

Pedigree Activity Lab

Use the following information to construct a pedigree for the Smith family.

The Smith Family DNA Activity is largely a genetic study of the inheritance of alleles in an extended family. Bob Smith has tested DNA samples from himself and his other relatives. The first task of a human geneticist is the creation of a family tree, or **pedigree** to help with the interpretation of genotypes. From the following relationships, construct a pedigree for Bob and his relatives. The trait being tested for is Red-Green Colorblindness.

| Person | Family Relationship | Is Trait Apparent? |
|---------|-------------------------------------|--------------------|
| Bob | All people are related to him | yes |
| Anne | Wife | no |
| David | Son | no |
| Katie | Daughter | no |
| Fred | Father of Bob and Steve | no |
| Norma | Mother of Bob and Steve | no |
| John | Maternal Grandfather of Bob | no |
| Millie | Maternal Grandmother of Bob | yes |
| Steve | Brother of Bob | no |
| Karen | Steve's wife | no |
| Tiffany | Adopted daughter of Karen and Steve | no |
| Jack | Son of Karen and Steve | no |
| Tom | Son of Karen and Steve | no |
| Bud | Brother of Norma; Bob's Uncle | yes |
| Louise | Wife of Bud | no |
| Buddy | Son of Bud and Louise | no |
| Marilyn | Daughter of Bud and Louise | no |
| Janet | Daughter of Bud and Louise | no |
| Kelvin | Husband of Janet | no |
| Jasper | Son of Janet and Kelvin | yes |