ACADEMIC PHYSICS

4. Electrostatics

1. I can describe the nature of static electricity.
2. I can state and demonstrate the Basic Law of Electrostatics: the attraction of unlike charges and the repulsion of like charges.
3. I can explain the Law of Conservation of Charge.
4. I can demonstrate charging by both conduction and induction and can explain the effect of a ground.
5. I can explain the differences between conductors and insulators in terms of atomic structure.
6. I can explain charging and discharging in terms of electron theory.
7. I can explain Coulomb’s Law and use it to solve problems relating to electrostatic charges.

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| ACTIVITY | TIME ALLOTMENT |
| Outside Reading Reference: Chapter 20: p. 461 – 476  | HW |
| Electrostatics Discussion | 1 |
| Electrostatics Lab | 2 |
| **HW – Book –** p. 477; 1-3, 6, 7, 9, 11, 12, 20, 21, 23 - 29 Electrostatics Review Sheet | HW |
| Discussion of Charging theory, Conductors and Insulators. | 1 |
| Coulomb’s Law Discussion | 1 |
| Review | 1 |
| **TEST** | 1 |
| TOTAL  | 7 |

P. 477

21. 2.50 x 102 electrons

24. 1e‑8 N repel

25. 9.0e1 N, attract

26. 5.6e2 N

27. 1.5e-14 m

28. 0.7 m

29. 3.2e-19 C