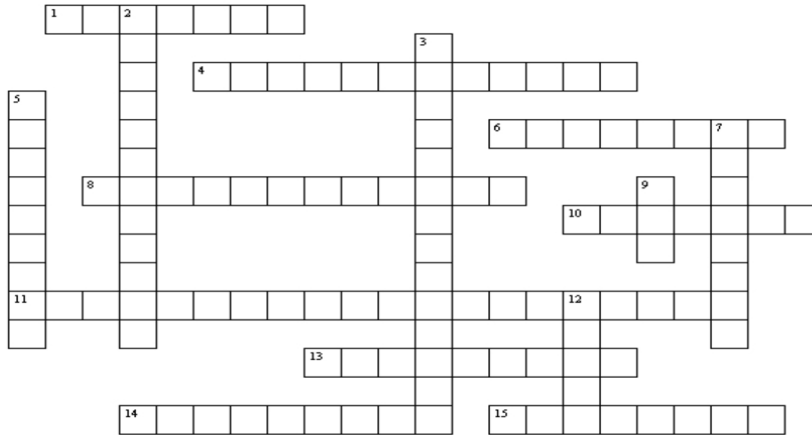


Name _____

Block _____

due on the Day of the test

Optional homework worth 10 points**Cell structures crossword****ACROSS**

- 1** This structure is surrounded by a double membrane with pores through which it can exchange materials with the cytoplasm. The cell's DNA is contained within it and directs the synthesis of RNA molecules that will leave through the pores to be used in protein synthesis.
- 4** These are found in abundance in your muscles where ATP must be made rapidly to supply the needs of the contracting cells. Their double membrane and single circular chromosome are two of the many lines of evidence suggesting they originated from free-living bacteria.
- 6** Bacteria, fungi and plants all have these but they are not composed of the same materials. What unites them is their ability to withstand osmotic pressure when the membrane-bound contents within push against them.
- 8** Various organelles within a cell are enclosed in one or more structures virtually identical to this and having the same function: to regulate the passage of materials between the compartments it stands between; in the present case, it surrounds the cell and regulates entry and exit from the cell.
- 10** These are mostly restricted to transporting or processing materials within animal cells where they remain quite small; in plant cells, they occupy the majority of a cell's volume and are crucial in maintaining the rigidity in the plant body.

DOWN

- 2** This structure is composed of microtubules, microfilaments, and intermediate fibers - all proteins - that help various cells maintain form, move from place to place, direct movement of organelles within the cell, and assist in cell division.
- 3** This structure is composed of flattened membrane-bound sacks that receive vacuoles with macromolecules in need of various modification after which they export the molecules in another vacuole. These might occupy the majority of a cell in glandular tissues that mass-produce hormones for activity throughout the body.
- 5** These are typically classified as either free or bound depending on whether they float free in the cytoplasm or are bound to the endoplasmic reticulum. They are able to bind to the messenger transcript of RNA and "read" the codon sequence that determines the sequence of amino acids in a polypeptide.
- 7** This organelle is essentially an enzyme-packed vacuole that breaks down macromolecules and recycles old organelles and their contents into monomers that can be used again by the cell.
- 9** This is an acronym for the space between cells which may be occupied by a rich array of fluids, ions, macromolecules, and various fibrous proteins. Some of the components involved link cells together structurally and some link them biochemically (i.e. biochemical exchange between cells occurs here).