

Homologous Chromosomes

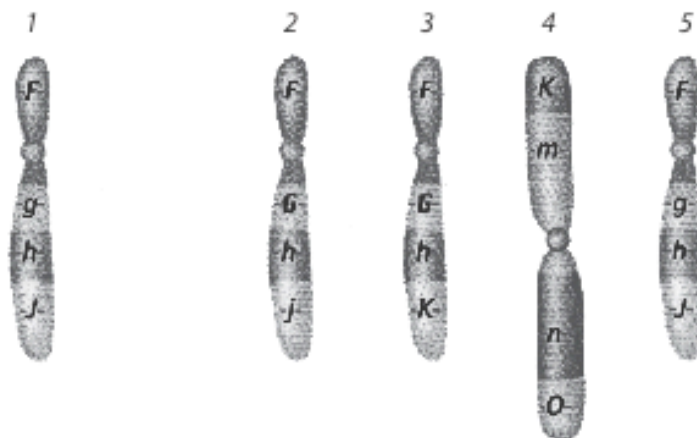
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Can you identify homologous chromosomes?

Homologous chromosomes are paired chromosomes having genes for the same trait located at the same place on the same chromosome. The gene itself, however, may have different **alleles**, producing different forms of a trait. For example, the gene for eye color is represented by a specific letter on each member of a homologous pair.

Analysis:

The diagram below shows **chromosome #1** with four different genes present. These genes are represented by the letters *F*, *g*, *h*, and *J*. Possible homologous chromosomes of chromosome #1 are labeled 2-5. Examine the five chromosomes and the genes they contain to determine which of the 2-5 are homologous with chromosome #1.



Thinking Critically:

1. Could chromosome #2 be homologous with chromosome #1?
Explain why or why not.
2. Could chromosome #3 be homologous with chromosome #1?
Explain why or why not.
3. Could chromosome #4 be homologous with chromosome #1?
Explain why or why not.
4. Could chromosome #5 be homologous with chromosome #1?
Explain why or why not.