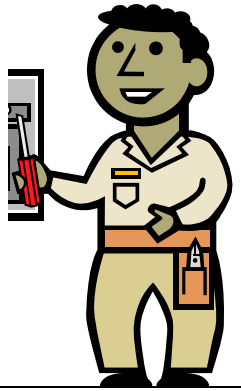
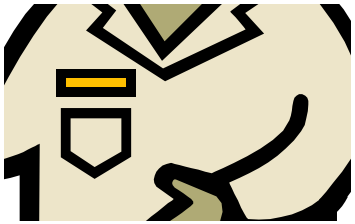
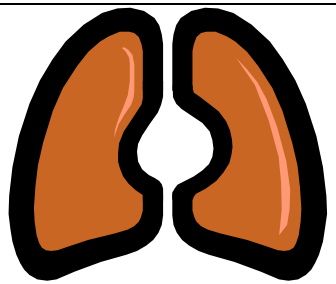
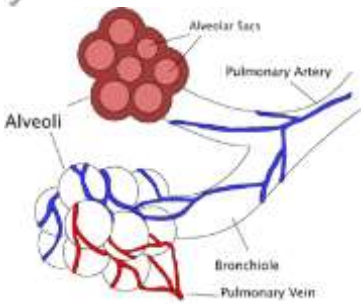
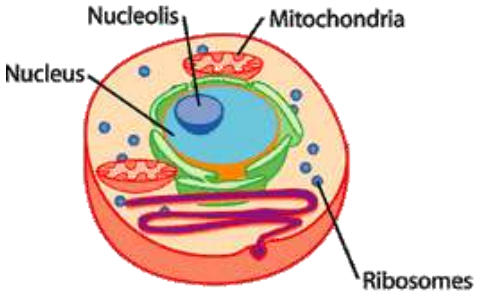
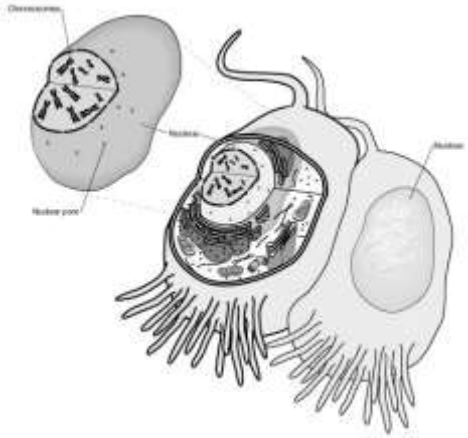
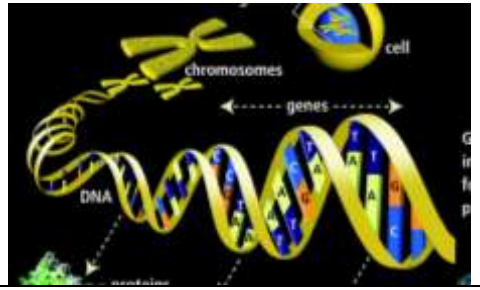
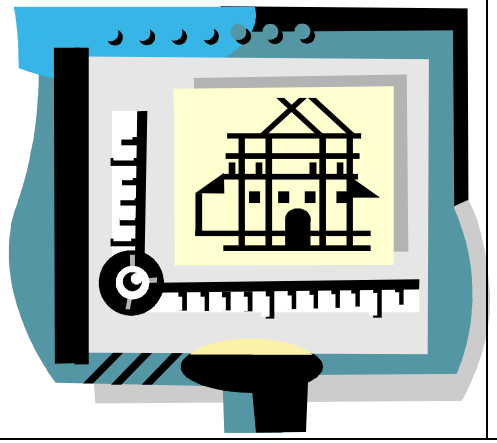
Course #: 051102 **Course Name:** Maxwell 16 Service Tech Training

