**Cell Parts**

Today in Science class, Mr. Smith taught us about the parts of a cell.

Things I learned:

* The nucleus is bounded by a double membrane called the nuclear envelope. This membrane separates the contents of the nucleus for the cytoplasm. The envelope helps to maintain the shape of the nucleus and assists in regulating the glow of molecules into and out of the nucleus through nuclear pores.
* Nucleolus:
  + Location:
    - All cells except prokaryotes
    - Found inside the cell’s nucleus
  + Description:
    - May have more than one
    - Disappear during cell division
  + Function:
    - Make ribosomes
* The nucleus controls the synthesis of proteins in the cytoplasm through the use of messenger RNA. Messenger RNA is produced in the nucleolus of the cell and travels to the cytoplasm through the pores of the nuclear envelope.
* Nuclear Membrane:
  + Location:
    - All cells except prokaryotes
  + Description:
    - Surrounds nucleus
    - Double membrane
    - Selectively permeable
  + Function
    - Controls movement of materials in/out of nucleus.
* There are two kinds of Endoplasmic Reticulum, or ER.
* There is Rough ER and Smooth ER.
* The rough ER manufactures membranes and secretory proteins.
* In leukocytes the rough ER produces antibodies. In pancreatic cells the rough ER produces insulin.
* The rough and smooth ER are usually interconnected and the proteins and membranes made by the rough ER move into the smooth ER to be transferred to other locations.

