

Sarah and her biological sister Danielle have some physical characteristics that are the same and some that are different, as shown in the table below.

	Sarah	Danielle
Eye Color	blue	brown
Natural Hair Color	light brown	dark brown
Ring Finger Length	shorter than index	shorter than index
Skin Tone	olive	olive

- Identify the molecule that stores the hereditary information for these characteristics in the chromosomes of every body cell.
- Identify the total number of chromosomes that should be in one of Sarah's body cells **and** the number of chromosomes that should have been contributed by each biological parent.
- Explain the roles of meiosis **and** fertilization in achieving the chromosome numbers you identified in part (b).
- Explain why Sarah and Danielle have some physical characteristics that are different from each other, even though they have the same biological parents.