Unit 2 – Electricity and Magnetism

You should be able to test on the following topics.

1. You should be able to define correctly in your own words:
    a. Conductor
    b. Insulator
    c. Static Electricity
    d. Resistance
    e. Capacitance
    f. Voltage
    g. Current
    h. Electric Field
    i. Magnetic Field
    j. Ampere's Law
    k. Faraday's Law
    l. Kirchhoff's loop rule
    m. Kirchhoff's junction rule

2. Measure with a multimeter
    a. Voltage
    b. Current
    c. Resistance
    d. Capacitance

3. Know the schematic symbol and explain the usage of a:
    a. Wire / lead
    b. Battery / EMF
    c. Resistor
    d. Capacitor
    e. Light Bulb
    f. Diode
    g. LED
    h. Transistor
    i. Inductor

4. You should be able to calculate

a. Ohm’s Law V = I x R
b. Power P = V x I
c. Resistors in series
d. resistors in parallel

5. You should be able to demonstrate
    a. How to solder wires together
    b. Build a circuit from a schematic

6. You should be able explain
    a. Earth’s magnetic field
    b. Applications of magnetism in transportation