City College of San Francisco
College for Kids Summer 2014
88 Fourth Street, Room 618, San Francisco

BASIC ELECTRICITY FOR KIDS
June 2 – June 6, 2014
1:00 PM – 4:00 P.M.

Instructor: Grace G. Imson, EIT, PE-CE

Electricity for Kids is designed for middle school students who want to explore and learn how electricity works. Exploring electricity is fun and rewarding. The workshop will be explored through demonstrations, modeling and laboratory work.

Course Goals: Students will understand and learn how electricity works. They will discover how light is produced and how to control light. This workshop will provide simple analogies and visual guidance on the *Introduction of Electricity* and its basic concepts through lectures, presentations, videos, and laboratory work.

Materials Need to Purchase:
- 4 - 3 V incandescent flashlight bulbs (with brass, not aluminum shell on its base)
- 4 - 1.5 V dry cell batteries
- 2 battery cases
- 2 bayonet sockets for the 2 bulbs
- 1 Roll of Electrical Tape
- 22 Gauge Red Wire Strand 5 feet long
- 22 Gauge Black Wire Strand 5 feet long

Course Outline

June 2: Introductions, class policies, class expectations, video (What is Electricity?), vocabulary terms, Ohm's law, and class project Information.
   HW: Do Ohm's Law worksheet.

June 3: *Series Circuit Connection*: video (Series Circuit), open discussion, computations, setting up a series circuit connection (Project 1), and how to write an activity report.
   HW: Do Series Circuit Connection report.

June 4: *Open Circuit and a Switch*: Setting up a switch on the series circuit project (Project 2).
   HW: Do Open Circuit and Switch report.

June 5: *Parallel Circuit Connection*, Application, setting up a Parallel Circuit Connection (Project 3).
   HW: (1) Bring materials to test conductivity – brass, steel, copper, GI Sheet, glass, plastic, wood
      (2) Do Parallel Circuit Connection report.

June 6: Creating games using the project, project presentations and "Test of Conductivity"

Project 1: Series Circuit Connection

Project 2: Open Circuit and a Switch

Project 3: Parallel Circuit Connection