

Riddles

1. Characteristics of Living Organisms

- I can grow, I can breathe,

I can reproduce, and I can feed.

What am I that shows these signs?

Alive I am, with body and mind.

(Answer: Living Organism)

2. Basic Classification

- I group the living into five grand classes,

From the smallest germs to the largest masses.

I'm a kingdom so vast, what could I be,

With Plantae, Fungi, and others to see?

(Answer: Five Kingdoms of Classification)

3. Cell Theory

- I say all living things are built from me,

With cells being the base, don't you see?

Where do you start, where do you begin?

I am the theory that life comes from within.

(Answer: Cell Theory)

4. Structure of Prokaryotic and Eukaryotic Cells

- Simple or complex, I house life's key,

With no nucleus or with one, you see.

One is old and the other is new,

What am I? Can you give me a clue?

(Answer: Prokaryotic and Eukaryotic Cells)

5. Biomolecules - Carbohydrates

- Sweet like sugar or starchy as bread,

I give you energy, keeping you fed.

What am I, made of C, H, and O,

Providing fuel wherever you go?

(Answer: Carbohydrates)

6. Biomolecules - Lipids

- I'm stored energy, with layers to keep,

I'm found in butter, oil, or deep.

I don't mix with water, no matter how hard you try,

What am I, giving insulation by?

(Answer: Lipids)

7. Biomolecules - Proteins

- I build and repair, that's what I do,

In meat and beans, you'll find me too.

Enzymes, hormones, and much more,

What am I, with amino acids at my core?

(Answer: Proteins)

8. Biomolecules - Nucleic Acids

- I hold the code for who you'll be,

In DNA and RNA, you'll find me.

Passed from parent to child with care,

What am I, the blueprint you share?

(Answer: Nucleic Acids)

9. Vitamins and Enzymes

- I speed things up, but I don't get tired,

I'm not consumed, but often required.

And though I'm small, I keep you well,

You need me more than you can tell.

(Answer: Enzymes and Vitamins)

10. Genes and Chromosomes

- I'm the thread of life, wrapped up so tight,

Carrying instructions from day to night.

I decide your traits, your hair, and eyes,

What am I, the package that's wise?

(Answer: Genes and Chromosomes)

Multiple-Choice Questions (MCQs)

1. Characteristics of Living Organisms

- Which of the following is NOT a characteristic of living organisms?

- a) Reproduction
- b) Metabolism
- c) Growth
- d) Non-responsiveness

(Answer: d) Non-responsiveness

2. Basic Classification

- Which kingdom includes multicellular, photosynthetic organisms?

- a) Monera
- b) Fungi
- c) Plantae
- d) Protista

(Answer: c) Plantae

3. Cell Theory

- Who proposed the cell theory?

- a) Watson and Crick
- b) Schleiden and Schwann
- c) Mendel
- d) Darwin

(Answer: b) Schleiden and Schwann

4. Structure of Prokaryotic and Eukaryotic Cells

- Which of the following is found in eukaryotic cells but not in prokaryotic cells?

- a) Cell membrane
- b) Nucleus
- c) Ribosomes
- d) DNA

(Answer: b) Nucleus

5. Biomolecules - Carbohydrates

- Which of the following is a disaccharide?

- a) Glucose
- b) Fructose
- c) Sucrose
- d) Glycogen

(Answer: c) Sucrose

6. Biomolecules - Lipids

- Which of the following is a function of lipids?

- a) Genetic information storage
- b) Energy storage
- c) Oxygen transport
- d) Enzyme activity

(Answer: b) Energy storage

7. Biomolecules - Proteins

- Proteins are made of which monomer?

- a) Nucleotides
- b) Fatty acids
- c) Amino acids
- d) Monosaccharides

(Answer: c) Amino acids

8. Biomolecules - Nucleic Acids

- DNA and RNA are composed of units called:

- a) Amino acids
- b) Fatty acids
- c) Nucleotides
- d) Sugars

(Answer: c) Nucleotides

9. Vitamins and Enzymes

- Which of the following is a vitamin?

- a) Hemoglobin
- b) ATP
- c) Vitamin C
- d) Insulin

(Answer: c) Vitamin C

10. Genes and Chromosomes

- What is the structure that carries genetic material in cells?

- a) Nucleus
- b) Chromosome
- c) Mitochondria
- d) Ribosome

(Answer: b) Chromosome

Puzzle

Crossword Puzzle - Biomolecules

Create a crossword puzzle with the following clues:

Across:

- 3. This biomolecule stores energy and provides insulation (Lipids).
- 5. This sugar is a disaccharide composed of glucose and fructose (Sucrose).
- 7. This is the monomer unit of proteins (Amino Acid).

Down:

- 1. The building blocks of DNA and RNA (Nucleotides).
- 2. A protein that speeds up reactions without being consumed (Enzyme).
- 4. Organic molecules that are vital for life and must be consumed in small amounts (Vitamins).
- 6. A complex carbohydrate that stores energy in animals (Glycogen).

