

Name: _____
Due: _____

LIGHT UNIT STUDY SHEET #1

These questions are intended to guide you through important concepts in this unit. Classroom discussions, supplemented by reading Chapter 13, will help you answer them.

1. What is the difference between transparent and translucent? Give an example of each.
2. Why is the sky blue? The sunset red?
3. What is parallax? Give two practical examples of where it is used.
4. Why are the insides of a camera or binoculars black?
5. To what is the illumination of a surface by a light source directly proportional? Inversely proportional?
6. What is the difference between a specular and diffuse reflector? Draw a diagram to supplement your explanation. Which type of reflector are you more likely to be able to see in a room?
7. White light consists of what 7 colors? Which of these has the longest wavelength? Shortest?
8. Two students want to improve the lighting of their desks. Jim wants to add a second light bulb of equal strength, while Julia wants to move the one bulb twice as close. Whose desk will be brighter, by how much (relative to the other), and why?
9. Calculate the required luminous flux from ceiling light fixtures onto school desks 2.3 m away if a minimum illuminance of 160 lx is required.
10. How far does light travel in a vacuum in one second? One nanosecond?