

Grade 6 Science Summative Test

Topic: Fair Testing (Scientific Method) & The Circulatory System

Date:

Score:

Name:

Instructions: Read each question carefully. Write the letter of the correct answer on the underline provided before each number.

____ 1. What is the primary function of the circulatory system?

- A. To break down food into nutrients
- B. To transport oxygen, nutrients, and waste throughout the body
- C. To control body movements and thoughts
- D. To filter air taken into the lungs

____ 2. Which organ acts as the main pump of the circulatory system?

- A. Lungs
- B. Brain
- C. Heart
- D. Liver

____ 3. Which type of blood vessel carries oxygen-rich blood away from the heart?

- A. Veins
- B. Capillaries
- C. Arteries
- D. Venules

____ 4. What are the microscopic blood vessels where the exchange of oxygen and nutrients occurs?

- A. Arteries
- B. Capillaries
- C. Veins
- D. Aorta

____ 5. Which component of blood helps transport oxygen from the lungs to the rest of the body?

- A. Red blood cells
- B. White blood cells
- C. Platelets
- D. Plasma

____ 6. Which part of the blood plays a key role in clotting to stop bleeding from a cut?

- A. Plasma
- B. Red blood cells
- C. Platelets
- D. White blood cells

____ 7. How many chambers does the human heart have?

- A. Two
- B. Three
- C. Four
- D. Six

____ 11. What is a "fair test" in a scientific experiment?

- A. An experiment where all variables are changed at once
- B. An investigation where only one factor is changed at a time
- C. A test that always proves the hypothesis correct
- D. A test conducted without recording data

____ 12. In an experiment, what is the variable that the scientist deliberately changes?

- A. Independent variable
- B. Dependent variable
- C. Controlled variable
- D. Constant variable

____ 13. What do you call the factor that is measured or observed as a result of an experiment?

- A. Independent variable
- B. Dependent variable
- C. Controlled variable
- D. Hypothesis variable

____ 14. Why is it important to keep controlled variables constant during an experiment?

- A. To speed up the experiment
- B. To ensure that only the independent variable affects the result
- C. To make the experiment more difficult
- D. To avoid using equipment

____ 15. A student tests how different types of exercise affect heart rate. What is the independent variable?

- A. The measured heart rate
- B. The type of exercise
- C. The person's age
- D. The time of day

____ 16. In the same heart rate experiment, what would be the dependent variable?

- A. The type of exercise done
- B. The heart rate (beats per minute)
- C. The room temperature
- D. The type of shoes worn

____ 17. Which of the following should be kept constant when testing how water temperature affects pulse rate after drinking?

- A. The temperature of the water
- B. The volume of water consumed
- C. The pulse rate measured
- D. The temperature change

_____ 8. Which blood vessel carries oxygen-poor blood back to the heart?

- A. Artery
- B. Vein
- C. Capillary
- D. Aorta

_____ 9. What component makes up the liquid portion of blood?

- A. Plasma
- B. Hemoglobin
- C. Fibrin
- D. White blood cells

_____ 10. Which cells in the blood defend the body against infection and disease?

- A. Red blood cells
- B. White blood cells
- C. Platelets
- D. Plasma cells

_____ 18. What happens if a scientist changes two variables at the same time in an experiment?

- A. The experiment becomes a fair test.
- B. It will be impossible to tell which variable caused the outcome.
- C. The results will be twice as accurate.
- D. The dependent variable disappears.

_____ 19. How can a researcher increase the reliability of a fair test?

- A. By changing multiple factors together
- B. By repeating trials and averaging the results
- C. By guessing the results without measuring
- D. By skipping controlled variables

_____ 20. Maria wants to test if music genre affects resting heart rate. What is her independent variable?

- A. The genre of music played
- B. The resting heart rate measured
- C. The duration of rest before testing
- D. The brand of headphones used