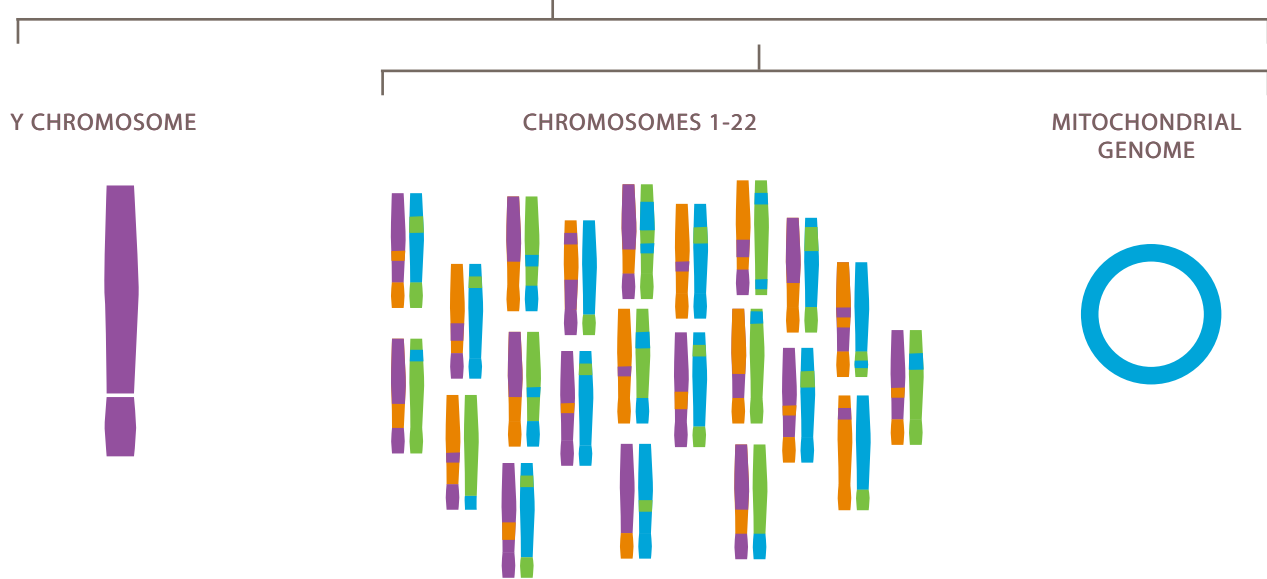
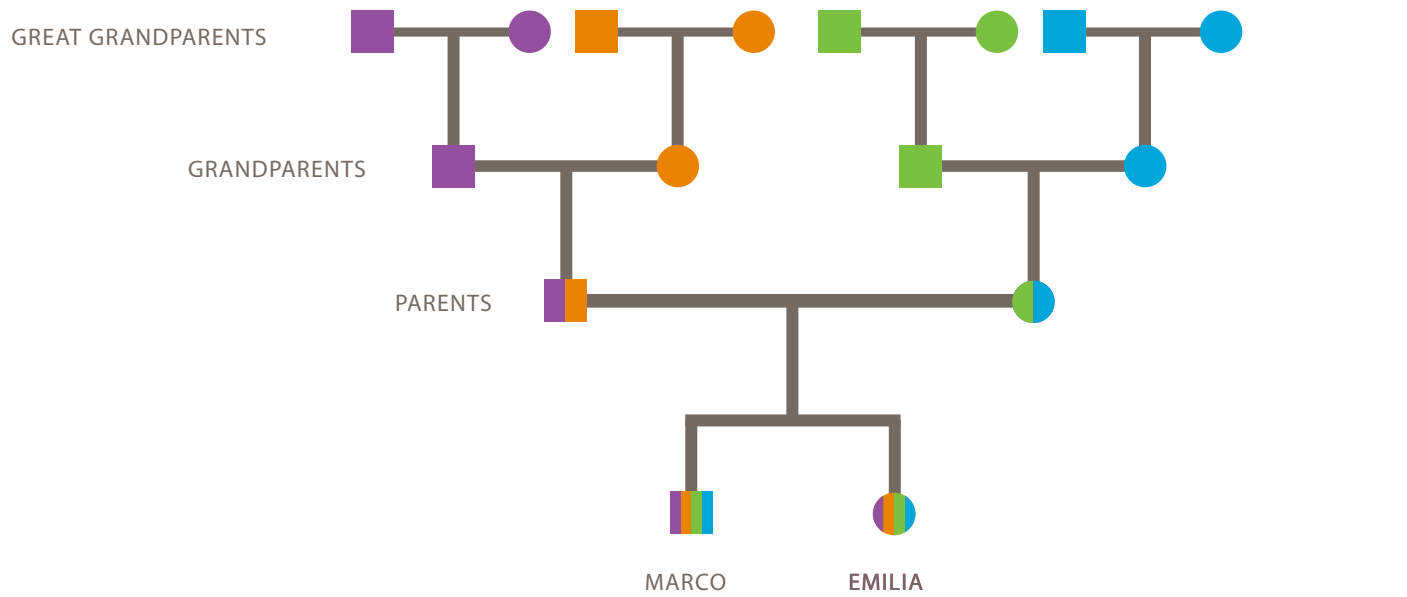
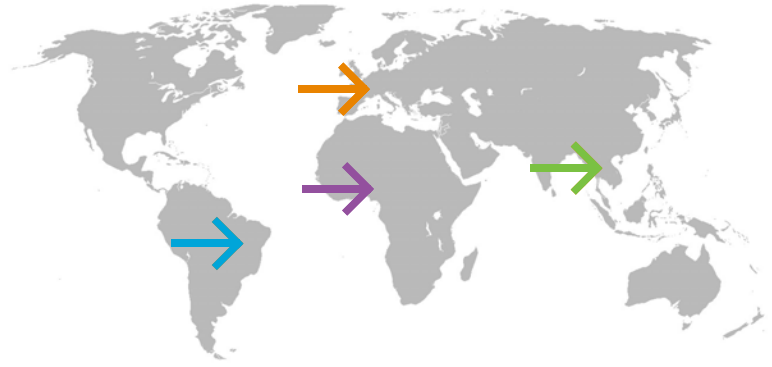


key words for ancestry

Brother and sister Marco and Emilia are tracing their family's geographic ancestry. Each of their grandparents was born in a different part of the world (purple, orange, green, blue arrows) where their ancestors had lived for many generations. Signatures of the origins of their grandparents can be found in different parts of Marco's and Emilia's genomes.



THE Y CHROMOSOME

The Y chromosome is handed down from father to son and allows us to trace our paternal ancestry. Marco's Y chromosome is similar to those found in western Africa.

Emilia can trace her paternal ancestry through the Y chromosome of certain male relatives (her father, brother, paternal uncle, etc.).

CHROMOSOMES

Chromosomes 1-22 (autosomes) are handed down from both parents to each child and allow us to trace many ancestors. Different parts of the autosomes of Emilia and Marco are similar to those found in South America, western Africa, northern Europe, and Southeast Asia.

MITOCHONDRIAL DNA

Mitochondrial DNA (mtDNA) is handed down from mother to child and allows us to trace our maternal ancestry. The mtDNA of Emilia and Marco is similar to those found in South America.

Both males and females have mitochondrial DNA, so both Emilia and Marco can trace their maternal ancestry through their own DNA