

Color Sensor Lesson 4 Summative Assessment

1. What does the “If, return” function block do?
 - a. It tells the computer to start over a piece of code when a condition is met.
 - b. It tells the computer to return a value when a condition is met. (correct answer)**
 - c. It tells the programmer to complete an action when a condition is met.
 - d. It tells the programmer to return to the beginning of a piece of code.
2. What does “repeat forever” do?
 - a. It tells the computer to execute a statement repeatedly forever. (correct answer)**
 - b. It tells the computer to restart a piece of code.
 - c. It tells the programmer to execute an action repeatedly forever.
 - d. It tells the programmer to restart a piece of code.
3. Why is it best to use the “repeat forever” loop? (Select all that apply.)
 - a. The sensor only senses at certain times and the code is timed to the sensor.
 - b. The sensor has to be told to sense, so the loop tells it to always sense.
 - c. The sensor is constantly sensing, so the loop allows the code to do the same. (correct answer)**
 - d. The computer needs to be told to repeat an action over and over forever. (correct answer)**
4. What logic blocks did you use? (Select all that apply.)
 - a. “Start” block (correct answer)**
 - b. “And” block
 - c. “= logic” block (correct answer)**
 - d. “True” block
5. How does the sensor detect color? (Select all that apply.)
 - a. The sensor shines a white light and it measures the frequency of the reflected waves. (correct answer)**
 - b. The sensor shines a white light and it measures the wavelength of the absorbed waves.
 - c. The sensor receives information from the code.
 - d. The sensor sends information to the computer based on the wavelengths it detects. (correct answer)**
6. What does it mean to “shout”?
 - a. It tells the computer to make a noise.
 - b. It tells the computer to display information visually on screen. (correct answer)**
 - c. It tells the programmer to shout when they see something pop up on the screen.
 - d. It tells the programmer to press a button.
7. Did the RGB values repeat for multiple letters?
 - a. Yes, letters can have the same color.

- b. No, each letter must have a specific color. (correct answer)**
8. Did the order matter when you were scanning the colors?
- a. **Yes, the order of colors scanned depended on the order of the letters. (correct answer)**
 - b. No, the order of colors scanned doesn't matter.
9. What does the human eye have in common with the color sensor?
- a. The human eye also shines a white light to detect color.
 - b. The human eye perceives color by measuring the waves of light absorbed by objects.
 - c. The brain sends signals to the eye to determine the color of an object.
 - d. **The human eye receives certain waves of light reflected by objects. (correct answer)**
10. How do the RGB values of a black object compare to those of a white object?
- a. They have the same RGB values.
 - b. They have the same RGB values in reverse.
 - c. **The black object absorbs all wavelengths, while the white object reflects all wavelengths. (correct answer)**
 - d. The white object absorbs all wavelengths, while the black object reflects all wavelengths.