Constructing a Pedigree

A pedigree is a symbolic representation of a family history that is often useful in analyzing the genetic traits of a family. In this activity you will be given information on a specific family. Your task is to construct a pedigree with all the information you are given and bring it back to share with your group.

Symbols used in pedigrees:

- **male**
- **female**
- **affected male**
- **affected female**
- **carrier**
- **mating**
- **parents**
- **offspring**
- **siblings**
- **twins**
- **fraternal**
- **identical**
- **deceased**
- **parents**
- **siblings**
- **offspring**
- **twins**
- **fraternal**
- **identical**
- **deceased**

Some useful tips:
- Usually siblings are placed from left to right from oldest to youngest (if that creates problems with the rest of the pedigree it is okay to put them out of order).
- A horizontal line indicates that the two people connected had children together.
- Offspring are branches off of the line coming down from the parents.
- All members of the same generation should be even with each other. In other words, first cousins should not be higher or lower on the page than each other.
- In order for a pedigree to be meaningful to other people it is necessary to include a key for any shadings used to indicate affected individuals (especially if there is more than one disorder in the family).
- With these pedigrees, it will most likely be easiest to start with the parents of the affected child and work from there.
- Include the name of the individual below their symbol on the pedigree.
Use the attached page to practice constructing a pedigree. Each numbered step below will explain how to add another part to the pedigree. You may also want to refer to the information on the previous page for help with the symbols.

1) We will begin with a couple named John and Jane. They should be drawn in the middle of the page and connected with a horizontal line. On a pedigree this shows that they have had children together.

2) Jane and John have two children, a boy, Luke, and a girl, Sally. Their oldest child is a boy so he will be drawn on the left and the symbol for the girl will be drawn on the right. They should be drawn as branches off of a line that is connected to the line between their parents.

3) Next, work out the information on one member of the couple. We will start with Jane. She is the oldest of three girls, so we will put her sisters (Sarah and Jessica) next to her at the same level on the page and connect them with branches from a common line above. This shows that they are siblings.

4) And of course, these three women have parents, Fred and Mayme, so we will put them connected to each other directly with a horizontal line and to their children by a vertical line.

5) The only other information we know about Jane’s family is that her youngest sister is married to Frank and has two daughters, Amy and Joy. To show this we connect the sister on the far right to a male with a horizontal line and we show their children as branches off of a vertical line. These children should be drawn on the same level on the page as the children of John and Jane because they are all in the same generation.

6) Now we move on to John’s side of the family. He is the youngest of four children. The oldest is a boy, Billy, followed by a girl, Kathy, then another boy, Jim and then John. We connect them as branches off of a single line to show that they are siblings.

7) Next we put in John’s parents, Dave and Pat.

8) And finally we add that John’s oldest brother is married to Diane, and they have one son, Matt. To show this we connect him to a wife with a horizontal line and draw a line down to their son. Notice here that the line does not have any branches because they have just one child.

9) Now the pedigree is complete with all the information we have. All the people in the same generation should be level with one another on the page.
Practice Pedigree