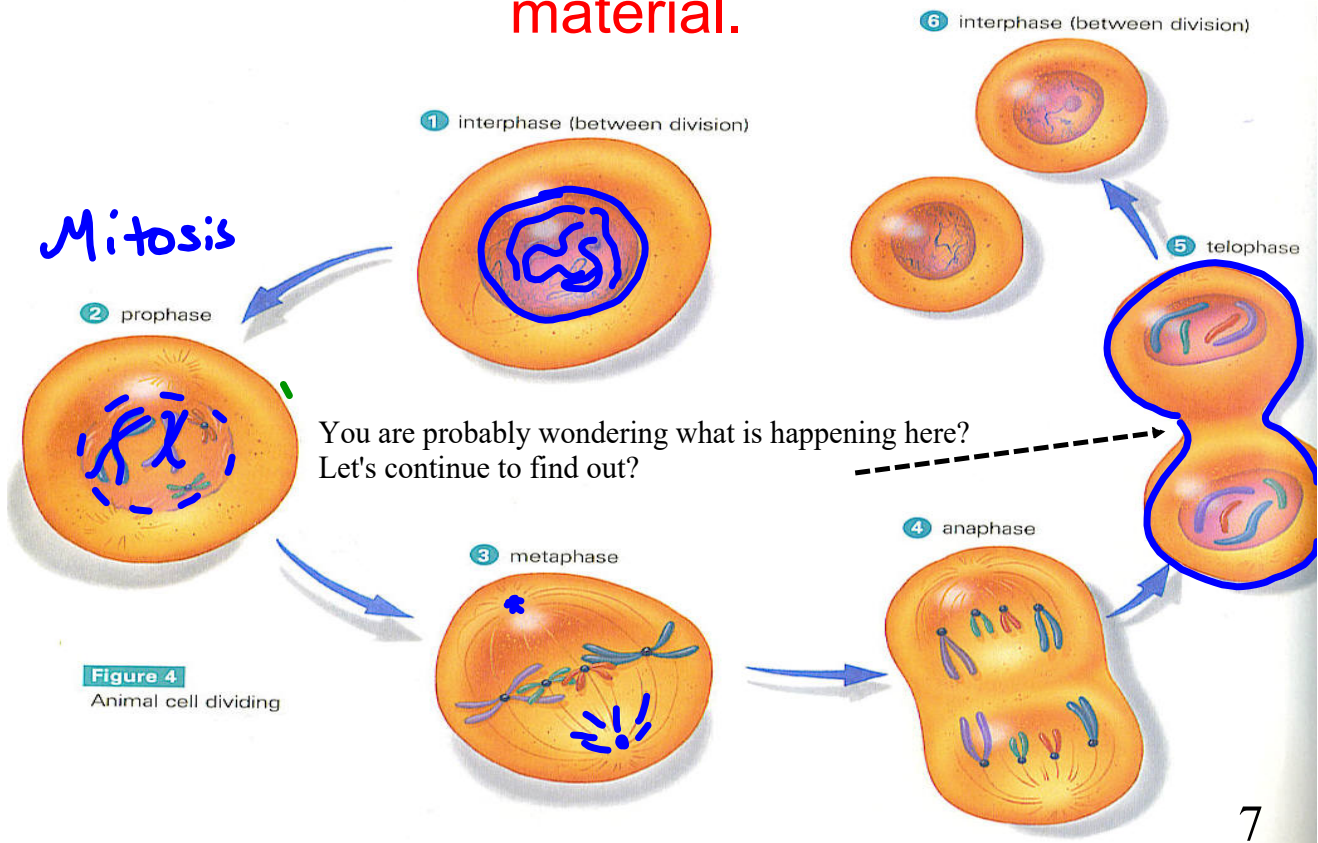


Mitosis is the process of dividing nuclear material.