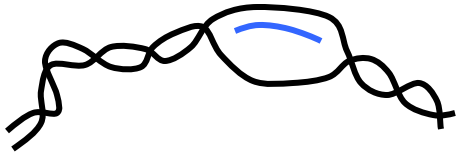
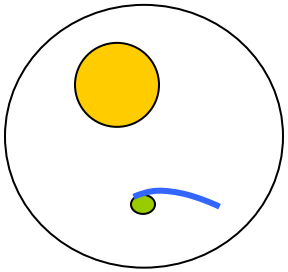
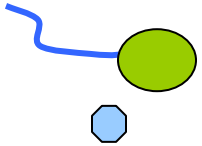
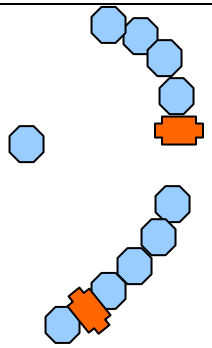
Slide #: Section 2 – Central Dogma (Basic Biology Lession) **Date:** 29 November 2006

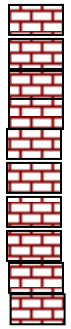
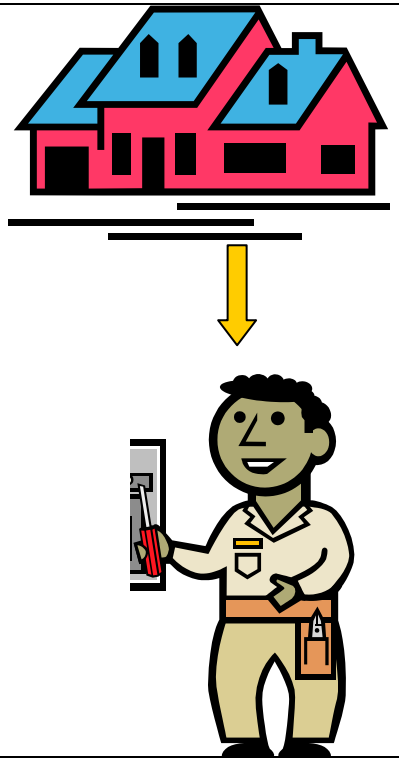
No Narration … script only to assist with timing & developing the story

#	Schematic	Action	Script (Narrator)
0		No action (intro to slide)	The Maxwell 16 System is used to purify DNA, RNA and protein. What are DNA, RNA and protein?
1			DNA, RNA and protein are essential for a cell to function.
2		Zoom into show a single cell. Show labels on cell (cell wall, cytoplasm, nucleus, ribosomes)	Let's take a look at a cell in your body to see where these molecules are located and how they work.

	   		
3		Show chromosomes in nucleus. Label nucleus and DNA.	The instructions that tell the cell what to do is located in the nucleus of every cell.

			
4		Zoom in to show chromosome and transition to double helix and show basepairing. Keep in context of cell and nucleus. Keep DNA label	These instructions are coded in the cell's DNA,
5		Transition DNA into a blueprint for a house (unrolls from DNA).	Which can be thought of as a blueprint. The blueprint holds the instructions that tell the cell how to make all the proteins it needs.

6		Transition (Roll up) blueprint back to DNA w/ DNA label Show DNA unwind, RNA grow and flow / float away from DNA. Label RNA. (Keep in context of cell and nucleus.)	When a cell needs to make a protein, the instructions in the DNA are written into a message, called RNA.
7		RNA moves outside nucleus into cytoplasm and binds on the ribosome.	The RNA carries the instructions for the protein to the cytoplasm and the cell's protein-making machinery, called the ribosome.
8		RNA moves through ribosome and protein is "spit" out. Fade out RNA. Label protein.	The ribosome reads the message and makes the protein.
9		Protein floats to cell wall. Zoom in to show cells forming the cell wall with a hole. (keep context of cell?)	The protein travels to the part of the cell where it is needed.

10		Transition cell wall to bricks. New protein (brick) joins brick cell wall. (keep context of cell?)	Think of the proteins as parts of a house. Each protein performs a different job for the cell.
11		Zoom out to show brick house and transition back to cell, then alveoli, lung and body.	And all proteins together make the house.