

Advanced Physics for Young Explorers

Physics · Answer Key · 18 Questions

1. What is the name of the invisible force that pulls everything toward the center of the Earth?

- A) Magnetism
- B) Gravity**
- C) Friction
- D) Inertia

2. Which state of matter has atoms that are packed very tightly together, giving it a fixed shape?

- A) Liquid
- B) Gas
- C) Plasma
- D) Solid**

3. What do we call the path that a planet follows as it travels around the Sun?

- A) Orbit**
- B) Spin
- C) Rotation
- D) Speed

4. When light hits a smooth, shiny surface and bounces back, what is this called?

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

5. Which part of an atom carries a positive electrical charge?

- A) Electron
- B) Neutron
- C) Proton**
- D) Molecule

6. What is the measure of how much matter is packed inside an object?

- A) Volume
- B) Density**
- C) Weight
- D) Temperature

7. What type of energy does an object have because it is moving?

- A) Kinetic energy**
- B) Potential energy
- C) Thermal energy
- D) Chemical energy

8. Which force resists the movement of two objects rubbing against each other?

- A) Gravity
- B) Magnetism
- C) Friction**
- D) Tension

9. What happens to a sound wave when it hits a hard surface and bounces back to our ears?

- A) Vibration
- B) Echo**
- C) Pitch
- D) Volume

10. Which color of light has the longest wavelength in the visible spectrum?

- A) Blue
- B) Green
- C) Yellow
- D) Red**

11. What is the term for the amount of space that an object occupies?

- A) Mass
- B) Weight
- C) Volume**
- D) Density

12. Which subatomic particle orbits the center of an atom?

- A) Proton
- B) Neutron
- C) Electron**
- D) Nucleus

13. What is the transfer of heat through direct contact between two objects?

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

14. Which simple machine uses a pivot point to help lift heavy objects?

- A) Pulley
- B) Lever**
- C) Screw
- D) Wedge

15. What is the term for the 'stored' energy an object has due to its position?

- A) Kinetic energy
- B) Potential energy**
- C) Solar energy
- D) Light energy

16. Which gas makes up the majority of the air we breathe?

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

17. What happens to the speed of light when it passes from air into water?

- A) It speeds up
- B) It stays the same
- C) It slows down**
- D) It stops completely

18. What is the name of the scale used to measure how hot or cold something is?

- A) Celsius**
- B) Newtons
- C) Joules
- D) Watts