

## Materials Available for student research:

Digital Microscopes – computer video and still readout.  
Chromatography equipment  
Spectrophotometer – computer readout  
Rock Tumbler  
Soil pH meter  
Conductivity Meter – computer readout or numerical readout  
Infrared Thermometer – measures temperature of liquid or surface without touching it  
Digital Camera  
Dialysis Tubing  
Dessicant – for removing small quantities of water in an experiment  
Hydroponics kit for growing plants – no soil required to grow the plants  
Solar Cell – this needs to be hooked up to any device requiring electricity  
Biochemical Test Kit – various tests can be done.  
Sonicator – for treating items with sound waves  
Soil Core sample kit – allow for a tube of soil to be cut from the earth  
Bacterial culture strains – we can order specific bacteria  
Scanner – to collect images for your project.  
Balance – should hook up to a computer, if we can figure out how to.  
Blood Pressure Meter – wrist or upper arm (more accurate)  
Explorers-force, temperature computer readout  
Oxygen probe-computer readout  
Heat block 25-125 degrees centigrade constant temperature  
Light meter – soil  
Moisture Meter - soil  
pH meter – soil  
pH meter – computer readout  
sound meter – dial readout  
soil test kit: pH, Nitrogen, Phosphorous, Potassium – chemical color indicator tests  
Heart rate monitor – computer read out  
Silica Gel – expands, also useful for chemistry polymerization studies.  
Voltage – current meter- computer readout  
Multimeter – current, resistance, voltage. – one may hook up to a computer if we can figure out how.  
Pipettes – microliter volumes can be measured  
Tesla coil – creates a very strong spark for a sustained duration.  
Turbidimeter – measures how clear a liquid is  
Hand microscope – useful for quick glances  
Hydromoter – to measure salinity or density of liquids  
Tool kits – electrical, small mechanics or computer  
Caliper – to measure inner or outer diameter/length of small tubes or items  
Sanding block – for sanding  
Vermiculite – useful for plant growth, or soil experiments  
Sinus rinse bottles – good for squirting water  
Fiber optic cable – to conduct fiber optic light studies  
Laser – useful for various experiments  
UV beads – these can be used to measure the amount of uv light present in an area and those changes

## Expt. # (Intro to Biochem Kit # 2)

1- determine food acid/alkal; food pH	2-Dt [starch] (Iodine solution)
3-determine sugar content (Benedict's Reagent)	4-" [fat] (Sudan Dye)
5-" [Protein] (Biuret Reagent)	6-" Amino Acid type (Ninhydrin, Pepsin, Chromatography)
7-"Amylase: a starch -->sugar enzyme study	8-" [vitamin C]
9- Chromatography of plant pigments, AA's, dyes.	10-Chromatography of plant pigments.

## --Carolina Animals available:

Ants	Brine Shrimp (Does diet effect?)	Pholcid Spiders (daddy long legs)
Lady Beetle (Aphid Eaters; stor for months cold; hibernation study)		
Daphnia	Wax Moths: 35 d max molt.	Crickets-
Jewel Wasp-parasitic control of flies.	Milkweed bug: 5,6 day instars. (Molts) (Temp Spec.)	
Praying Mantis	Tarantula	Thricogramms Parasitic Wasp