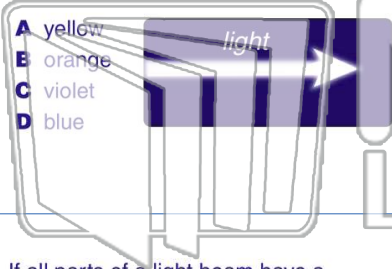# Light

Name_____ Class_____ Date_____

**1** A monochromatic beam of light has a **frequency of 6.5 × 10¹⁴ hertz**. What **color** is the light?

A yellow
B orange
C violet
D blue

*light*

**2** What occurs as a ray of light passes from air into **water**?

A The ray must decrease in speed.
B The ray must increase in speed.
C The ray must decrease in frequency.
D The ray must increase in frequency.

**3** If all parts of a light beam have a **constant phase** relationship, with the **same wavelength** and **frequency**,

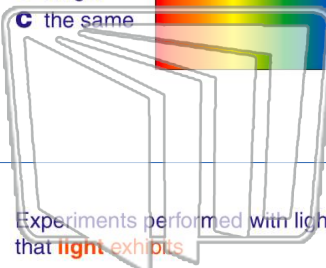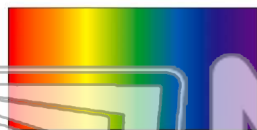**4** A beam of green light may have a **frequency** of

A 5.0 × 10⁻⁷ Hz

**5**

**PREVIEW**

Please Sign In or Sign Up to download
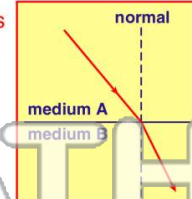the printable version of this worksheet

**7**

A shorter
B longer
C the same

When the wave travels from medium **A** into medium **B**, its **speed**

A decreases
B increases
C remains the same

*normal*
*medium A*
*medium B*
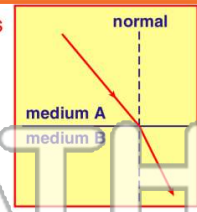
**9** Experiments performed with light indicate that **light exhibits**

A particle properties, only
B wave properties, only
C both particle and wave properties
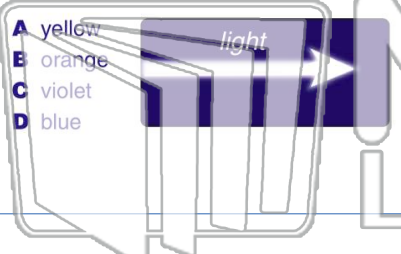D neither particle nor wave properties

**10** What is the **energy** of a quantum of light having a **frequency of 6.0 × 10¹⁴ hertz**?

A 1.6 × 10⁻¹⁹ J
B 4.0 × 10⁻¹⁹ J
C 3.0 × 10⁸ J
D 5.0 × 10⁻⁷ J

Name_____ Class_____ Date_____

**1** A monochromatic beam of light has a **frequency of $6.5 \times 10^{14}$ hertz**. What **color** is the light?

A yellow
B orange
C violet
D blue

*light*

**D**

**2** What occurs as a ray of light passes from air into **water**?

A The ray must decrease in speed.
B The ray must increase in speed.
C The ray must decrease in frequency.
D The ray must increase in frequency.

**A**

**3** If all parts of a light beam have a **constant phase** relationship, with the **same wavelength** and **frequency**,

**4** A beam of green light may have a **frequency** of
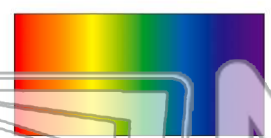
A $5.0 \times 10^{-7}$ Hz

**D**

**5**

**PREVIEW**

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the printable version of this worksheet

**7**

A shorter
B longer
C the same

**A**

When the wave travels from medium **A** into medium **B**, its **speed**

A decreases
B increases
C remains the same

normal

medium A
medium B

**A**

**9** Experiments performed with light indicate that **light exhibits**

A particle properties, only
B wave properties, only
C both particle and wave properties
D neither particle nor wave properties

**C**

**10** What is the **energy** of a quantum of light having a **frequency** of $6.0 \times 10^{14}$ hertz?

A $1.6 \times 10^{-19}$ J
B $4.0 \times 10^{-19}$ J
C $3.0 \times 10^{8}$ J
D $5.0 \times 10^{-7}$ J

**B**