

Red Gold - The Epic Story of Blood

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

Phase 1: The Creation of Blood

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?

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

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

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?

' Testing Donated Blood

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

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?

Vocabulary Checklist

Bone marrow

Stem Cell

Red blood cell

White blood cell

Hemoglobin

Platelet

Plasma

Transfusion

Artery

Vein

Capillary

Aorta

Leukemia

Hepatitis

Phase 5: The Transfusion

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)

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? _____

EXTENSION: Using what you know about blood and transfusions, design a poster to educate on blood donations and encourage people to donate. There are some examples on the site at Blood History ' The Impact of War ' Poster Gallery. You may draw your poster below or design it on the computer to print.