

Elementary Science Mastery Challenge

Basic Science · Answer Key · 25 Questions

1. Which of the following is the smallest unit of matter that retains the properties of an element?

- A) Molecule
- B) Compound
- C) Atom**
- D) Ion

2. Photosynthesis, the process plants use to convert light energy into chemical energy, primarily takes place in which organelle?

- A) Mitochondria
- B) Nucleus
- C) Ribosome
- D) Chloroplast**

3. The Earth's magnetic field is generated by the movement of molten iron in which layer of the Earth?

- A) Crust
- B) Mantle
- C) Inner Core
- D) Outer Core**

4. When a solid directly turns into a gas without becoming a liquid, this phase change is called:

- A) Evaporation
- B) Melting
- C) Condensation
- D) Sublimation**

5. What is the primary function of red blood cells in the human body?

- A) Fighting infection
- B) Clotting blood
- C) Transporting oxygen**
- D) Producing antibodies

6. Which planet in our solar system is known for its prominent rings, primarily made of ice particles?

- A) Jupiter
- B) Uranus
- C) Neptune
- D) Saturn**

7. The process by which water vapor in the air cools and changes back into liquid water, forming clouds, is called:

- A) Evaporation
- B) Precipitation
- C) Transpiration
- D) Condensation**

8. What force keeps planets in orbit around the Sun and the Moon in orbit around the Earth?

- A) Electromagnetism
- B) Nuclear Force
- C) Gravity**
- D) Friction

9. Which type of rock is formed from the cooling and solidification of molten rock (magma or lava)?

- A) Sedimentary
- B) Metamorphic
- C) Igneous**
- D) Crystalline

10. The observable change in the position of an object over time is called:

- A) Acceleration
- B) Velocity
- C) Speed
- D) Motion**

11. What gas do humans and animals exhale during respiration, which plants then use for photosynthesis?

- A) Oxygen
- B) Nitrogen
- C) Carbon Dioxide**
- D) Helium

12. The outermost layer of the Earth, on which we live, is known as the:

- A) Mantle
- B) Core
- C) Lithosphere**
- D) Asthenosphere

13. Which of the following is a vertebrate animal that breathes air using lungs and has a backbone?

- A) Fish
- B) Insect
- C) Amphibian**
- D) Jellyfish

14. What is the unit of electrical resistance?

- A) Ampere
- B) Volt
- C) Watt
- D) Ohm**

15. The process of a seed developing into a new plant is called:

- A) Fertilization
- B) Pollination
- C) Germination**
- D) Sprouting

16. Which part of a plant is responsible for absorbing water and nutrients from the soil?

- A) Stem
- B) Leaf
- C) Flower
- D) Root**

17. The bending of light as it passes from one medium to another is known as:

- A) Reflection
- B) Diffraction
- C) Refraction**
- D) Absorption

18. Which of the following is a non-renewable energy source that is formed from the remains of ancient organisms?

- A) Solar energy
- B) Wind energy
- C) Fossil fuels**
- D) Hydropower

19. What is the process by which living things produce offspring that are similar to themselves?

- A) Metabolism
- B) Evolution
- C) Reproduction**
- D) Adaptation

20. The study of living organisms and their interactions with each other and their environment is called:

- A) Geology
- B) Astronomy
- C) Biology**
- D) Chemistry

21. Which of the following is a common characteristic of all living things?

- A) They have fur
- B) They breathe oxygen
- C) They grow and develop**
- D) They have bones

22. The process of heat transfer through direct contact is called:

- A) Convection
- B) Radiation
- C) Conduction**
- D) Insulation

23. Which celestial body orbits the Earth?

- A) Sun
- B) Mars
- C) Moon**
- D) Venus

24. What is the basic unit of heredity that is passed from parents to offspring?

- A) Cell
- B) Protein
- C) Gene**
- D) Organelle

25. When an object is pushed or pulled, this is an example of a:

- A) Wave
- B) Energy
- C) Force**
- D) Current