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**Enhancing Electronics concepts through life related experiments for
G.C.E Advance Level Physics students**

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Abstract

A new Physics syllabus for GCE Advanced Level students has been introduced from 1996. Furthermore, since 1997 the students should sit the exam for three main subjects. Under new syllabus several new units have been introduced for all the subjects. In Physics, "Electronics" is one of the new units.

The main objective of this research project is to introduce new set of experiments for Electronics in addition to the experiments recommended by NIE. These experiments will be related to the real world and helpful to understand the basic principles of the subject clearly. Each experiment is expected to generate interest and enthusiasm of the students. Through these experiments, they could understand the basic principles of day-to-day Electronics items. Students could make their own circuits to make solutions to their problems and needs. This will improve also the problem solving skills of students. Students could make Electronics circuits according to given circuit diagrams. This will give them the confidence to make their own circuits for their various applications. The resource need for the experiments are available commercially. To teach electronics, properly students need to know the function of the cathode ray oscilloscope (CRO) well. For that, a simple experiment has also been introduced to demonstrate the action of the CRO.

The evaluation of the experimental group has been done while keeping a control group and the effectiveness of the experiments were identified. Control group was taught by using traditional methods and for the experimental group the new experiments were introduced. A

post-test was administered for both groups to study the effectiveness of the experiments. As expected the experimental group has performed the test well. This clearly demonstrates that we relate the subject to the real world problems; students will understand the concepts well.