

Exploring the World of Light: Optics

Optics · Answer Key · 8 Questions

1. Which of these is the bending of light as it passes from one transparent material to another?

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

2. When light bounces off a smooth surface, like a mirror, what is this phenomenon called?

- A) Refraction
- B) Dispersion
- C) Reflection**
- D) Transmission

3. What property of light allows us to see colors? It is the splitting of white light into its different colored components.

- A) Polarization
- B) Interference
- C) Diffraction
- D) Dispersion**

4. Why does a straw appear bent when placed in a glass of water?

- A) The straw is actually bent.
- B) Light reflects off the straw differently.
- C) Light refracts as it moves between air and water.**
- D) The water absorbs some of the straw's color.

5. What is the primary function of a lens in optical instruments like telescopes or magnifying glasses?

- A) To absorb all light.
- B) To reflect light in a straight line.
- C) To refract light to form an image.**
- D) To scatter light in all directions.

6. Which part of the eye acts like a lens, bending light to focus it on the retina?

- A) Pupil
- B) Cornea**
- C) Iris
- D) Retina

7. What do we call the path that light travels in a straight line?

- A) Wave
- B) Ray**
- C) Beam
- D) Spectrum

8. Why does a black object feel hotter in the sun than a white object?

- A) Black objects reflect more light.
- B) Black objects absorb more light and heat.**
- C) White objects emit more heat.
- D) Black objects transmit more heat.