Anatomy & Physiology 12 – Lab pre-and post-assessment **Name: _____**

BIOLOGICAL MOLECULES LAB

		Beginning	Developing	Accomplished	Exemplary
PRE-LAB **(due day of lab)**	**Variables & Predictions**	No variables identified includes hypotheses for half or fewer experimental trials.	variables are partially identified or identified incorrectly and are not described includes hypothesis in "If…then…" format for reaction rate in most experimental trials	most variables are correctly identified and briefly described includes and describes hypothesis in "If…then…" format for reaction rate in each experimental trial	dependent, independent, and controlled variables are correctly identified and explained includes and explains hypothesis in "If…then…" format for reaction rate in each experimental trial
	Flow Chart	Unorganized No diagrams Procedure is not in own words Many steps are missing or unclear no safety considerations	Unorganized Very few diagrams Words commands are unclear Some steps are missing or unclear minor safety considerations	Organized Diagrams included Clear word commands, but not concise Some minor steps are missing or unclear key safety considerations	Excellent organization, easy to follow. Diagrams clear and catch the eye Clear, concise word commands All steps included comprehensive list of HEM safety considerations
LAB REPORT	**Results and Observations (During lab)**	Little raw data is collected and presented, or data is not in table form. Highlights of data are not presented No log of experimental progress	most relevant raw data is collected and presented in table form There is an attempt to present highlights of data through calculations/graphs some events are noted in the Experimental progress	All relevant raw data is collected and presented in table form Highlights of data are presented through calculations/graphs Most significant notes are noted in the Experimental Progress	detailed raw data is correctly collected, organized and presented in table form Highlights of data are effectively presented through calculations/graphs Detailed log of experimental Progress.
	Analysis & Evaluation (After Lab)	Not very well organized; difficult to identify separate sections. Data is interpreted Validity of some hypotheses is stated validity of the method is stated based on the outcome of a scientific investigation improvements or extensions to the method are stated	Somewhat organized in separate paragraphs. Data is interpreted and results are explained Validity of some hypotheses is assessed and outlined using scientific reasoning. validity of the method is outlined based on the outcome of a scientific investigation Improvements or extensions to the method that would benefit the scientific investigation are outlined.	Organized in separate paragraphs. Data is accurately interpreted and results are explained using scientific reasoning Validity of most hypotheses is assessed and described using scientific reasoning. validity of the method is discussed based on the outcome of a scientific investigation improvements or extensions to the method that would benefit the scientific investigation are described	Well organized in concise separate paragraphs. Data is correctly and interpreted and results for each trial are explained using correct scientific reasoning Validity of each hypothesis is assessed and explained using scientific reasoning. validity of the method is evaluated based on the outcome of the scientific investigation Improvements or extensions to the method that would benefit the scientific investigation are explained.
	Conclusion (After Lab)	Point form Does not refer to purpose of lab or big picture Personal opinions are included "I like this lab" or, "This lab was FUN!"	Sentence structure lacking May vaguely refer to purpose of lab Does not attempt to connect results to big picture	Full Sentences, well structured Responds to purpose of the lab with some reference to evidence Attempts to connect results to big picture.	In a concise paragraph Succinctly responds to purpose of the lab using scientific evidence. Connects results to big picture (relevance)