



# Intermediate Science 9

## Unit 3: ELECTRICITY

### STUDY GUIDE: STATIC ELECTRICITY

Know the following terms:

|                    |                    |                        |
|--------------------|--------------------|------------------------|
| Static Electricity | Electric discharge | Electric forces        |
| Atom               | Electron           | Proton                 |
| Neutral            | Negative Charge    | Positive Charge        |
| Conductors         | Insulators         | Van de Graff Generator |
| Grounding          | Coulomb            | Electroscope           |
| Repulsion          | Attraction         |                        |

Know the following:

1. Define static electricity.
2. Recognize that static electricity is an integral part of their lives.
3. Recognize the existence of different types of electric charges.
  - Positive
  - Negative
  - Neutral
  -
4. Describe how the charges on objects can change. Include:
  - (i) Neutral objects can develop a positive charge
  - (ii) Neutral objects can develop a negative charge
  - (iii) Positively charged objects can become neutral
  - (iv) Negatively charged objects can become neutral
5. Define the Laws of Electric Charges. Include:
  - (i) Like charges repel
  - (ii) Unlike charges attract
  - (iii) Charged objects attract some neutral ones
6. Explain the production of static electrical charges in some common materials.
7. Define electric discharge
8. Provide examples of how knowledge of static electricity has resulted in the development of technologies. Include:
  - (i) Lightning rods
  - (ii) Photocopiers
  - (iii) Electrostatic air cleaners
  - (iv) Electrostatic Painting

Know the following questions from the Discovering Science 9:

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