

*Mr. Ganci*

**WARD'S  
Simulated ABO and Rh  
Blood Typing Lab Activity**

Name: \_\_\_\_\_  
Group: \_\_\_\_\_  
Date: \_\_\_\_\_

**ANALYSIS**

**Table 1**

	Anti-A Serum	Anti-B Serum	Anti-Rh Serum	Blood Type
Slide #1 Mr. Smith				
Slide #2 Mr. Jones				
Slide #3 Mr. Green				
Slide #4 Ms. Brown				

**Table 2**

Blood Cell Type	Cell Count			Total # of Cells	Avg. # Cells or Total/3	Dilution Factor	Total # Blood Cells per mm <sup>3</sup> or Avg. # Cells x Dilution Factor
	1	2	3				
Red (Red)						150,000	
White (Blue)						5,000	

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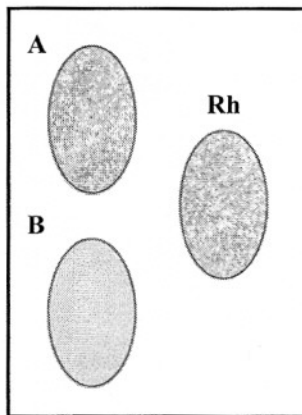
Name: \_\_\_\_\_  
Group: \_\_\_\_\_  
Date: \_\_\_\_\_

**ASSESSMENT**

1. a. Choose one of the following patients:  
Mr. Smith      Mr. Jones  
Mr. Green      Ms. Brown

Record his/her name here: \_\_\_\_\_

- b. Using the information shown in Figure 1 on blood type and the data recorded in Table 1, what agglutinogens are present on the patient's RBCs? \_\_\_\_\_
- c. What ABO agglutinin(s) is/are found in this patient's plasma? \_\_\_\_\_
- d. What is this patient's blood type? \_\_\_\_\_
- e. If this patient needed a transfusion, what blood type(s) could this patient safely receive?  
\_\_\_\_\_
- f. What blood type(s) could safely receive this patient's blood? \_\_\_\_\_
2. Below is a diagram representing the blood type analysis of a new patient (patient X). From the information obtained from the slide, fill out the medical technologist's report.



Medical Technologist's Report

Patient Name: \_\_\_\_\_

ABO Type: \_\_\_\_\_

Rh Type: \_\_\_\_\_

Med Tech Name: \_\_\_\_\_

3. Using a Venn diagram, compare and contrast agglutinogens and agglutinins. In your diagram, show at least two similarities and two differences.
  
4. Pretend you went with your class on a medical career field trip to a local hospital. One of the stops on the visit was to the hospital's blood lab. The medical technologist at this stop gave a demonstration of how blood types are determined. Your job is to write a paragraph for the school newspaper on the visit to the blood lab, summarizing what you've learned about how ABO/Rh blood groups are determined. Write a paragraph and include the title.
  
5. List at least three situations where blood typing could be used.
  
6.
  - a. Define erythroblastosis fetalis.
  
  - b. Describe the sequence of events that result in this condition.
  
  - c. What might be some benefits if the medical profession developed a shot or vaccination that could desensitize an Rh<sup>+</sup> situation?

7. You are a type A erythrocyte placing an ad in the personals and you are seeking a compatible mate for a long lasting transfusion. Create an ad to be submitted to the newspaper. The newspaper charges \$0.25 per word and the ad can cost no more than \$10.
  
8. Another important diagnostic tool used by medical technologists is determining a patient's blood cell count, for both red blood cells (erythrocytes) and white blood cells (leukocytes). When this procedure is performed, one technique used is to take multiple samples and calculate the average. This method of multiple sampling is a standard procedure in scientific and medical investigations. Discuss why this method is important in blood typing.
  
9. Each year thousands of people contract blood borne diseases. What could be done in a clinical blood lab to minimize the risk of obtaining or spreading a blood borne disease?
  
10. The flowchart below represents a short history of the study of blood and blood typing. The area marked "???" represents possibilities for the next important new discovery in blood and blood typing. In a short paragraph, identify what you think may be the next important breakthrough, milestone or discovery in the study of blood and blood diseases and explain why.

Landsteiner and Weiner

