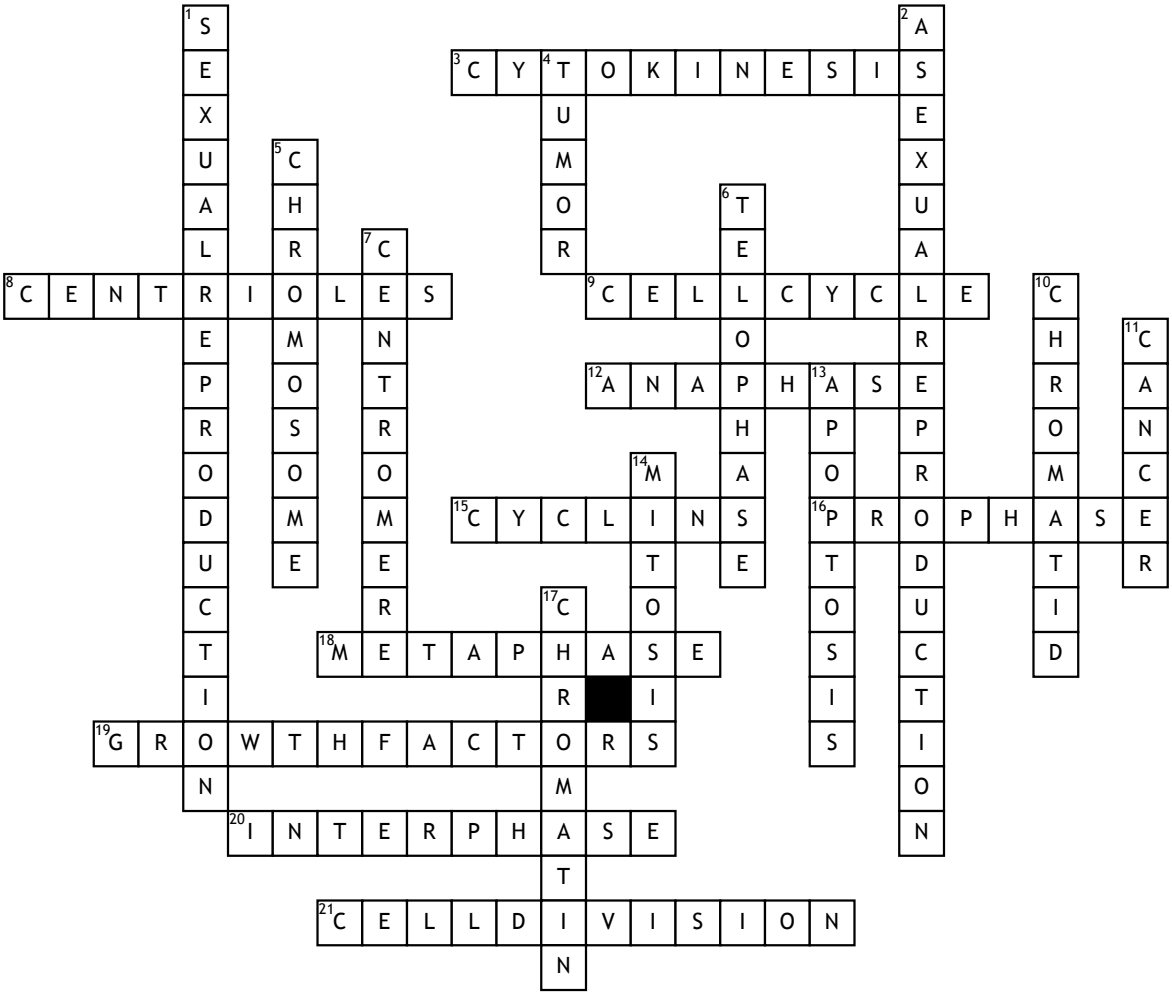
Name: _____

Cell Division - Ch. 10 Biology



Across

3. The splitting of one cell into two; occurs after the phases of mitosis are complete; the process of cytokinesis is different in plant and animal cells

8. Tiny paired structures where spindles come from to attach to the centromere to

9. A series of events where a cell grows, prepares for division and divides to form two daughter cells

12. Third event of mitosis; the chromosomes separate and move along spindle fibers to opposite ends of the cell

15. Proteins that regulate the timing of the cell cycle; these proteins are inside and outside the cell

16. First described phase of mitosis, takes the longest, the genetic material inside the nucleus condenses and the duplicated chromosomes become visible. Outside the nucleus, a spindle starts to form

18. The second phase of mitosis; the centromere of the duplicated chromosomes line up across the center of the cell. Spindle fibers connect the centromere of each chromosome to the the two poles of the spindle

19. Proteins that stimulate the growth and division of cells; especially important proteins during embryonic development and wound healing

20. Part of cell cycle where the cell grows, DNA replicates, and the organelles and molecules produced for cell division

21. The process by which a cell divides into two daughter cells

Down

1. Offspring produced by sexual reproduction inherit some of their genetic information from each parent

2. The production of genetically identical offspring from a single parent is known as asexual reproduction

4. A mass of cells; can be benign which means the mass doesn't spread; or malignant which means the mass will spread and start new tumors in other areas of the body

5. DNA, genetic information, that is bundled and packaged in the cell in preparation for cell division (rather than being in long strands of chromatin)

6. The fourth and final phase of mitosis; the chromosomes, which were distinct and condensed, begin to spread out into a tangle of chromatin; the nuclear envelope re-forms around each cluster of chromosomes . the spindle breaks apart and a nucleolus becomes visible in each daughter nucleus. Mitosis is complete.

7. Where the duplicated strands of DNA attach

10. One of the duplicated strands of DNA, sometimes the two strands are referred to sister chromatids

11. A mass of body cells that do not respond to the signals that regulate the growth of most cells

13. A process of programmed cell death; cells end their life cycle in one of two ways: damage or programmed

14. Duplication of the cell's genetic information which is described by four phases

17. DNA exists in the nucleolus in chromatin form; "beads on a string" the beads are histone proteins and the the string is the DNA