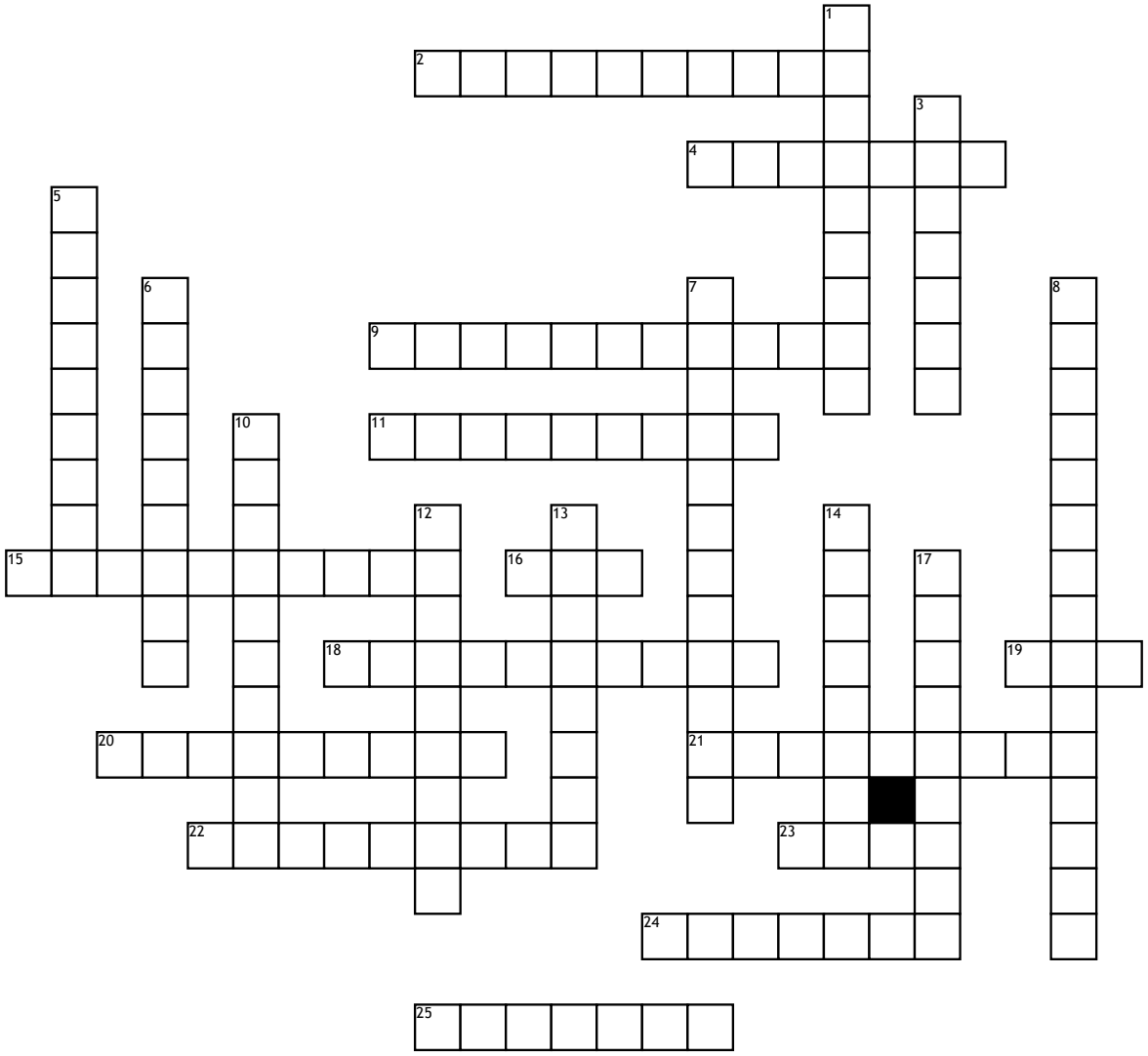
Name: _____ Date: _____

CELL CYCLE AND MITOSIS



Across

2. an organelle near the nucleus of a cell which contains the centrioles (in animal cells) and from which the spindle fibers develop in cell division.

4. a type of cell division that results in four daughter cells each with half the number of chromosomes of the parent cell, as in the production of gametes and plant spores.

9. the cytoplasmic division of a cell at the end of mitosis or meiosis, bringing about the separation into two daughter cells.

11. the series of events that take place in a cell leading to duplication of its DNA and division of cytoplasm and organelles to produce two daughter cells.

15. the region of a chromosome to which the microtubules of the spindle attach, via the kinetochore, during cell division.

16. ribonucleic acid, a nucleic acid present in all living cells. Its principal role is to act as a messenger carrying instructions from DNA for controlling the synthesis of proteins

18. The phase of the cell cycle in which a typical cell spends most of its life. During this phase, the cell copies its DNA in preparation for mitosis.

19. the fundamental and distinctive characteristics or qualities of someone or something, especially when regarded as unchangeable.

20. the material of which the chromosomes of organisms other than bacteria (i.e., eukaryotes) are composed. It consists of protein, RNA, and DNA.

21. any of a number of organized or specialized structures within a living cell.

22. the structure found inside the dividing cells of terrestrial plants and some algae. It develops in the middle plane of the cell separating two daughter cells during cell division.

23. the smallest structural and functional unit of an organism, typically microscopic and consisting of cytoplasm and a nucleus enclosed in a membrane. Microscopic organisms typically consist of a single cell, which is either eukaryotic or prokaryotic

24. a dense organelle present in most eukaryotic cells, typically a single rounded structure bounded by a double membrane, containing the genetic material.

25. a slender mass of microtubules formed when a cell divides. At metaphase the chromosomes become attached to it by their centromeres before being pulled toward its ends.

Down

1. the final phase of cell division, between anaphase and interphase, in which the chromatids or chromosomes move to opposite ends of the cell and two nuclei are formed.

3. a type of cell division that results in two daughter cells each having the same number and kind of chromosomes as the parent nucleus, typical of ordinary tissue growth.

5. the second stage of cell division, between prophase and anaphase, during which the chromosomes become attached to the spindle fibers.

6. each of the two threadlike strands into which a chromosome divides longitudinally during cell division. Each contains a double helix of DNA.

7. the division of a cell into two daughter cells with the same genetic material.

8. is made up of two lipid bilayer membranes which in eukaryotic cells surrounds the nucleus, which encases the genetic material.

10. a threadlike structure of nucleic acids and protein found in the nucleus of most living cells, carrying genetic information in the form of genes.

12. a minute cylindrical organelle near the nucleus in animal cells, occurring in pairs and involved in the development of spindle fibers in cell division.

13. the stage of meiotic or mitotic cell division in which the chromosomes move away from one another to opposite poles of the spindle.

14. the first stage of cell division, before metaphase, during which the chromosomes become visible as paired chromatids and the nuclear envelope disappears.

17. a small dense spherical structure in the nucleus of a cell during interphase.