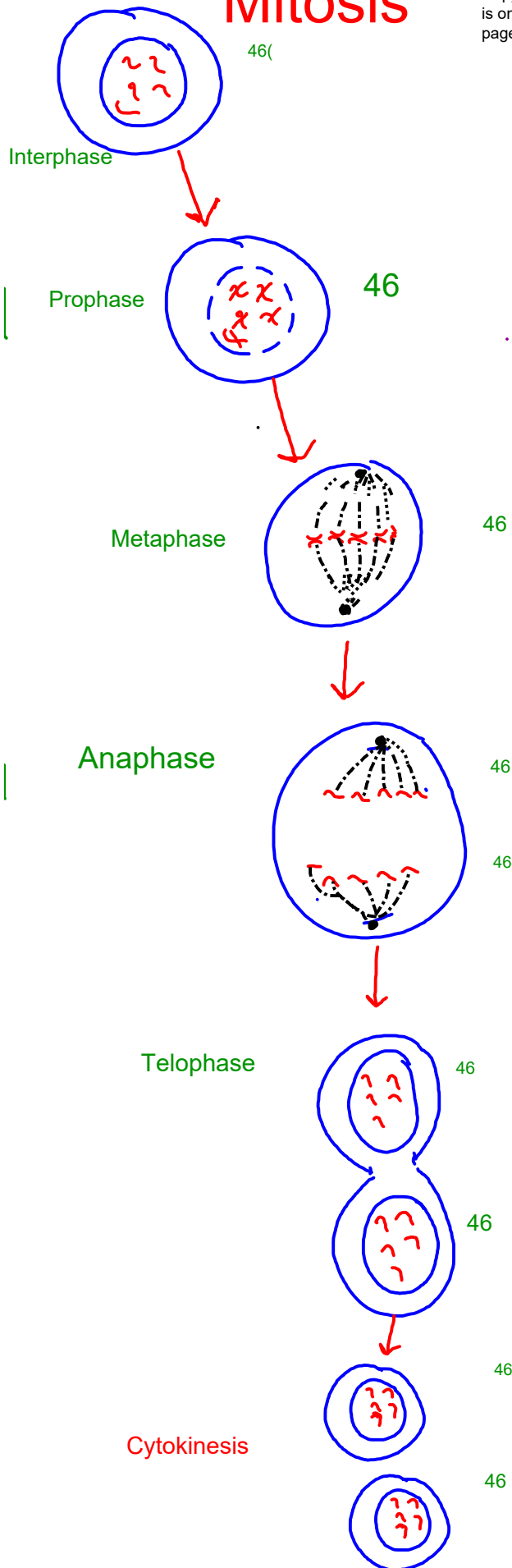


http://www.google.com/imgres?imgurl=http://www.phschool.com/science/biology_place/labbench/lab3/images/stages1.gif&imgrefurl=http://www.phschool.com/science/biology_place/labbench/lab3/design1.html&h=637&w=337&sz=21&tbnid=sjoXBxYIWUDrdM::&tbnh=137&tbnw=72&prev=/images%3Fq%3Dmitosis%2Bstages&usg=__nhSg0TrzWz7k5NiM3XL5E9DGDg8=&ei=ZBbQSeO-C-friQePw9TfCQ&sa=X&oi=image_result&resnum=5&ct=image&cd=1



Mitosis

Copy what is on next page



Mitosis



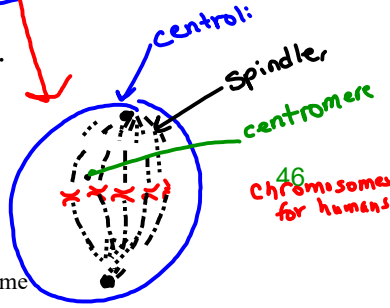
46 **Interphase**
grows and duplicating its genetic material (Chromotids). Nuclear membrane still intact

46 for humans



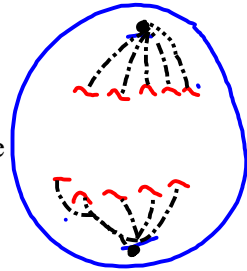
Prophase
Chromosomes(X) become shorter and thicker. Centrolies move to opposite Nuclear membrane starts to dissolve

