**Meiosis I**

**interphase I**
- Centrosomes (with centriole pairs)
- Nuclear envelope
- Chromatin

**prophase I**
- Chiasmata
- Spindle
- Sister chromatids
- Tetrads pair and exchange segments
- Synapsis - pairing of homologs to form tetrad

**metaphase I**
- Microtubule attached to kinetochore
- Metaphase plate
- Centromere (with kinetochore)

**anaphase I**
- Sister chromatids remain attached
- Homologous chromosomes separate

**Meiosis I**

**telophase & cytokinesis**
- Cleavage furrow

**Meiosis II**

**prophase II**

**metaphase II**

**anaphase II**
- Sister chromatids separate
- Haploid daughter cells forming

**telophase II**
- Two haploid cells form; chromosomes are still double
- During another round of cell division, the sister chromatids finally separate; four haploid daughter cells result, containing single chromosomes

Copyright © Pearson Education, Inc., publishing as Benjamin Cummings.
**Meiosis Assignment**

1. Label the stages of meiosis.
   - A.
   - B.
   - C.
   - D.
   - E.
   - F.
   - G.
   - H.
   - I.

2. What important event is taking place in stage A?

3. Label the following.
   - J.
   - K.
   - L.

4. What important event is taking place in stage B?

5. What is the chromosome number for the cell in stage B? (haploid or diploid)

6. Label the following.
   - M.
   - N.
   - O.
   - P.
   - Q.
   - R.
   - S.

7. Describe the event that takes place in stage D.

8. Label the following.
   - T.
   - U.

9. What is the chromosome number for the cell in stage E? (haploid or diploid)

10. Label the following.
    - V.
    - W.

11. Describe the event that takes place in stage H.
Meiosis Assignment

1. Label the stages of meiosis.

A. interphase  B. prophase I  C. metaphase I
D. anaphase I  E. telophase I  F. prophase II
G. metaphase II  H. anaphase II  I. telophase II

2. What important event is taking place in stage A?
The chromosomes are replicating.

3. Label the following.

J. nuclear membrane  K. chromatin  L. centriole pair

4. What important event is taking place in stage B?
Exchanging of segments AKA crossing over

5. What is the chromosome number for the cell in stage B? (haploid or diploid)

6. Label the following.

M. sister chromatids  N. tetrad  O. chiasmata  P. spindle
Q. centromere  R. microtubule  S. metaphase plate

7. Describe the event that takes place in stage D.
Homologous chromosomes separate

8. Label the following.

T. sister chromatid  U. homologous chromosomes

9. What is the chromosome number for the cell in stage E? (haploid or diploid)

10. Label the following.

V. cleavage furrow  W. separated sister chromatids

11. Describe the event that takes place in stage H.
sister chromatids separate