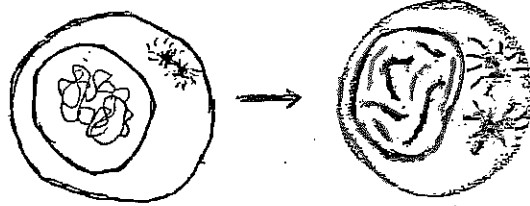


# Exploring Meiosis

**Interphase**  
 -cell grows  
 -DNA duplicates



## Prophase I

- Rod shaped chromosomes form from the chromatin
- centrioles start to move apart
- chromosomes pair up with their copies
- copies attach at the centromere
- nuclear membrane disappears

## 1 Beginning of Meiosis

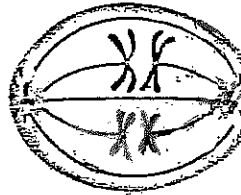
*crossing-over*



*random alignment*

## Metaphase I

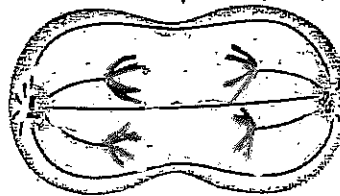
- centrioles stretched fibers across cell
- paired chromosomes line up along middle of cell and attach to fibers



## 2 Meiosis I

## Anaphase I

- chromosome pairs separate; pulled apart as fibers retract



## Telophase I/Cytokinesis I

- nuclear membrane reforms around each set of chromosomes
- final separation of cytoplasm

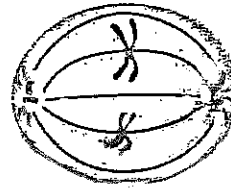
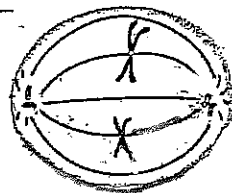


-two new non-identical cells are formed

## 3 Meiosis II

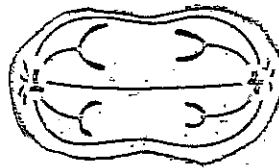
## Metaphase II

- paired chromosomes line up along middle of cell and attach to fibers



## Anaphase II

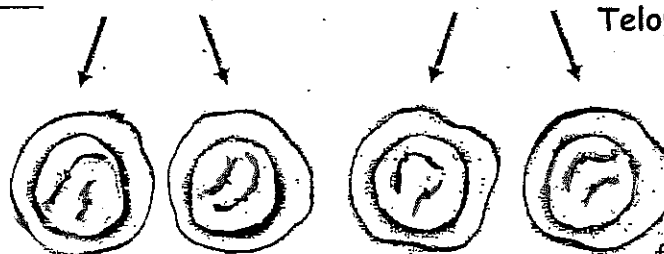
- chromosome pairs separate; pulled apart as fibers retract



## Telophase II/Cytokinesis II

- nuclear membrane reforms around each set of chromosomes
- final separation of cytoplasm

*independent assortment*



-four non-identical reproductive cells are formed

## 4 End of Meiosis

*random selection*

