**Direct-Current Circuits**

**Kirchoff’s Rules**

* Junction Rule is based on *conservation of electric change*
* Loop rule is based on conservative electrostatic force

Sign Convention for the Loop Rule:

* Choose an assumed direction of current
* - to + for emf is positive
* + to – for emf is negative
* Going same direction as assumed current with IR is negative, opposite is positive

**Electrical Measuring Instruments**

* Coil of wire placed in magenetic field of permanent magnet. When there is current, the pointer exterts torque on the coil proportional to current

Ammeter – Uses **shunt resistor** tso that some current bypassese meter and larger measurements can be made

Ammeter + Voltmeter: Used to find power + resistance

Potentiometer – Has a sliding contact and is connected to one battery. The contact is slid until there is no deflection, ie no current passing through the second battery.

**R-C Circuits**

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