Metaphase
The double stranded "X" chromosomes line up in the middle Spindle fibres start to connect to the centromere of each chromosome.
•Centrol: anchors the Spindle fibers



46 Chromosomes for humans

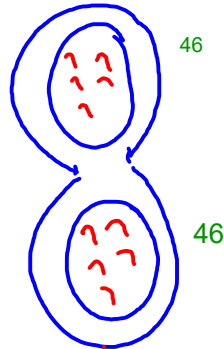
Anaphase
The chromosomes(X) are split in two and move AWAY from each other



46 chromatids

46 chromatids

Telophase
Nuclear membrane begins to form around each . Cytoplasm begins to separate into two equal parts.

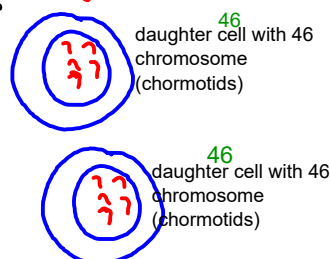


46

46

Cytokinesis- pinch off
Cytoplasm splits and 2 new daughter forms(after telophase)

they are identical



46 daughter cell with 46 chromosome (chormotids)

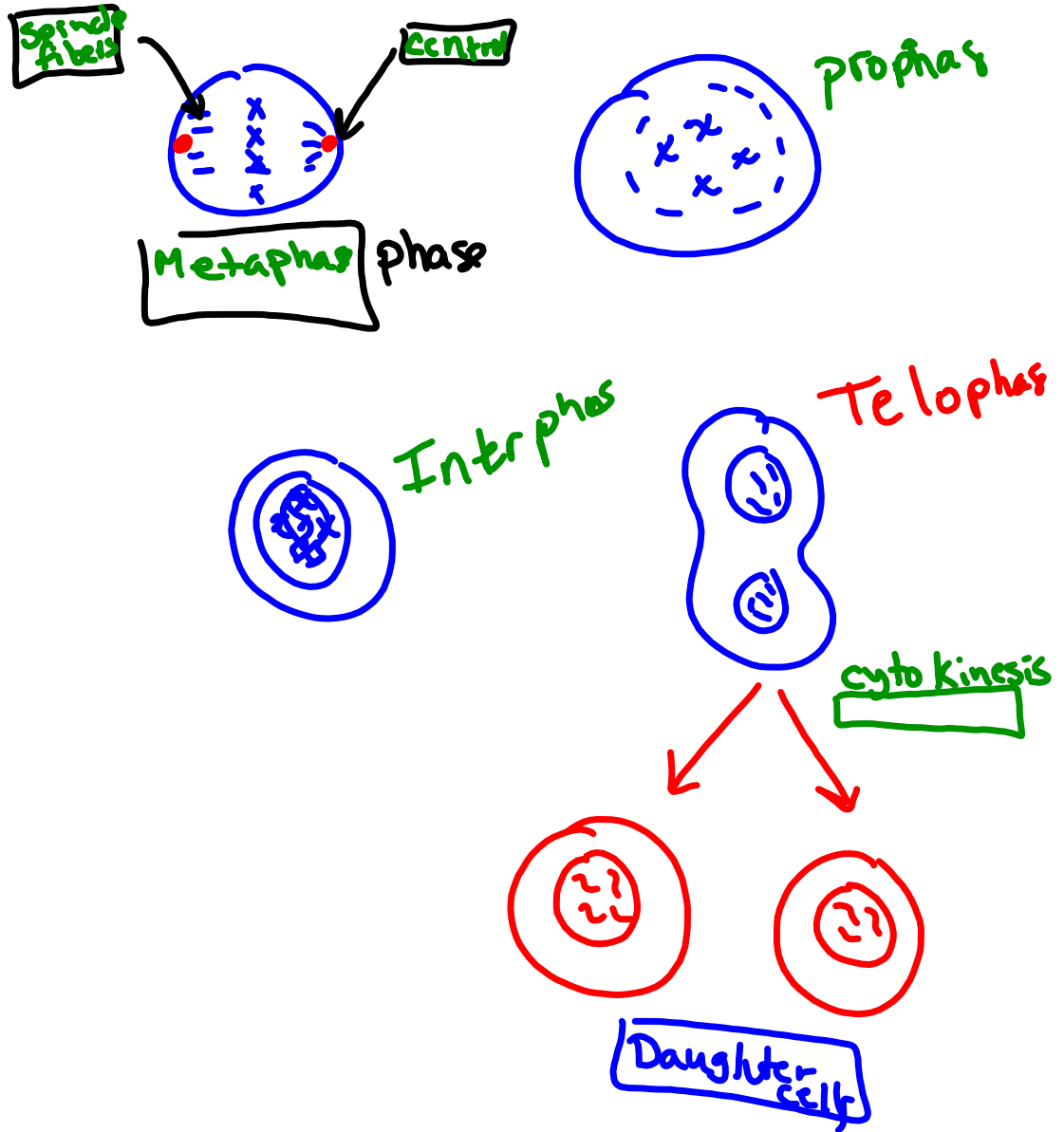
46 daughter cell with 46 chromosome (chormotids)

