

Chapter 18 The Electromagnetic Spectrum and Light

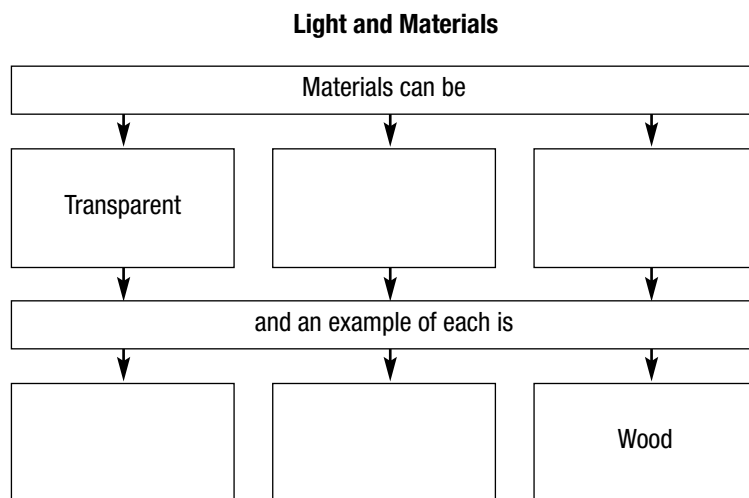
Section 18.3 Behavior of Light

(pages 546-549)

This section discusses the behavior of light when it strikes different types of materials.

Reading Strategy (page 546)

Monitoring Your Understanding As you read, complete the flowchart to show how different materials affect light. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.



Light and Materials (pages 546–547)

1. Is the following sentence true or false? Without light, nothing is visible. _____

Match each term to its definition.

Term	Definition
_____ 2. transparent	a. Material that absorbs or reflects all of the light that strikes it
_____ 3. opaque	b. Material that transmits light
_____ 4. translucent	c. Material that scatters light

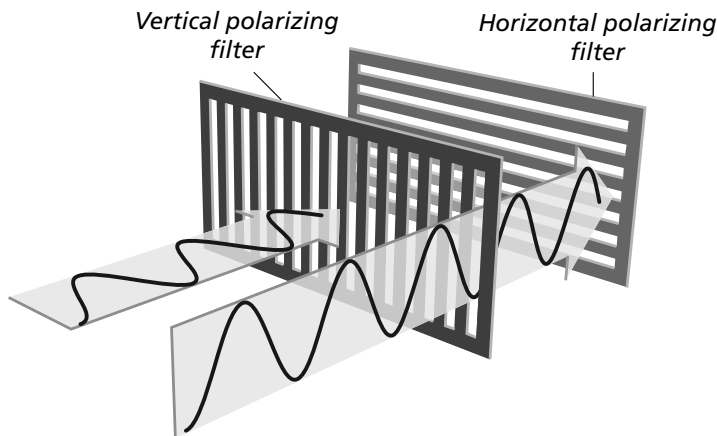
Interactions of Light (pages 547–549)

5. Is the following sentence true or false? Just as light can affect matter, matter can affect light. _____
6. When light strikes a new medium, it can be _____, _____, or _____.

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7. When light is transmitted, it can be refracted, polarized, or _____.
8. A copy of an object formed by reflected or refracted light waves is known as a(n) _____.
9. When parallel light waves strike an uneven surface and reflect off it in the same direction, _____ reflection occurs.
10. When parallel light waves strike a rough, uneven surface and reflect in many different directions, _____ reflection occurs.
11. Light bends, or _____, when it passes at an angle from one type of medium into another.
12. Explain why a mirage occurs. _____

13. Is the following sentence true or false? Light with waves that vibrate in only one plane is polarized light. _____



14. Refer to the drawing and complete the table on polarizing filters.

Polarizing Filters		
Direction of Light Vibration	Filter Type	Action
Horizontal wave	Vertically polarizing filter	
	Vertically polarizing filter	Light passes through.

15. How do sunglasses block glare? _____

16. The effect when light is redirected as it passes through a medium is called _____.
17. Explain why the sun looks red at sunset and sunrise. _____

