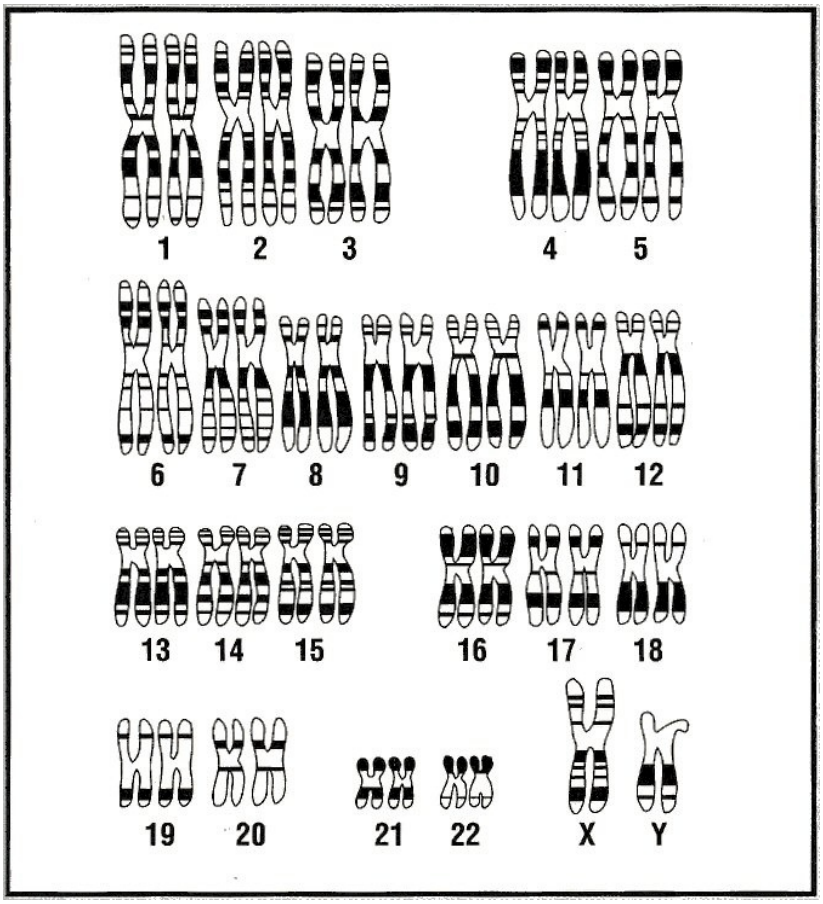
Human Karyotypes

In this activity you will use a karyotype to diagnose genetic disorders.



Procedure

1. Obtain a set of chromosomes and examine it.
2. Cut out each of the chromosomes to prepare a karyotype.

Questions

1. What criteria are used to arrange the chromosomes in pairs?
2. What is the sex of the individual in your karyotype?
3. On the basis of the information you can gather from your karyotype, provide a .
4. What stage during the cell cycle is best for producing a karyotype?
5. Would the diagnosis of Turner's syndrome in a single cell necessarily mean that every cell of the body would contain 45 chromosomes? Explain.
6. Explain how nondisjunction could result in Down sydnrome.
7. Is it possible for two people who have Down syndrome to give birth to a normal child? Explain.
8. Would it ever be possible to produce a baby who has 48 chromosomes? Explain.
9. More males than females suffer from color blindness. Speculate as to why females who have Turner's syndrome have a similar incidence of color blindness as males.
10. Would a genetic counsellor be able to use a karyotype to identify a carrier of cystic fibrosis?