
b) Store energy
c) Facilitate oxygen transport
d) Regulate body temperature

70. 

Where does the glucose combustion process primarily take place in the cell?

a) Nucleus
b) Mitochondria
c) Ribosome
d) Cytoplasm

71. What is released as waste during the glycolysis and citric acid cycle processes?

a) Oxygen and glucose
b) Water and carbon dioxide
c) ATP and oxygen
d) Protein and fat

72. What happens to energy during the breaking and forming of bonds in glucose during cellular respiration?

a) More energy is absorbed in breaking bonds than forming bonds.
b) More energy is released in forming bonds than absorbed in breaking bonds.
c) Equal energy is released and absorbed during bond changes.
d) Energy is only absorbed during bond changes.

73. Which level of protein structure is characterized as a simple "linear chain of amino acids"?

a) A) Secondary Structure
b) B) Tertiary Structure
c) C) Primary Structure
d) D) Quaternary Structure

74. What are the three components that make up a nucleotide?

a) A) Sugar, protein, and lipid
b) B) Phosphate, sugar, and nitrogen base
c) C) Amino acid, phosphate, and ribose
d) D) DNA, RNA, and nucleus

75. What reaction occurs when glycerol combines with three fatty acids to form a triglyceride?

a) A) Hydrolysis reaction
b) B) Condensation reaction
c) C) Oxidation reaction
d) D) Hydrogenation reaction