# **Light Comprehension Check**

For questions 1-3, match each vocabulary term to the correct definition:

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| 1. Opaque | a. describes an object that allows only some light to pass through it |
| 2. Translucent | b. describes an object that does not allow light to pass through it |
| 3. Transparent | c. describes an object that allows nearly all light to pass through it |

1. Opaque – b
2. Translucent – a
3. Transparent – c
4. Support the following claim from the text using evidence and reasoning: “Without light, you would not have food to eat or air to breathe.”
   1. Plants use sunlight and a process called photosynthesis to transform light energy into food and fuel. Animals eat those plants and therefore also rely on light for survival. Although not all animals eat plants, they do eat something that somehow relies on sunlight to survive. Therefore, without light, we could not survive the way we do now.
5. Describe the three things that can occur when light hits an object.
   1. When light hits an object, it can pass through the object, be absorbed, or be reflected. Most objects absorb some of the light that hits them. They also reflect light. The light that is reflected reaches your eyes and allows you to see. We see the light an object reflects, not the light it absorbs.
6. What is a prism?
   1. A prism is a special piece of glass or plastic that can refract (bend) light to produce a spectrum of colors.
7. Describe how wavelength affects the color of light.
   1. Each color has its own wavelength. If you consider the colors of the rainbow in order (ROY G BIV), red light has the longest wavelength, and wavelengths decrease in length until you get to violet, which has the shortest wavelength.
8. What is the visible spectrum?
   1. The visible spectrum describes all the colors we can see with our eyes. The visible spectrum includes ROY G BIV (red, orange, yellow, green, blue, indigo, and violet) and variations of these that we can see.
9. Use an example to explain how light hits an object and is reflected back to your eyes as a specific color.
   1. White light is made of all the colors in the visible spectrum. When it hits an object, all the colors except what we see are absorbed. The object reflects the color of light that we see. For example, a yellow banana absorbs all the colors except yellow. We see the yellow light that bounces off the banana.
10. What is the role of the retina in sight?
    1. The retina plays an important role in sight. After light is refracted off the lens so it strikes the retina, the retina then changes that image into signals that the brain can understand. The retina is like a translator for the brain.