This course is designed for any teacher to present to students with a minimum of knowledge in the subject. It is recommended, however, that the teacher read over the student package to get an idea about what the students will be undertaking. The guidelines presented in this introduction are merely a starting point for this course. As the instructor presents the course over a period of time, they are encouraged to modify the coursework in anyway which they see fit. It is highly recommended that they indicate any changes to the course in the teacher package, and indicate the author of the changes. This will allow future course instructors to understand their thinking and better present the course.

***Safety***

Safety is the primary consideration of this – and every – CTS module. ***If you feel the students are undertaking or attempting something you feel is decidedly dangerous, stop the activity and contact your administration for further instructions.*** There are several areas of particular concern that must be carefully monitored.

Soldering – students will be using soldering irons to melt solder for joining wires and disassembling electronic items. Care must be taken not to touch the metal parts of the soldering iron, not to drop molten solder onto body parts or flammable surfaces, or to attempt to solder/de-solder any device that is currently under power.

Electricity – students will be using batteries as a power source for making circuits, but may attempt to diagnose the operation of devices before disassembling them. Ascertain that no one is in contact with device while it is being plugged in, that it is not wet, and that the device is being plugged into a power bar or wall socket which will provide circuit protection.

***Marking***

The guidelines presented here are the initial recommendation of the program author and not the final word. If you, as a professional educator, wish to adjust the marking scheme, it is well within your right as the course instructor. There are parts of the course which are marked “check only”. These are circuit assignments and the rationale for “check only” is that either the circuit works, or it doesn’t. No check will be given for a circuit that doesn’t work. There are other supplementary parts of those assignments – such as diagrams and oral/written explanations – but the author is treating the entire section of the assignment as worth one check or not.

The module has worksheets which are to be done using the textbook, video clips which are available on the student CD, the soldering package which has a CD, and through practical assignments. There are teacher masters for marking all of the worksheets, as well as exemplars for comparison marking of the various soldering and joining practical assignments.

It is likely that you are not familiar or experienced in the area of electronics. As you are marking the assignments and examining the practical components, make sure you discuss your results with the student and make an effort to understand exactly what you are marking, what the student is expecting and how to best recognize their efforts.

The marking rubric for soldering is flexible and needs to be done in conjunction with the student. Explain to the students that the final mark is not an average, but if they are honest in their marking, their mark and your mark should be very similar. Make sure they mark it first, then sit down with them and their project and work through your marking with them. Ask them to explain why they responded as they did – especially in areas where your responses are very different. Your final mark should be the final mark and not an average of the two.

The bottom of the rubric has a section called “In Short…” There is no mark for this section. The last thing you should do with the student is to verbally explain this to them. It is a good way to wrap up their effort and will give them some positive and negative feedback to reflect on during their next effort.

***Occupational Connection Sheet***

The Occupational Connection Sheet is a chance for students to research occupations which use skills discovered in the module. It is something that can be introduced with class discussion, or even a guest speaker. Ideally, the connection sheet should have an obvious connection to the module being studied. However, it is also possible that the student will find an occupation which utilizes some aspect or parallel skill set to the course. An example for electronics would be recycler. This module deals a bit with the science of recycling electronics, but it is not an occupation which would first come to mind.

***Author’s Note***

This module was designed by Kelly Lewis of J. C. Charyk Hanna School. It has not been tested on students or previously offered as a course. It has been designed with an inexperienced CTS teacher in mind. There is the chance that there are errors in writing, mathematics or presentation of concepts. When errors are found, please make changes to the appropriate document on the master CD.