

Student:	ID:	Circle Gender & Grade: Male or Female	6	7	8	9	10	11	12
Teacher:	Class Period:	Subject:	Date:						

Born of Blood: Inheritance of Blood Types -- Pilot Pre/PostTest

Use **Figure 1** to determine what is being represented in a model that consists of two pieces of curling ribbon somewhat centrally joined by sticky Velcro® dots. Then respond to items 1 and 2.

- In the model described, the two pieces of curling ribbon represent a
 - chromosome pair (dyad).
 - homologous pair of chromosomes.
 - set of duplicate sister cells
- In this same curling ribbon model, what does the sticky dot represent?
 - nucleus
 - kinetochore
 - homologous pair
- The blood type gene is found on the _____ of chromosome 9.
 - centromere
 - long arm
 - nucleus

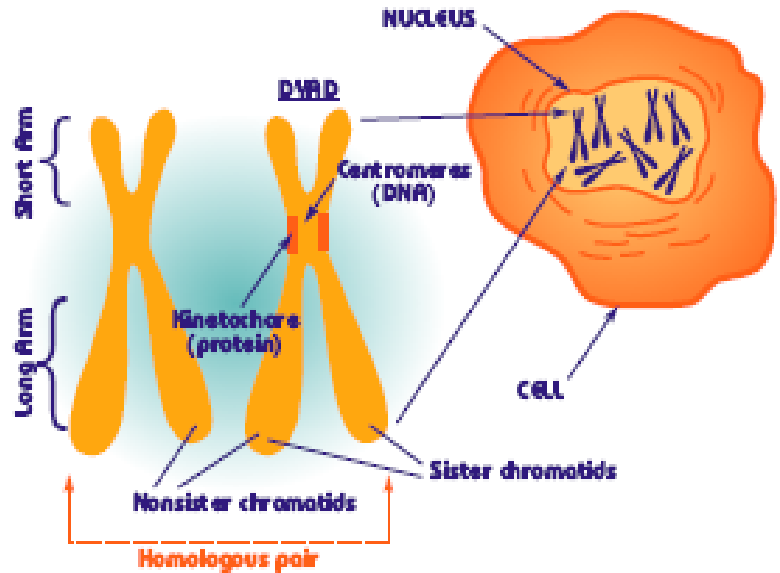


Figure 1 Chromosome Pairs (Dyads)

- The genes that code for blood type are found on the
 - chromosomes of most body cells.
 - surface of most body cells
 - surface of red blood cells.
- When any one of the ABO genes is present, it is expressed; thus the ABO genes are _____ genes.
 - dominant
 - recessive
 - co-dominant
- In which blood type are the “H” antigens on human red blood cells left unchanged?
 - A
 - B
 - O
- In the case of AB blood type, the “H” antigens on human red blood cells have been changed into
 - “A” antigens.
 - “B” antigens.
 - “A” and “B” antigens.
- The presence of a B gene and an O gene yield type B blood because the “H” antigens on the red blood cells are changed by the type B gene, thus expressing only the
 - A gene.
 - B gene.
 - O gene.

9. What is the blood type of a child who inherited a gene for blood type A from its mother and a gene for blood type O from its father?
- type A
 - type O
 - type B
10. What are the possible blood types of children born to a father with type AB blood and a mother with type A blood (an A gene and an O gene present)?
- Types A, AB, B
 - Types A, B, O
 - Types A, AB, O
11. It is possible for parents who both have type A blood to have a child who is type O if both parents have
- two type A genes and no type O gene.
 - one type A gene and one type O gene.
 - two type O genes and one type A gene.
12. What are the possible blood types of children born to parents who both have type O blood?
- type A
 - type B
 - type AB
 - type O
13. What are the possible blood types of children born to a mother with **type A** blood (AA) and a father with **type B** blood (BB)?
- type A
 - type B
 - type AB
 - type O

14. Examine the Punnett Square drawn on the right. What are the possible blood types of children born to this couple?
- types A, AB, O
 - types AB, B
 - types A, AB, B
 - types A, AB, B, O

		Dad Type A (AO)	
		A	O
Mom Type B (BB)	B		
	B		