

Transparency, Opacity & Color

⚠ This is a preview of the published version of the quiz

Started: Jul 12 at 1:16am

Quiz Instructions

Watch the videos and answer the questions.

[Transparent and Opaque Materials in Electromagnetic Waves - Video Lesson Transcript Studycom.mp4](#)

[Color White Light Reflection Absorption - Video Lesson Transcript Studycom.mp4](#)

[Eureka! Episode 30 - Radiation Spectrum.mp4](#)

Question 1

1 pts

An object is said to be opaque when light passes through it without being dispersed.

- True
- False

Question 2**1 pts**

Light waves are absorbed by an object when the object's resonant frequency matches the frequency of the light waves.

- True
- False

Question 3**1 pts**

Transmission is the passing of electromagnetic waves through a material.

- True
- False

Question 4**1 pts**

When resonance occurs between a light wave and an object, the light wave is scattered and dispersed.

- True
- False

Question 5**1 pts**

Absorption occurs when none of the light waves are transmitted through an object.

True

False

Question 6

1 pts

The atoms of transparent materials vibrate at the frequency of incoming light and is transmitted through the material.

True

False

Question 7

1 pts

Reflection is the change in direction of a wave when it strikes a surface.

True

False

Question 8

1 pts

Opacity occurs when light waves are not transmitted through an object.

True

False

Question 9

1 pts

Opaque materials allow light waves to travel through.

True

False

Question 10

1 pts

Glass is transparent to visible light but opaque to infrared.

True

False

Question 11

1 pts

All electromagnetic waves follow the rules of transparency and opacity.

True

False

Question 12

1 pts

Silicon is transparent to infrared light and visible light.

True

False

Question 13**1 pts**

Sunscreen is opaque to ultraviolet light but transparent to visible light.

- True
- False

Question 14**1 pts**

X-rays are transparent through bone, but opaque through muscle and skin tissue.

- True
- False

Question 15**1 pts**

Radio waves pass through brick but not steel.

- True
- False

Question 16**1 pts**

Green light has a lower frequency than red light.

- True

False

Question 17

1 pts

White light is the combination of many frequencies of visible light.

True

False

Question 18

1 pts

All light waves can be transmitted, absorbed, or reflected by an object.

True

False

Question 19

1 pts

Selective absorption occurs when no frequencies of light are absorbed by an object.

True

False

Question 20

1 pts

Selective absorption is the tendency of a material to absorb some frequencies of light more than others.

- True
- False

Question 21

1 pts

An object that appears a certain color absorbs all frequencies of light other than that color.

- True
- False

Question 22

1 pts

An orange absorbs all color frequencies of light other than orange.

- True
- False

Question 23

1 pts

Truly black materials absorb all visible frequencies of light.

- True
- False

Question 24

1 pts

Truly white materials absorb no frequencies of visible light.

True

False

Question 25

1 pts

Green leaves absorb green light for the purposes of photosynthesis.

True

False

Not saved

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