

Name \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## **Red Gold - The Epic Story of Blood**

<http://www.pbs.org/wnet/redgold/> ----- **BLOOD JOURNEY**

Phase 1: The Creation of Blood: [http://www.pbs.org/wnet/redgold/journey/phase1\\_a1.html](http://www.pbs.org/wnet/redgold/journey/phase1_a1.html)

1. What are the three kinds of cells found in blood?
2. What molecule in the blood cell carries oxygen?
3. What element makes blood red?
4. What is the function of leukocytes?
5. What is the function of platelets?
6. Plasma is made of 90% \_\_\_\_\_

How is Blood Produced? [http://www.pbs.org/wnet/redgold/journey/phase1\\_a2.html](http://www.pbs.org/wnet/redgold/journey/phase1_a2.html)

7. Where in the body are blood cells made?
8. What might cause the body to produce more blood cells?

**Phase 2: The Circulatory System**

[http://www.pbs.org/wnet/redgold/journey/phase2\\_a1.html](http://www.pbs.org/wnet/redgold/journey/phase2_a1.html)

9. Approximately how many liters of blood move through the circulatory system?

10. Name the three parts of the circulatory system:

---

---

---

11. \_\_\_\_\_ circulation is when blood flows through the kidneys.

12. What is the main artery that leaves the heart?

13. Blood moves from arteries into \_\_\_\_\_

**Phase 3: Donation**

What to Expect

[http://www.pbs.org/wnet/redgold/journey/phase3\\_a1.html](http://www.pbs.org/wnet/redgold/journey/phase3_a1.html)

14. How long does it take for your body to replace fluids lost during blood donation?

15. What should you do before donating blood?

16. What organization collects blood?

Vocabulary Checklist

- Bone marrow
- Stem Cell
- Red blood cell
- White blood cell
- Hemoglobin
- Platelet
- Plasma
- Transfusion
- Artery
- Vein
- Capillary
- Aorta
- Leukemia
- Hepatitis

**Testing Donated Blood:**

[http://www.pbs.org/wnet/redgold/journey/phase3\\_a2.html](http://www.pbs.org/wnet/redgold/journey/phase3_a2.html)

17. What are the four blood types?

18. Rh type can be \_\_\_\_\_ or

\_\_\_\_\_

19. Name two diseases you would be tested for before donating blood:

**Phase 4: Blood Banks:**

[http://www.pbs.org/wnet/redgold/journey/phase4\\_a1.html](http://www.pbs.org/wnet/redgold/journey/phase4_a1.html)

20. Blood donated is split into three components. What are they?

21. What type of patients might use the platelets?

22. What type of patients might use the plasma?

**Phase 5: The Transfusion**

[http://www.pbs.org/wnet/redgold/journey/phase5\\_a2.html](http://www.pbs.org/wnet/redgold/journey/phase5_a2.html)

23. Which blood type can receive blood from all groups?

24. What are the two most common blood types in the U.S.?

**Test Your Blood IQ (take the quiz to get these answers):**

<http://www.pbs.org/wnet/redgold/php/bloodquiz.php>

1. How long do red blood cells stay in the body? \_\_\_\_\_

2. Blood circulates through the body in what order?  
\_\_\_\_\_

3. How much blood is there in the average adult human body? \_\_\_\_\_

4. You should not donate blood more often than about: \_\_\_\_\_

5. In the blood disease called leukemia, the body produces \_\_\_\_\_

6. If you have type O blood, you can safely receive transfusions of \_\_\_\_\_

7. Under normal circumstances, the blood transfers a lot of excess heat from:  
\_\_\_\_\_

8. What makes the pulmonary arteries unique among arteries?  
\_\_\_\_\_

9. Neutrophils and leukocytes are: \_\_\_\_\_

10. Which blood vessels have one-way valves? \_\_\_\_\_