

1- Student Pretest—Learning about Infrared Light

Directions: Write all of your answers on the answer sheet. Do NOT Write on the test.

Matching: On your answer sheet, you will find diagrams. Match the diagrams to the following terms. Mark your answer on the answer sheet, not on the test.

1. Reflection
2. Transmission
3. Absorption
4. Emission

Multiple Choice: Select the one best answer for each question. Mark your answer on the answer sheet.

5. Which of the following best describes why infrared telescopes enable observations that are not possible with visible light telescopes?
 - A. Infrared light is less harmful than visible light.
 - B. Visible light travels slower than infrared light.
 - C. Infrared light will pass through the stellar dust clouds.
 - D. All of the above
6. What colors of light make up the light from the sun?
 - A. Red, Yellow, Blue, White, and Black
 - B. White and Yellow
 - C. Red, Orange, Yellow, Green, Blue, Indigo, and Violet
 - D. White and Black
7. Which of the following best describes the speed of infrared light?
 - A. Faster than the speed of visible light
 - B. Same as the speed of visible light
 - C. Slower than the speed of visible light
 - D. None of the above
8. Which of the following describes electromagnetic energy interacting with matter?
 - A. Interrupted infrared red light on a solar cell connected to an amplifier
 - B. White light passing through a green filter
 - C. Microwaves hitting a telescope
 - D. All of the above
9. Which of the following is a common use of infrared light?
 - A. Tanning lamp
 - B. Remote control
 - C. Street light
 - D. Microwave oven

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10. A blue object viewed in red light appears

- A. Blue
- B. Red
- C. Purple
- D. Black

Short Answer: Answer all parts of the questions in the spaces provided on the answer sheet. You do not have to answer in complete sentences.

11. On the answer sheet, fill in the blanks with the names of the different kinds of electromagnetic waves, in order of increasing wavelength.

12. On the answer sheet, complete the diagram to explain what color the viewer observes. Please write a few sentences to explain the diagram.