DNA Testing aka Genetic Genealogy

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Three types of DNA are tested:

I. Mitochondrial (in outer part of cell, not in chromosomes)
   In egg but not in sperm; passed from mother to all children; not passed on by sons
   Everyone can be tested for this
   Deep ancestry only, even with 100% match

II. Y-DNA (in the nucleus)
   One of the sex chromosomes, determines the male gender
   Therefore, test can be done only in males
   Generally tracks with surname (if father’s surname given to children)
   Deep ancestry (haplogroup) PLUS closer relationships—paternal lineage

III. Autosomal DNA
   Tests Chromosomes 1-22 plus the X, but NOT the Y (separate test, see above)
   Can indicate origins of ancestors about 500 years ago (“ethnicity”)
   Segments of DNA come from ancestors; matching segments come from common ancestor
   Closer relatives only

Companies
1. Ancestry.com
   Autosomal only
   Biggest database
   Poorest tools
   Saliva test
2. Family Tree DNA
   Does all three tests
   Stores sample for 25 years (so you can get additional tests done later)
   Swab test, not saliva
   Excellent tools
3. 23 & Me
   Autosomal only
   Does medical testing
   Excellent tools
   Saliva test
4. My Heritage
   Israel-based, more European residents in database
   Autosomal only
   Swab test
   Excellent tools

Resources:
Blaine Bettinger and Debbie Parker Wayne, Genetic Genealogy in Practice, Arlington, Va.: National Genealogical Society, 2016. Available at ngsgenealogy.org and Amazon

ISOGG.org (tons!) also Genetic Genealogy Tips and Techniques grp on Facebook