Quiz Thursday on Mitosis diagram

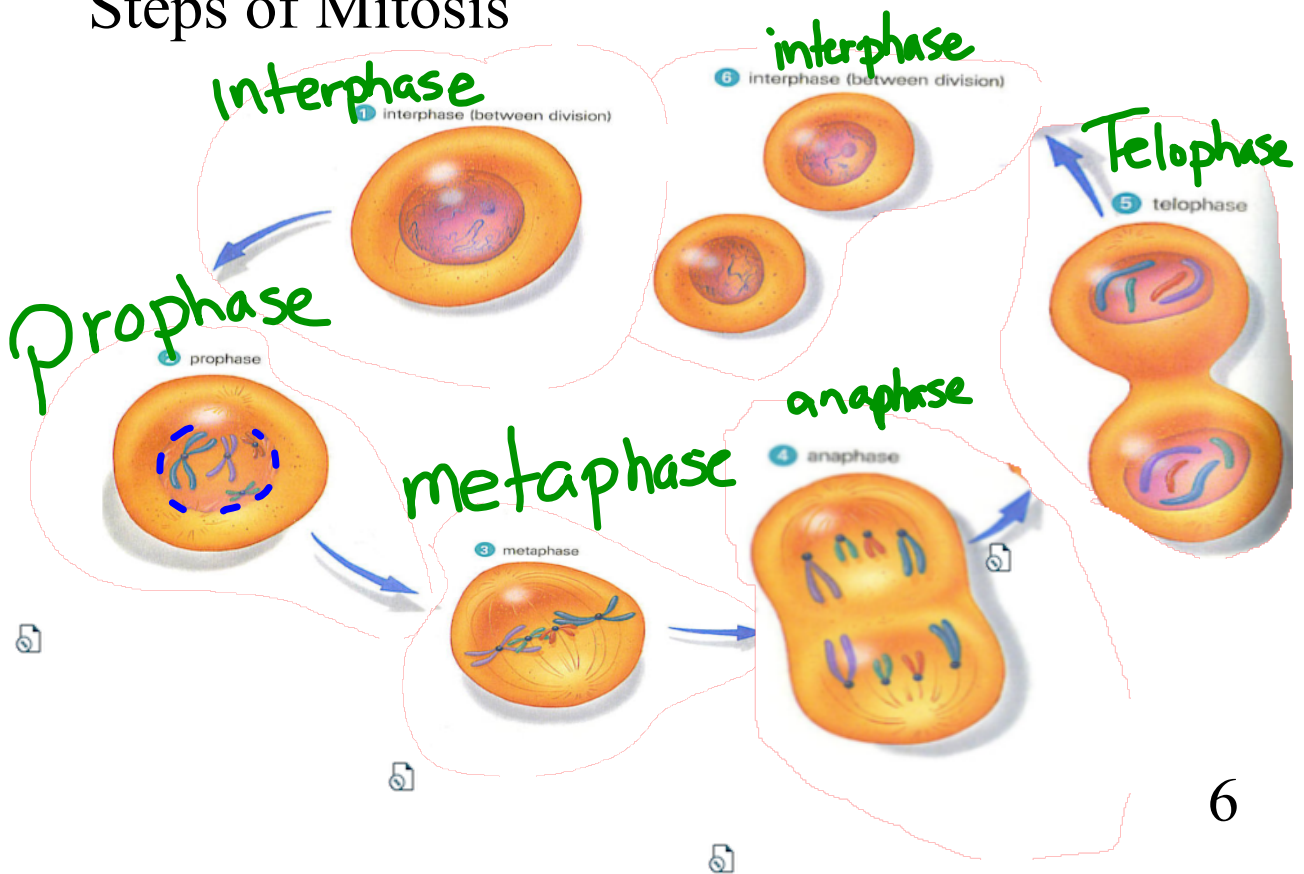
April 18

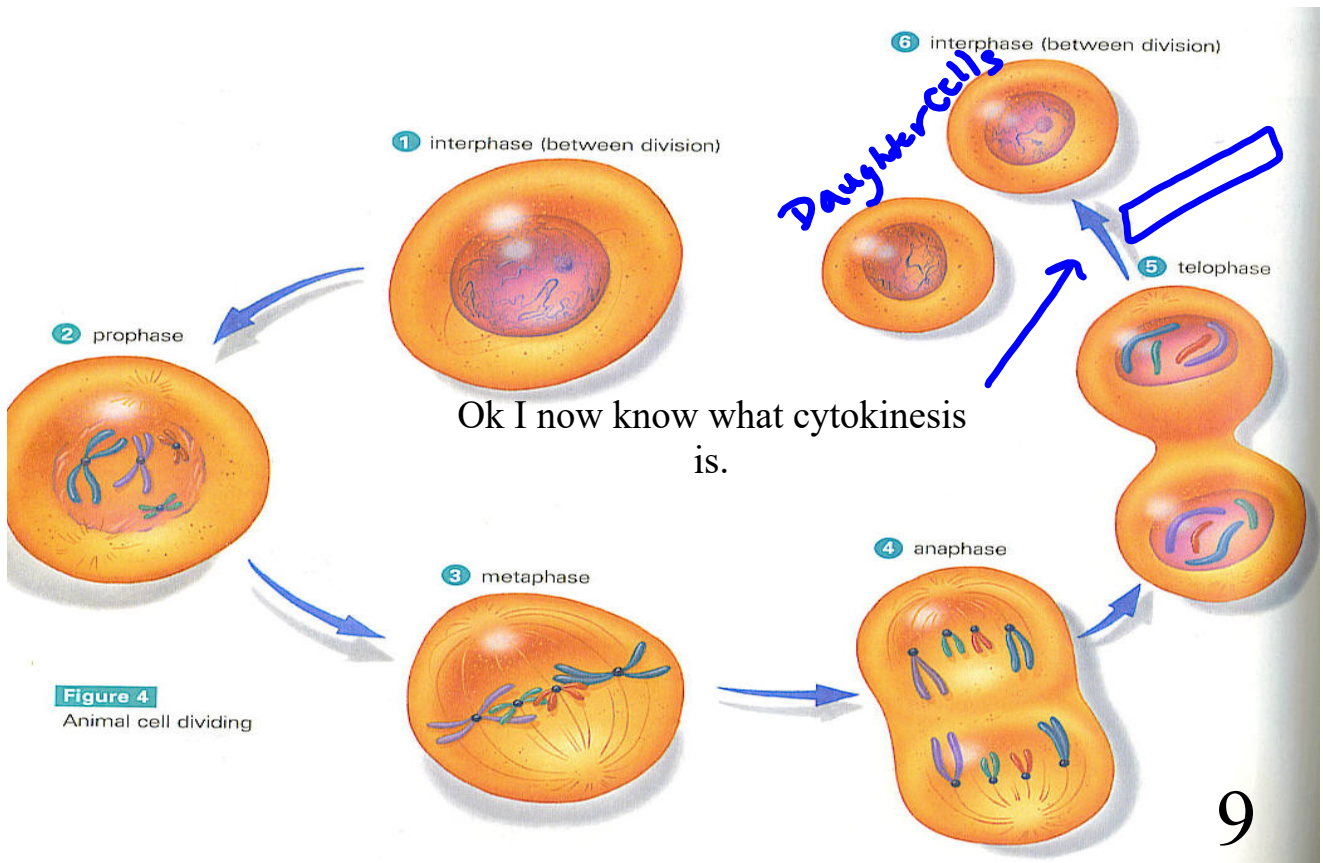
Diagram is new

so don't just study order

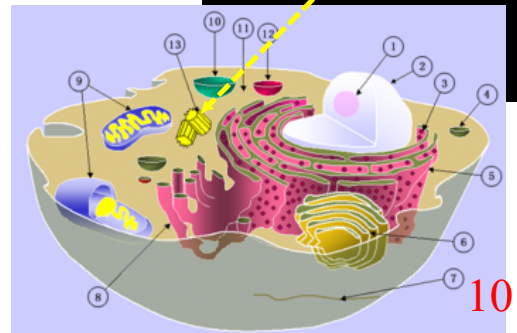
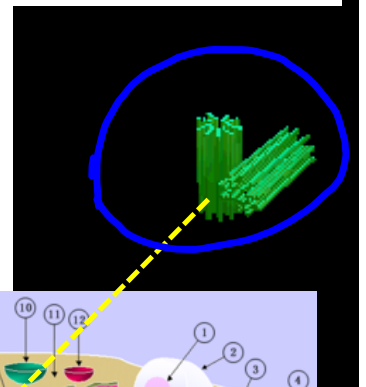
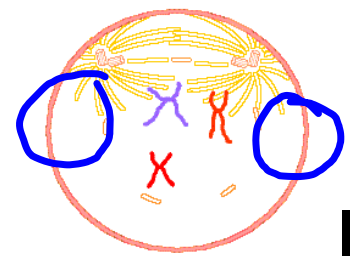


Steps of Mitosis





The centrioles move to the opposite sides of the cell. Spindle fibers attach from the centrioles to the chromosome. The centrioles reel in the chromosomes like a fisherman reels in a fish.



OK. I think we got it. Let's put it all together.
Ladies and Gentleman, I present, Mitosis.



By: Tom Diab
Science Department
Saline High School

Links



<http://www.cellsalive.com/mitosis.htm>

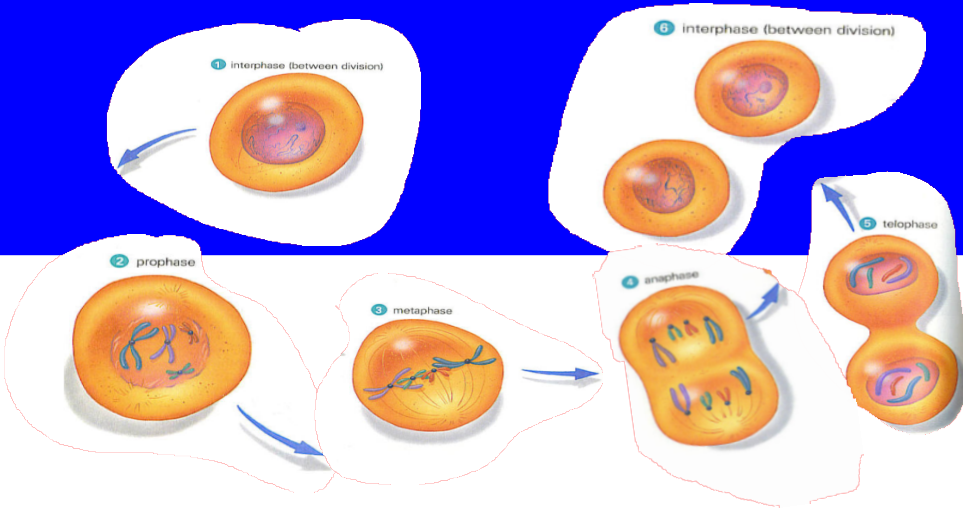


http://www.pbs.org/wgbh/nova/miracle/divi_flash.html

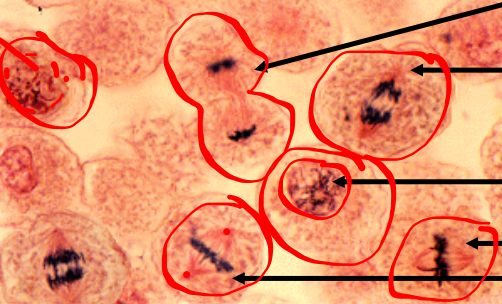


Put me together

Tricky Questions



Ph: Name that Stage



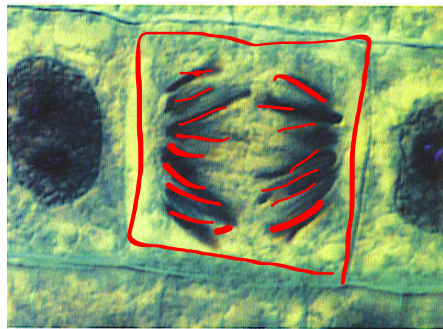
Telo

Anaph

Int

Met

12



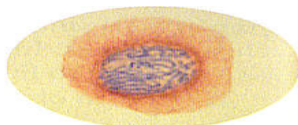
B A plant cell dividing



Figure 2
Onion cells in mitosis



a cell before mitosis



b early prophase



f metaphase



g anaphase



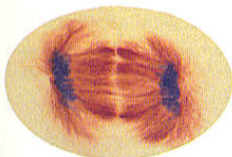
c prophase



d late prophase



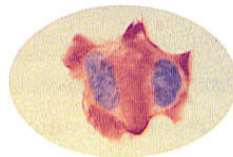
e transition to metaphase



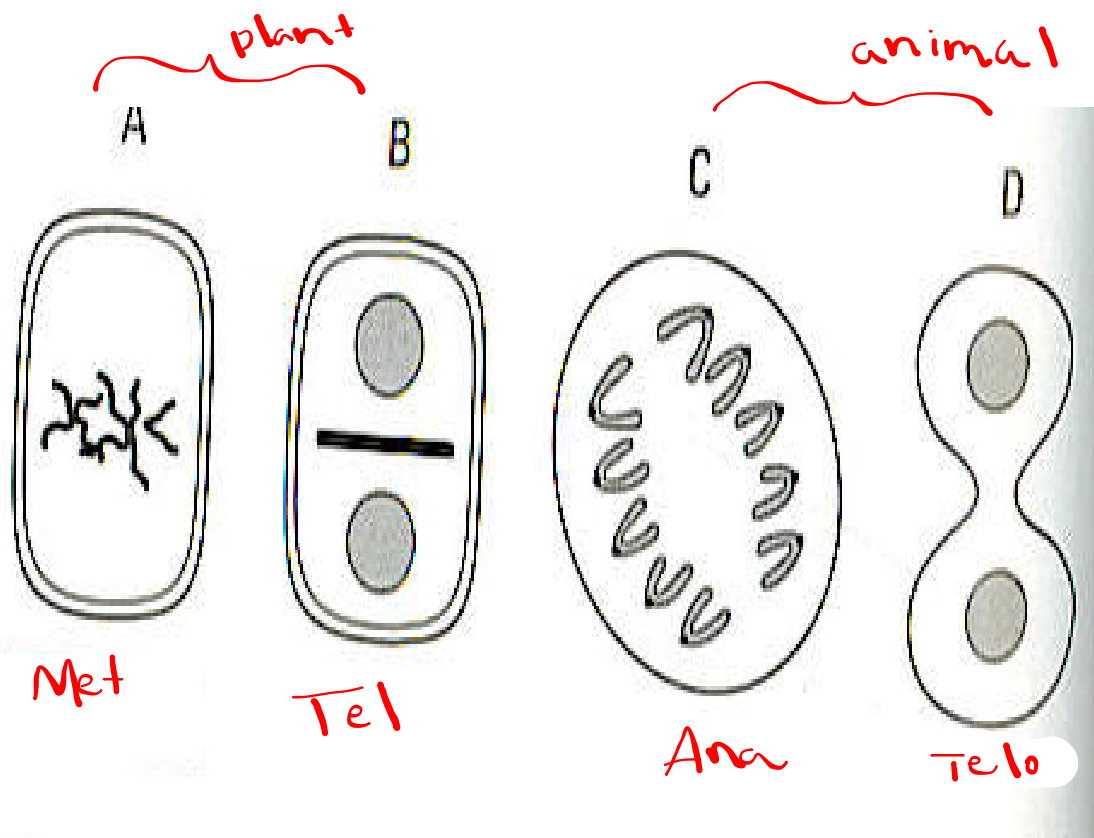
h telophase



i late telophase

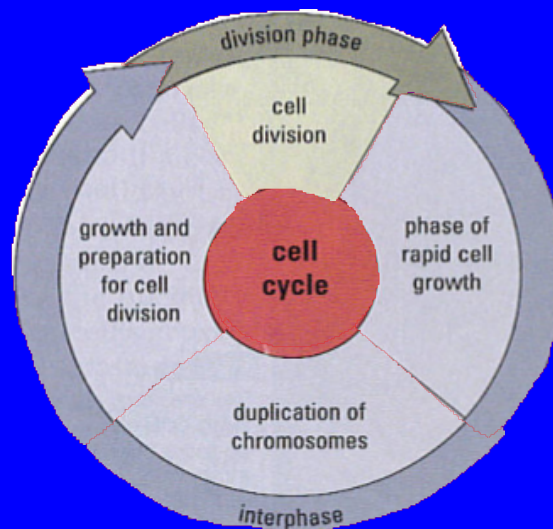


j cells after mitosis



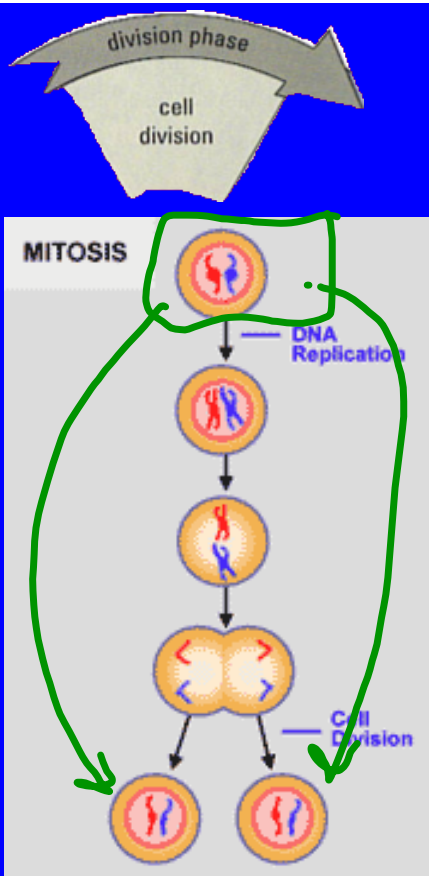
The Cell Cycle

Cells divide and rest. The sequence of event from one division to the next is called the cell cycle.



Cell Cycle → is made up
of Interphase
and P-MAT

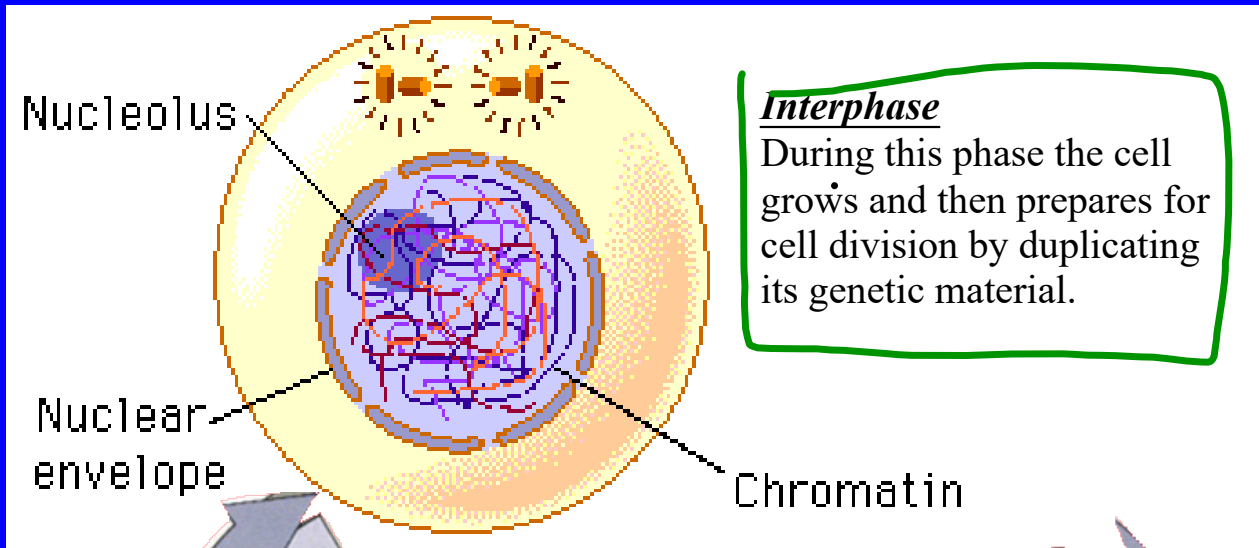
Interphase
Prophase
Metaphase
Anaphase
Telophase



During mitosis (also called cell division), chromosomes are duplicated and move to opposite sides of the cell.

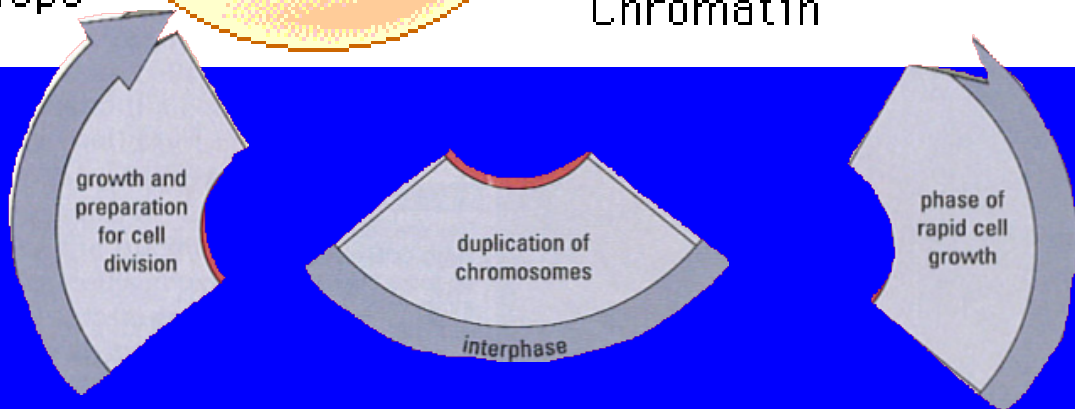


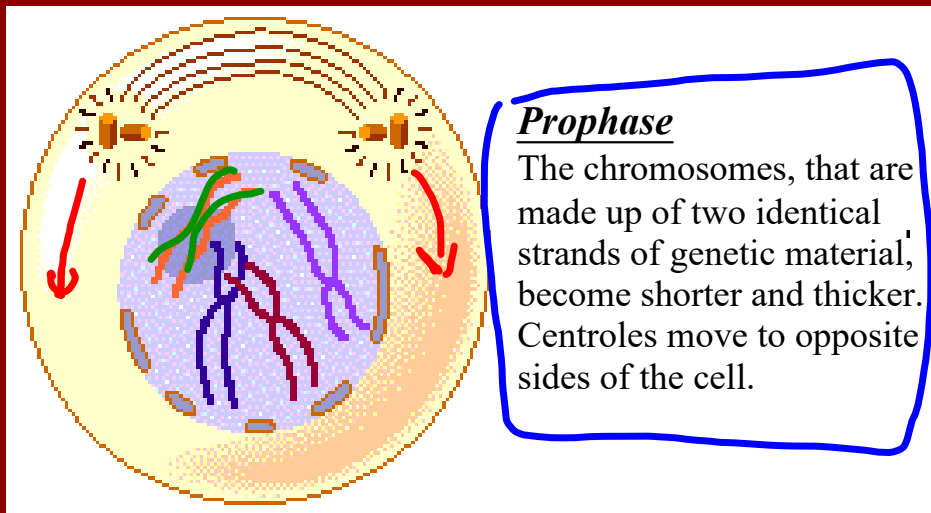
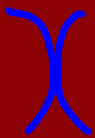
The stage between cell division is called interphase.



Interphase

During this phase the cell grows and then prepares for cell division by duplicating its genetic material.



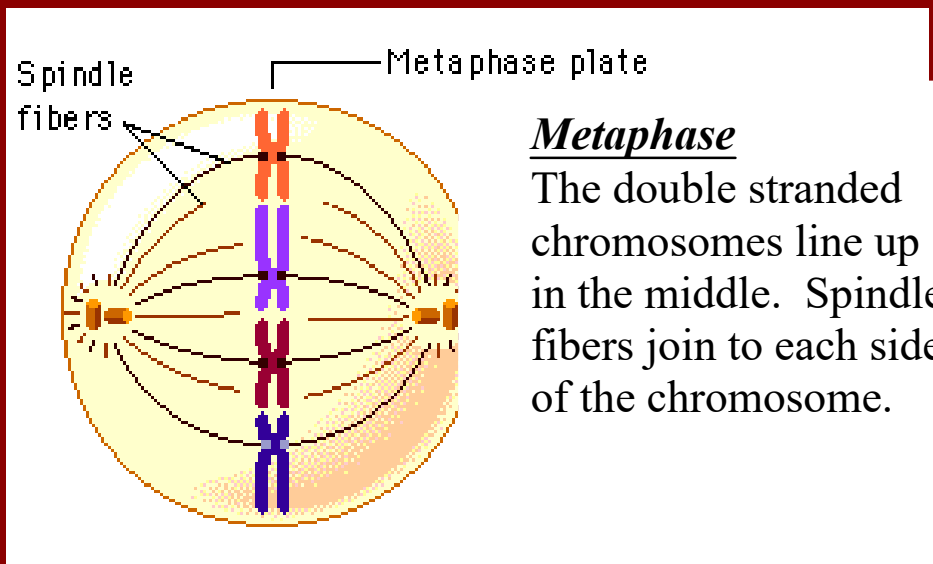
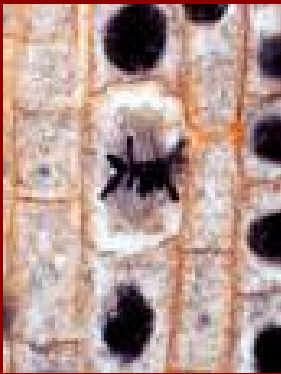


Prophase

The chromosomes, that are made up of two identical strands of genetic material, become shorter and thicker. Centroles move to opposite sides of the cell.

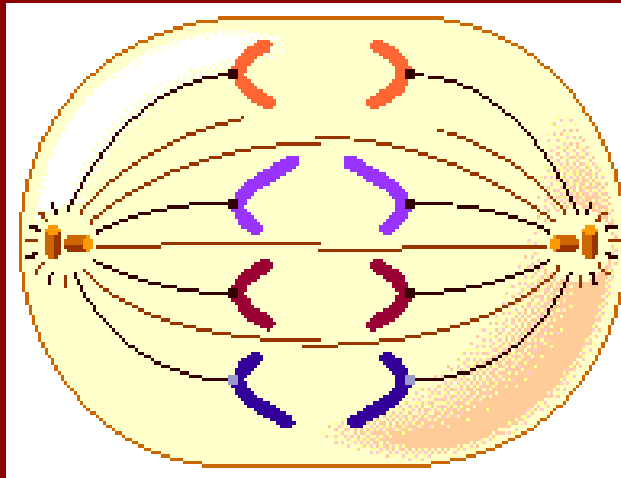
Return





Return

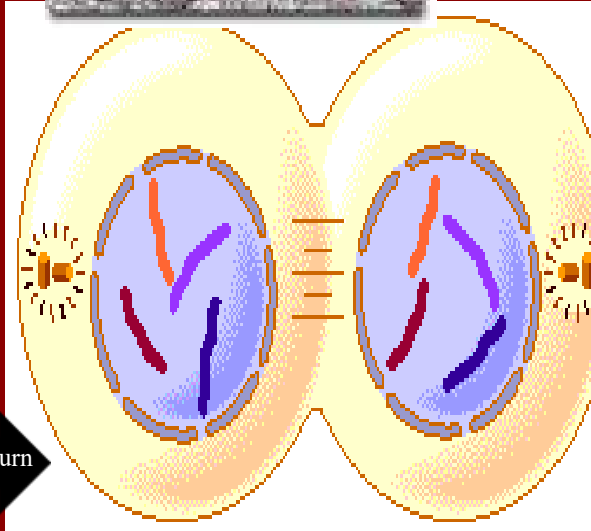
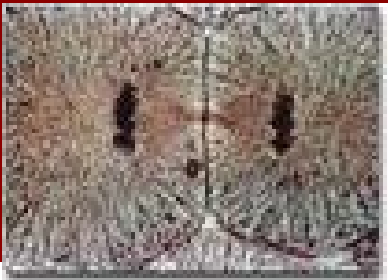




Return

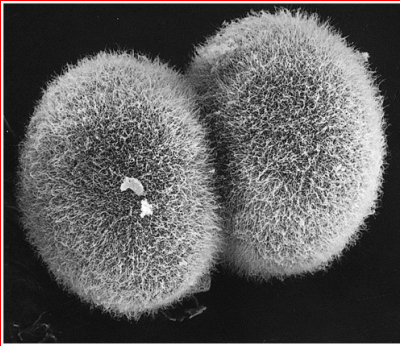
Anaphase

The chromosomes are separated and move toward the opposite poles.

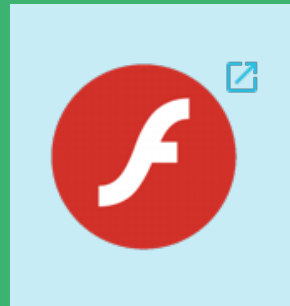
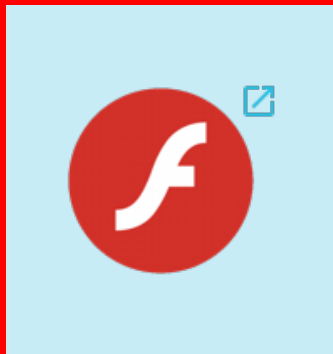
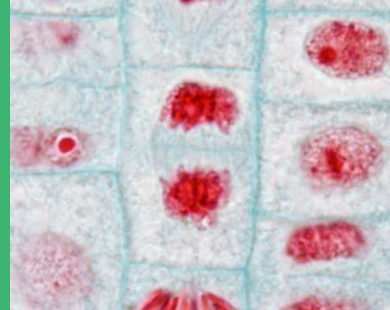
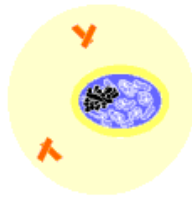


Telophase ;
The chromosomes reach opposite poles of the cell, and a nuclear membrane begins to form around each .Cytoplasm separates into two equal parts.

Cell division continues with the separation of the cytoplasm into two equal parts. This is called cytokinesis.



© T. E. Schroeder/Biological Photo Service

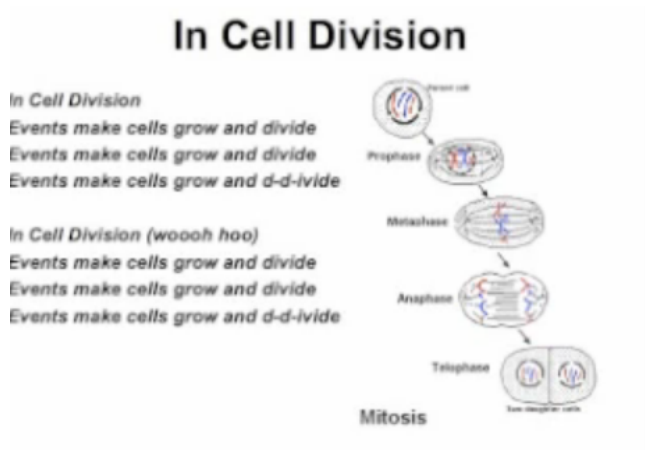


Interphase

Two daughter cells are formed and the process begins again.



<http://www.youtube.com/watch?v=IIV9hExXZnM>



Song

<http://www.youtube.com/watch?v=ZEwddr9ho-4>



In-Class Assignment/Homework

Page 153 #2,3,5,6,8,9

