Biomedical Sciences
Certification Document 3:Student Work & Equipment Guide

Name of Campus/School:			
Campus/School Street Address	**City**	**State**	**Zip Code:**

Levels of Assessment	Interpretation of Level
4 – Excellent	Exceeds requirements.
3 – Good	Meets requirements. No need for additional technical assistance at this time, although some areas, as indicated, could be improved.
2 – Needs Improvement	Generally fall below requirements. Demonstrates limited effectiveness; additional technical assistance and/or resource utilization is needed for improvement.
1 – Poor or Missing	Evidences little or no effectiveness. A great deal of technical assistance and/or resource utilization would be an immediate need.
N/A – Not Applicable	Does not apply to the program being reviewed.

I. Student work should contain evidence of:

A. Principles of the Biomedical Sciences™ (PBS)	1	2	3	4	N/A
Evidence board with possible causes of Anna Garcia's death					
Data tables for blood pressure, heart rate, and EKG activities					
"How Much Energy is in Foods" (calorimetry lab) data labs					
Insulin research notes and insulin/glucose model					
Designer protein printout					
LDL/HDL information brochure					
Antibiotic sensitivity experiment results					
"How can pharmaceuticals help" (lactose lab) data tables					
Notes on possible medical interventions for Anna Garcia					
Grant proposal or the research notes to complete it					
B. Human Body Systems™ (HBS)					
Case report for missing persons scenario – Bone Detectives and DNA Detectives					
Brain map					
Digital pictures (or working model) of the Anatomy in Clay® Maniken™ with constructed body systems and structures (brain, muscles, digestive system, urinary system, blood vessels, nerves, lymph)					
Case study patient file					
Nephron action poster showing urine formation path and key structures (picture or actual)					
Bone estimation Excel graph/equation of a line					
Thyroid function or glucose regulation feedback loop					

Amylase investigation experimental design and conclusions					
Labeled LabVIEW™ lung capacity graph and volume calculations					
Training plan notes and presentation					
C. Medical Interventions™ (MI)					
Flow chart of outbreak investigation					
Audiogram matching worksheets					
Bacterial conjugation lab data tables					
Genetic counseling case file					
DNA microarray statistics worksheets					
Yeast and sunscreen experimental design and results					
Biofeedback therapy experimental design and LabVIEW™ results					
Clinical trial PowerPoint™					
Manufacturing human proteins flowchart					
Bionic human blueprints					
D. Biomedical Innovation™ (BI)					

II. Equipment

Overall	1	2	3	4	N/A
Appropriate software for the courses offered (LabVIEW™ and Inspiration®)					
Computers for each student enrolled					
LCD Projector in each classroom					
Printer					
Science laboratory glassware & supplies					
Microscopes with 100x oil immersion objectives and mechanical stages					
Gloves & safety goggles with sterilizer cabinet					
Dissection pans & tools					
A. Principles of the Biomedical Sciences™ (PBS)					
Prepared slides of: cardiac tissue, arteries, veins, normal and abnormal human blood including sickle cell disease, bacterial cells					
Histology set of prepared slides: major tissue types					
Preserved sheep hearts for dissection					
Vernier Sensor DAQ Multifunction Units					
Vernier EKG sensors					
Vernier Hand Grip Heart Rate Monitors					
Vernier Blood Pressure Sensors					
Vernier Stainless Steel Temperature Probes					
Vernier Carbon Dioxide Sensors					
DNA model kits					

Amino acids model kits					
Carbohydrates & fats model kits					
3-D Molecular Designs Beta-Hemoglobin Bioinformatics Kit					
Electronic scale					
DNA Electrophoresis equipment for class					
Micropipettors variable for 20 to 200 µL or fixed at 20 µL					
Microcentrifuge for 1.5 mL tubes					
Hot plates					
Electronic Stirrers					
B. Human Body Systems™ (HBS)					
Prepared slides of: bone, muscle, skin					
Vernier 25g Accelerometers					
Vernier spirometers					
Vernier oxygen gas sensors					
Vernier hand dynamometers					
Anatomy in Clay® Manikens™ , clay, tools, and muscle atlases					
Eye model					
Visual perception kit					
Forensic anthropology bone detectives kits (2)					
Goniometers					
Doppler devices and 8Mhz probes					
Waterbath					
Broken bones X-ray set					
Surviving the Extremes class set of books					
C. Medical Interventions™ (MI)					
Vernier respiration belts					
Vernier gas pressure sensors					
Vernier skin surface temperature probes					
Protein gel electrophoresis tanks and power supplies					
Micropipettors variable for 0.5µl to 10µl					
Incubator					
How to stitch wounds kits					
Tuning forks					
D. Biomedical Innovation™ (BI)					