

Electrical Principles - Part 1

Storage and transfer of electrical energy

Mario Pineda

Queen Elizabeth High School

`drpineda.ca`

`github.com/mariopineda`

`@therocsci`

Slides: `github.com/mariopineda/electrical-principles-slides`



Static Electricity

► ...

► ...

► ...

Current Electricity

- ▶ Superconductors
- ▶ Wire gauge
- ▶ DMM - Digital Multi Meters
- ▶ Resistance

Electrical Safety

Cells and Batteries

- ▶ Dry Cells:
- ▶ Wet Cells:
- ▶ Multiple cells \longrightarrow battery

Battery Chemistries: LiPo

- ▶ Chemistry:
- ▶ Pros:
- ▶ Cons:
- ▶ Usage:

Battery Chemistries: LiFePO₄

- ▶ Chemistry:
- ▶ Pros:
- ▶ Cons:
- ▶ Usage:

Battery Chemistries: SLA

- ▶ Chemistry:
- ▶ Pros:
- ▶ Cons:
- ▶ Usage:

Battery Chemistries: NiCd

- ▶ Chemistry:
- ▶ Pros:
- ▶ Cons:
- ▶ Usage:

Battery Chemistries: NiMH

- ▶ Chemistry:
- ▶ Pros:
- ▶ Cons:
- ▶ Usage: