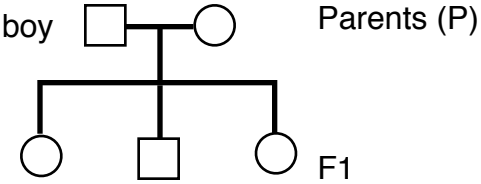
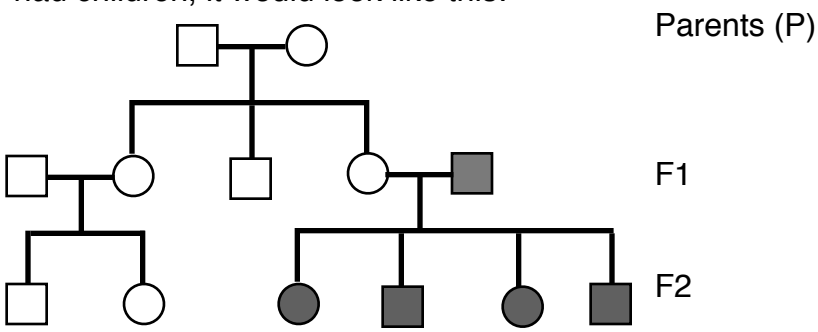
Genetics Part VI

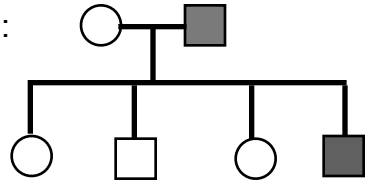
- Scientists use a tool called a Pedigree to examine how traits are passed through families
- A pedigree uses the following symbols to analyze a family
  - Male expressing the trait
  - Male not expressing the trait
  - Female expressing the trait
  - Female not expressing the trait
- These symbols can be used to show different generations:
  - This family has 3 children, 2 girls and 1 boy



- If the children in this family had children, it would look like this:



- The pattern of how traits are passed can tell us about the trait
  - The trait that the male in the F1 generation shows is probably a dominant trait because all of thir children show the trait
- A recessive trait would look more like this:



- Because recessive traits have to have 2 copies to show up in the phenotype, the mom must have had 1 copy of the recessive allele
  - An organism that has a copy of the recessive, but are not showing the trait is called a **carrier**
  - Carriers have a special symbol in pedigrees that is only half shaded:
    - So a male carrier would use this symbol: