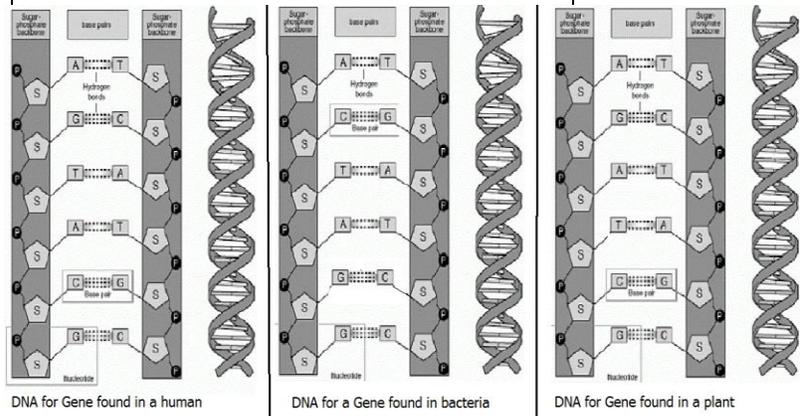


I can identify that DNA is found in the cells of all living organisms and that within an organism, all cells contain the same DNA unless a mutation has occurred.

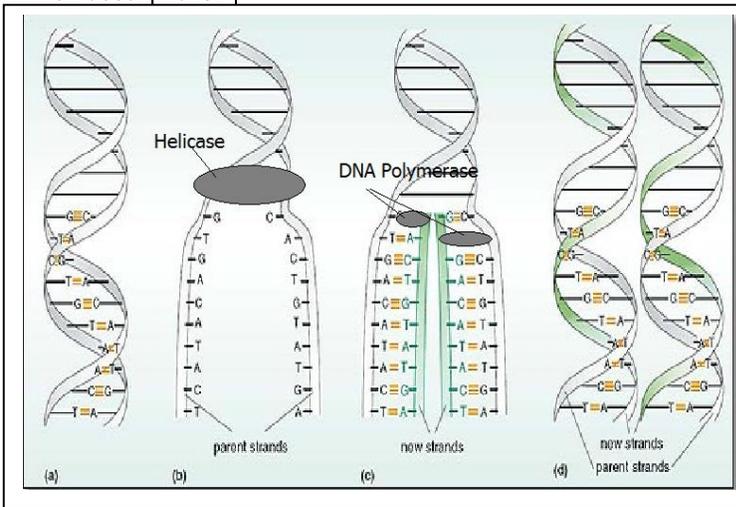


1. Is the basic DNA structure for all three organisms the same?

 2. What do you see is different in the DNA structure of the three organisms?

I can sequence the step in replication, using diagrams or written descriptions.

DNA Replication



1. For each letter in the DNA Replication diagram describe what is occurring

a. Parent Strand

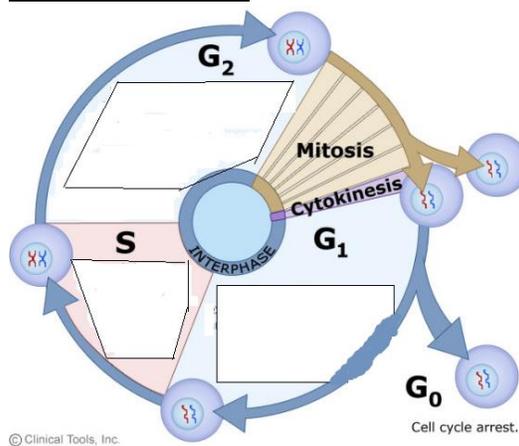
b. _____

c. _____

d. _____

I can list and explain what happens in each stage of the cell cycle.
 I can sequence and explain what happens in mitosis.

Cell Cycle Diagram

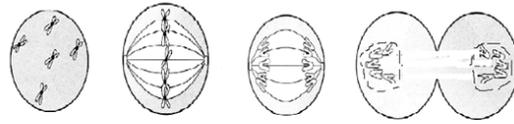


1. The Cell cycle diagram shows that most of the time the cell is in the G₁, S, and G₂ phases. What is stage of the cell cycle are these phases part of?

2. In the Cell Cycle diagram write what is happening in the G₁, S, and G₂ phase.

3. When a cell does not enter G₀ and continues to divide uncontrollably, what disease may result?

Mitosis Stages diagram

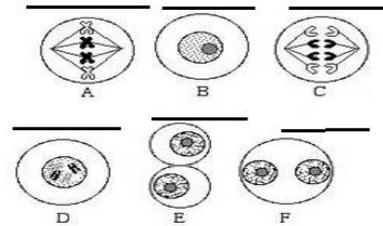


Describe what is occurring in each phase

4. In the mitosis stages diagram, write the name the picture is describing on the line below the picture then describe what happens during that stage

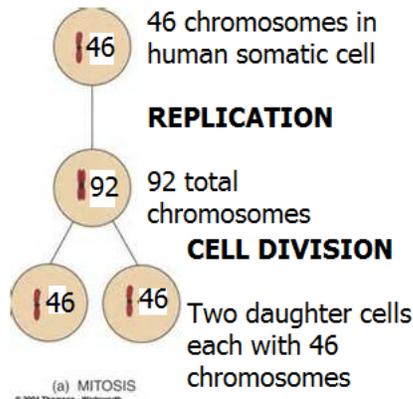
5. Below are pictures of the cell cycle. Under the number write the letter that correctly places the stages in order then write the name of the phase in the cell cycle. In the picture write the name of the phase.

1st 2nd 3rd 4th 5th 6th



I can explain the importance of the results of the identical cells produced in the cell cycle and the importance of the cell cycle to growth.

Division of human somatic cells



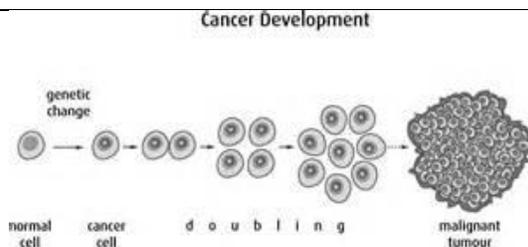
1. What is the importance of DNA replication during S phase before the cell divides?

2. Give two reasons why organisms' cells need to undergo the cell cycle.

1. _____

2. _____

I can explain how disruptions to the cell cycle affect organisms, such as causing cancer.



1. Explain how cancer relates to the cell cycle. _____
