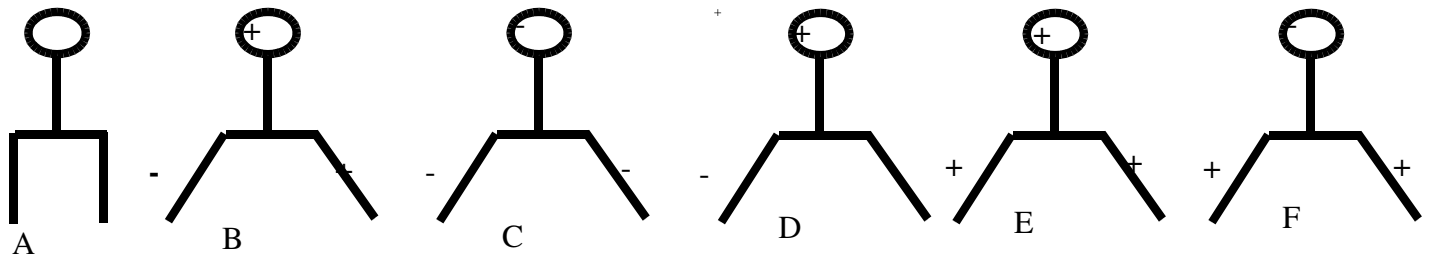


Electroscope Worksheet

Each of the diagrams below shows an electroscope with the NET charge on the knob and leaves. Match each scenario with the electroscope diagram which would be produced by the scenario. Some questions may have multiple answers. The diagrams may be used more than once.



1. A neutral electroscope. _____.
2. An electroscope that was charged by touching a positively charged object to it. _____.
3. An electroscope that was polarized by bringing a positively charged object near it. _____.
4. An electroscope that was charged by bring a positively charged object near, grounding the electroscope then removing both the ground connection and the charged object. _____.
5. An electroscope that was charged by contact with a negatively charged object. _____.
6. An electroscope that was charged by induction using a negatively charged rod. _____.
7. An electroscope that was polarized by bringing a negatively charged object near it. _____.
8. An electroscope was charged by conduction using a positive rod, the positive rod was removed and then the electroscope was grounded. _____
9. When a positively charged object is brought in contact with a neutral electroscope and then removed. A copper wire is then connected between the earth and the electroscope. The copper wire is then removed.

10. Which of the diagrams shown above is not possible? _____
11. When an object is charged by conduction, the charging object and the electroscope end up with **(identical / opposite)** charges.
12. When an object is charged by induction, the charging object and the electroscope end up with **(identical / opposite)** charges.
13. When an object is charged by polarization, the leaves and the knob of the electroscope end up with **(identical / opposite)** charges.