Questions 7–10 are based on the passage below.

A common misconception is that color refers only to a wavelength of light in the visual spectrum, from about 400 nanometers (violet) to about 700 nanometers (red). When an object reflects light of a given wavelength, we see that object as the corresponding color. So, for example, we might see a Braeburn apple as red and a Granny Smith apple as green because they reflect light of different wavelengths. However, color is not merely a property of an external physical object but rather the result of an interaction among that object, the light that shines on it, and, finally but most significantly, the manner in which the human eye and brain make sense of the reflected light stimulus. Thus, the study of color can properly fall as much within the realm of psychology as that of physics.

Experience is one psychological factor that informs our perception of color. For example, a child eating by a campfire that emits a great deal of yellow light may believe that the melted Cheddar cheese served on white bread on a white paper plate is actually a white cheese like Swiss or Monterey Jack. This occurs because the yellow light reflects off both the plate and the bread, which the child knows are white, and off the cheese, which the child isn't sure about. All the objects therefore appear to be the same color, and the child assumes that color is white. On the other hand, an adult with experience viewing things in firelight would intuitively adjust her perception to account for the yellow light and would not make the same mistake.

Color is also perceived differently depending on its context. The noted abstract painter Josef Albers produced an influential body of work based on this phenomenon, including his series *Homage to the Square* featuring nested squares of different colors. In one psychological experiment testing perception, the letter *X* is presented against two colored backgrounds. Although the letter is identical each time it is presented, it appears olive green in one context and lavender in the other context. This effect is achieved when the *X* is given a low-saturation blue color, or gray-blue, and the backgrounds are also low-saturation colors with hues on either side of blue on the color wheel. Because blue falls between purple and green on the color wheel, a gray-blue *X* against a gray-purple background will look gray-green, or olive, and the same *X* against an olive background will look gray-purple, or lavender. In a similar manner, an intermediate color will look different against different primary color backdrops; teal, for instance, will look green against a blue background and blue against a green background.