

## TEACHER'S GUIDE: A MATCH MADE IN DNA

Answer the following questions as you watch A Match Made in DNA video from the K20 Center.

1. Two different alleles that are expressed at the same time is called:

- Incomplete Dominance
- Dihybrid
- Sex-Linked
- Codominance

2. How many pairs of chromosomes do humans have?

- 46
- 23
- 12
- 35

3. Complete the following table with the correct genotypes for each phenotype.

Phenotype	Possible Genotypes
A	$I^A I^A$ or $I^A i$
B	$I^B I^B$ or $I^B i$
AB	$I^A I^B$
O	ii

4. If you are type AB can you give to someone who is type B? Explain your reasoning.

No, because you have the A antigens in your blood it will be rejected by a type B person.

5. T/F. Punnett squares allow us to decide what our children look like. Explain your reasoning.

False. It only gives a prediction of what our kids can potentially be.

6. If Zarría was heterozygous for type  $I^A i$ , provide at least two possible genotypes that her parents could be. Show your work.

- $I^A I^A$  and  $I^A i$
- $I^A I^A$  and ii

- $I^A i$  and  $ii$
- $I^A B$  and  $ii$
- $I^A B$  and  $I^A i$